

## AGENDA

### IRVINE RANCH WATER DISTRICT BOARD OF DIRECTORS REGULAR MEETING

November 11, 2013

#### PLEDGE OF ALLEGIANCE

#### CALL TO ORDER

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

#### ROLL CALL

Directors Matheis, LaMar, Swan, Withers and President Reinhart

#### NOTICE

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

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#### COMMUNICATIONS TO THE BOARD

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1. A. Written:

B. Oral: Mrs. Joan Irvine Smith relative to the Dyer Road Wellfield.

2. ITEMS RECEIVED TOO LATE TO BE AGENDIZED

Recommendation: Determine that the need to discuss and/or take immediate action on item(s) introduced come to the attention of the District subsequent to the agenda being posted.

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#### PRESENTATION

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3. NATIONAL PURCHASING INSTITUTE ACHIEVEMENT OF EXCELLENCE IN PROCUREMENT AWARD

Staff will present the Achievement of Excellence in Procurement Award given to IRWD by the National Purchasing Institute for the 13th consecutive year. The award is achieved by those organizations that demonstrate excellence in procurement by obtaining a high score on a rating of standardized criteria.

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**PUBLIC HEARING**

**Resolution No. 2013-43**

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4. CONSOLIDATION OF COTERMINOUS IMPROVEMENT DISTRICTS 125 AND 225; DETACHMENTS AND ANNEXATIONS FOR IMPROVEMENT DISTRICTS 153 AND 253; FORMATION OF IMPROVEMENT DISTRICTS 185 AND 285; AND ADOPT PLANS OF WORKS FOR IMPROVEMENT DISTRICTS 125, 225, 153, 253, 185 AND 285

Recommendation:

- a. Open the Hearing.
- b. Inquire of the Secretary how the hearing was noticed.
- c. Receive and file the affidavit of posting and proof of publication.
- d. Request legal counsel to describe the nature of the proceedings.
- e. Inquire of the Secretary if there have been any written communications.
- f. Hear any person who wishes to speak relative to consolidation of coterminous Improvement Districts 125 and 225; detachments and annexations for Improvement Districts 153 and 253; formation of Improvement Districts 185 and 285; and adoption of Plans of Works for Improvement Districts 125, 225, 153, 253, 185 and 285.
- g. Board comments/discussion.
- h. Close the Hearing.
- i. Adopt resolution relative to consolidation of coterminous Improvement Districts 125 and 225; detachments and annexations for Improvement Districts 153 and 253; formation of Improvement Districts 185 and 285; and adopt Plans of Works for Improvement Districts 125, 225, 153, 253, 185 and 285.

Reso. No. 2013-

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**CONSENT CALENDAR**

**Items 5-12**

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5. MINUTES OF REGULAR BOARD MEETING

Recommendation: That the minutes of the October 28, 2013 Regular Board meeting be approved as presented.

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

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



**CONSENT CALENDAR – Continued**

**Resolution No. 2013-43**

**Items 5-12**

7. QUITCLAIM OF REAL PROPERTY – CITY OF TUSTIN WATER PIPELINE EASEMENT PER PARCEL MAP NO. 91-265 TUSTIN METROLINK STATION

Recommendation: That the Board adopt a resolution approving execution of the quitclaim deed to the City of Tustin.

Reso. No. 2013-

8. QUITCLAIM OF REAL PROPERTY – FOOTHILL 10/PAD 2, LLC AND CPUS FOOTHILL PLAZA, LP PORTION OF SEWER PIPELINE EASEMENT PER INST. NO. 19960563167, O.R. GLENN RANCH ROAD SEWER – FOOTHILL PLAZA

Recommendation: That the Board adopt a resolution approving execution of the quitclaim deeds to Foothill 10/PAD 2, LLC and CPUS Foothill Plaza, LP.

Reso. No. 2013-

9. QUITCLAIM OF REAL PROPERTY IRVINE COMMUNITY DEVELOPMENT COMPANY LLC WATER AND SEWER PIPELINE AND ACCESS EASEMENT PER TRACT NO. 17004 ORCHARD HILLS

Recommendation: That the Board adopt a resolution approving execution of the quitclaim deed to Irvine Community Development Company LLC.

Reso. No. 2013-

10. ORANGE PARK ACRES RESERVOIR DEMOLITION FINAL ACCEPTANCE

Recommendation: That the Board accept construction of the Orange Park Acres Reservoir Demolition, project 11416 (1337); authorize the General Manager to file a Notice of Completion; and authorize the payment of the retention 35 days after the date of recording the Notice of Completion.

11. 2013 STATE LEGISLATIVE UPDATE

Recommendation: Receive and file.

12. DENTAL INSURANCE COVERAGE FOR CALENDAR YEAR 2014

Recommendation: That the Board authorize the General Manager to extend the existing contract with ACWA/JPIA for Delta DPO Plan A with child and adult orthodontic coverage.

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**ACTION CALENDAR**

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13. ADOPTING REVISED CAPITAL DEFINITIONS

Recommendation: That the Board adopt a resolution adopting revised capital definitions.

Reso. No. 2013-

14. PROPOSED CONSUMER PRICE INDEX CHANGES TO SALARY GRADE SCHEDULE AND EMPLOYEE COST OF LIVING ADJUSTMENTS FOR UNREPRESENTED EMPLOYEES

Recommendation: That the Board approve a 0.68% increase to the salary grade ranges for unrepresented positions and a 0.68% cost of living adjustment (COLA) for each eligible unrepresented employee, both effective December 1, 2013, and adopt a resolution rescinding Resolution No. 2013-22 and establishing a revised Schedule of Positions and salary rate ranges.

Reso. No. 2013-

15. UTILITY BILLING SOFTWARE IMPLEMENTATION UPDATE AND CONSULTANT VARIANCE APPROVAL FOR BACKFLOW TEST TRACKING, CROSS CONNECTION AND RECYCLED WATER ON-SITE INSPECTIONS

Recommendation: That the Board authorize the General Manager to execute Variance No. 2, in the amount of \$110,000, with Infosys for additional implementation services for the Utility Billing Software Implementation, projects 11615 (3236) and 21615 (3237).

16. BAKER WATER TREATMENT FACILITY PARTICIPANT PROJECT FINANCING – EL TORO WATER DISTRICT

Recommendation: That the Board approve the installment sale agreement between El Toro Water District and IRWD, and recommend approval of a municipal investment with a maturity greater than five years.

17. ASSOCIATION OF CALIFORNIA WATER AGENCIES' STATEWIDE WATER ACTION PLAN

Recommendation: That the Board adopt a resolution supporting the Association of California Water Agencies' Statewide Water Action Plan for California.

Reso. No. 2013-

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**OTHER BUSINESS**

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

18. A. General Manager's Report

B. Directors' Comments

C. Closed Session relative to conference with labor negotiator pursuant to Government Code Section 54957.6:  
Agency Designated Representative: President Reinhart  
Unrepresented Employee: Paul Cook

D. Adjourn

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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.

November 11, 2013

Prepared by: Christopher Smithson

Submitted by: Cheryl Clary

Approved by: Paul Cook

## PUBLIC HEARINGS

### CONSOLIDATION OF COTERMINOUS IMPROVEMENT DISTRICTS 125 AND 225; DETACHMENTS FROM AND ANNEXATIONS TO IMPROVEMENT DISTRICTS 153 AND 253; FORMATION OF IMPROVEMENT DISTRICTS 185 AND 285; AND ADOPTION OF PLANS OF WORKS FOR IMPROVEMENT DISTRICTS 125, 225, 153, 253, 185, AND 285

#### SUMMARY:

At the October 28, 2013 Board meeting, the Board approved several resolutions:

- Resolution No. 2013-38 declared its intention to:
  - order the consolidation of coterminous water Improvement Districts (IDs) to form one coterminous water ID 125 and adopt a Plan of Works; and
  - order the consolidation of coterminous sewer IDs to form one coterminous sewer ID 225 and adopt a Plan of Works;
- Resolution No. 2013-39 declared its intention to detach and annex specified territories to IDs 153 and 253 and to adopt revised Plans of Works for the identified IDs;
- Resolution No. 2013-40 declared its intention to form ID 185 and to adopt a Plan of Works; and
- Resolution No. 2013-41 declared its intention to form ID 285 and to adopt a Plan of Works.

Staff recommends that the Board find that the consolidation is in the best interest of the present and future taxpayers and property owners of the coterminous improvement districts to be consolidated as ID 125 and coterminous improvement districts to be consolidated as ID 225. Furthermore, staff recommends that the Board find that the reorganization of IDs 153 and 253 and the formation of IDs 185 and 285 will benefit the respective included lands. Each Plan of Works includes a “Benefit of the Plan of Works to the Lands in the Improvement District” section that outlines the requirements and the approach used to meet those requirements. The District has undertaken a comprehensive evaluation and study of its long-term financial requirements, including:

- A detailed planning, engineering and financial assessment of the total costs of existing and future facilities in the water and Sewer systems;
- Available bond authorization and other revenue sources to finance facilities to serve future development (“new capital”), augment system reliability and meet upgraded regulatory requirements for both existing and future demands (“enhancement”) and replace and refurbish the existing systems (“replacement”);
- Debt service;
- Simplification of the improvement district structure; and

Public Hearings – Consolidation of Coterminous Improvement Districts 125 and 225; Order Detachments and Annexations for Improvement Districts 153 and 253; Order Formation of Improvement Districts 185 and 285; and Adopt Plans of Works for Improvement Districts 125, 225, 153, 253, 185, and 285  
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- Assurance of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

The purpose of these hearings are to allow members of the public and the Board to consider any matters concerning the consolidation of the identified coterminous IDs, the annexation and detachment of specified territories for IDs 153 and 253 and the formation of the water ID 185 and the sewer ID 285. The District Secretary has noticed the hearings pursuant to the requirements of Section 6066 of the California Government Code.

### OUTLINE OF PROCEEDINGS

President: Declare this to be the time and place for hearings on:

- The consolidation of coterminous water IDs 102, 105, 106, 121, 130, 135, 140, 161, 182, 184, and 186 into ID 125 and Sewer IDs 2(202), 206, 221, 230, 235, 250, 261, 282, 284, and 286 into ID 225 and the adoption of Plans of Works for the new consolidated IDs;
- The detachment and annexation of specified territories to IDs 153 and 253 and to adopt revised Plans of Works for the water and sewer IDs 153 and 253;
- The formation of ID 185 and adoption of a Plan of Works; and
- The formation of ID 285 and adoption of a Plan of Works.

President: Declare the hearings open. Ask the Secretary how the hearings were noticed.

Secretary: Notice of the time and place of these hearings was published in the Orange County Register on October 28, 2013 and November 4, 2013. A notice was also posted in the District office on October 28, 2013, and on October 29, 2013, notices were posted in three public places within the territory proposed to be consolidated, the territory proposed to be detached and annexed, and the areas of ID formation.

Board: RECOMMENDATION: RECEIVE AND FILE THE AFFIDAVIT OF POSTING AND THE PROOF OF PUBLICATION PRESENTED BY THE SECRETARY.

President: Request Legal Counsel to describe the nature of the proceedings.

Legal  
Counsel: Describe the proceedings.

President: Inquire of the Secretary whether there have been any written communications.

Secretary: Respond.

President: Inquire whether there is anyone present who wishes to address the Board concerning:

- the proposed consolidations of IDs 125 and 225;
- the detachments and annexations of specified territories to and from IDs 153 and 253; and
- The formation of the water ID 185 and the Sewer ID 285.

President: Inquire whether there are any comments or questions from members of the Board of Directors. State that the hearings will be closed and ask for a recommendation to close the hearings and to adopt the following resolutions by title.

Board: RECOMMENDATION: THAT THE HEARINGS BE CLOSED AND THE FOLLOWING RESOLUTIONS BE ADOPTED BY TITLE:

RESOLUTION NO. 2013- \_\_\_\_

RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE IRVINE RANCH WATER DISTRICT ORDERING  
THE CONSOLIDATION OF COTERMINOUS IMPROVEMENT  
DISTRICTS AND ADOPTION OF PLANS OF WORKS FOR  
CONSOLIDATED IMPROVEMENT DISTRICTS 125 AND 225

RESOLUTION NO. 2013- \_\_\_\_

RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
IRVINE RANCH WATER DISTRICT ORDERING  
THE DETACHMENT OF SPECIFIED TERRITORY FROM,  
AND THE ANNEXATION OF SPECIFIED TERRITORY TO  
IMPROVEMENT DISTRICT NOS. 153 AND 253  
AND ADOPTING REVISED PLANS OF WORKS  
FOR SAID IMPROVEMENT DISTRICTS

RESOLUTION NO. 2013- \_\_\_\_

RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE IRVINE RANCH WATER DISTRICT ORDERING THE  
FORMATION OF IMPROVEMENT DISTRICT NO. 185,  
ADOPTING PLAN OF WORKS AND SETTING FORTH  
THE ESTIMATED EXPENSE OF CARRYING OUT THE  
PURPOSE OF SAID IMPROVEMENT DISTRICT

RESOLUTION NO. 2013- \_\_\_\_

RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE IRVINE RANCH WATER DISTRICT ORDERING THE  
FORMATION OF IMPROVEMENT DISTRICT NO. 285,  
ADOPTING PLAN OF WORKS AND SETTING FORTH  
THE ESTIMATED EXPENSE OF CARRYING OUT THE  
PURPOSE OF SAID IMPROVEMENT DISTRICT

ENVIRONMENTAL COMPLIANCE:

The improvement district consolidations, annexations, detachments and formations are categorically exempt from CEQA (categorical exemption Class 20) as projects consisting of changes in organization of local agencies not changing the area in which existing powers are exercised, under the California Environmental Quality Act Code of Regulations, Title 14, Article 19, Section 15320. The adoption of the Plans of Works and revised Plans of Works are steps in the process of authorization of bonds and not projects under CEQA (California Environmental Quality Act Code of Regulations, Title 14, Article 20, Section 15378(b)(4) - creation of government funding mechanisms or other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment).

LIST OF EXHIBITS:

- Exhibit “A” – Resolution consolidating coterminous Improvement Districts and adopting Plans of Works for Consolidated Improvement District Nos. 125 and 225
- Exhibit “B” – Resolution detaching and annexing territory to Improvement District Nos. 153 and 253 and Adopting Revised Plans of Works
- Exhibit “C” – Resolution forming Water Improvement District Nos. 185 and Adopting Plan of Works
- Exhibit “D” – Resolution forming Sewer Improvement District Nos. 285 and Adopting Plan of Works
- Exhibit “E” – Plan of Works Providing For Domestic Water Supply, Storage, Transmission and Distribution Facilities for Irvine Ranch Water District Improvement District No. 125
- Exhibit “F” – Plan of Works Providing For Sewer Collection, Treatment and Water Recycling for Irvine Ranch Water District Improvement District No. 225
- Exhibit “G” – Plan of Works Providing For Domestic Water Supply, Storage, Transmission and Distribution Facilities for Irvine Ranch Water District Improvement District No. 153
- Exhibit “H” – Plan of Works Providing For Sewer Collection, Treatment and Water Recycling for Irvine Ranch Water District Improvement District No. 253

Public Hearings – Consolidation of Coterminous Improvement Districts 125 and 225; Order Detachments and Annexations for Improvement Districts 153 and 253; Order Formation of Improvement Districts 185 and 285; and Adopt Plans of Works for Improvement Districts 125, 225, 153, 253, 185, and 285  
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Exhibit “I” – Plan of Works Providing For Domestic Water Supply, Storage, Transmission and Distribution Facilities for Irvine Ranch Water District Improvement District No. 185

Exhibit “J” – Plan of Works Providing For Sewer Collection, Treatment and Water Recycling for Irvine Ranch Water District Improvement District No. 285

Exhibit “K” – Long Term Capital Funding Plan Schedule



## **EXHIBIT "A"**

RESOLUTION NO. 2013-\_\_\_\_\_

### **RESOLUTION OF THE BOARD OF DIRECTORS OF THE IRVINE RANCH WATER DISTRICT ORDERING THE CONSOLIDATION OF COTERMINOUS IMPROVEMENT DISTRICTS AND ADOPTING PLANS OF WORKS FOR CONSOLIDATED IMPROVEMENT DISTRICT NOS. 125 AND 225**

WHEREAS, the Irvine Ranch Water District ("IRWD") has established various improvement districts for the purpose of acquiring and constructing works and facilities to provide water service for the benefit of the lands within such improvement districts, including Improvement District Nos. 102, 105, 106, 121, 130, 135, 140, 161, 182, 184 and 186 of IRWD; and

WHEREAS, IRWD has established various improvement districts for the purpose of acquiring and constructing works and facilities to provide sewer and recycled water service for the benefit of the lands within such improvement districts, including Improvement District Nos. 2(202), 206, 221, 230, 235, 250, 261, 282, 284 and 286 of IRWD; and

WHEREAS, by virtue of annexations and detachments ordered by this Board of Directors, the water improvement districts listed in the first recital hereof are coterminous, and the sewer improvement districts listed in the second recital hereof are coterminous; and

WHEREAS, it is the opinion of the Board of Directors of IRWD that it is in the best interests of IRWD to consolidate the water improvement districts listed in the first recital hereof into a single improvement district and to consolidate the sewer improvement districts listed in the second recital hereof into a single improvement district; and

WHEREAS, the Board of Directors of IRWD has been presented with a plan of works for each of the consolidated improvement districts amending the plans of works of the respective improvement districts to be consolidated; and

WHEREAS, by the adoption of Resolution No. 2013-38, the Board of Directors stated its intention to order said consolidations and adopt said plans of works; and

WHEREAS, by the adoption of said Resolution, the Board of Directors set Monday, November 11, 2013, at the hour of 5:00 p.m. of said day (or as soon thereafter as is reasonably practicable) in the Board of Directors Room of Irvine Ranch Water District, 15600 Sand Canyon Avenue, Irvine, California, as the time and place for a hearing on the question of such consolidations and plans of works and directed the publication and posting of notice thereof; and

WHEREAS, at the time set, the duly noticed public hearing was held, and all persons interested, including any persons owning land included within the improvement districts to be consolidated, were given an opportunity to be heard concerning any matters set forth in said Resolution;

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

Section 1. This Board has considered the benefit or lack of benefit to the lands within the coterminous Improvement District, as described in the proposed Plans of Works, and has determined that the lands in said coterminous Improvement Districts will benefit through their inclusion in the within said Improvement Districts. Pursuant to Sections 36454 *et seq.* of the Water Code, the Board of Directors hereby determines that the proposed consolidations are in the best interests of the present and future property owners and taxpayers and hereby orders the consolidation of the water improvement districts listed in the first recital hereof, as modified by the annexations and detachments described, depicted and ordered in Resolution No. 2013-38, into a single improvement district, which shall be designated "Improvement District No 125," and the consolidation of the sewer improvement districts listed in the second recital hereof, as modified by the annexations and detachments described, depicted and ordered in Resolution No. 2013-38, into a single improvement district, which shall be designated "Improvement District No. 225."

Section 2. The Plans of Works for Improvement District Nos. 125 and 225, as presented to this meeting, are hereby adopted.

Section 3. The purpose of the consolidated Improvement District No. 125 and of the plan of works shall be to acquire and construct works and facilities, as described in the plan of works, for the acquisition, collection, storage, distribution and treatment of water and water rights, including dams, reservoirs, storage tanks, treatment facilities, pipes, pumping equipment, urban runoff diversion and treatment systems, and all necessary equipment and property therefor, reconstruction, replacements and additions to said facilities, acquiring funds to fulfill contractual commitments to carry out the powers and purposes of IRWD contained in contracts, including contracts with other agencies, and the payment of operating and other costs of IRWD to the extent permitted by law, provided that the carrying out of said purpose shall benefit the land within the proposed improvement district.

Section 3. The purpose of the consolidated Improvement District No. 225 and of the plan of works shall be to acquire and construct works and facilities, as described in the plan of works, for the collection, treatment and disposal of sewage and the storage and distribution of reclaimed water, including dams, reservoirs, storage tanks, treatment facilities, pipes, pumping equipment and all necessary equipment and property therefor, reconstruction, replacements and additions to said facilities, acquiring funds to fulfill contractual commitments to carry out the powers and purposes of IRWD contained in contracts, including contracts with other agencies, and the payment of operating and other costs of IRWD to the extent permitted by law, provided that the carrying out of said purpose shall benefit the land within the proposed improvement district

Section 4. The Secretary is hereby directed to file a certified copy hereof with the Auditor of the County of Orange, the Assessor of the County of Orange and the Board of Equalization of the State of California. Each filing shall be accompanied by the statement on the Board of Equalization's form, maps or plats and any other documents as may be required by Section 54902 of the California Government Code.

ADOPTED, SIGNED AND APPROVED this 11<sup>th</sup> day of November, 2013.

\_\_\_\_\_  
President/Vice President  
IRVINE RANCH WATER DISTRICT  
and of the Board of Directors  
thereof

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

APPROVED AS TO FORM:

BOWIE, ARNESON,  
WILES & GIANNONE  
Legal Counsel - IRWD

By \_\_\_\_\_

BAWGjca/ 172768

## **EXHIBIT "B"**

RESOLUTION NO. 2013-\_\_\_\_\_

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
IRVINE RANCH WATER DISTRICT ORDERING  
THE DETACHMENT SPECIFIED TERRITORY FROM,  
AND THE ANNEXATION OF SPECIFIED TERRITORY TO  
IMPROVEMENT DISTRICT NOS. 153 AND 253  
AND ADOPTING REVISED PLANS OF WORKS  
FOR SAID IMPROVEMENT DISTRICTS**

WHEREAS, the Irvine Ranch Water District ("IRWD") has established various improvement districts for the purpose of acquiring and constructing works and facilities to provide water service for the benefit of the lands within such improvement districts, including Improvement District No. 153 of IRWD; and

WHEREAS, IRWD has established various improvement districts for the purpose of acquiring and constructing works and facilities to provide sewer and recycled water service for the benefit of the lands within such improvement districts, including Improvement District No. 253 of IRWD; and

WHEREAS, by the adoption of Resolution No. 2013-39, the Board of Directors declared its intention to order the below-designated annexations to (the "Annexations") and detachments from (the "Detachments") said improvement districts upon the terms and conditions set forth herein; and

WHEREAS, it is the opinion of the Board of Directors of IRWD that the below-designated annexations (the "Annexations") and detachments (the "Detachments"), each as described and depicted in the exhibit hereto listed opposite each such annexation or detachment, should be ordered upon the terms and conditions set forth herein; and

WHEREAS, the Board of Directors of IRWD has been presented with a draft revised plan of works for each of Improvement District Nos. 153 and 253, amending and superseding the respective existing plans of works for said improvement districts.

WHEREAS, by the adoption of said Resolution, the Board of Directors set Monday, November 11, 2013, at the hour of 5:00 p.m. of said day (or as soon thereafter as is reasonably practicable) in the Board of Directors Room of Irvine Ranch Water District, 15600 Sand Canyon Avenue, Irvine, California, as the time and place for a hearing on the question of such Annexations and Detachments and directed the publication and posting of notice thereof; and

WHEREAS, at the time set, the duly noticed public hearing was held, and all persons interested, including all persons owning land included within the herein-described property to be detached and/or annexed, were given an opportunity to be heard concerning any matters set forth in said Resolution;

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

Section 1. This Board has considered the benefit or lack of benefit to the lands within Improvement District Nos. 153 and 253 and any other matter related to the Annexations and Detachments, as described in the proposed revised Plans of Works, and hereby determines that the lands in said Improvement Districts, including the properties hereby annexed to each of the Improvement Districts, will benefit through their inclusion in the within said Improvement Districts.

Section 2. Pursuant to Sections 36428 *et seq.* and Sections 36442 *et seq.*, respectively, of the Water Code, the Board of Directors hereby orders the below-designated Annexations and Detachments:

ANNEXATION NO. 1 TO IMPROVEMENT DISTRICT NO. 153 [Exhibits A1 and B1];

DETACHMENT NO. 1 FROM IMPROVEMENT DISTRICT NO. 153 [Exhibits A2 and B2];

ANNEXATION NO. 1 TO IMPROVEMENT DISTRICT NO. 253 [Exhibits A3 and B3];

DETACHMENT NO. 1 FROM IMPROVEMENT DISTRICT NO. 253 [Exhibits A4 and B4].

Section 3. The Annexations and Detachments shall be subject to the following terms and conditions:

(a) From and after the date of Annexations, the properties annexed shall be liable for debt service on all currently outstanding and future bonds of the respective improvement district to which they are annexed (including any bonds of a predecessor improvement district with respect to which any improvement district is obligated);

(b) From and after the date of Detachments, to the extent permitted by law, the properties detached shall be relieved of liability for debt service on all currently outstanding and future bonds of the respective improvement district from which they are detached (including any bonds of a predecessor improvement district with respect to which any improvement district is obligated);

(c) IRWD shall pay the costs incurred by IRWD in accomplishing the Annexations and Detachments, including legal, engineering and administrative costs, and all processing fees of the County of Orange and/or the State Board of Equalization.

Section 4. The revised Plans of Works for Improvement District Nos. 153 and 253, as presented to this meeting, be and the same hereby are adopted.

Section 5. Assessments for carrying out any of the respective purposes of Improvement District or warrants of said Improvement Districts, shall be levied exclusively

on the lands in said Improvement Districts, including the properties annexed to each of the Improvement Districts. If revenues are used for carrying out any of the respective purposes of Improvement District Nos. 153 and 253, including the payment of principal of and interest on any outstanding revenue bonds of said Improvement Districts, such revenues shall be limited to revenues derived from the operation of the Improvement District works, including those serving the properties annexed.

Section 6. The Secretary is hereby directed to file a certified copy hereof with the Auditor of the County of Orange, the Assessor of the County of Orange and the Board of Equalization of the State of California. Each filing shall be accompanied by the statement on the Board of Equalization's form, maps or plats and any other documents as may be required by Section 54902 of the California Government Code.

ADOPTED, SIGNED AND APPROVED this \_\_\_\_ day of \_\_\_\_\_, 2013.

\_\_\_\_\_  
President/Vice President  
IRVINE RANCH WATER DISTRICT  
and of the Board of Directors  
thereof

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

APPROVED AS TO FORM:

BOWIE, ARNISON,  
WILES & GIANNONE  
Legal Counsel - IRWD

By \_\_\_\_\_

BAWGjca/ 0172773

## EXHIBIT "C"

RESOLUTION NO. 2013-\_\_\_\_\_

### RESOLUTION OF THE BOARD OF DIRECTORS OF THE IRVINE RANCH WATER DISTRICT ORDERING THE FORMATION OF IMPROVEMENT DISTRICT NO. 185, ADOPTING PLAN OF WORKS AND SETTING FORTH THE ESTIMATED EXPENSE OF CARRYING OUT THE PURPOSE OF SAID IMPROVEMENT DISTRICT

WHEREAS, the Board of Directors of the Irvine Ranch Water District ("IRWD") has commenced proceedings to form an improvement district to be known as Improvement District No. 185 pursuant to Section 36410 *et seq.* of the Water Code of the State of California; and

WHEREAS, by the adoption of Resolution No. 2013-40, the Board of Directors declared its intention to form the proposed improvement district, to adopt a plan of works and to issue and sell general obligation bonds therefor, for the purposes set forth in that Resolution and more particularly set forth in the plan of works prepared for the proposed improvement district and presented to the Board of Directors, entitled "Plan of Works Providing For Domestic Water Supply, Storage, Transmission and Distribution Facilities for Irvine Ranch Water District Improvement District No. 185 (the 'Plan of Works')"; and

WHEREAS, by the adoption of said Resolution, the Board of Directors set Monday, November 11, 2013, at the hour of 5:00 p.m. of said day (or as soon thereafter as is reasonably practicable) in the Board of Directors Room of Irvine Ranch Water District, 15600 Sand Canyon Avenue, Irvine, California, as the time and place for a hearing on the question of the formation of the proposed improvement district, the extent thereof, the purpose for which it is to be formed, the benefit to lands within the proposed improvement district from carrying out said purpose, the estimated expense of carrying out said purpose, the proposed Plan of Works and the benefit or lack of benefit therefrom to the lands within the proposed improvement district and any other matter related to any of the foregoing; and

WHEREAS, at the time set, the duly noticed public hearing was held and all persons interested, including all persons owning land within the territory proposed to be included in the proposed improvement district, were given an opportunity to be heard concerning any matters set forth in said Resolution No. 2013-40;

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

Section 1. This Board has considered the benefit or lack of benefit to the lands within the proposed improvement district and any other matter related to any of the foregoing, as described in the proposed Plan of Works, and hereby determines that the proposed improvement district, the extent thereof, and the purpose for which it is to be formed, will benefit lands the within the proposed improvement district..

Section 2. The proposed improvement district, hereby designated AImprovement District No. 185 of Irvine Ranch Water District,@ be and the same hereby is ordered to be formed for the purposes and with the exterior boundary described in the map thereof on file with the Secretary as specified in Resolution No. 2013-40, and the Plan of Works, as presented to this meeting, be and the same hereby is adopted.

Section 3. The estimated expense of carrying out the purposes of Improvement District No. 185 as set forth in the Plan of Works is \$13,500,000.00.

Section 4. The Secretary is hereby directed to file a certified copy hereof with the Auditor of the County of Orange, the Assessor of the County of Orange and the Board of Equalization of the State of California. Each filing shall be accompanied by the statement on the Board of Equalization=s form, maps or plats and any other documents as may be required by Section 54902 of the California Government Code.

ADOPTED, SIGNED AND APPROVED this \_\_\_\_ day of \_\_\_\_\_, 2013.

\_\_\_\_\_  
President/Vice President  
IRVINE RANCH WATER DISTRICT  
and of the Board of Directors thereof

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

APPROVED AS TO FORM:

BOWIE, ARNESON, WILES & GIANNONE  
Legal Counsel - IRWD

By \_\_\_\_\_

BAWGjca/ 00172792/ 110613



**EXHIBIT "D"**

RESOLUTION NO. 2013-\_\_\_\_\_

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
IRVINE RANCH WATER DISTRICT ORDERING THE  
FORMATION OF IMPROVEMENT DISTRICT NO. 285,  
ADOPTING PLAN OF WORKS AND SETTING FORTH  
THE ESTIMATED EXPENSE OF CARRYING OUT THE  
PURPOSE OF SAID IMPROVEMENT DISTRICT**

WHEREAS, the Board of Directors of the Irvine Ranch Water District ("IRWD") has commenced proceedings to form an improvement district to be known as Improvement District No. 285 pursuant to Section 36410 *et seq.* of the Water Code of the State of California; and

WHEREAS, by the adoption of Resolution No. 2013-41, the Board of Directors declared its intention to form the proposed improvement district, to adopt a plan of works and to issue and sell general obligation bonds therefor, for the purposes set forth in that Resolution and more particularly set forth in the plan of works prepared for the proposed improvement district and presented to the Board of Directors, entitled "Plan of Works Providing For Wastewater Collection, Treatment and Water Recycling for Irvine Ranch Water District Improvement District No. 285 (the "Plan of Works"); and

WHEREAS, by the adoption of said Resolution, the Board of Directors set Monday, November 11, 2013, at the hour of 5:00 p.m. of said day (or as soon thereafter as is reasonably practicable) in the Board of Directors Room of Irvine Ranch Water District, 15600 Sand Canyon Avenue, Irvine, California, as the time and place for a hearing on the question of the formation of the proposed improvement district, the extent thereof, the purpose for which it is to be formed, the benefit to lands within the proposed improvement district from carrying out said purpose, the estimated expense of carrying out said purpose, the proposed Plan of Works and the benefit or lack of benefit therefrom to the lands within the proposed improvement district and any other matter related to any of the foregoing; and

WHEREAS, at the time set, the duly noticed public hearing was held and all persons interested, including all persons owning land within the territory proposed to be included in the proposed improvement district, were given an opportunity to be heard concerning any matters set forth in said Resolution No. 2013-41;

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

Section 1. This Board has considered the benefit or lack of benefit to the lands within the proposed improvement district and any other matter related to any of the foregoing, as described in the proposed Plan of Works, and hereby determines that the proposed improvement district, the extent thereof, and the purpose for which it is to be formed, will benefit lands the within the proposed improvement district.

Section 2. The proposed improvement district, hereby designated Improvement District No. 285 of Irvine Ranch Water District, be and the same hereby is ordered to be formed for the purposes and with the exterior boundary described in the map thereof on file with the Secretary as specified in Resolution No. 2013-41, and the Plan of Works, as presented to this meeting, be and the same hereby is adopted.

Section 3. The estimated expense of carrying out the purposes of Improvement District No. 285 as set forth in the Plan of Works is \$21,300,000.00.

Section 4. The Secretary is hereby directed to file a certified copy hereof with the Auditor of the County of Orange, the Assessor of the County of Orange and the Board of Equalization of the State of California. Each filing shall be accompanied by the statement on the Board of Equalization's form, maps or plats and any other documents as may be required by Section 54902 of the California Government Code.

ADOPTED, SIGNED AND APPROVED this 11<sup>th</sup> day of November, 2013.

---

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

---

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

APPROVED AS TO FORM:

BOWIE, ARNESON, WILES & GIANNONE  
Legal Counsel - IRWD

By \_\_\_\_\_

BAWGjca/ 001727911/ 110613

**REVISED  
 PLAN OF WORKS  
 PROVIDING FOR SEWER COLLECTION, TREATMENT  
 AND WATER RECYCLING FOR  
 IRVINE RANCH WATER DISTRICT  
 IMPROVEMENT DISTRICT NO. 285**

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## SECTION 1 INTRODUCTION

### 1.1 OBJECTIVES

This Plan of Works is a means by which the fiscal requirements of the Improvement District are identified, including bond authorization, in order to provide for the construction, planning and design of facilities necessary to provide service within the Improvement District. The obligation of the Irvine Ranch Water District (“IRWD” or the “District”) is to plan to meet the projected service needs of the specific property within the Improvement District.

The Sewer Treatment Master Plan (“WTMP”) and its predecessor planning documents have accomplished the planning of the District’s sewer collection and treatment. The Sewage Collection System Master Plan (SCSMP) also addresses the planning of the collection system. Recycled water supply, which is within the fiscal requirements of sewer plans of works, including this Plan of Works, is part of the scope of the Water Resources Master Plan (“WRMP”). Sub-area master plans (“SAMP”) are created to plan in more detail the local facilities needed for development planning areas that may overlie all or part of an improvement district. SAMPs are generally prepared as the property owners and the city planning agency begin the development process.

Plans of works are used to describe local facilities and proportional participation in regional facilities that the improvement districts will need, relying on the WTMP, WRMP, SCSMP, and SAMPs for the detailed engineering and planning analysis. The role of the plan of works is founded in statute (Water Code 35950 *et seq.*) and is to define a plan for the facilities needed to serve the improvement district and make an estimate of their cost as necessary to support the voter authorization and issuance of general obligation bonds of the District for the improvement district. The plan of works thus provides the linkage between the engineering plan and the corresponding financial requirements by setting forth the basis for a determination by the Board of Directors in a noticed hearing that the plan benefits all the territory within the improvement district including any territory that has been annexed to it.

Plans of Works incorporate generalized facilities descriptions and some flexibility in the selection of specific projects. This allows the District to accommodate changes in development phasing, changes in technology and facilities planning developed through IRWD’s ongoing master planning and subarea master planning, and corresponding changes in costs of acquisition, construction, replacement, reconstruction and additions to facilities. The Board of Directors may determine that it is necessary to change a previously adopted plan of works. This has occurred in some instances in conjunction with a revision in the cost estimate making it necessary to propose a supplemental authorization of bonds, and it has also occurred in conjunction with improvement district reorganization. This Plan of Works has been prepared in connection with the reorganization of Improvement District No. 253 to include a number of planned development areas within the improvement districts concurrently consolidated as Improvement District No. 225.] This Plan of Works has been prepared in connection with the formation of Improvement District No. 185 including a number of planned development areas within the former

Improvement District No. 135; Improvement District Nos. 135 and 235 and other improvement districts are being reorganized and consolidated as Improvement District Nos. 125 and 225.. See Section 1.3.

The facilities generally identified in this Plan of Works may also change without a modification of the Plan of Works, in order to substitute other facilities to accommodate land use planning or development phasing determinations as they evolve, or in accordance with facilities planning modifications and refinements identified through IRWD’s ongoing master planning and subarea master planning. The general purpose of the facilities in the Plan of Works is to meet the sewer collection and treatment and recycled water requirements of the Improvement District, including basic system redundancy and reliability in accordance with the policies of the District. As the facilities are needed, IRWD will choose those projects that provide sewer collection and treatment and recycled water services most economically. Projects may include acquisition, construction, reconstruction and addition to facilities. The fiscal requirements identified in the Plan of Works include the development phase, during which the system will be expanded and a share of the existing regional system will be acquired as needed to serve the Improvement District, and will continue thereafter, representing the Improvement District’s participation along with other improvement districts in the completion of the IRWD regional system.

This Plan of Works has the following general objectives: (1) update the description of the capital facilities for the sewer system; (2) provide a revised plan of works to supersede and replace the existing plan of works of the improvement district being reorganized; and (3) evaluate the benefit of the revised plan of works to the territory of the reorganized improvement district.

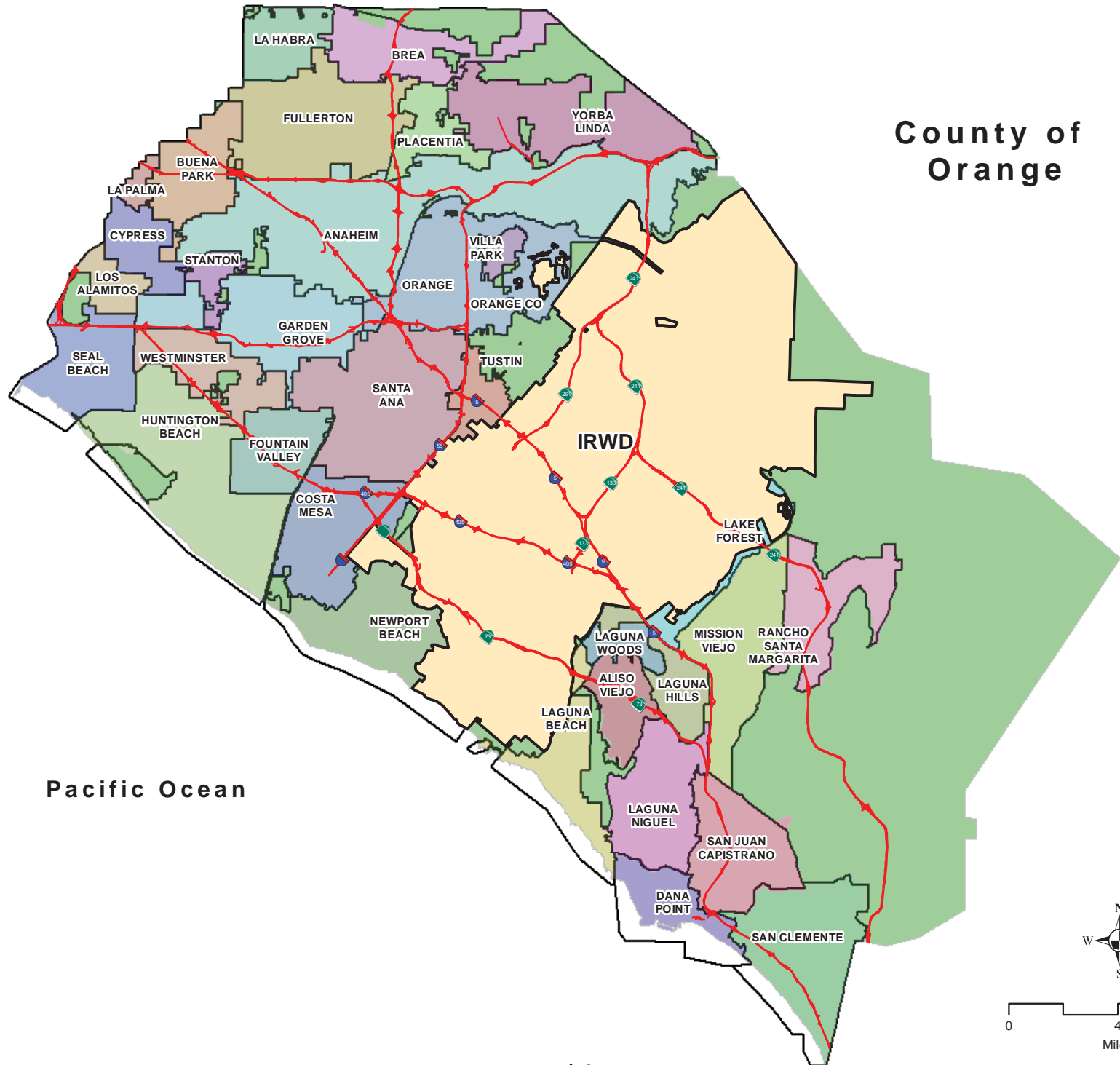
The further objectives of this Plan of Works are to determine logical planning areas and the need for facilities. This includes (1) a proportionate share of regional sewer collection and treatment and recycled water facilities; and (2) adequate local planning and system layouts based on the projected ultimate development within the improvement district.

## 1.2 DESCRIPTION OF THE IRVINE RANCH WATER DISTRICT

The District was established in January, 1961, as a California Water district under the provisions of Section 34000 *et seq.* of the California Water Code (the “Act”). Presently the District has four primary services – supplying potable water, collecting and treating sewer, producing and distributing recycled and other non-potable water and implementing urban runoff treatment programs. Historically, the District has provided agricultural water service as needed until residential or commercial development occurs, and provided potable and recycled water services and sewage collection and treatment service when development occurs. Recycled water is used for irrigation of agricultural areas, parks, parkways, greenbelt areas and school grounds, and is used for individual yard landscaping in certain areas, industrial processing, toilet and urinal flushing and other purposes permitted by regulations. IRWD has also implemented a plan for natural treatment system service to divert urban runoff of water used for irrigation and other outdoor uses and treat the runoff by natural processes in water quality wetlands and similar facilities. See **Figure I-1** for a location Map of IRWD.



# County of Orange



Pacific Ocean



The District serves a 178-square-mile area extending from the Pacific Ocean and over a central flat, alluvial plain to the foothills, which includes all of the City of Irvine and portions of the cities of Tustin, Newport Beach, Costa Mesa, Orange and Lake Forest, as well as certain unincorporated areas of the County. The District serves a total estimated population of approximately 340,000 through approximately 105,000 water and approximately 100,400 sewer service connections.

### 1.3 THE IMPROVEMENT DISTRICTS

**Historical Background.** At the time of the District's initial formation, the District's objective was to secure a supplemental water supply for irrigation and domestic use from The Metropolitan Water District of Southern California ("MWD"). This was accomplished through the installation of regional water transmission pipelines in cooperation with other districts in and the construction of the San Joaquin Reservoir, financed by the sale in 1961 and 1963 of general obligation waterworks bonds of the overall District aggregating \$10,500,000.

After the initial authorization of waterworks bonds for the overall District, all water and sewer bonds were authorized within improvement districts formed by the District to encompass specific geographic areas. The first improvement district formation occurred in 1965, when sewage collection and treatment were added to the District's powers and Improvement District No. 1, a sewer improvement district, was formed to provide financing for the District's first collection, treatment and reclamation systems. Between 1965 and 2008, the District formed 18 water improvement districts and 16 sewer improvement districts covering specific areas within the District's boundaries, some of them overlapping.

The District formed the improvement districts<sup>1</sup> in order to allocate funding responsibility for capital facilities to the areas which would benefit from such capital facilities. Local facilities addressed particular needs that varied by geographic area, proximity to existing infrastructure, elevation and other factors. Improvement districts were also used to separate areas based on projected timing of development so that local capital facilities construction could be matched to development approval decisions as they occurred. In addition, improvement districts served as a mechanism to share the funding of the District's regional facilities to be used by improvement districts in common, such as major water importation facilities and water and sewer treatment plants. The plans of works derived information from District planning documents and from land development plans as the basis for determining, for water improvement districts, the water requirements and the size, location and phasing of water delivery facilities to be constructed from the existing feeders and supply sources, and, for sewer improvement districts, the sewage generation and recycled water requirements and the size,

<sup>1</sup> Most of the improvement districts were formed by the District's Board of Directors, but Improvement district formation was in some cases accomplished by the District's predecessor district or the Orange County Local Agency Formation Commission, in the case of certain areas included in the District by annexation or consolidation with another district.

location and phasing of sewer collection and recycled water delivery facilities to be constructed from the existing trunk sewers and recycled water distribution system to serve the various planning areas and service elevations or zones. As changes occurred in development planning, annexations and detachments were used to modify the boundaries of some of the improvement districts.

**Water Improvement Districts.** The initial financing of the District's water facilities was undertaken in the early 1960s with bonds of the District. During the 1970s, the District formulated a water facilities master plan and formed many of the water improvement districts that have existed until the current reorganization and consolidation. The first water improvement district to be formed was Improvement District ("ID") No. 104, formed in 1972, followed by the formation of ID Nos. 103 and 105 in 1974, and ID Nos. 102, 106 and 109 in 1976. When water improvement districts were formed, the District excluded lands (sometimes referred to collectively with the shorthand reference "110" in keeping with the District's numbering system for designating improvement districts) that were determined to have funded a portion of the District's earliest regional system costs through payment of debt service on general obligation waterworks bonds of the overall District in the 1960s.

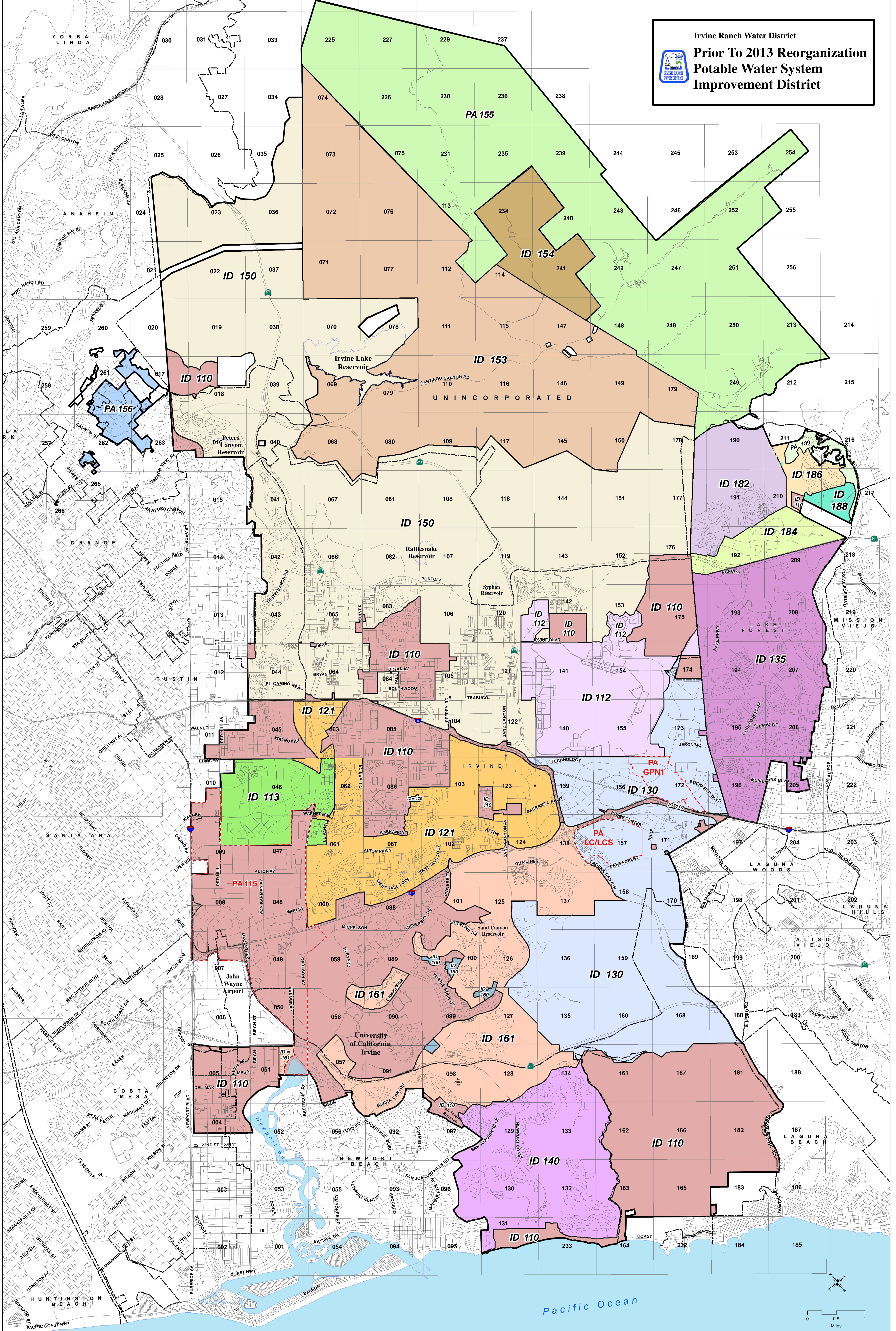
ID No. 104 incorporated the coastal area of the District from the Pacific Ocean to the crest of the San Joaquin Hills. ID No. 103 covered the planned industrial and commercial developments, then known as the Irvine Center Planned Community or "Regional Triangle" and the Irvine Industrial Complex-East, in the vicinity of the intersection of the Santa Ana and San Diego Freeways and adjacent to the Marine Corps Air Station, El Toro. ID No. 105, containing about 22,000 acres in the northernmost portion of the District extending from the Santa Ana Freeway to the northerly, easterly and westerly boundaries of IRWD, was formed initially to build a pipeline to replace the Highline Canal System for the delivery of water from Irvine Lake for agricultural irrigation purposes; its first plan of works contemplated that these untreated water facilities would be augmented with later phases of works to deliver domestic water. ID No. 102 was formed to include the central part of Irvine, between the Santa Ana and San Diego Freeways. ID No. 106 encompassed the Turtle Rock, Quail Hill and Bonita Canyon areas of the San Joaquin Hills, extending north to the San Diego Freeway. ID No. 109 covered the portion of the San Joaquin Hills extending eastward from proposed Sand Canyon Avenue to the eastern boundary of the District.

As urban growth continued, further phases were added to the District's planned water system in the mid- to late 1970s, and it became necessary to increase the authorization of bonds to finance them. To accomplish that objective for some of the initial water improvement districts, the District revised the plans of works and elections were conducted to obtain supplemental bond authorizations (ID No. 103 in 1976, 1977 and 1978, ID No. 105 in 1976 and 1978, and ID No. 109 in 1978). In other improvement districts, the District formed overlapping improvement districts with new bond authorizations: ID Nos. 121, 141 and 142, and 161 were formed in 1978, overlapping portions of ID Nos. 102, 104, and 106, respectively.

Beginning in the late 1980s, other water improvement districts were formed as areas were added to the District by annexation and consolidation and as former military bases were closed and underwent reuse planning. In 1988, ID Nos. 182 and 184 were formed over the Foothill Ranch (Whiting Ranch) area located in the foothills and canyons north of El Toro in eastern Orange County, an area that was annexed to IRWD in 1982. ID No. 182 covered the northern, predominantly residential portion of this planning area and ID No. 184 covered the southern, predominantly commercial portion. Later in 1988, ID Nos. 186 and 188 were formed over the annexed Glenn Ranch area lying to the east of Foothill Ranch and including a portion of the community of Portola Hills. ID No. 186 covered the northern, predominantly residential portion of this planning area and ID No. 188 covered the southern, predominantly commercial portion.

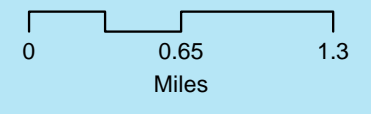
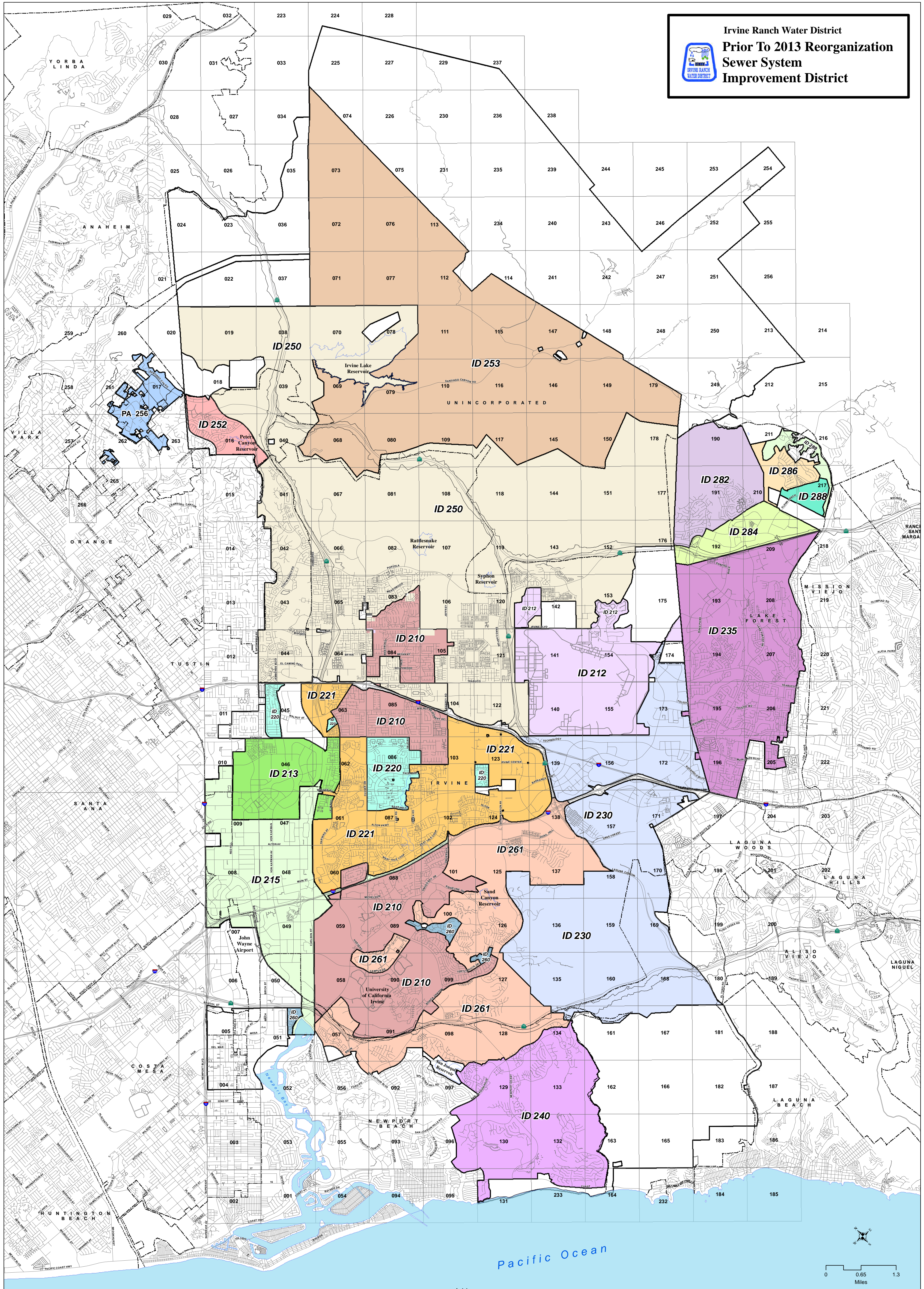


Irvine Ranch Water District  
**Prior To 2013 Reorganization  
 Potable Water System  
 Improvement District**





Irvine Ranch Water District  
 Prior To 2013 Reorganization  
 Sewer System  
 Improvement District





ID No. 135, encompassing the territory of the former Los Alisos Water District (“LAWD”), was formed as part of the proceedings for LAWD’s consolidation with IRWD on December 31, 2000, to provide a vehicle for issuing and servicing LAWD’s remaining water bond authorization. ID No. 135 lies to the northeast of the intersection of the Santa Ana and San Diego Freeways, and covers a majority portion of the City of Lake Forest.

ID No. 113 was formed in 2004 over the property within the former Marine Corps Air Station Tustin, a facility established in 1942 to support U.S. Navy lighter-than-air aircraft (blimps) conducting anti-submarine patrol off the California coast during World War II and later used to support Marine Corps helicopter operations until its closure in 1999. The former helicopter base, now known as Tustin Legacy, is currently being redeveloped with residential, commercial, institutional and recreational uses.

The formation of ID Nos. 153 and 154 took place in conjunction with the July 1, 2006 consolidation of the former Santiago County Water District (SCWD) with IRWD, to serve as the successors to two improvement districts formed by SCWD in 1978, ID No. 1 (water and sewer) in the area extending northward from Loma Ridge to the Fremont Canyon area, and ID No. 2 (water) including portions of Black Star, Baker and Hall Canyons. As part of the district consolidation, the majority of the territory of SCWD’s ID No. 1 became ID No. 153 (with respect to ID No. 1’s water bond authorization), and all of the territory of SCWD’s water ID No. 2 became ID No. 154 of IRWD.

The most recent IRWD water improvement district formation took place in 2008, when the District formed ID No. 112 over the lands in the eastern portion of the District north of the Santa Ana Freeway, within the former Marine Corps Air Station El Toro, a base originally established in 1942 to support U.S. Marine Corps aviation activities during World War II, and encompassing the planning areas now known as Heritage Field and the Great Park.

**Sewer Improvement Districts.** The first sewer improvement district to be formed by the District was Improvement District No. 1, in 1965. ID No. 1 encompassed an area lying south of the San Diego Freeway and ranging from two to seven miles inland from the Pacific Ocean, including most of the University of California Irvine campus. ID No. 1 assumed the obligations of Orange County Sanitation District No. 14 for the cost of a nucleus collection system when District No. 14 was disbanded,<sup>2</sup> and ID No. 1’s planned works also included a treatment plant and IRWD’s initial reclamation and reclaimed water storage facilities. ID No. 1 is presently known as ID No. 1(201) or “210.” Like “110”, the “210” area was excluded from later improvement district formations based on initial contribution.

After ID No. 1, sewer improvement district formations generally paralleled the water improvement district formations discussed in the preceding section. In the case of most of the

<sup>2</sup> The disbanded Sanitation District was the original “District No. 14.” Another District No. 14 of the Orange County Sanitation Districts was formed in 1986, over much of IRWD’s territory (except for the coastal portion within Orange County Sanitation District No. 5), for the purpose of acquiring regional collection, treatment and disposal capacity in the OCSD facilities to augment IRWD’s Michelson Water Reclamation Plant. See Section 1.4.

improvement districts formed before 1978, each sewer improvement district preceded its water counterpart by a few years; after that, each water improvement district and its corresponding sewer improvement district were generally formed concurrently and were coterminous.

In 1971, sewer ID Nos. 2 (subsequently known as 202) and 3 (subsequently known as 203) were formed over areas generally corresponding to the areas that, a few years later, were included in water ID Nos. 102 and 103, described above. Their plans of works contemplated an expansion of the Michelson Water Reclamation Plant, dual collection and treatment systems for reclaimable domestic sewer and non-reclaimable industrial discharges, reclaimed water distribution facilities and wet weather treated sewer disposal. ID No. 204 was formed in 1972 at the same time as the corresponding water ID No. 104. ID No. 204's plan of works initially envisioned two systems delivering sewage from the coastal area, one discharging to a regional treatment and disposal system and the other to a local treatment plant to be built. Ultimately, the collection system was instead designed to deliver all of the sewage flow from ID No. 204 (and from the later-formed ID Nos. 241 and 242) to the interceptor and trunk sewers and regional treatment facilities financed by Orange County Sanitation District No. 5. ID No. 206 was formed in 1975, covering the area corresponding to ID No. 106 which was formed the following year.

As happened in the water system, the addition of further phases of facilities to the planned sewer system in the late 1970s made it necessary to increase the authorized bonds to finance them. In 1978, the District formed ID Nos. 221, 241, 242, 250, 261 and 290 (coterminous with the counterpart water ID Nos. 121, 141, 142, 105, 161 and 109, respectively).

Beginning in the 1980s, the addition of areas to the District by annexations and consolidations and the closure of former military bases generally led to the formations of sewer improvement districts at the same time as the corresponding water improvement district formations, described above.<sup>3</sup> ID Nos. 282, 284, 286 and 288 were formed in 1988 (coterminous with ID Nos. 182, 184, 186 and 188, respectively). ID No. 235, encompassing the territory of the former LAWD and coterminous with ID No. 135, was formed upon LAWD's consolidation with IRWD on December 31, 2000, to issue and service LAWD's remaining sewer bond authorization. Upon the July 1, 2006 consolidation of the former Santiago County Water District with IRWD, ID No. 253 (coterminous with ID No. 153) was formed as the successor to Santiago County Water District ID No. 1's 1978 sewer bond authorization). ID Nos. 213 (coterminous with ID No. 113) and 212 (coterminous with ID No. 112) were formed in 2004 and 2008, respectively. In 2008, ID No. 256 was formed through annexation proceedings that were conducted to include the former territory of Orange Park Acres Mutual Water Company in IRWD. ID No. 256 has no authorized bonds, but was formed to provide a potential vehicle for such authorization if and when the residents of the area, now served predominantly by septic tanks, determine to finance a public sewer collection system to allow a conversion to sewer service.

<sup>3</sup> An improvement district unrelated to the addition of service area to the District, ID No. 252, was formed in 2005, encompassing a small portion of the area formerly within ID No. 250.

**Regional Allocation.** As regional water system have been built, buy-ins and allocations among the improvement districts have been utilized to maintain proportionate sharing of regional system costs. Allocations among the improvement districts have similarly been utilized to maintain proportionate cost allocation of regional sewer system costs. Regional potable water and regional sewer allocations are based on demands. For the portion of the regional costs relating to the reclamation system, historically allocation was weighted, with two-thirds of the cost of the storage, transmission and disposal facilities making up the regional irrigation system allocated based on the improvement districts' prorated shares of the sewage generation and one-third of the cost prorated based on their share of irrigation water demands. That practice was subsequently discontinued, and the District instituted its current practice of establishing separate regional allocations for sewer facilities, based on sewage generation, and recycled water facilities, based on recycled water demand, for each sewer improvement district. Cost variations among tributary collection system areas have also been factored into the regional sewer allocation. The regional split for the area within ID No. 240 reflects that ID No. 240 has participated in the financing of the Orange County Sanitation District's treatment facilities and does not discharge sewer to the MWRP collection system.

Regional allocation includes facilities serving all improvement districts as well as sub-regional facilities serving two or more, but not all, improvement districts. Consistent with regional allocation, as certain areas were added to IRWD's service area through annexations, consolidations, and military base conversions, in some areas acquisition balances were established to recover regional system cost, and in others new improvement districts were formed to assure that those areas would contribute proportionately to regional facilities and pay for local facilities and expanded regional facilities to serve their demands. Regional allocation will continue to be used with the reorganized improvement districts to assure proportionate cost-sharing of the District's regional system.

Under the District's historic and continuing methodology for achieving equitable cost allocation, the improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. As a result an improvement district can reach full development, but its regional system funding participation will continue. A similar regional allocation would be applied to replacement and enhancement projects, to the extent funded by the improvement districts. This incremental funding approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service.

As discussed in more detail in Section 6, the District will also allocate future regional cost sharing to "110" and "210" areas excluded from earlier improvement district capital funding, based upon an analysis of historic cost contributions of these areas and benefit received from future capital facilities.

**Consolidation of Improvement Districts.** As development progresses to completion in improvement districts and the need for having separate improvement districts to match capital facilities



construction timing and other specific local facilities needs of different geographic areas diminishes, consolidation of various improvement districts can produce efficiencies for the District, its customers and property owners. The California Water Code allows the Board of Directors, in a noticed hearing process, to reorganize its improvement district boundaries and to consolidate coterminous improvement districts. The statutory provisions for the consolidation of improvement districts specify that a consolidated improvement district may levy and collect the assessments and charges necessary to satisfy the obligations of its predecessor improvement districts, and that the authorized and unissued bonds of the predecessor improvement districts may be issued and sold as the bonds of the consolidated improvement district.

Ultimately, the District envisions a succession plan that would reduce the number of its improvement districts, ideally to one water improvement district and one sewer improvement district, through consolidations and reorganizations to be implemented as and when considerations for separation of the various improvement districts no longer remain. The current reorganizations and consolidations significantly advance this plan. The timing of the remainder of this plan will be dictated by various factors relating to the preservation of equitable cost sharing as development continues to buildout and as the regional system benefits for various geographic areas are merged.

**Previous Consolidations.** Under the statutory consolidation provisions, some of the original improvement districts described in the preceding sections have been consolidated. The consolidations that were implemented prior to the current consolidation included two groups of the original improvement districts. The first of these consolidations took place in the coastal area. In 1989, after completing annexations to and detachments from ID Nos. 104, 141 and 142 to exclude permanent open space areas and create coterminous boundaries for the improvement districts' remaining territories, they were consolidated, with the resulting consolidated improvement district designated as ID No. 140. Simultaneously, ID Nos. 204, 241 and 242 were consolidated as coterminous improvement districts, with the resulting consolidated improvement district designated ID No. 240. Following a similar process in 2008, ID Nos. 103 and 109 were consolidated and designated as ID No. 130 and ID Nos. 3(203) and 290 were consolidated and designated as ID No. 230.

**The Current Consolidations and Reorganizations.** With the 1989 and 2008 improvement district consolidations, the District began to implement a transition of its improvement district financing structure from a developing to a developed condition. The current consolidations continue that transition. Based on the District's investigation of the merits of implementing further reorganization and consolidation of its improvement districts, the current reorganization and consolidation have been formulated on a comprehensive, District-wide basis, to provide a sustainable platform for capital funding through the buildout of the District and the completion of the system. The current reorganization and consolidation preserve the District's long-term funding approach in which regional facilities and capacity are acquired incrementally by all improvement districts until the regional system as a whole is complete and regional cost allocations are used to maintain equitable cost-sharing. The interrelated consolidation actions, expected to be effective January 1, 2014, include the following key components:

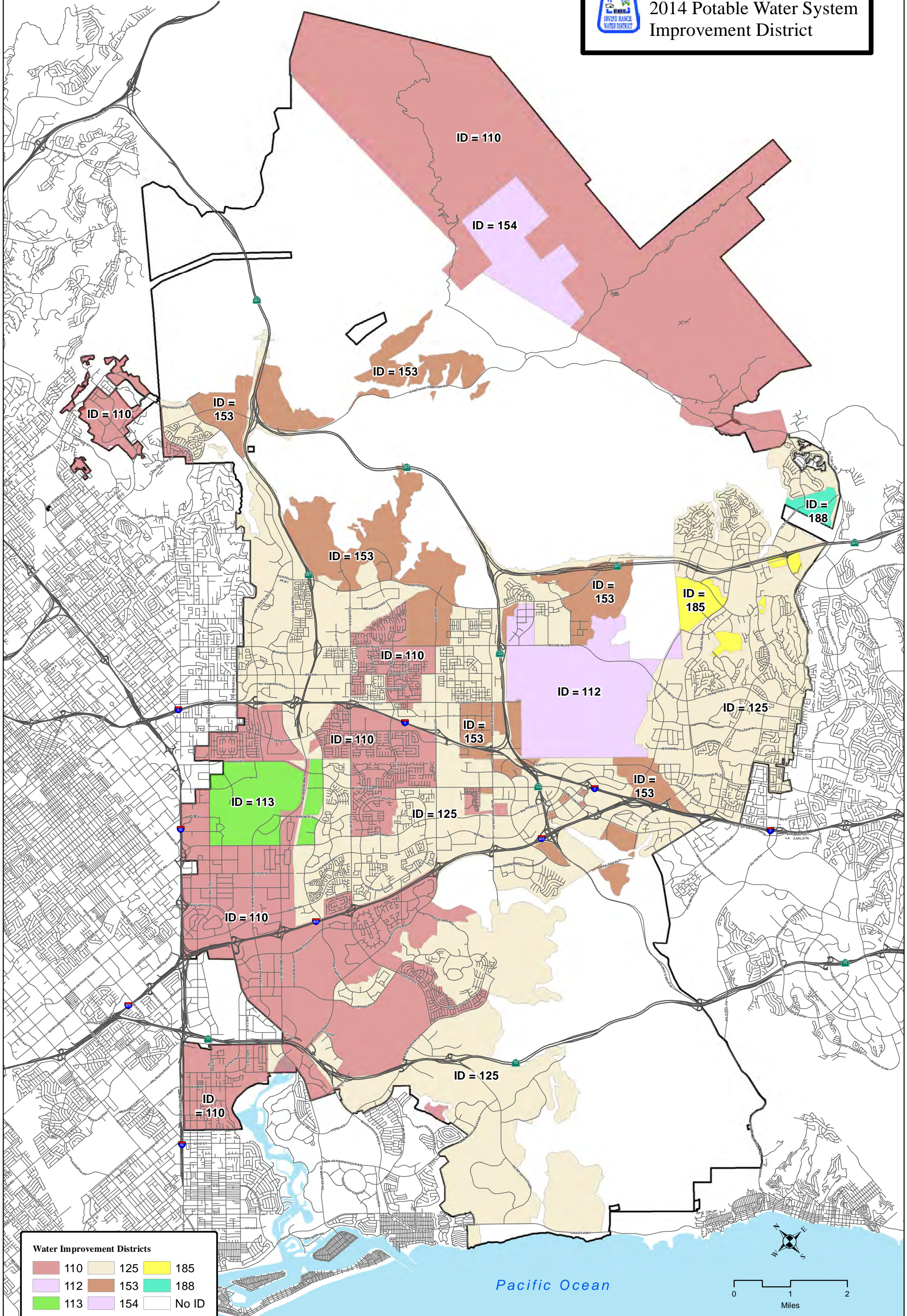
- Reorganization and consolidation of the substantially developed and certain partially developing improvement districts into a single water improvement district and a single sewer improvement district, ID Nos. 125 and 225;
- Reorganization of several remaining developing areas into one existing and one new water improvement district (ID Nos. 153 and 185) and one existing and one new sewer improvement district (ID Nos. 253 and 285). These developing areas are also retained within the improvement districts reorganized and consolidated as ID Nos. 125 and 225, with the effect that ID Nos. 125 and 225 will underlay these developing improvement districts and ensure cost participation of these developing improvement districts in local and sub-regional facilities already built by the former improvement districts being consolidated (see Chapter 6);
- Retention of existing ID Nos. 112, 113, 188, 212, 213 and 288 as separate developing improvement districts;
- Retention of existing ID Nos. 154, 252 and 256 pending future evaluation of applicable equity considerations;
- Establishment of a planning area over the area of former ID No. 135, consolidated within the developed water improvement district ID No. 125, until completion of financial programs currently in progress to place the former ID No. 135's user rates under the same structure as other developed areas;
- Retention of existing ID No. 240 as a separate improvement district, unless and until separate regional sewer cost allocations are no longer necessary;
- Implementation of separate charges or other mechanisms, as necessary, to recover a proportional allocation of cost for future regional facilities from the "110" and "210" areas that are not participating in proportional regional cost allocation by inclusion in an improvement district.

Throughout the construction of the District's capital facilities, the District has separated the financing of its water and sewer (including recycled water) systems. The District believes this historical separation continues to be justified, based on differences between the two systems in terms of the factors that govern the allocation of benefits and cost responsibilities among the areas served by each system. For this reason, the above described actions do not include any consolidations of water improvement districts with sewer improvement districts, and the District has no plans at this time to do so. The separation can be reexamined in the future.



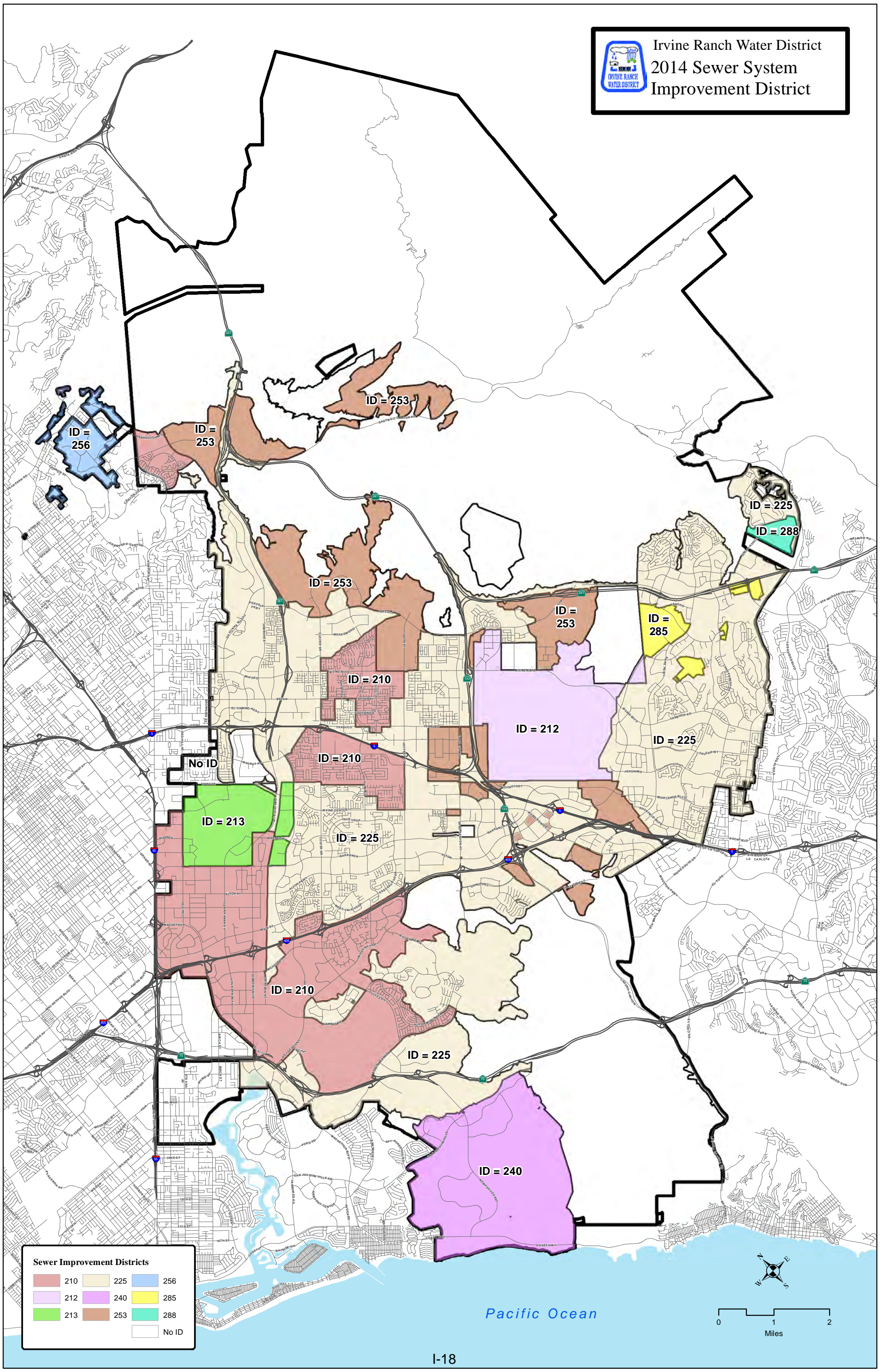


Irvine Ranch Water District  
2014 Potable Water System  
Improvement District



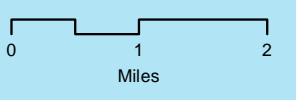
Water Improvement Districts		
110	125	185
112	153	188
113	154	No ID





**Sewer Improvement Districts**

210	225	256
212	240	285
213	253	288
No ID		





## 1.4 THE WATER, SEWER AND RECYCLED WATER SYSTEMS

**The Water System.** The initial domestic water system included the San Joaquin Reservoir<sup>4</sup> and IRWD's capacity in the East Orange County Feeder No. 2 and other transmission facilities, financed by the sale of general obligation waterworks bonds of the overall District in the 1960s. The District also acquired from the U.S. Government an 18-inch transmission main used to deliver a water supply to the Tustin and El Toro military bases from Metropolitan Water District's East Orange County Feeder and later from East Orange County Feeder No. 2. For the delivery of untreated water supplies, the District acquired capacity in the regional untreated delivery system of the Santiago Aqueduct Commission.

The District's Water Resources Master Plan ("WRMP"), initially formulated in 1972 and updated periodically, sought to provide for ultimate demands and reliability. With the formation of the first few improvement districts and the authorization and sale of improvement district bonds in the early 1970s, the system was expanded, adding local master planned facilities for each of the developing areas as development progressed and building the regional system in which the improvement districts participated in proportion to their demands. Through cooperative efforts with Municipal Water District of Orange County ("MWDOC"), neighboring water districts and cities, an area wide system was acquired, storage was constructed and transmission pipelines were acquired and installed to receive Colorado River imports via MWD facilities. This supplemental source of water was augmented by northern California supplies with commencement of deliveries through the State Water Project system in July, 1976.

In 1978, additional water capacity needed to serve the District was estimated at 140 cubic feet per second ("cfs") (ultimate peak month demand). A supplementary water source plan envisioned in the 1970s and embodied in the 1978 plans of works consisted of the purchase of a 60 cfs share of a proposed regional pipeline (then known as the "Diemer Intertie" and now known as the Allen McColloch Pipeline or "AMP") and an 80 cfs wellfield in the main Orange County groundwater basin. The AMP was constructed by MWDOC, with 79 cfs participation by IRWD, and IRWD constructed two transmission mains capable of supplying 45 cfs from AMP into the distribution system. These facilities, along with two wells in the Tustin area with a combined capacity of 4 cfs, and the Zone 1 Reservoir to provide internal operational storage and avoid the need to supply peak hour demands from feeder connections, comprised the first phase of the domestic water system. Construction of the 80 cfs wellfield, known as the "Dyer Road Wellfield," took place in the 1980's.

As the domestic water system was built, it was anticipated that commercial agriculture would be phased out by residential, industrial and commercial development, and it was assumed that the existing irrigation system would provide agricultural water until no longer needed. The cost of the untreated water system and its supply, storage and transmission facilities, consisting of the Irvine lake Pipeline and

<sup>4</sup> The San Joaquin Reservoir was initially constructed as a domestic water facility. Due to water quality considerations, that use was eventually discontinued, and IRWD acquired the facility from its agency partners and converted it to a recycled water seasonal storage facility.

improvements to Irvine Lake, were apportioned primarily to ID No. 105. In the 1970s, the ID No. 105 plans of works noted that the Irvine Lake Pipeline supply would require treatment for use as a domestic water supply, and an untreated delivery system from Irvine Lake, through either the Santiago Aqueduct Commission facilities or a new Irvine Lake Pipeline, as well as a treatment plant identified in the 1972 WRMP, were included in the planned works for that improvement district.

In the early to mid 1980s, as the district's water supply needs were updated, other regional system improvements were planned and financed by the improvement districts, including the continued construction of the regional supply, transmission and storage facilities, administration and operations facilities and telemetry.

The AMP, Dyer Road Wellfield and major delivery facilities were completed as contemplated in the existing plans of works. With those core imported and groundwater supply and delivery facilities and the associated distribution system in place, the District's current WRMP targets a reliable water supply mix and includes the development of sufficient groundwater production capacity to pump up to the District's basin production percentage set by the Orange County Water District.

In accordance with current IRWD policy, basic operational reliability and redundancy for the water system is evaluated with reference to the capacity needed to sustain an outage of a major supply system component, assuming demand reduction obtainable through customer cooperation.

Wells in addition to those in the Dyer Road Wellfield have been constructed or improved in Orange Park Acres, Lake Forest and Irvine to provide additional groundwater supplies. The groundwater production and treatment components of the Irvine Desalter Project produce both domestic and recycled water supplies

In 2009-10, the District commenced the engineering design for a new water treatment plant, the Baker Water Treatment Plant (the "Baker WTP"). Construction of the Baker WTP is anticipated to be complete in July 2015. This project, to be constructed by the District in cooperation with neighboring water districts, will improve operational supply capacity and regional reliability through the treatment of local and imported raw water sources to drinking water standards. When constructed, the Baker WTP is expected to treat to drinking water standards approximately 28 million gallons per day ("mgd") of raw imported water purchased from MWD. During emergencies and planned raw imported water outages, water from Irvine Lake is expected to be supplied to the Baker WTP for treatment to drinking water standards. The Baker WTP will utilize microfiltration and ultraviolet disinfection as the primary treatment processes.

In addition to developing its water treatment, local groundwater and recycled water systems, the District is diversifying its water supply portfolio by developing water banking projects for dry year reliability. These projects include the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project, situated on groundwater recharge lands that overlie the regional Kern County groundwater basin. The District has also secured access to certain participation rights in the

Kern Water Bank to store water. The purpose of developing banking facilities is to improve the District's water supply reliability by enabling the District to store lower cost water it can acquire during wet hydrologic periods for use during dry periods. The District has entered into arrangements to acquire water for banking, including unbalanced exchanges and other transactions. The banking facilities will enhance the District's ability to respond to drought conditions and potential water supply interruptions and will provide the District the ability to reduce the cost of water delivered under such conditions. The District has also entered into an agreement with MWD and MWDOC to provide a means to deliver banked water to the District's service area.

**The Sewer System.** The District's powers did not include sewage collection and treatment when the District was formed. When the District's principal act, the California Water District Law, was amended to permit California water districts to provide sewage services subject to voter approval, voters of the District approved the added scope of services at an election held in March, 1965.

The District began the construction of a sewer system with the bonds of ID No. 1 issued in 1966 and subsequent bonds issued on behalf of ID Nos. 2(202) and 3(203). In addition to the nucleus sewage collection system acquired from Orange County Sanitation District No. 14, the original planned works included a treatment plant, reclamation and reclaimed water storage facilities. Subsequent plans of works contemplated an expansion of the Michelson Water Reclamation Plant, dual collection and treatment systems for reclaimable domestic sewer and non-reclaimable industrial discharges, reclaimed water distribution facilities and wet-weather treated sewer disposal.

The Michelson Water Recycling Plant ("MWRP"), then known as the Michelson Water Reclamation Plant, has been expanded in phases. The most recent expansion, anticipated to be completed during fiscal year 2014, will bring its capacity from 18 to 28 mgd. The District's sewer system also includes facilities and contractual entitlements to serve the portions of its service area in the coastal, Lake Forest and Santa Margarita ("Chiquita") areas not tributary to MWRP, as well as regional treatment capacity in the facilities of Orange County Sanitation District for the sewage from the MWRP-tributary area that is in excess of its needs for production of recycled water.

The sewer system to serve the coastal area not tributary to MWRP was first envisioned as two systems, one discharging to a regional treatment and disposal system and the other to a local treatment plant to be built. Ultimately, the collection system for the coastal area was instead designed to deliver all of the sewage flow to the regional collection and treatment facilities of Orange County Sanitation District No. 5.

During fiscal year 1986, the District cooperated with Orange County Sanitation District ("OCSD") to form Sanitation District 14 (functionally replaced by "Revenue Area 14" of OCSD, upon the 1998 consolidation of the several sanitation districts comprising OCSD's predecessor, the County Sanitation Districts of Orange County), which overlays much of the District's territory other than the coastal area. Under an agreement entered into between the District and OCSD, the District acquired equity interests in OCSD's sewage processing facilities (the percentage of interest will vary over time pursuant to a

formula set forth in the agreement between OCSD and the District). The agreement also provides for the purchase by the District of additional capacity in OCSD sewage processing facilities on an as-needed-basis determined from annual flows. These equity purchase costs are included in the costs regionally allocated to the improvement districts.

In 2000, as part of the consolidation of Los Alisos Water District with the District, the Los Alisos Water Reclamation Plant (“LAWRP”) was added to the sewer system. Currently, approximately 85% of the District’s sewer is treated by the MWRP and LAWRP operated by the District, and approximately 14% is treated by OCSD.

A future MWRP expansion up to 33 mgd has undergone environmental review and is planned by 2025, as needed to meet demand. Ultimately, the District plans to expand capacity for its treatment facilities to approximately 40.5 mgd in order to: (i) increase recycled water production and utilization; (ii) decrease exposure to external treatment costs and operational constraints; and (iii) decrease dependencies on imported water supplies.

The construction of IRWD’s regional sewer system also includes the network of gravity sewers, force mains, sewer lift stations and siphons that convey sewer to each treatment facility, which was developed as the system was expanded.

The processes for treating sewage and producing recycled water generate solids residuals. After evaluating alternative approaches to handling its sewer solids, the District is proceeding with the construction of facilities for handling MWRP solids, currently conveyed to Fountain Valley for treatment by OCSD, as well as solids from the District’s LAWRP. The solids handling capital project is underway and is anticipated to be completed in fiscal year 2017.

**The Recycled Water System.** In addition to the water reclamation facilities described under the preceding subheading, the recycled water system consists of a dual system for distribution of the recycled water, primarily for irrigation, and seasonal storage to allow production in the low-demand winter season for use in the high-demand summer season. These facilities presently include the District’s Sand Canyon, Rattlesnake Canyon, and San Joaquin Reservoirs, which are recycled water reservoirs with capacities of 750 acre feet, 1,100 acre feet, and 2,500 acre feet respectively. In addition to the future expansion of reclamation capacity, based on demand as described above relative to the sewer system, the District plans to increase seasonal storage capacity. At this time, the expansion of Syphon Reservoir is being evaluated for that purpose. The cost of the Syphon expansion or a comparable seasonal storage project is included in the proposed sewer plans of works. As stated above, the recycled water system regional and local costs comprise a part of regional and local sewer costs under the plans of works.

**Enhancement and Replacement.** Apart from the ongoing system expansion and completion that will continue to buildout, the District has incorporated in its system planning efforts the updating of its infrastructure to meet the needs of existing and future customers. These system enhancement



efforts will include capital projects that provide service cost savings and projects that provide reliability or redundancy beyond that necessary to satisfy the District's policy for basic reliability. Replacement and refurbishment improvements consist of repairs and restoration to existing water, recycled water and sewer system facilities. The District presently funds enhancement and replacement costs from reserves set aside for that purpose with contributions from user rates, general 1% tax levy revenues and other sources. The District may also evaluate the funding of enhancement and replacement costs through the improvement districts to the extent authorized general obligation bonds are available for such purposes and the enhancement and replacement costs are allocable among improvement districts and other funding sources in a fair and equitable manner.

## SECTION 2 IMPROVEMENT DISTRICT NO. 285

### 2.1 DESCRIPTION OF THE STUDY AREA

ID No. 285, represented the majority of the future development area of ID 235 (former Los Alisos Water District). The development areas included in the newly formed ID No. 285 include development areas identified in the City of Lake Forest's Opportunity Study Area, which identified properties zoned predominately as commercial and industrial but as a result of the closing of the El Toro Marine Corp Air Station were eligible to be converted to residential. The resulting Improvement District No. 285 is a developing improvement district that will function in tandem with existing ID Nos. 212 (former MCAS El Toro), 213 (former MCAS Tustin) and 288 (Portola Center) and new ID No. 253, where development is underway, to provide equitable regional capital cost sharing by the District's developing areas.

To simplify the text of this report, "north" refers to "Irvine north" running parallel to Sand Canyon Avenue. North arrows on exhibits show true north.

### 2.2 LAND USE AND DEVELOPMENT PHASING

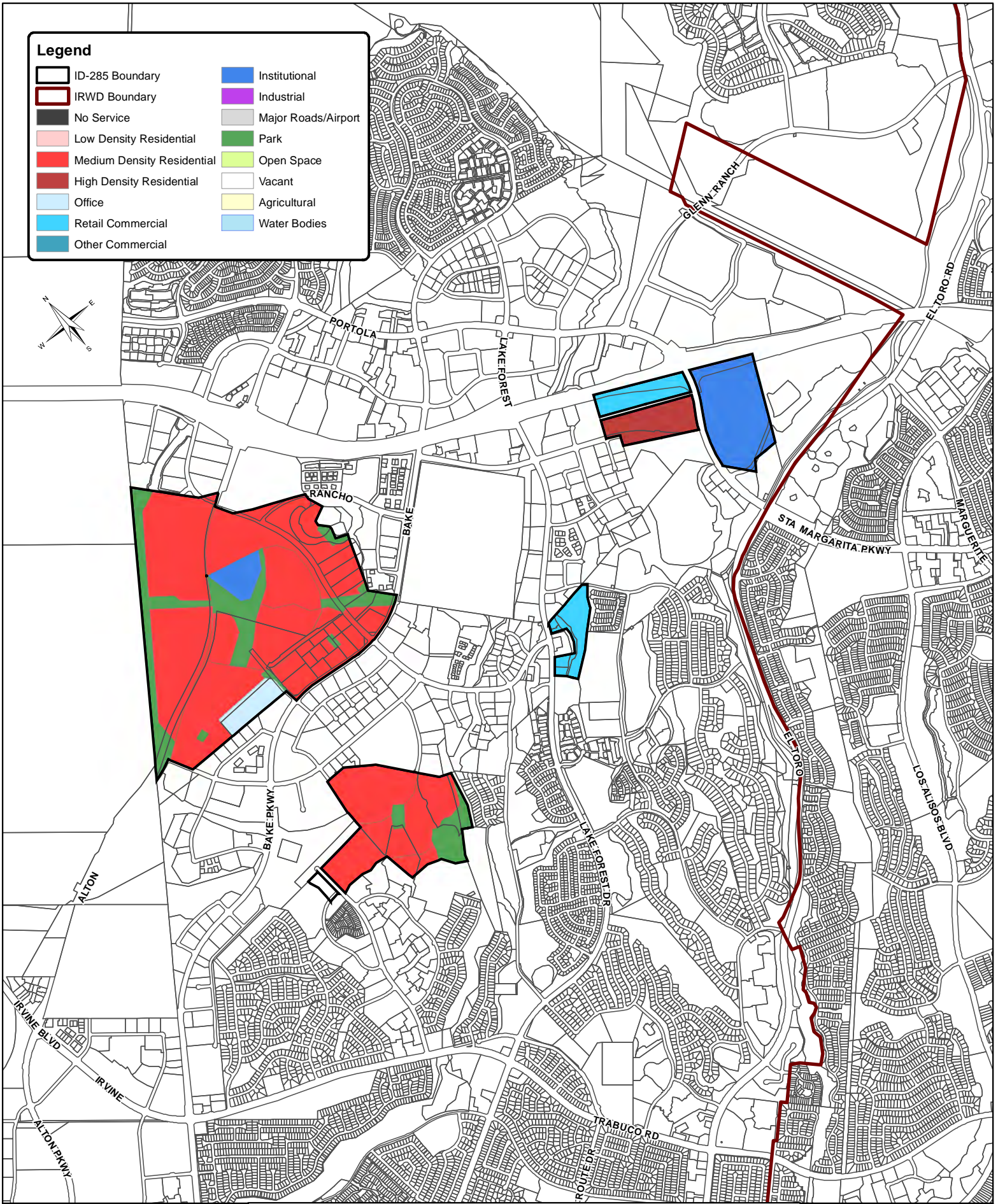
**Land Use.** The District expects future development of the reorganized ID No. 285 to be predominantly residential with supporting commercial development, and expects development in ID No. 285 to continue through at least 2035. **Figure II-1** shows the boundaries and proposed land use of newly formed ID No. 285, encompassing about 578 acres.

**Development Phasing.** This Plan of Works follows and incorporates the phasing used in the subarea master plans applicable to the various planned development areas.

Phasing of development is subject to change. Depending upon real estate markets, city planning decisions and other factors, some phases or portions of phases could occur simultaneously rather than sequentially. The phasing of bond issues discussed in Section 5, have been selected to allow reasonable flexibility in phasing priorities.

**Legend**

	ID-285 Boundary		Institutional
	IRWD Boundary		Industrial
	No Service		Major Roads/Airport
	Low Density Residential		Park
	Medium Density Residential		Open Space
	High Density Residential		Vacant
	Office		Agricultural
	Retail Commercial		Water Bodies
	Other Commercial		



### 2.3 DEMANDS AND PEAKING FACTORS

**Water Use Factors.** **Table II-1** reflects most recently adopted duty factors from the IRWD Water Resources Master Plan (WRMP), summarizing the District's standard interior and exterior water use factors. The District employ local interior water use factors, shown in the table, as its sewer duty factors. Irrigation factors used to determine recycled water demands are also shown in the table. The factors in **Table II-1** were also used to develop **Table II-2** and **Table II-3**.

**Peaking Factors.** Potable water peaking factors, irrigation peaking factors, applied in calculation for sizing respective facilities, are set forth in the WRMP. Sewer peaking, applied in calculation for sizing sewer collection and treatment facilities, are set forth in the SCSMP.

**Table 3-1 Land Use and Water Use Factors (September 2012)**

Code	Land Use Description	Land Use Agency	Land Use Density		Local Demands			Irrigation Demands	
			Average	Units	Local - Interior	Local - Exterior	Total Local	% Irrigated Area	Irrigation Factor
<b><u>1100</u></b>	<b><u>Residential</u></b>				<b><u>Gal/DU/Day</u></b>			<b><u>Gal/Acre/Day</u></b>	
1111	Rural Density	Orange	0.3	du/acre	250	170	420	0%	1,000
1112	Rural Density	Irvine	0.3	du/acre	250	750	1,000	5%	2,800
1115	Rural Density	County	0.26	du/acre	300	350	650	5%	2,800
1121	Estate Density	Orange	1.2	du/acre	300	350	650	5%	2,800
1122	Estate Density	Irvine	0.5	du/acre	300	225	525	5%	2,800
1126	Estate Density	Lake Forest	0.5	du/acre	300	350	650	7%	3,000
1131	Low Density	Orange	4	du/acre	300	350	650	8%	2,500
1132	Low Density	Irvine	3	du/acre	225	180	405	16%	2,200
1133	Low Density	Newport Beach	1	du/acre	290	220	510	17%	2,800
1134	Low Density PC	Tustin	4.5	du/acre	450	1,550	2,000	17%	2,800
1135	Suburban Density	County	9.25	du/acre	165	95	260	15%	2,500
1136	Low Density	Lake Forest	3	du/acre	270	150	420	20%	2,800
1141	Low-Medium Density	Orange	10.5	du/acre	235	145	380	15%	2,500
1146	Low-Medium Density	Lake Forest	11	du/acre	205	150	355	10%	3,000
1153	Medium-Low Density	Newport Beach	2.75	du/acre	400	350	750	10%	2,800
1161	Medium Density	Orange	19.5	du/acre	200	150	350	15%	2,800
1162	Medium Density	Irvine	7.5	du/acre	200	100	300	15%	2,800
1163	Medium Density	Newport Beach	5	du/acre	225	205	430	20%	2,800
1164	Medium Density PC	Tustin	11.8	du/acre	155	95	250	15%	2,800
1166	Medium Density	Lake Forest	7.5	du/acre	140	60	200	15%	2,800
1172	Medium-High Density	Irvine	17.5	du/acre	130	30	160	22%	2,400
1175	Urban Density	County	29	du/acre	140	45	185	20%	2,800
1176	Medium-High Density	Lake Forest	17.5	du/acre	145	70	215	17%	2,500
1182	High Density	Irvine	32.5	du/acre	130	13	143	20%	2,800
1183	High Density	Newport Beach	12.25	du/acre	115	10	125	20%	3,200
1184	High Density PC	Tustin	17.4	du/acre	115	10	125	15%	2,800
1186	High Density	Lake Forest	32.5	du/acre	115	10	125	20%	2,800
1191	High Rise Density	Orange	35	du/acre	115	10	125	20%	2,800
1192	High Rise Density	Irvine	40	du/acre	115	10	125	20%	2,800
<b><u>1200</u></b>	<b><u>Commercial</u></b>				<b><u>Gal/KSF/Day</u></b>			<b><u>Gal/Acre/Day</u></b>	
1210	General Office		20	ksf/acre	62	10	72	20%	2,500
1221	Community Commercial		9	ksf/acre	142	33	175	20%	3,500
1222	Regional Commercial		10	ksf/acre	130	10	140	20%	3,500
1230	Commercial Recreation		8	ksf/acre	41	20	61	30%	3,000
1235	Hotel		45	rooms/acre	110	50	160	30%	2,800
1240	Institutional		8	ksf/acre	30	15	45	30%	2,750
1244	Hospital		9	ksf/acre	165	65	230	30%	2,850
1260	School		10	ksf/acre	20	8.0	28.0	50%	2,500
1261	UCI		10	ksf/acre	215	15	230	40%	3,800
1273	Military Air Field		0	ksf/acre	0	0	0	0%	0
1290	Hotel		45	rooms/acre	110	50	160	30%	2,800
1300	Industrial		9.091		600	25	625	20%	2,800
1310	Industrial - Light		18	ksf/acre	60	10	70	20%	2,800
1320	Industrial - Heavy		25	ksf/acre	2,000.0	18	2,018	20%	2,800
	<b><u>Open Space and Other</u></b>							<b><u>Gal/Acre/Day</u></b>	
1411	Airports		0	acre/acre	0	0	0	0%	0
1413	Freeways & Major Road		0	acre/acre	0	0	0	0%	0
1820	Community Park		1	acre/acre	0	0	0	86%	2,200
1830	Regional Park		1	acre/acre	0	0	0	75%	2,200
1840	Fuel Modification Zone		1	acre/acre	0	0	0	100%	1,000
1850	Wildlife Preserve		0	acre/acre	0	0	0	0%	0
1880	Open Space (Rec)		0	acre/acre	0	0	0	0%	0
1900	Vacant		1	acre/acre	0	0	0	0%	0
4100	Water		0		0	0	0	0%	0
<b><u>2000</u></b>	<b><u>Agriculture</u></b>			<b><u>acre/acre</u></b>				<b><u>Gal/Acre/Day</u></b>	
2100	Low-Irrigated AG Potable		1	acre/acre	0	0	0	80%	1,800
2110	Low-Irrigated AG Untreated		1	acre/acre	0	0	0	80%	1,800
2120	Low-Irrigated AG Recycled		1	acre/acre	0	0	0	80%	1,800
2200	High-Irrigated AG Potable		1	acre/acre	0	0	0	80%	3,100
2210	High-Irrigated AG Untreated		1	acre/acre	0	0	0	80%	3,100
2220	High-Irrigation AG Recycled		1	acre/acre	0	0	0	80%	3,100

**Table II-2 - Sewage Generation:** Tabulates the average daily sewer flow at build-out (2035) within the reorganized ID No. 253 service area, using the District’s *demand forecasting tool*.

Land Use Code	Description	Land Use Agency	2035 Sewer Flows (MGD)
---------------	-------------	-----------------	------------------------

**Residential**

1135	Suburban Density	County	0.10
1136	Low Density	Lake Forest	0.23
1166	Medium Density	Lake Forest	0.09
1176	Medium-High Density	Lake Forest	0.06
1186	High Density	Lake Forest	0.05

**Commercial**

1221	Community Commercial		0.03
1240	Institutional		0.01

**Total**

**0.58 MGD**

**Table II-3 - Recycled Water Demands:** Tabulates the average daily Recycled Water Demands at build-out (2035) within the reorganized ID No. 253 service area, using the District’s *demand forecasting tool*.

Land Use Code	Description	Land Use Agency	2035 Recycled Water Demands (AFY)
<b><u>Residential</u></b>			
1135	Suburban Density	County	23
1136	Low Density	Lake Forest	137
1166	Medium Density	Lake Forest	31
1176	Medium-High Density	Lake Forest	16
1186	High Density	Lake Forest	14
<b><u>Commercial</u></b>			
1210	General Office		7
1221	Community Commercial		25
1240	Institutional		44
1260	School		15
<b><u>Other</u></b>			
1820	Community Park		76
1830	Regional Park		64

**Total**

**450 AFY**

## SECTION 3 REGIONAL FACILITIES

### 3.1 DESCRIPTION

Through the reorganization consolidation process, 10 of IRWD's 18 sewer improvement districts will be consolidated into a single improvement district, containing both lands where development is essentially completed, as well as certain remaining lands proposed for development that are also included in reorganized ID No. 253, newly formed 285 and existing 288. Existing ID Nos. 1(201), 212, 213, 240, 252, and 256 are not included in the reorganization or consolidation actions. Regional sewer and recycled water project costs will continue to be allocated to each sewer improvement district based on that improvement district's pro-rata shares of the ultimate IRWD sewer and recycled water demands.

Under the District's methodology for achieving equitable cost allocation, the improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. This incremental funding approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service.

For purposes of maintaining equity in facilities cost allocation, IRWD employs multiple treated water regional splits. For example, one regional split may include all IDs; another may include some IDs and exclude one or more IDs (sometimes referred to as a "sub-regional project"). In the latter instance, that split is applied to the cost of all projects that provide no benefit to the excluded improvement district(s); an improvement district would be included only in the regional splits for the projects from which it does derive benefit.

In this Plan of Works, the appropriate regional split has been applied to existing and proposed sewer collection and treatment and recycled water supply, storage and distribution facilities needed to provide an adequate and reliable sewer and recycled water system meeting the ultimate needs of ID No. 285.

Periodically, IRWD revises its sewer improvement district regional allocation to reflect changes in demand factors, land use planning, phasing of planned development and other factors which may influence sewer treatment and recycled water demands, either within a specific improvement district or throughout IRWD. Revised regional splits are applied prospectively. The regional cost allocations known as regional splits are calculated based on IRWD's internal sewer and recycled water demand forecasting tool.

### 3.2 COST ESTIMATES AND REGIONAL ALLOCATION

Based on the total IRWD sewage generation, the demands of ID No. 253 as calculated by the District's demand forecasting tool would yield a regional allocation 9.6%. Based on the total IRWD recycled water demands, the demands of ID No. 253 as calculated by the District's demand forecasting tool would yield a regional allocation 10.3%.

A description and cost estimate of the proposed regional sewer and recycled water facilities share allocated to ID No. 285 is shown in **Table III-1**.

As noted in the Introduction, the projects identified here may change to reflect changes in land use and development phasing. For purposes of determining the allowance for deferred costs, the project costs have been escalated at 10% per year.



## Table III-1 Regional Projects Proposed Facilities and Estimated Escalated Costs Improvement District 285

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
20113	OCSD CORF 12/13	Regional	1.3%	\$4,826	\$4,826	\$0	\$0	\$0
20114	OCSD CORF 13/14	Regional	1.3%	\$27,441	\$27,441	\$0	\$0	\$0
20115	OCSD CORF 14/15	Regional	1.3%	\$32,244	\$25,245	\$6,999	\$0	\$0
20116	OCSD CORF 15/16	Regional	1.3%	\$34,447	\$0	\$34,447	\$0	\$0
20117	OCSD CORF 16/17	Regional	1.3%	\$44,978	\$0	\$44,978	\$0	\$0
20118	OCSD CORF 17/18	Regional	1.3%	\$59,281	\$0	\$59,281	\$0	\$0
20119	OCSD CORF 18/19	Regional	1.3%	\$47,550	\$0	\$47,550	\$0	\$0
20120	OCSD CORF 19/20	Regional	1.3%	\$56,197	\$0	\$43,766	\$12,431	\$0
20214	MWRP EXPANSION PHASE II	Regional	1.3%	\$641	\$641	\$0	\$0	\$0
20356	OCSD CORF 20/21	Regional	1.3%	\$64,558	\$0	\$0	\$64,558	\$0
20357	OCSD CORF 21/22	Regional	1.3%	\$72,704	\$0	\$0	\$72,704	\$0
20358	OCSD CORF 22/23	Regional	1.3%	\$80,907	\$0	\$0	\$80,907	\$0
20360	OCSD CORF 23/24	Regional	1.3%	\$90,038	\$0	\$0	\$90,038	\$0
20362	OCSD CORF 24/25	Regional	1.3%	\$100,175	\$0	\$0	\$77,735	\$22,440
20468	FOOTHILL SEWER DIVERSION TO LAWRP	Regional	1.3%	\$14,746	\$2,347	\$12,399	\$0	\$0
20540	LONG TERM SEWER SYSTEM FLOW MONITORING	Regional	1.3%	\$5,465	\$2,574	\$2,890	\$0	\$0
20587	OCSD EQUITY 12/13	Regional	1.3%	\$0	\$0	\$0	\$0	\$0
20588	OCSD EQUITY 13/14	Regional	1.3%	\$1	\$1	\$0	\$0	\$0
20589	OCSD EQUITY 14/15	Regional	1.3%	\$18,094	\$11,640	\$6,454	\$0	\$0
20593	OCSD EQUITY 15/16	Regional	1.3%	\$28,256	\$0	\$28,256	\$0	\$0
20621	OCSD EQUITY 16/17	Regional	1.3%	\$32,977	\$0	\$32,977	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
20715	OCSD EQUITY 17/18	Regional	1.3%	\$79,399	\$0	\$79,399	\$0	\$0
20716	OCSD EQUITY 18/19	Regional	1.3%	\$88,745	\$0	\$88,745	\$0	\$0
20717	OCSD EQUITY 19/20	Regional	1.3%	\$89,235	\$0	\$57,124	\$32,111	\$0
20718	OCSD EQUITY 20/21	Regional	1.3%	\$59,974	\$0	\$0	\$59,974	\$0
20719	OCSD EQUITY 21/22	Regional	1.3%	\$38,163	\$0	\$0	\$38,163	\$0
20720	OCSD EQUITY 22/23	Regional	1.3%	\$21,652	\$0	\$0	\$21,652	\$0
20733	OCSD EQUITY 23/24	Regional	1.3%	\$23,858	\$0	\$0	\$23,858	\$0
20734	OCSD EQUITY 24/25	Regional	1.3%	\$26,292	\$0	\$0	\$16,765	\$9,528
20798	OCSD EQUITY 25/26	Regional	1.3%	\$28,014	\$0	\$0	\$0	\$28,014
20799	OCSD EQUITY 26/27	Regional	1.3%	\$25,465	\$0	\$0	\$0	\$25,465
20802	OCSD CORF 25/26	Regional	1.3%	\$111,384	\$0	\$0	\$0	\$111,384
20803	OCSD CORF 26/27	Regional	1.3%	\$123,636	\$0	\$0	\$0	\$123,636
20811	OCSD SOLIDS HANDLING 13/14	Regional	0.6%	\$7,776	\$7,776	\$0	\$0	\$0
20812	OCSD SOLIDS HANDLING 14/15	Regional	0.6%	\$9,412	\$9,412	\$0	\$0	\$0
20959	SEWER GEN SYS MODS 14/15	Regional	1.3%	\$4,338	\$4,338	\$0	\$0	\$0
21055	ENG PLANNING STUDY RESERVE 13/14	Regional	1.3%	\$2,461	\$2,461	\$0	\$0	\$0
21056	ENG PLANNING STUDY RESERVE 14/15	Regional	1.3%	\$2,707	\$2,707	\$0	\$0	\$0
21057	ENG PLANNING STUDY RESERVE 15/16	Regional	1.3%	\$2,979	\$0	\$2,979	\$0	\$0
21096	GIS SUPPORT APPLICATIONS 13/14	Regional	1.3%	\$861	\$861	\$0	\$0	\$0
21097	GIS SUPPORT APPLICATIONS 14/15	Regional	1.3%	\$947	\$947	\$0	\$0	\$0
21129	HYDRAULIC MODELING 13/14	Regional	1.3%	\$631	\$631	\$0	\$0	\$0
21131	HYDRAULIC MODELING 14/15	Regional	1.3%	\$694	\$694	\$0	\$0	\$0
21133	UNIVERSITY LS ODOR CONTROL SYSTEM	Regional	1.3%	\$3,652	\$3,652	\$0	\$0	\$0
21134	MANHOLE CONST MAIN AND SKY PARK SOUTH	Regional	1.3%	\$696	\$696	\$0	\$0	\$0
21146	MWRP BIOSOLIDS AND ENERGY RECOVERY	Regional	0.6%	\$1,396,204	\$604,155	\$792,049	\$0	\$0
21147	LAWRP SYSTEM UPGRADES	Regional	1.3%	\$10,516	\$5,869	\$4,647	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
21248	MWRP EXPANSION PHASE 3	Regional	1.3%	\$389,042	\$0	\$200,055	\$188,987	\$0
21339	AUTOMATION SYSTEM IMPROVEMENTS SEWER	Regional	1.3%	\$1,886	\$1,195	\$691	\$0	\$0
21455	IRWD PIPELINES RELOCATION FOR SC GRADE	Regional	1.3%	\$4,352	\$4,352	\$0	\$0	\$0
21578	OPS CENTER IMPROVEMENTS PH2 (WAREHOUSE)	Regional	1.3%	\$22,222	\$0	\$22,222	\$0	\$0
21655	SKYLIGHT PROTECTION	Regional	1.3%	\$501	\$501	\$0	\$0	\$0
21742	LTFP ID CONSOLIDATION	Regional	1.3%	\$1,115	\$1,115	\$0	\$0	\$0
30214	MWRP EXPANSION PHASE II	Regional	1.5%	\$551	\$551	\$0	\$0	\$0
30331	IRVINE LAKE SEISMIC STABILITY STUDY	Regional	1.5%	\$452	\$452	\$0	\$0	\$0
30342	LAWRP SYSTEM UPGRADES	Regional	1.5%	\$16,754	\$9,013	\$7,741	\$0	\$0
30374	SYPHON RESERVOIR INTERIM IMPROVEMENTS	Regional	1.5%	\$3,115	\$3,115	\$0	\$0	\$0
30380	SALT MANAGEMENT PLAN DEVELOPMENT	Regional	1.5%	\$1,818	\$1,818	\$0	\$0	\$0
30382	SYPHON RESERVOIR EXPANSION	Regional	1.5%	\$1,475,280	\$39,409	\$1,435,871	\$0	\$0
30396	RW SITE INSPECTION & TESTING COMPUTER	Regional	1.5%	\$818	\$818	\$0	\$0	\$0
30398	RW CONVERSION GRANTS FOR ON-SITE 13/14	Regional	1.5%	\$4,137	\$4,137	\$0	\$0	\$0
30399	RW CONVERSION FOR OFF-SITE 13/14	Regional	1.5%	\$2,412	\$2,412	\$0	\$0	\$0
30400	HEALTH DEPT FEES FOR 13/14	Regional	1.5%	\$1,401	\$1,401	\$0	\$0	\$0
30408	MULTI-ZONE REGIONAL PS - ZONE A TO SYPHON	Regional	1.5%	\$61,461	\$5,999	\$55,462	\$0	\$0
30412	SYPHON RESERVOIR EXPANSION - ENV.	Regional	1.5%	\$3,783	\$1,783	\$2,000	\$0	\$0
30415	CATHODIC PROTECTION FOR GAP PIPE SEGMENT	Regional	1.5%	\$2,008	\$2,008	\$0	\$0	\$0
30418	MWRP MBR LEAP AERATION CONVERSION	Regional	1.5%	\$19,290	\$0	\$19,290	\$0	\$0
30422	PA9 JEFFREY RD PIPELINES, 36" ZNA, 36" SYPHON	Regional	1.5%	\$25,837	\$25,837	\$0	\$0	\$0
30517	LAKE FOREST CONTROL AND TELEMETRY SYS	Regional	1.5%	\$589	\$589	\$0	\$0	\$0
31055	ENG PLANNING STUDY RESERVE 13/14	Regional	1.5%	\$2,912	\$2,912	\$0	\$0	\$0
31056	ENG PLANNING STUDY RESERVE 14/15	Regional	1.5%	\$3,203	\$3,203	\$0	\$0	\$0
31057	ENG PLANNING STUDY RESERVE 15/16	Regional	1.5%	\$3,525	\$0	\$3,525	\$0	\$0
31096	GIS SUPPORT APPLICATIONS 13/14	Regional	1.5%	\$993	\$993	\$0	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
31097	GIS SUPPORT APPLICATIONS 14/15	Regional	1.5%	\$1,093	\$1,093	\$0	\$0	\$0
31129	HYDRAULIC MODELING 13/14	Regional	1.5%	\$728	\$728	\$0	\$0	\$0
31131	HYDRAULIC MODELING 14/15	Regional	1.5%	\$800	\$800	\$0	\$0	\$0
31248	MWRP EXPANSION PHASE 3	Regional	1.5%	\$283,272	\$0	\$141,969	\$141,303	\$0
31339	AUTOMATION SYSTEM IMPROVEMENTS RW	Regional	1.5%	\$3,980	\$2,523	\$1,458	\$0	\$0
31384	HYDRAULIC MODEL UPDATE / CALIBRATION -	Regional	1.5%	\$7,399	\$7,399	\$0	\$0	\$0
31578	OPS CENTER IMPROVEMENTS PH2 (WAREHOUSE)	Regional	1.5%	\$25,641	\$0	\$25,641	\$0	\$0
31582	GEN SYS MODS 13/14	Regional	1.5%	\$965	\$965	\$0	\$0	\$0
31648	GEN SYS MODS 14/15	Regional	1.5%	\$1,062	\$1,062	\$0	\$0	\$0
31655	SKYLIGHT PROTECTION	Regional	1.5%	\$578	\$578	\$0	\$0	\$0
31697	GEN SYS MODS 15/16	Regional	1.5%	\$1,168	\$0	\$1,168	\$0	\$0
				<b>\$5,351,365</b>	<b>\$847,678</b>	<b>\$3,262,034</b>	<b>\$921,187</b>	<b>\$320,466</b>

## SECTION 4 LOCAL MASTER PLAN FACILITIES

### 4.1 DESCRIPTION

The facilities detailed in the following section represent local facilities serving one or more of the planned development areas within the improvement district, based on the respective subarea master plans, as well as sub-regional projects serving this improvement district and other improvement district(s) For the purpose of this POW, local facilities include both local and sub-regional projects.

### 4.2 COST ESTIMATES

The proposed local master plan facilities for ID No. 285 are detailed in **Table IV-1** and shown on **Figure IV-1a** through **IV-1c** (sewer) and **Figure IV-1d** through **IV-1f** (recycled water). The figures, taken from the Lake Forest Area sub-area master plan, show both facilities inside and outside the improvement district's boundary, and some facilities shown may have already been constructed. The amounts shown in Table IV-1 reflect the facilities or portions there-of allocable to the improvement district. As noted in the Introduction, the projects identified here may change to reflect changes in land use and development phasing.

For the purpose of determining the allowance for deferred costs, the project costs have been escalated at 10% per year.

**Table IV-1 Local Projects  
Proposed Facilities and Estimated Escalated Costs  
Improvement District 285**

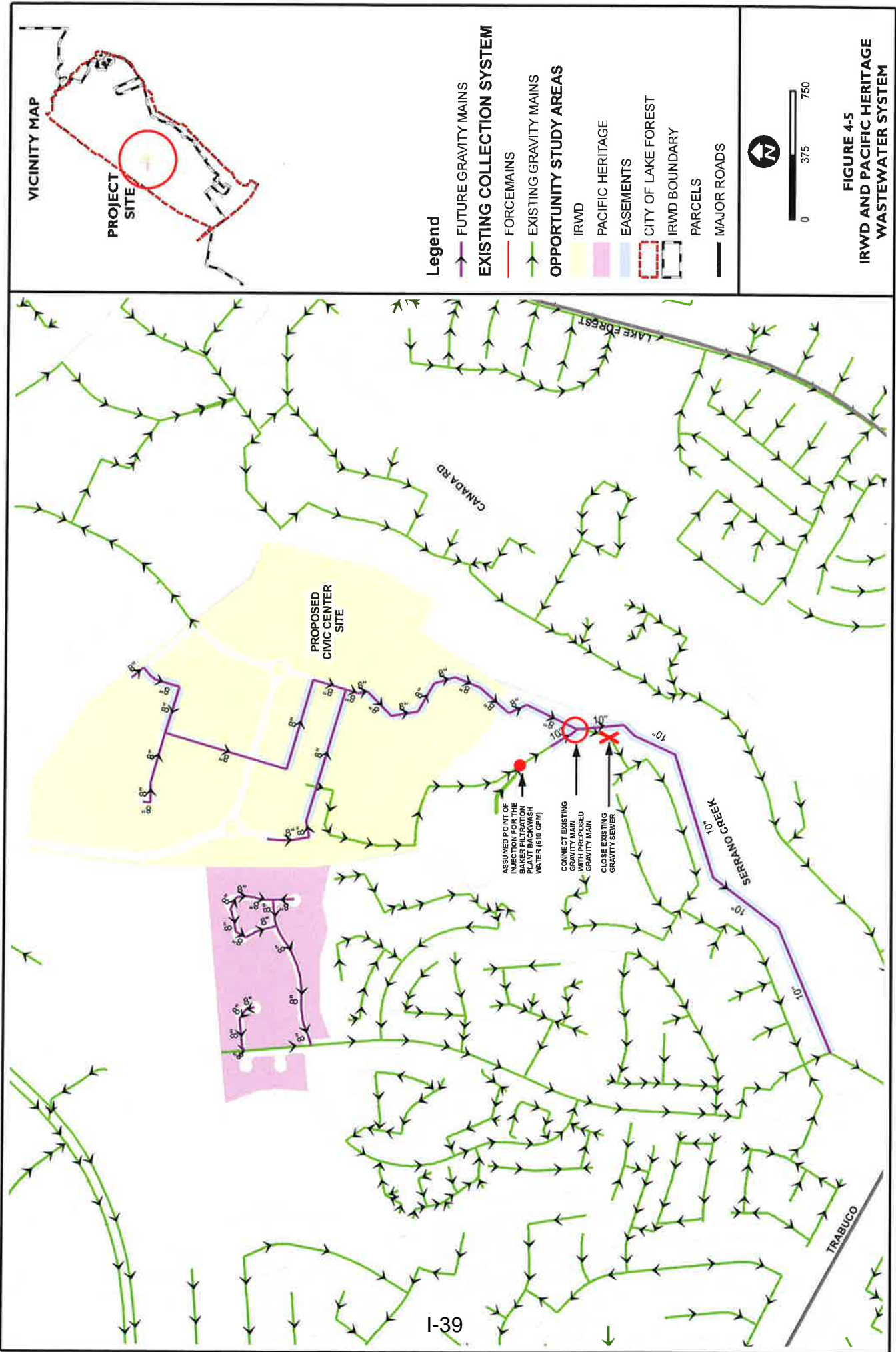
Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
21560	LAKE FOREST WW OFFSITE IMPROVEMENTS	Local	100.0%	\$5,107,993	\$2,817,914	\$2,290,079	\$0	\$0
21562	LAKE FOREST WW OPPORTUNITY AREAS	Local	100.0%	\$2,077,658	\$1,147,036	\$930,622	\$0	\$0
30390	PA 9B RW AND SYPHON LATERAL PIPELINE,	Sub-Regional	1.5%	\$2,176	\$2,176	\$0	\$0	\$0
31562	LAKE FOREST RW OPPORTUNITY AREAS	Local	100.0%	\$3,953,302	\$2,183,258	\$1,770,044	\$0	\$0
31661	BAKER RANCH PHASE 1 RW ZONE B & C	Local	100.0%	\$172,040	\$172,040	\$0	\$0	\$0
31662	BAKER RANCH PHASE 2 RW ZONE B & C	Local	100.0%	\$142,890	\$142,890	\$0	\$0	\$0
				<b>\$11,456,059</b>	<b>\$6,465,314</b>	<b>\$4,990,744</b>	<b>\$0</b>	<b>\$0</b>







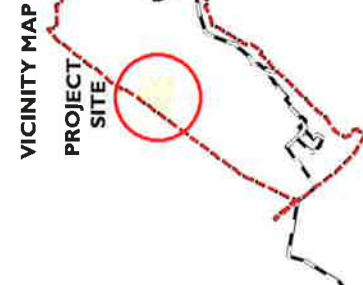
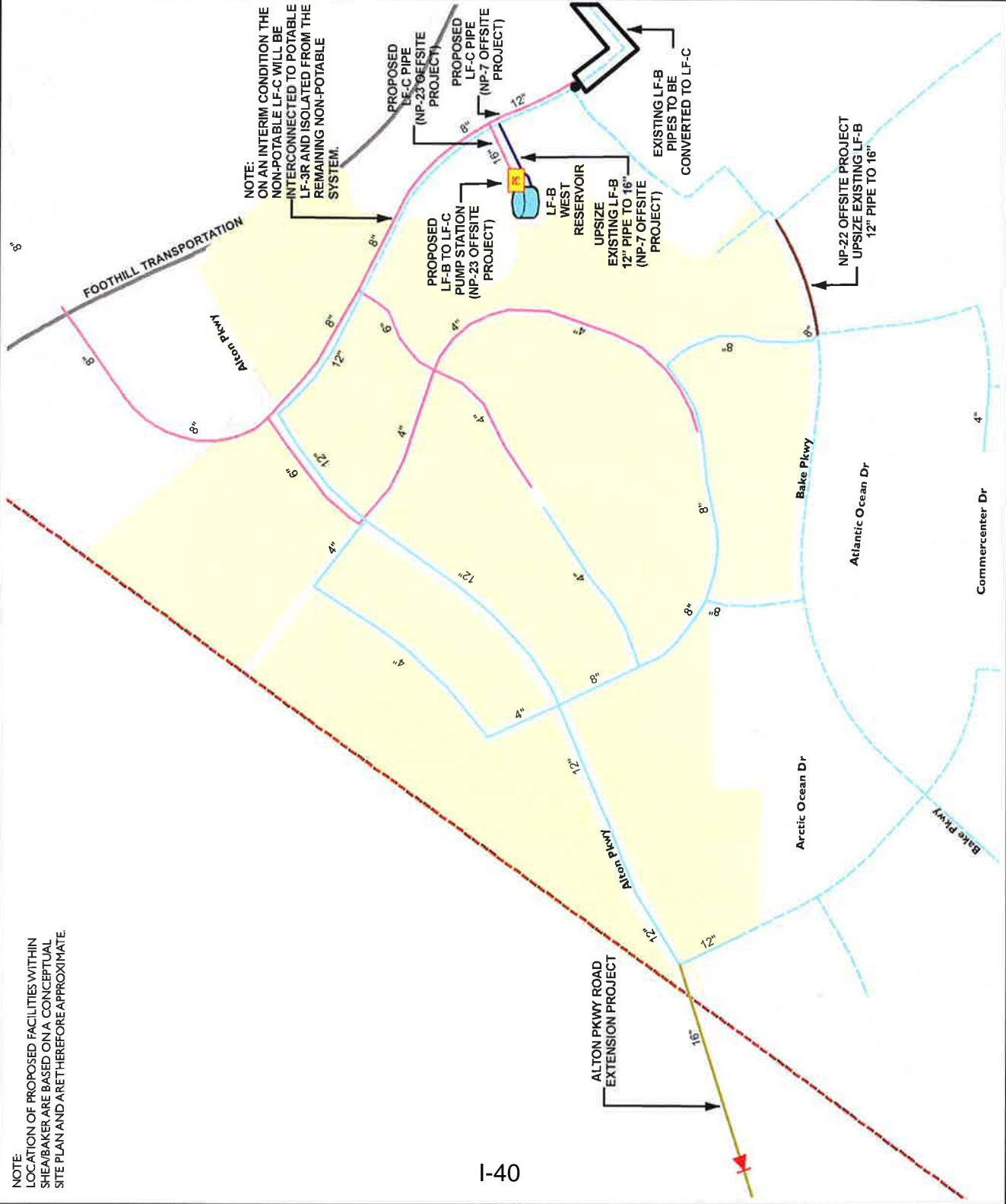




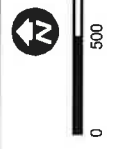
**FIGURE 4-5**  
**IRWD AND PACIFIC HERITAGE**  
**WASTEWATER SYSTEM**

NOTE:  
LOCATION OF PROPOSED FACILITIES WITHIN  
SHEA/BAKER ARE BASED ON A CONCEPTUAL  
SITE PLAN AND ARE THEREFORE APPROXIMATE.

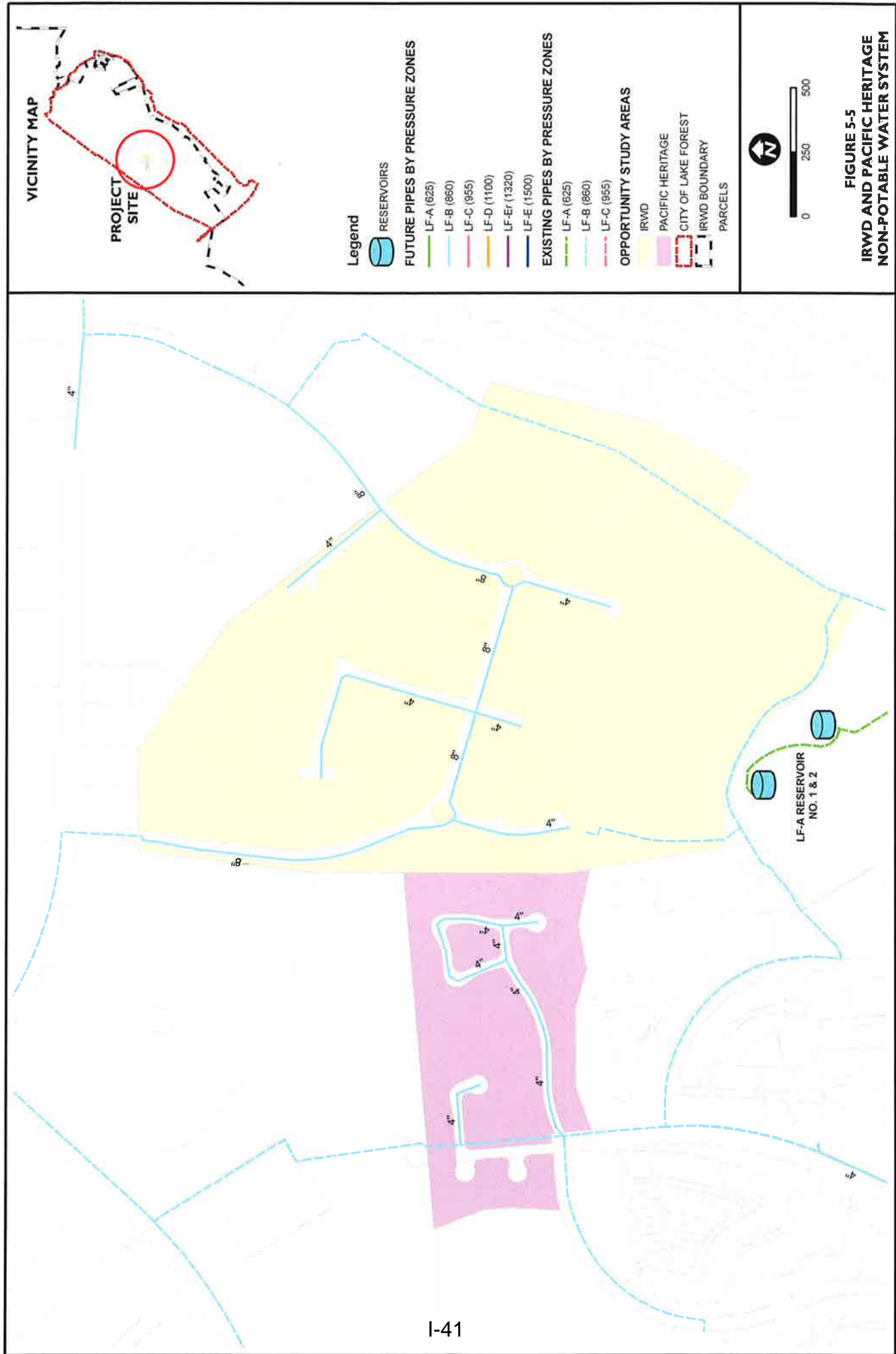
I-40



- Legend**
- FUTURE CLOSED VALVES
  - PUMP STATIONS
  - RESERVOIRS
  - ▲ PRESSURE REDUCING STATIONS
  - ▲ EXISTING
  - ▲ PROPOSED
  - ▲ FUTURE PIPES BY PRESSURE ZONES
  - ▲ LF-A (625)
  - ▲ LF-B (660)
  - ▲ LF-C (655)
  - ▲ LF-D (1100)
  - ▲ LF-E (1320)
  - ▲ LF-F (1500)
  - ▲ EXISTING PIPES BY PRESSURE ZONES
  - ▲ LF-A (625)
  - ▲ LF-B (660)
  - ▲ LF-C (655)
  - ▲ ALTON PKWY ROAD EXTENSION PROJECT
  - ▲ NP-22 OFFSITE PROJECT
  - ▲ A PORTION OF NP-7 OFFSITE PROJECT
  - ▲ SHEA/BAKER
  - ▲ CITY OF LAKE FOREST
  - ▲ IRWD BOUNDARY
  - ▲ PARCELS
  - ▲ MAJOR ROADS



**FIGURE 5-3**  
**SHEA/BAKER**  
**NON-POTABLE WATER SYSTEM**







## SECTION 5 FINANCIAL PHASING SUMMARY

This section summarizes the phasing of the financial requirements in ID No. 285. A schedule of financial phasing requirements based on projected phasing of facilities is shown in **Table V-1**. Also shown in the table is the general class of items that will be covered in these projected amounts.

Table V-1 includes a 10% contingency to allow for unexpected inflation as well as changes in land use and development density.

It should be noted that this table does not represent actual bond issues. As facilities are needed which warrant or require bond funding, actual bond issuance needs will be determined.

It is proposed that bonds in the amount of \$21,300,000 be authorized for ID No. 285.

**Table V-1**  
**Bond Authorization Summary**  
**Improvement District 285**

	2013-2015	2016-2020	2021-2025	2026-2035	Total Escalated Amt
<b>Escalated Local Subtotal</b>	<b>\$6,463,138</b>	<b>\$4,990,744</b>	<b>\$0</b>	<b>\$0</b>	<b>\$11,453,882</b>
<b>Escalated Regional Subtotal</b>	<b>\$847,678</b>	<b>\$3,262,034</b>	<b>\$921,187</b>	<b>\$320,466</b>	<b>\$5,351,365</b>
<b>Escalated Sub-Regional Subtotal</b>	<b>\$2,176</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,176</b>
<b>Contingency (10%)</b>	<b>\$731,299</b>	<b>\$825,278</b>	<b>\$92,119</b>	<b>\$32,047</b>	<b>\$1,680,742</b>
<b>Bond Reserve (6%)</b>	<b>\$482,657</b>	<b>\$544,683</b>	<b>\$60,798</b>	<b>\$21,151</b>	<b>\$1,109,290</b>
<b>Funded Reserve (6%)</b>	<b>\$482,657</b>	<b>\$1,320,444</b>	<b>\$60,798</b>	<b>\$21,151</b>	<b>\$1,109,290</b>
<b>Bond Discount (2%)</b>	<b>\$179,682</b>	<b>\$990,333</b>	<b>\$20,266</b>	<b>\$7,050</b>	<b>\$369,763</b>
<b>Bond Issuance Costs (1%)</b>	<b>\$89,841</b>	<b>\$990,333</b>	<b>\$10,133</b>	<b>\$3,525</b>	<b>\$184,882</b>
<b>Bond Authorization Total</b>	<b>\$9,279,129</b>	<b>\$12,923,850</b>	<b>\$1,165,302</b>	<b>\$405,390</b>	<b>\$21,261,391</b>

## SECTION 6 BENEFIT OF THE PLAN OF WORKS TO THE LANDS IN THE IMPROVEMENT DISTRICT

### 6.1 OVERVIEW

Under the California Water Code, the plan of works for an improvement district provides a plan and an estimate of the cost of the works that are needed to serve the improvement district and that will be financed through District-issued bonds, and reflects the determination by the District's Board of Directors that the territory within the improvement district will benefit from the works. To the extent practical, a plan of works will incorporate generalized facilities descriptions and flexibility in the selection of specific projects, so that a revised or supplemented plan will not be needed. If a revised or supplemented plan is adopted, it must benefit the territory within the improvement district. Similarly, when territory is annexed to or detached from an improvement district, including annexations and detachments implemented for the purpose of reorganizing improvement districts to be consolidated as coterminous improvement districts, there must be an accompanying evaluation of territory that will benefit by inclusion within the plan and therefore should be included, and territory that will not benefit and therefore should be excluded.

The benefits that lands receive from sewer and recycled water works are derived from multiple considerations. Primary is the ability of lands to receive service currently or when needed in the future. Other examples of benefits are system or facilities reliability through supply diversification, redundant treatment and disposal capacity, storage capability, system looping or other characteristics; regulatory compliance; environmental protection; and regional cost efficiencies in operation and maintenance. In the case of a consolidation of improvement districts, other benefits may include economies of scale, administrative simplification and enhancement of credit and reduced borrowing cost or debt service cost.

For purposes of evaluating benefit of improvement district consolidations, cost allocation is dictated in part by the requirements contained in the Water Code for structuring consolidations. In accordance with these requirements, the remaining authorized, unissued bonds of the consolidating improvement districts will become the authorized bonds that can be issued on behalf of the consolidated successor improvement district. Upon the consolidation, debt service for the outstanding bonds of the consolidating improvement districts will become obligations of the consolidated successor improvement district.

### 6.2 DESCRIPTION OF THE STUDY APPROACH

The formation of ID Nos. 185 and 285 is part of an overall restructuring of the District's improvement districts, which also includes the reorganization of ID Nos. 153 and 253 and the consolidation of ID Nos. 125 and 225. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations." In this regard, the District has undertaken a comprehensive evaluation and study of its long-term financial requirements, including:

- a detailed planning, engineering and financial assessment of the total costs of existing and future facilities in the water and sewer systems;
- available bond authorization and other revenue sources to finance facilities to serve future development (“new capital”), augment system reliability and meet upgraded regulatory requirements for both existing and future demands (“enhancement”) and replace and refurbish the existing systems (“replacement”);
- debt service;
- simplification of the improvement district structure; and
- assurance of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

The existing improvement district structure has served the District for more than 40 years as the system was built and growth patterns necessitated a means of maintaining equity in the financing of facilities. Using the mechanisms of periodic formation of new improvement districts and authorization of bonds as well as regional cost allocations and system buy-ins, the District has been able to maintain fair and equitable cost sharing while accommodating both intense growth within its boundaries and several acquisitions of adjacent service areas. Construction and expansion of the systems were the key features of this financial structure. Although growth will continue for several more years, going forward the completion of the regional systems and provision for system reliability and replacement will become the predominant driver of the financial requirements. The District’s comprehensive evaluation of its financial requirements indicates that a simplification of the improvement district structure and related actions will provide a sustainable methodology for equitable cost allocation in the future.

As described in Section 1.3, a succession plan for the improvement district structure would reduce the number of improvement districts, ideally to one water improvement district and one sewer improvement district, through consolidations and reorganizations to be implemented as and when considerations for separation of the various improvement districts no longer remain. The District’s financial review identified steps that were currently feasible in achieving that objective as well as the parts of the current structure which need to be maintained at this time until factors relating to the preservation of equitable cost sharing merit the evaluation of further consolidation steps.

General obligation bonds have been the District’s principal tool for financing facilities. Under this form of financing, the obligation for repayment of bonds issued on behalf of an improvement district is secured by the power of the District to levy and collect *ad valorem* assessments without limitation as to rate or amount on land only (enforceable by customary rights to foreclose and sell property for delinquent assessments) or, in lieu of assessments, in the District’s discretion, charges for water or sewer service, as applicable, all within the subject improvement district. The District also uses connection charge revenues to pay a portion of the debt service costs. For new capital cost within developing improvement districts, the District plans to continue its historical practice of targeting a 50-



50 allocation as a fair means of sharing improvement district debt service costs between the aggregate contributions of connection charge revenues and property tax revenues. The evaluation of financial requirements and modifications of the District's improvement district structure therefore involve an examination of outstanding and future bond debt service, bonding authority, allocation of costs, and resultant contributions of connection charges and *ad valorem* property taxes over time.

### 6.3 LONG-TERM FINANCIAL REQUIREMENTS MODELING

As introduced in the preceding section, the foundation of the evaluation of the benefit of the Plan of Works to the lands in the Improvement District is the District's comprehensive review of its long-term financial requirements. To assist the District in this evaluation, the District employed modeling of a baseline condition defined by the improvement district structure as it existed prior to the current reorganization and consolidation steps. The baseline modeling facilitated various aspects of the long-term financial requirements evaluation:

- refinement of capital cost allocations according to the functional benefits (e.g., development expansion, reliability, regulatory compliance, environmental protection, system refurbishment) of the facilities to various areas and user categories;
- use of existing bond proceeds and available bond authorization and other revenue sources for the financing of future facilities within the new capital expansion, enhancement and replacement project classifications;
- use of the District's allocation of the general 1% *ad valorem* property tax levy;
- benefit of the simplification of the improvement district structure and the aggregated regional and local systems;
- identification of areas where the structure must be retained or modified to equitably address special considerations; and
- measurement of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

Modeling of modified aspects of the baseline enabled the District to test the effectiveness of modifications to various capital – project related fiscal and financing practices in developing a new improvement district and cost allocation structure to effectively maintain equity as the development phase within the District progresses toward build-out. Details of the modeling process described in this section, including review and analysis of interim results and identification of refined and additional modeling efforts, are compiled in a Technical Appendix that serves as a reference document for this Plan of Works.

## 6.4 REGIONAL SYSTEM BENEFIT

The Plan of Works for ID No. 253's predecessor, ID No. 1 of Santiago County Water District (SCWD), contemplated that the sewage collection, treatment and disposal needs of its ultimate population of about 38,000 would be furnished through a trunk sewer system that would discharge sewage from the southern portion of the improvement district to Limestone and Santiago Canyons and into a proposed SCWD tertiary sewer reclamation plant that would also receive flows pumped from the Fremont Canyon area. Reclaimed water produced by the plant and untreated water that could, by agreement with IRWD, be received from the Santiago Lateral through Irvine Lake were the contemplated sources to be used to supply irrigation demands. In 1985, when the reorganization of Orange County Sanitation District No. 14 was undertaken to include much of IRWD's territory, a portion of SCWD's ID No. 1 was also included. At that time the remainder of ID No. 1 now included in IRWD's ID No. 253 was designated within OCSD's sphere of influence. The OCSD-sphere portion of ID No. 1 (ID No. 253) was annexed to OCSD in 2006, in conjunction with the consolidation of SCWD with IRWD. These organizational changes formed the groundwork for serving ID No. 253 through MWRP and OCSD's Revenue Area 14, thus integrating the regional system for ID No. 253 within the regional system that serves most of IRWD.

The majority of the regional sewer treatment, disposal and reclamation facilities exist. Based on its ultimate demands, ID No. 285 will need to contribute its proportional share of the cost of completing the regional system, including any expansion such as the acquisition of additional MWRP capacity, and including new components necessary to provide basic reliability. The areas reorganized within ID No. 253 were primarily within former ID Nos. 230, 250, 253 and to a lesser extent, other improvement districts. At this stage of completion of IRWD's regional system, former distinctions among the improvement districts from which the areas reorganized as ID No. 153 originated are no longer material in regard to service from the regional system. Historically, these distinctions included the extent and duration of individual improvement districts' reliance on the untreated system to serve agricultural water, proximity to different completed and yet-to-be-completed segments of the treated water feeders, interceptor and trunk sewers and treatment facilities, uncertainties in the progression (location and pace) of development, and planning determinations that were yet to be made by the District in the elements of the major facilities components and supply sources, such as pipeline and well field capacity. All of these factors have either disappeared or diminished in importance, and the regional benefits among the areas reorganized within ID No. 285 are now essentially uniform.

As one example of the gradual diminishing of the earlier distinctions among the individual improvement districts' plans for supply and delivery alternatives, the 1974 plans of works initially contemplated separate treatment plants connected to the untreated delivery system for each of ID Nos. 103 and 105. In 1977, the initial plan for local (or regional) treatment of raw water in ID No. 103 (shared with ID No. 109), was shifted to a backup alternative, in favor of ID No. 103's pro rata participation in the District's capacity to be obtained in the proposed regional treated water system now known as the Allen McColloch Pipeline (AMP) to serve its supplemental water needs. By 1978, this was again modified to include participation by ID No. 103 in the District's acquisition of capacity in the AMP in combination with participation in the construction of the District's own well field in the main Orange County

groundwater basin as a more economical and preferred domestic supply alternative source. The local treatment plants as originally contemplated were not built, but the District is presently participating in the construction of the Baker Plant as a regional treatment plant that will benefit the entire service area.

This progression continued, with the distinctions becoming fewer as the planning of the regional system evolved and the system was constructed. With only approximately 10-12 percent of the equivalent dwelling units (EDUs) remaining to be built in ID Nos. 253 and 285, these distinctions are no longer prominent. The regional system and its integrated treatment and reclamation facilities provide uniform benefit to all of the component areas of ID No. 285 by satisfying basic treatment, disposal and recycled water supply and peaking needs and providing protection against emergency outages. Connection fees, adjusted by planning areas if and to the extent necessary to differentiate the fee amounts to adjust for varying local and sub-regional project benefits, and ad valorem taxation will adequately allocate the cost share of ID No. 285 among its various planned development areas in proportion to their benefit.

Through the regional split, the areas within the reorganized ID No. 253 have shared the cost of IRWD's regional reclamation plants, as well as the treatment and disposal facilities of Orange County Sanitation District and its Revenue Area 14 under agreements between the District and OCSD. Not all of ID No. 285 and other improvement districts' service areas are tributary to all of the plants. However, the plants and their tributary regional collection systems are considered to function as one regional system and optimize the District's sewage collection and water reclamation systems and provide dual or backup treatment capability for various parts of the service area. The District is continuing to develop its capability for multiple discharge options among the tributary areas of the plants. Thus all areas participate proportionally in the regional system. All areas receive the uniform sewer rate which provides the benefit of reduced cost through treatment options. An exception to this is ID No. 240, which is sewered only to OCSD's regional plant and is not within OCSD's Revenue Area 14 nor tributary to the MWRP, LAWRP, or Chiquita plants. IRWD does provide sewage collection and recycled water service to ID No. 240. ID No. 256 in large part remains on individual septic systems, and it is uncertain whether and when that community will desire to convert to a public sewer system. ID No. 252 is not tributary to IRWD plants but may benefit from future recycled water facilities. ID Nos. 240, 252 and 256 are not included in the current reorganization and consolidation of improvement districts.

As described in Section 3, the District uses a demand forecasting tool to allocate regional system costs among improvement districts. This ensures that ID No. 285 as a whole will be allocated a share of the regional system costs in proportion to the benefit it will receive from the system. See **Table III-1**.

#### 6.5 REGIONAL COST ALLOCATION – INCLUSION IN IMPROVEMENT DISTRICT NO. 225

In parallel with the reorganization of ID No 285 itself, ID No. 285's territory will be retained as part of the reorganization of several improvement districts to form a consolidated improvement district designated ID No. 225. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations." All of the developing areas reorganized into ID Nos. 285 are retained or

reorganized within the boundaries of the underlying improvement district, ID No. 225. This assures that the developing areas will share in the cost of existing local and sub-regional facilities from which they benefit, such as sewer trunk facilities, previously built with the proceeds of bonds of one of the improvement districts consolidated in the underlying improvement district.

Like ID No. 253, ID No. 285 will continue to share proportionally in the cost of completing the regional system, such as treatment plant expansion costs and the new capital portion of the cost of solids handling facilities. This occurs because under the District's incremental approach, although the regional system provides service prior to its completion, it remains incomplete, and future regional projects will add components necessary to provide basic reliability, benefitting the developed areas as well as future development. To prevent overpayment by the areas included within both improvement districts' regional allocations, the regional allocation for ID No. 225 will exclude demands of ID No. 285, and the 50/50 allocation of debt service responsibilities between connection fees and property taxes will be applied on an aggregated basis for the area within ID No. 285 between the overlying and underlying improvement districts.

#### 6.6 LOCAL FACILITIES COST ALLOCATION

Historically, planned developments within a geographic area have been grouped together in an improvement district notwithstanding the fact that each development may be served by distinct local facilities, as the cost of these are generally uniform over the improvement district. This is also considered to be the case for the various geographic areas comprising ID No. 285. To the extent necessary to achieve fair and equitable allocation of local facilities costs, planning areas can be used to recognize any unequal costs of sub-regional and local facilities benefiting only one, or some but not all, of the planned developments in the territory of the consolidated ID No. 253.

As with regional system benefits discussed above, connection fees, adjusted by planning areas if and to the extent necessary to reflect unique local facilities costs not fairly allocable to the entire improvement district, and *ad valorem* taxation will adequately allocate the cost share of the ID among its various planned development areas in proportion to their benefit. The segregation between the ID Nos. 253, 285, 288, existing ID Nos. 212 and 213, and the consolidated developed ID No. 225 is considered adequate to ensure that capital cost allocation recognizes the area-specific local facilities costs yet to be incurred in the planned development areas.

#### 6.7 IMPROVEMENT DISTRICT NO. 285 BENEFIT

The District has reviewed and analyzed benefit to the lands from the reorganized ID No. 285 in several ways: (1) similarities or differences in future service needs among the areas identified for inclusion by annexation to, or by retention in, the reorganized as ID No. 285; (2) the benefit or lack of benefit to the areas identified for exclusion from the reorganized as ID No. 285; and (3) regional cost allocation among ID No. 285 and other areas receiving benefit from the regional facilities. Also

evaluated were (4) areas not included in any improvement district and (5) certain areas retained as separate improvement districts.

**(1) Included areas.** The areas reorganized as ID No. 285 comprise several non-contiguous planned development areas that were previously in different improvement districts. Therefore, it is appropriate to assess whether any one or more of these areas possess essential distinctions, in terms of benefit from the planned local facilities or regional facilities (including treatment and disposal), that would warrant exclusion from the ID No. 285 territory. The areas included in the reorganized ID No. 285 are described in Section 2. With respect to regional facilities, all areas will be benefitted by the integrated sewer collection and treatment and recycled water systems. Based on the available planning information for the expected development of each planned area, all of which are predominantly residential with other use, it is concluded that the areas are similarly benefitted by the Plan of Works and that the *ad valorem* assessments for debt service and connection fees for the classifications applicable to the anticipated uses will fairly allocate cost within the ID based on demands. Connection fees, which can be adjusted through planning areas if and to the extent necessary to reflect unique local or sub-regional facilities costs not fairly allocable to the entire improvement district, and *ad valorem* taxation will adequately allocate the cost share of the improvement district among its various planned development areas in proportion to their benefit. Simultaneous inclusion of the ID No. 285 lands within the underlying improvement district, ID No. 225, assures that the developing areas will share in the cost of existing local and sub-regional facilities from which they benefit, such as trunk sewers, previously built with the proceeds of bonds of one or more of the improvement districts consolidated in the underlying improvement district. The exclusion of ID No. 285 demands from the ID No. 225 regional split, and allocation of debt service responsibilities between connection fees and property taxes on an aggregated 50/50 basis between the overlying and underlying improvement districts will prevent overpayment as a result of inclusion within both improvement districts' regional allocations.

**(2) Excluded areas.** The District also analyzed whether any areas proposed to be excluded from the reorganized ID No. 285 would receive benefit from ID No. 285 planned works, and should not be excluded. The areas excluded consist of substantially developed areas of ID Nos. 230, 250 and other improvement districts 235 which will, instead, be included in the reorganized ID No. 225, open space, and areas contained within another developing improvement district. Also excluded are the areas not included in any improvement district and certain areas retained as separate improvement districts, discussed under separate headings below.

The excluded developed areas will contribute their regional cost share for the completion of the regional system and for the previously constructed local facilities through ID No. 225. The developed areas will continue to be benefitted by the regional facilities financed and to be financed by ID No. 285. However, it is concluded that exclusion of the developed areas is justified in terms of benefit, because, through the reorganized ID No. 225, their allocation of the cost of the regional system benefits will continue to be proportional.

The 13,400 acres reserved as permanent open space near the Lomas de Santiago ridgeline, which is not proposed to remain within any improvement district, and other smaller permanent open space areas will not receive benefit from the planned works and are excluded from ID No. 253, 225 and other improvement districts. This is warranted by the fact that the area will have no demand served by the system.

Finally, areas contained within developing ID Nos. 253, 212, 213, 285 and 288 are logically maintained as separate improvement districts based on their separate local facilities costs and stages of development. To the extent there are sub-regional facilities from which any of these improvement districts benefit in common, they will share the cost of those facilities with the other participating improvement districts through a proportionate allocation based on benefit received. Exclusion of the other separate developing improvement districts from ID No. 253 will facilitate the allocation of local facilities costs. Having these remain separate improvement districts does not negatively impact the regional cost allocation or bond authorization, nor would combining them produce any advantage.

**(3) Regional cost allocation.** Also considered was whether the reorganization achieves equity in relation to the other cost allocations within the regional split. Under the District's historic and continuing methodology for achieving equitable cost allocation, all improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. This incremental funding approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional system has been born by ad valorem assessments on lands not yet fully developed and receiving service. Adjustment of this methodology will be applied as discussed in Section 6.5 to recognize inclusion of areas in both ID No. 253 and underlying ID No. 225. A similar regional allocation would be applied to replacements and enhancement projects, to the extent funded by the improvement districts. Contribution by areas not included in an improvement district is discussed in the heading below.

**(4) Areas not included in an improvement district.** The District's regional cost allocation approach took into consideration that some areas (referred to collectively with the shorthand references "110" and "210" in keeping with the District's numbering system for designating improvement districts) funded a portion of the District's earliest regional system costs through payment of debt service on general obligation waterworks bonds of the overall District in the 1960s (e.g., original construction of the San Joaquin Reservoir and IRWD's capacity in the East Orange County Feeder No. 2 and other transmission facilities, Frances Mutual Water Company wells, the Aufdenkamp Transmission Main and the original sewage treatment and reclamation system components financed by ID. No. 1 (201). Based on their initial financial participation in the original waterworks bonds and sewer ID No. 1 bonds, these earlier-developing areas were not included in the improvement districts formed during the 1970s. Similarly, certain areas added to the District through annexation and consolidation have funded a proportionate share of existing regional facilities costs, sometimes referred to as "acquisition balances," through user rate components. The "110" and "210" areas as excluded from ID Nos. 125 and

225. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations."

The District has performed calculations to determine whether historic allocations of cost, to the areas included in the improvement districts and the excluded areas, require future cost participation by excluded areas in order to ensure that the improvement districts do not bear a disproportionate cost of the system. Included in this evaluation are costs of the service delivery systems as well as other regional costs such as administrative headquarters and telemetry. Based on this evaluation, the District has determined that funding of future regional facilities costs of the District, (i.e., costs other than those costs financed by previous bonds and outstanding bonds assumed as obligations of the improvement districts being consolidated) should include participation of the areas that comprise "110" and "210," in proportionate amounts that will be determined taking into account revenue contribution, and benefit received from future capital facilities.

**(5) Retention of certain improvement districts.** Individual cost allocation considerations dictate that certain improvement districts be retained as separate improvement districts at this time.

ID No. 154 contains an area in which general planning information shows that some development could occur. However, the owner indicates no plans beyond current uses.

ID No. 240 discharges sewer only to OCSD's regional plant and is not tributary to the MWRP, LAWRP, or Chiquita plants. For that reason it is not within OCSD's Revenue Area 14. IRWD does provide sewage collection and recycled water service to ID No. 240, and collection system and recycled water system costs are proportionately allocated to ID No. 240.

ID No. 256 in large part remains on individual septic systems, and it is uncertain whether and when that community will desire to convert to a public sewer system. If and when this occurs, the District will evaluate the appropriate method for recovering the cost of the conversion from the benefitted area, such as retention of the separate improvement district and/or an underlying improvement district.

ID No. 252 is not tributary to IRWD plants but may benefit from future recycled water facilities. This requires retention of the improvement district so that applicable recycled water system costs can be separately allocated. The ID No. 252 formation conditions provided for this through the allocation of a proportionate share of ID No. 250 debt service costs. With the consolidation of ID No. 250 as part of ID No. 225, ID No. 225's debt service costs would be used for this allocation.

## 6.8 REDEVELOPMENT COST

In recent years, some areas of the District have begun to experience redevelopment activity. This has necessitated the consideration of the fair allocation of cost that should be borne by these areas, and how demands should be included in the demands of the improvement districts. The District is applying methodology to ensure proportional cost contributions for regional system and for added local system needs generated by redevelopment.



## SECTION 7 IMPLEMENTATION OF PLAN OF WORKS

### 7.1 GENERAL

The Plan of Works has been prepared by IRWD pursuant to the provisions of California Water Code Section 36410 *et seq.*

It is by this means that IRWD implements the various portions of its Sewer Treatment Master Plan and Sewer Collection System Master Plan, as to sewer system facilities, and its Water Resources Master Plan, as to recycled water system facilities. IRWD, from time to time as needed, will issue increments of the propose bonds and construct the described facilities in order to meet its responsibility to have facilities available to serve the needs of approved development.

As hereinafter discussed, this Plan of Works will be implemented on a phased basis. Accomplishment of this obligation by IRWD necessitates issuance authorization of bonds in the amount estimated in this Plan of Works.

It is acknowledged that, from time to time, the means of accomplishing the purposes of ID No. 285 may be altered and projects identified in this Plan of Works may be changed or replaced by other projects, by reason of changes in development phasing, changes in technology and refinements to facilities planning developed through IRWD's ongoing master planning and subarea master planning. Costs may include acquisition, construction, replacement, reconstruction and additions to facilities.

### 7.2 AUTHORIZATION AND ISSUANCE OF BONDS

It is proposed that elections will be held and conducted in the manner provided in Section 36420 of the California Water Code for the purpose of authorizing bonds in the estimated amount of the cost of accomplishing this Plan of Works. Authorized bonds may be sold and the proceeds used only as specified in the Plan of Works, subject to changes in the projects or substitutions of other projects to reflect changes in development phasing, changes in technology and refinements in master planning and subarea master planning.

**REVISED  
 PLAN OF WORKS  
 PROVIDING FOR SEWER COLLECTION, TREATMENT AND  
 WATER RECYCLING FOR  
 IRVINE RANCH WATER DISTRICT  
 IMPROVEMENT DISTRICT NO. 253**

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## SECTION 1 INTRODUCTION

### 1.1 OBJECTIVES

This Revised Plan of Works is a means by which the fiscal requirements of the Improvement District are identified, including bond authorization, in order to provide for the construction, planning and design of facilities necessary to provide service within the Improvement District. The obligation of the Irvine Ranch Water District (“IRWD” or the “District”) is to plan to meet the projected service needs of the specific property within the Improvement District.

The Wastewater Treatment Master Plan (“WTMP”) and its predecessor planning documents have accomplished the planning of the District’s wastewater collection and treatment. The Sewage Collection System Master Plan (SCSMP) also addresses the planning of the collection system. Recycled water supply, which is within the fiscal requirements of sewer plans of works, including this Plan of Works, is part of the scope of the Water Resources Master Plan (“WRMP”). Sub-area master plans (“SAMP”) are created to plan in more detail the local facilities needed for development planning areas that may overlie all or part of an improvement district. SAMPs are generally prepared as the property owners and the city planning agency begin the development process.

Plans of works are used to describe local facilities and proportional participation in regional facilities that the improvement districts will need, relying on the WTMP, WRMP, SCSMP, and SAMPs for the detailed engineering and planning analysis. The role of the plan of works is founded in statute (Water Code 35950 *et seq.*) and is to define a plan for the facilities needed to serve the improvement district and make an estimate of their cost as necessary to support the voter authorization and issuance of general obligation bonds of the District for the improvement district. The plan of works thus provides the linkage between the engineering plan and the corresponding financial requirements by setting forth the basis for a determination by the Board of Directors in a noticed hearing that the plan benefits all the territory within the improvement district including any territory that has been annexed to it.

Plans of Works incorporate generalized facilities descriptions and some flexibility in the selection of specific projects. This allows the District to accommodate changes in development phasing, changes in technology and facilities planning developed through IRWD’s ongoing master planning and subarea master planning, and corresponding changes in costs of acquisition, construction, replacement, reconstruction and additions to facilities. The Board of Directors may determine that it is necessary to change a previously adopted plan of works. This has occurred in some instances in conjunction with a revision in the cost estimate making it necessary to propose a supplemental authorization of bonds, and it has also occurred in conjunction with improvement district reorganization. This Plan of Works has been prepared in connection with the reorganization of Improvement District No. 253 to include a number of planned development areas within the improvement districts concurrently consolidated as Improvement District No. 225. See Section 1.3.

The facilities generally identified in this Plan of Works may also change without a modification of the Plan of Works, in order to substitute other facilities to accommodate land use planning or development phasing determinations as they evolve, or in accordance with facilities planning modifications and refinements identified through IRWD's ongoing master planning and subarea master planning. The general purpose of the facilities in the Plan of Works is to meet the wastewater collection and treatment and recycled water requirements of the Improvement District, including basic system redundancy and reliability in accordance with the policies of the District. As the facilities are needed, IRWD will choose those projects that provide wastewater collection and treatment and recycled water services most economically. Projects may include acquisition, construction, reconstruction and addition to facilities. The fiscal requirements identified in the Plan of Works include the development phase, during which the system will be expanded and a share of the existing regional system will be acquired as needed to serve the Improvement District, and will continue thereafter, representing the Improvement District's participation along with other improvement districts in the completion of the IRWD regional system.

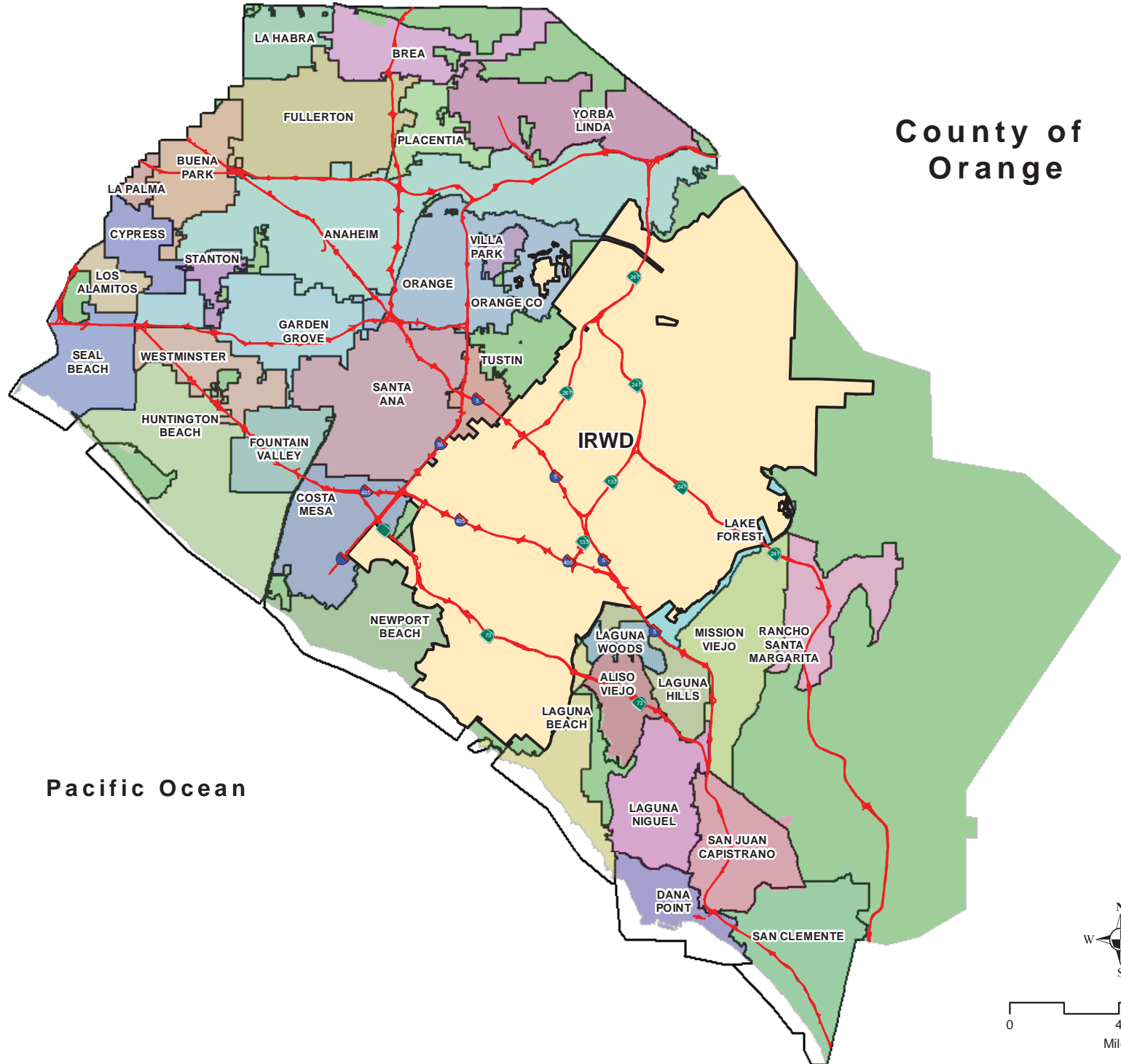
This Plan of Works has the following general objectives: (1) update the description of the capital facilities for the wastewater system; (2) provide a revised plan of works to supersede and replace the existing plan of works of the improvement district being reorganized; and (3) evaluate the benefit of the revised plan of works to the territory of the reorganized improvement district.

The further objectives of this Plan of Works are to determine logical planning areas and the need for facilities. This includes (1) a proportionate share of regional wastewater collection and treatment, and recycled water facilities; and (2) adequate local planning and system layouts based on the projected ultimate development within the improvement district.

## 1.2 DESCRIPTION OF THE IRVINE RANCH WATER DISTRICT

The District was established in January, 1961, as a California Water district under the provisions of Section 34000 *et seq.* of the California Water Code (the "Act"). Presently the District has four primary services – supplying potable water, collecting and treating wastewater, producing and distributing recycled and other non-potable water and implementing urban runoff treatment programs. Historically, the District has provided agricultural water service as needed until residential or commercial development occurs, and provided potable and recycled water services and sewage collection and treatment service when development occurs. Recycled water is used for irrigation of agricultural areas, parks, parkways, greenbelt areas and school grounds, and is used for individual yard landscaping in certain areas, industrial processing, toilet and urinal flushing and other purposes permitted by regulations. IRWD has also implemented a plan for natural treatment system service to divert urban runoff of water used for irrigation and other outdoor uses and treat the runoff by natural processes in water quality wetlands and similar facilities. See **Figure I-1** for a location Map of IRWD.

# County of Orange



Pacific Ocean



The District serves a 178-square-mile area extending from the Pacific Ocean and over a central flat, alluvial plain to the foothills, which includes all of the City of Irvine and portions of the cities of Tustin, Newport Beach, Costa Mesa, Orange and Lake Forest, as well as certain unincorporated areas of the County. The District serves a total estimated population of approximately 340,000 through approximately 108,000 water and approximately 103,500 sewer service connections.

### 1.3 THE IMPROVEMENT DISTRICTS

**Historical Background.** At the time of the District's initial formation, the District's objective was to secure a supplemental water supply for irrigation and domestic use from The Metropolitan Water District of Southern California ("MWD"). This was accomplished through the installation of regional water transmission pipelines in cooperation with other districts in and the construction of the San Joaquin Reservoir, financed by the sale in 1961 and 1963 of general obligation waterworks bonds of the overall District aggregating \$10,500,000.

After the initial authorization of waterworks bonds for the overall District, all water and sewer bonds were authorized within improvement districts formed by the District to encompass specific geographic areas. The first improvement district formation occurred in 1965, when sewage collection and treatment were added to the District's powers and Improvement District No. 1, a sewer improvement district, was formed to provide financing for the District's first collection, treatment and reclamation systems. Between 1965 and 2008, the District formed 18 water improvement districts and 16 sewer improvement districts covering specific areas within the District's boundaries, some of them overlapping.

The District formed the improvement districts<sup>1</sup> in order to allocate funding responsibility for capital facilities to the areas which would benefit from such capital facilities. Local facilities addressed particular needs that varied by geographic area, proximity to existing infrastructure, elevation and other factors. Improvement districts were also used to separate areas based on projected timing of development so that local capital facilities construction could be matched to development approval decisions as they occurred. In addition, improvement districts served as a mechanism to share the funding of the District's regional facilities to be used by improvement districts in common, such as major water importation facilities and water and wastewater treatment plants. The plans of works derived information from District planning documents and from land development plans as the basis for determining, for water improvement districts, the water requirements and the size, location and phasing of water delivery facilities to be constructed from the existing feeders and supply sources, and, for sewer improvement districts, the sewage generation and recycled water requirements and the size,

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<sup>1</sup> Most of the improvement districts were formed by the District's Board of Directors, but Improvement district formation was in some cases accomplished by the District's predecessor district or the Orange County Local Agency Formation Commission, in the case of certain areas included in the District by annexation or consolidation with another district.

location and phasing of sewer collection and recycled water delivery facilities to be constructed from the existing trunk sewers and recycled water distribution system to serve the various planning areas and service elevations or zones. As changes occurred in development planning, annexations and detachments were used to modify the boundaries of some of the improvement districts.

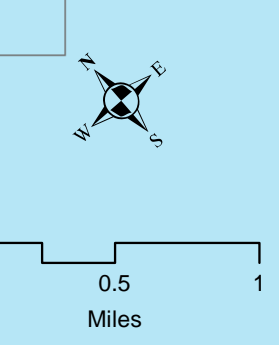
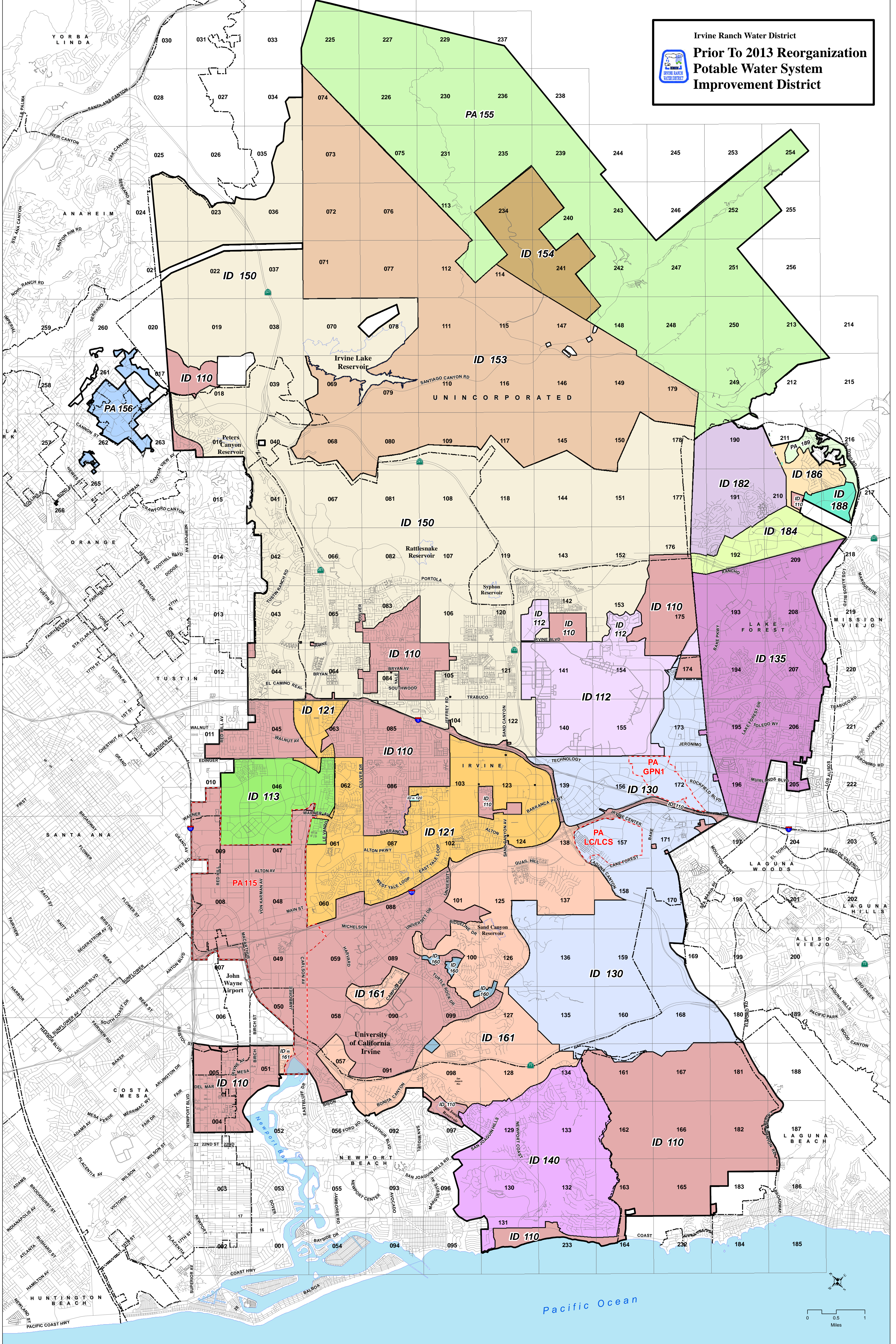
**Water Improvement Districts.** The initial financing of the District's water facilities was undertaken in the early 1960s with bonds of the District. During the 1970s, the District formulated a water facilities master plan and formed many of the water improvement districts that have existed until the current reorganization and consolidation. The first water improvement district to be formed was Improvement District ("ID") No. 104, formed in 1972, followed by the formation of ID Nos. 103 and 105 in 1974, and ID Nos. 102, 106 and 109 in 1976. When water improvement districts were formed, the District excluded lands (sometimes referred to collectively with the shorthand reference "110" in keeping with the District's numbering system for designating improvement districts) that were determined to have funded a portion of the District's earliest regional system costs through payment of debt service on general obligation waterworks bonds of the overall District in the 1960s.

ID No. 104 incorporated the coastal area of the District from the Pacific Ocean to the crest of the San Joaquin Hills. ID No. 103 covered the planned industrial and commercial developments, then known as the Irvine Center Planned Community or "Regional Triangle" and the Irvine Industrial Complex-East, in the vicinity of the intersection of the Santa Ana and San Diego Freeways and adjacent to the Marine Corps Air Station, El Toro. ID No. 105, containing about 22,000 acres in the northernmost portion of the District extending from the Santa Ana Freeway to the northerly, easterly and westerly boundaries of IRWD, was formed initially to build a pipeline to replace the Highline Canal System for the delivery of water from Irvine Lake for agricultural irrigation purposes; its first plan of works contemplated that these untreated water facilities would be augmented with later phases of works to deliver domestic water. ID No. 102 was formed to include the central part of Irvine, between the Santa Ana and San Diego Freeways. ID No. 106 encompassed the Turtle Rock, Quail Hill and Bonita Canyon areas of the San Joaquin Hills, extending north to the San Diego Freeway. ID No. 109 covered the portion of the San Joaquin Hills extending eastward from proposed Sand Canyon Avenue to the eastern boundary of the District.

As urban growth continued, further phases were added to the District's planned water system in the mid- to late 1970s, and it became necessary to increase the authorization of bonds to finance them. To accomplish that objective for some of the initial water improvement districts, the District revised the plans of works and elections were conducted to obtain supplemental bond authorizations (ID No. 103 in 1976, 1977 and 1978, ID No. 105 in 1976 and 1978, and ID No. 109 in 1978). In other improvement districts, the District formed overlapping improvement districts with new bond authorizations: ID Nos. 121, 141 and 142, and 161 were formed in 1978, overlapping portions of ID Nos. 102, 104, and 106, respectively.

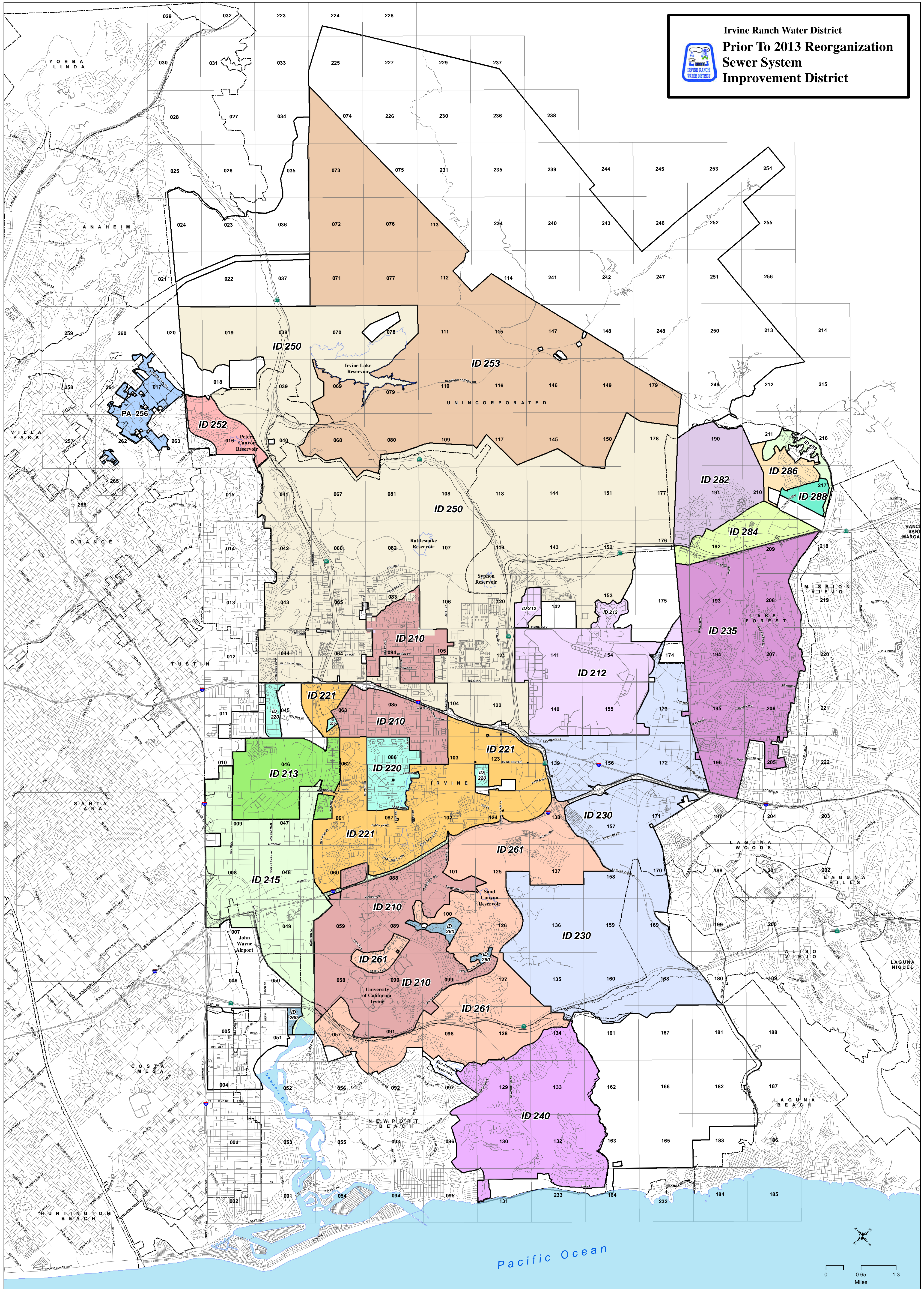


Irvine Ranch Water District  
**Prior To 2013 Reorganization  
 Potable Water System  
 Improvement District**





Irvine Ranch Water District  
 Prior To 2013 Reorganization  
 Sewer System  
 Improvement District





Beginning in the late 1980s, other water improvement districts were formed as areas were added to the District by annexation and consolidation and as former military bases were closed and underwent reuse planning. In 1988, ID Nos. 182 and 184 were formed over the Foothill Ranch (Whiting Ranch) area located in the foothills and canyons north of El Toro in eastern Orange County, an area that was annexed to IRWD in 1982. ID No. 182 covered the northern, predominantly residential portion of this planning area and ID No. 184 covered the southern, predominantly commercial portion. Later in 1988, ID Nos. 186 and 188 were formed over the annexed Glenn Ranch area lying to the east of Foothill Ranch and including a portion of the community of Portola Hills. ID No. 186 covered the northern, predominantly residential portion of this planning area and ID No. 188 covered the southern, predominantly commercial portion.

ID No. 135, encompassing the territory of the former Los Alisos Water District (“LAWD”), was formed as part of the proceedings for LAWD’s consolidation with IRWD on December 31, 2000, to provide a vehicle for issuing and servicing LAWD’s remaining water bond authorization. ID No. 135 lies to the northeast of the intersection of the Santa Ana and San Diego Freeways, and covers a majority portion of the City of Lake Forest.

ID No. 113 was formed in 2004 over the property within the former Marine Corps Air Station Tustin, a facility established in 1942 to support U.S. Navy lighter-than-air aircraft (blimps) conducting anti-submarine patrol off the California coast during World War II and later used to support Marine Corps helicopter operations until its closure in 1999. The former helicopter base, now known as Tustin Legacy, is currently being redeveloped with residential, commercial, institutional and recreational uses.

The formation of ID Nos. 153 and 154 took place in conjunction with the July 1, 2006 consolidation of the former Santiago County Water District (SCWD) with IRWD, to serve as the successors to two improvement districts formed by SCWD in 1978, ID No. 1 (water and sewer) in the area extending northward from Loma Ridge to the Fremont Canyon area, and ID No. 2 (water) including portions of Black Star, Baker and Hall Canyons. As part of the district consolidation, the majority of the territory of SCWD’s ID No. 1 became ID No. 153 (with respect to ID No. 1’s water bond authorization), and all of the territory of SCWD’s water ID No. 2 became ID No. 154 of IRWD.

The most recent IRWD water improvement district formation took place in 2008, when the District formed ID No. 112 over the lands in the eastern portion of the District north of the Santa Ana Freeway, within the former Marine Corps Air Station El Toro, a base originally established in 1942 to support U.S. Marine Corps aviation activities during World War II, and encompassing the planning areas now known as Heritage Field and the Great Park.

**Sewer Improvement Districts.** The first sewer improvement district to be formed by the District was Improvement District No. 1, in 1965. ID No. 1 encompassed an area lying south of the San Diego Freeway and ranging from two to seven miles inland from the Pacific Ocean, including most of the University of California Irvine campus. ID No. 1 assumed the obligations of Orange County Sanitation

District No. 14 for the cost of a nucleus collection system when District No. 14 was disbanded,<sup>2</sup> and ID No. 1's planned works also included a treatment plant and IRWD's initial reclamation and reclaimed water storage facilities. ID No. 1 is presently known as ID No. 1(201) or "210." Like "110", the "210" area was excluded from later improvement district formations based on initial contribution.

After ID No. 1, sewer improvement district formations generally paralleled the water improvement district formations discussed in the preceding section. In the case of most of the improvement districts formed before 1978, each sewer improvement district preceded its water counterpart by a few years; after that, each water improvement district and its corresponding sewer improvement district were generally formed concurrently and were coterminous.

In 1971, sewer ID Nos. 2 (subsequently known as 202) and 3 (subsequently known as 203) were formed over areas generally corresponding to the areas that, a few years later, were included in water ID Nos. 102 and 103, described above. Their plans of works contemplated an expansion of the Michelson Water Reclamation Plant, dual collection and treatment systems for reclaimable domestic wastewater and non-reclaimable industrial discharges, reclaimed water distribution facilities and wet weather treated wastewater disposal. ID No. 204 was formed in 1972 at the same time as the corresponding water ID No. 104. ID No. 204's plan of works initially envisioned two systems delivering sewage from the coastal area, one discharging to a regional treatment and disposal system and the other to a local treatment plant to be built. Ultimately, the collection system was instead designed to deliver all of the sewage flow from ID No. 204 (and from the later-formed ID Nos. 241 and 242) to the interceptor and trunk sewers and regional treatment facilities financed by Orange County Sanitation District No. 5. ID No. 206 was formed in 1975, covering the area corresponding to ID No. 106 which was formed the following year.

As happened in the water system, the addition of further phases of facilities to the planned wastewater system in the late 1970s made it necessary to increase the authorized bonds to finance them. In 1978, the District formed ID Nos. 221, 241, 242, 250, 261 and 290 (coterminous with the counterpart water ID Nos. 121, 141, 142, 105, 161 and 109, respectively).

Beginning in the 1980s, the addition of areas to the District by annexations and consolidations and the closure of former military bases generally led to the formations of sewer improvement districts at the same time as the corresponding water improvement district formations, described above.<sup>3</sup> ID Nos. 282, 284, 286 and 288 were formed in 1988 (coterminous with ID Nos. 182, 184, 186 and 188, respectively). ID No. 235, encompassing the territory of the former LAWD and coterminous with ID No. 135, was formed upon LAWD's consolidation with IRWD on December 31, 2000, to issue and service

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<sup>2</sup> The disbanded Sanitation District was the original "District No. 14." Another District No. 14 of the Orange County Sanitation Districts was formed in [1986], over much of IRWD's territory (except for the coastal portion within Orange County Sanitation District No. 5), for the purpose of acquiring regional collection, treatment and disposal capacity in the OCSD facilities to augment IRWD's Michelson Water Reclamation Plant. See Section 1.4.

<sup>3</sup> An improvement district unrelated to the addition of service area to the District, ID No. 252, was formed in 2005, encompassing a small portion of the area formerly within ID No. 250.

LAWD's remaining sewer bond authorization. Upon the July 1, 2006 consolidation of the former Santiago County Water District with IRWD, ID No. 253 (coterminous with ID No. 153) was formed as the successor to Santiago County Water District ID No. 1's 1978 sewer bond authorization). ID Nos. 213 (coterminous with ID No. 113) and 212 (coterminous with ID No. 112) were formed in 2004 and 2008, respectively. In 2008, ID No. 256 was formed through annexation proceedings that were conducted to include the former territory of Orange Park Acres Mutual Water Company in IRWD. ID No. 256 has no authorized bonds, but was formed to provide a potential vehicle for such authorization if and when the residents of the area, now served predominantly by septic tanks, determine to finance a public sewer collection system to allow a conversion to sewer service.

**Regional Allocation.** As regional water system have been built, buy-ins and allocations among the improvement districts have been utilized to maintain proportionate sharing of regional system costs. Allocations among the improvement districts have similarly been utilized to maintain proportionate cost allocation of regional sewer system costs. Regional potable water and regional sewer allocations are based on demands. For the portion of the regional costs relating to the reclamation system, historically allocation was weighted, with two-thirds of the cost of the storage, transmission and disposal facilities making up the regional irrigation system allocated based on the improvement districts' prorated shares of the sewage generation and one-third of the cost prorated based on their share of irrigation water demands. That practice was subsequently modified, and the District instituted its current practice of establishing separate regional allocations for sewer facilities, based on sewage generation, and recycled water facilities, based on recycled water demand, for each sewer improvement district. Cost variations among tributary collection system areas have also been factored into the regional wastewater allocation. The regional split for the area within ID No. 240 reflects that ID No. 240 has participated in the financing of the Orange County Sanitation District's treatment facilities and does not discharge wastewater to the MWRP collection system.

Regional allocation includes facilities serving all improvement districts as well as sub-regional facilities serving two or more, but not all, improvement districts. Consistent with regional allocation, as certain areas were added to IRWD's service area through annexations, consolidations, and military base conversions, in some areas acquisition balances were established to recover regional system cost, and in others new improvement districts were formed to assure that those areas would contribute proportionately to regional facilities and pay for local facilities and expanded regional facilities to serve their demands. Regional allocation will continue to be used with the reorganized improvement districts to assure proportionate cost-sharing of the District's regional system.

Under the District's historic and continuing methodology for achieving equitable cost allocation, the improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. As a result an improvement district can reach full development, but its regional system funding participation will continue. A similar regional allocation would be applied to replacement and enhancement projects, to the extent funded by the improvement districts. This incremental funding

approach also recognizes that at any point in time prior to full buildout, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service.

As discussed in more detail in Section 6, the District will also allocate future regional cost sharing to “110” and “210” areas excluded from earlier improvement district capital funding, based upon an analysis of historic cost contributions of these areas and benefit received from future capital facilities.

**Consolidation of Improvement Districts.** As development progresses to completion in improvement districts and the need for having separate improvement districts to match capital facilities construction timing and other specific local facilities needs of different geographic areas diminishes, consolidation of various improvement districts can produce efficiencies for the District, its customers and property owners. The California Water Code allows the Board of Directors, in a noticed hearing process, to reorganize its improvement district boundaries and to consolidate coterminous improvement districts. The statutory provisions for the consolidation of improvement districts specify that a consolidated improvement district may levy and collect the assessments and charges necessary to satisfy the obligations of its predecessor improvement districts, and that the authorized and unissued bonds of the predecessor improvement districts may be issued and sold as the bonds of the consolidated improvement district.

Ultimately, the District envisions a succession plan that would reduce the number of its improvement districts, ideally to one water improvement district and one sewer improvement district, through consolidations and reorganizations to be implemented as and when considerations for separation of the various improvement districts no longer remain. The current reorganizations and consolidations significantly advance this plan. The timing of the remainder of this plan will be dictated by various factors relating to the preservation of equitable cost sharing as development continues to buildout and as the regional system benefits for various geographic areas are merged.

**Previous Consolidations.** Under the statutory consolidation provisions, some of the original improvement districts described in the preceding sections have been consolidated. The consolidations that were implemented prior to the current consolidation included two groups of the original improvement districts. The first of these consolidations took place in the coastal area. In 1989, after completing annexations to and detachments from ID Nos. 104, 141 and 142 to exclude permanent open space areas and create coterminous boundaries for the improvement districts’ remaining territories, they were consolidated, with the resulting consolidated improvement district designated as ID No. 140. Simultaneously, ID Nos. 204, 241 and 242 were consolidated as coterminous improvement districts, with the resulting consolidated improvement district designated ID No. 240. Following a similar process in 2008, ID Nos. 103 and 109 were consolidated and designated as ID No. 130 and ID Nos. 3(203) and 290 were consolidated and designated as ID No. 230.

**The Current Consolidations and Reorganizations.** With the 1989 and 2008 improvement district consolidations, the District began to implement a transition of its improvement district financing

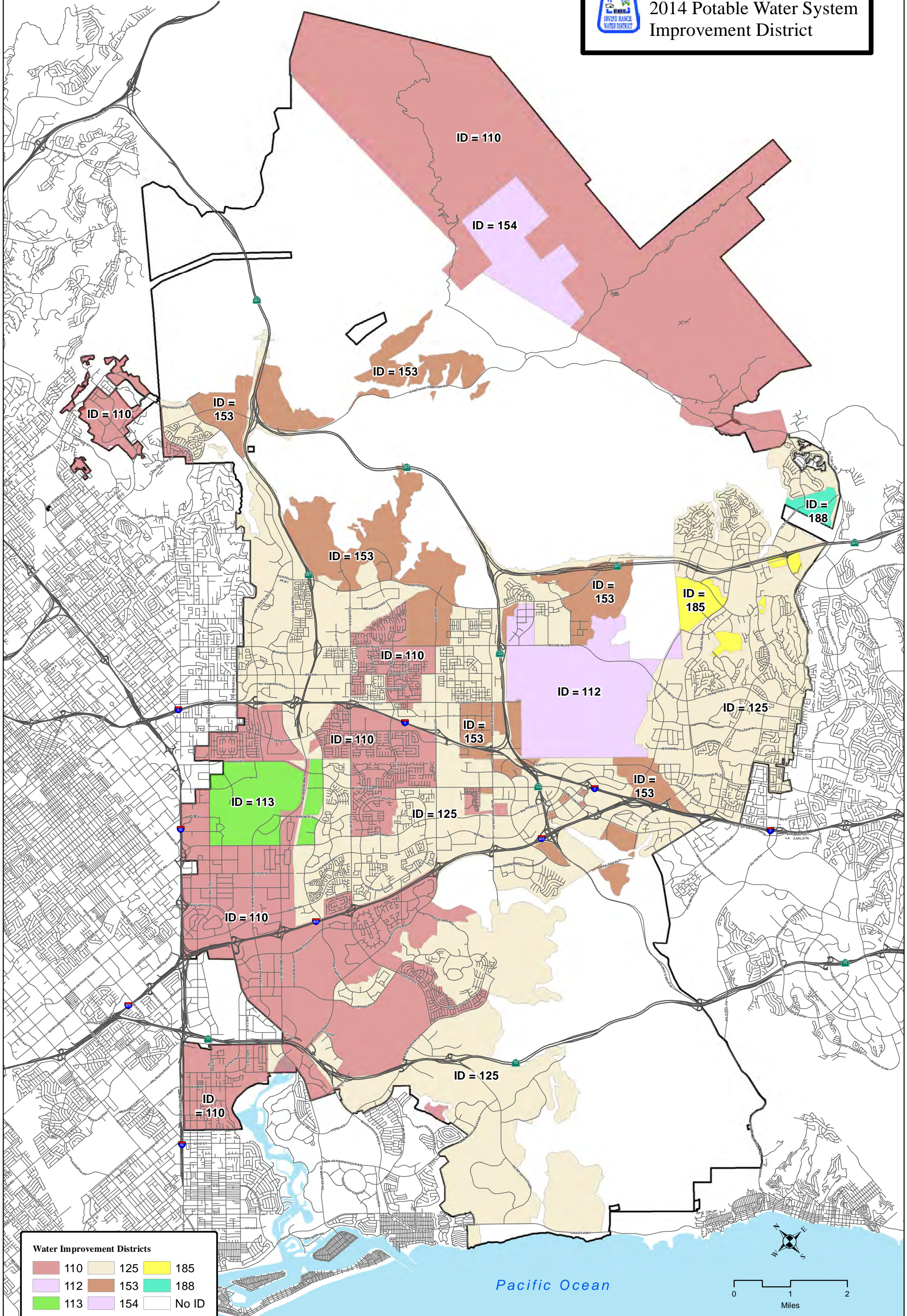
structure from a developing to a developed condition. The current consolidations continue that transition. Based on the District's investigation of the merits of implementing further reorganization and consolidation of its improvement districts, the current reorganization and consolidation have been formulated on a comprehensive, District-wide basis, to provide a sustainable platform for capital funding through the buildout of the District and the completion of the system. The current reorganization and consolidation preserve the District's long-term funding approach in which regional facilities and capacity are acquired incrementally by all improvement districts until the regional system as a whole is complete and regional cost allocations are used to maintain equitable cost-sharing. The interrelated consolidation actions, expected to be effective January 1, 2014, include the following key components:

- Reorganization and consolidation of the substantially developed and certain partially developing improvement districts into a single water improvement district and a single sewer improvement district, ID Nos. 125 and 225;
- Reorganization of several remaining developing areas into one existing and one new water improvement district (ID Nos. 153 and 185) and one existing and one new sewer improvement district (ID Nos. 253 and 285). These developing areas are also retained within the improvement districts reorganized and consolidated as ID Nos. 125 and 225, with the effect that ID Nos. 125 and 225 will underlay these developing improvement districts and ensure cost participation of these developing improvement districts in local and sub-regional facilities already built by the former improvement districts being consolidated (see Chapter 6);
- Retention of existing ID Nos. 112, 113, 188, 212, 213 and 288 as separate developing improvement districts;
- Retention of existing ID Nos. 154, 252 and 256 pending future evaluation of applicable equity considerations;
- Establishment of a planning area over the area of former ID No. 135, consolidated within the developed water improvement district ID No. 125, until completion of financial programs currently in progress to place the former ID No. 135's user rates under the same structure as other developed areas;
- Retention of existing ID No. 240 as a separate improvement district, unless and until separate regional wastewater cost allocations are no longer necessary;
- Implementation of separate charges or other mechanisms, as necessary, to recover a proportional allocation of cost for future regional facilities from the "110" and "210" areas that are not participating in proportional regional cost allocation by inclusion in an improvement district.



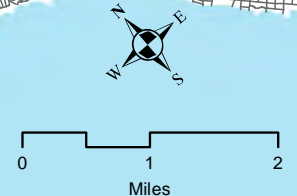


# Irvine Ranch Water District 2014 Potable Water System Improvement District



Water Improvement Districts		
110	125	185
112	153	188
113	154	No ID

Pacific Ocean









Throughout the construction of the District's capital facilities, the District has separated the financing of its water and sewer (including recycled water) systems. The District believes this historical separation continues to be justified, based on differences between the two systems in terms of the factors that govern the allocation of benefits and cost responsibilities among the areas served by each system. For this reason, the above described actions do not include any consolidations of water improvement districts with sewer improvement districts, and the District has no plans at this time to do so. The separation can be reexamined in the future.

#### 1.4 THE WATER, WASTEWATER AND RECYCLED WATER SYSTEMS

**The Water System.** The initial domestic water system included the San Joaquin Reservoir<sup>4</sup> and IRWD's capacity in the East Orange County Feeder No. 2 and other transmission facilities, financed by the sale of general obligation waterworks bonds of the overall District in the 1960s. The District also acquired from the U.S. Government an 18-inch transmission main used to deliver a water supply to the Tustin and El Toro military bases from Metropolitan Water District's East Orange County Feeder and later from East Orange County Feeder No. 2. For the delivery of untreated water supplies, the District acquired capacity in the regional untreated delivery system of the Santiago Aqueduct Commission.

The District's Water Resources Master Plan ("WRMP"), initially formulated in 1972 and updated periodically, sought to provide for ultimate demands and reliability. With the formation of the first few improvement districts and the authorization and sale of improvement district bonds in the early 1970s, the system was expanded, adding local master planned facilities for each of the developing areas as development progressed and building the regional system in which the improvement districts participated in proportion to their demands. Through cooperative efforts with Municipal Water District of Orange County ("MWDOC"), neighboring water districts and cities, an areawide system was acquired, storage was constructed and transmission pipelines were acquired and installed to receive Colorado River imports via MWD facilities. This supplemental source of water was augmented by northern California supplies with commencement of deliveries through the State Water Project system in July, 1976.

In 1978, additional water capacity needed to serve the District was estimated at 140 cubic feet per second ("cfs") (ultimate peak month demand). A supplementary water source plan envisioned in the 1970s and embodied in the 1978 plans of works consisted of the purchase of a 60 cfs share of a proposed regional pipeline (then known as the "Diemer Intertie" and now known as the Allen McColloch Pipeline or "AMP") and an 80 cfs wellfield in the main Orange County groundwater basin. The AMP was constructed by MWDOC, with 79 cfs participation by IRWD, and IRWD constructed two transmission mains capable of supplying 45 cfs from AMP into the distribution system. These facilities, along with two wells in the Tustin area with a combined capacity of 4 cfs, and the Zone 1 Reservoir to provide

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<sup>4</sup> The San Joaquin Reservoir was initially constructed as a domestic water facility. Due to water quality considerations, that use was eventually discontinued, and IRWD acquired the facility from its agency partners and converted it to a recycled water seasonal storage facility.

internal operational storage and avoid the need to supply peak hour demands from feeder connections, comprised the first phase of the domestic water system. Construction of the 80 cfs wellfield, known as the “Dyer Road Wellfield,” took place in the 1980s.

As the domestic water system was built, it was anticipated that commercial agriculture would be phased out by residential, industrial and commercial development, and it was assumed that the existing irrigation system would provide agricultural water until no longer needed. The cost of the untreated water system and its supply, storage and transmission facilities, consisting of the Irvine Lake Pipeline and improvements to Irvine Lake, were apportioned primarily to ID No. 105. In the 1970s, the ID No. 105 plans of works noted that the Irvine Lake Pipeline supply would require treatment for use as a domestic water supply, and an untreated delivery system from Irvine Lake, through either the Santiago Aqueduct Commission facilities or a new Irvine Lake Pipeline, as well as a treatment plant identified in the 1972 WRMP, were included in the planned works for that improvement district.

In the early to mid 1980s, as the district’s water supply needs were updated, other regional system improvements were planned and financed by the improvement districts, including the continued construction of the regional supply, transmission and storage facilities, administration and operations facilities and telemetry.

The AMP, Dyer Road Wellfield and major delivery facilities were completed as contemplated in the existing plans of works. With those core imported and groundwater supply and delivery facilities and the associated distribution system in place, the District’s current WRMP targets a reliable water supply mix and includes the development of sufficient groundwater production capacity to pump up to the District’s basin production percentage set by the Orange County Water District.

In accordance with current IRWD policy, basic operational reliability and redundancy for the system is evaluated with reference to the capacity needed to sustain an outage of a major supply system component, assuming demand reduction obtainable through customer cooperation.

Wells in addition to those in the Dyer Road Wellfield have been constructed or improved in Orange Park Acres, Lake Forest and Irvine to provide additional groundwater supplies. The groundwater production and treatment components of the Irvine Desalter Project produce both domestic and recycled water supplies.

In 2009-10, the District commenced the engineering design for a new water treatment plant, the Baker Water Treatment Plant (the “Baker WTP”). Construction of the Baker WTP is anticipated to be complete in July 2015. This project, to be constructed by the District in cooperation with neighboring water districts, will improve operational supply capacity and regional reliability through the treatment of local and imported raw water sources to drinking water standards. When constructed, the Baker WTP is expected to treat to drinking water standards approximately 28 million gallons per day (“mgd”) of raw imported water purchased from MWD. During emergencies and planned raw imported water outages, water from Irvine Lake is expected to be supplied to the Baker WTP for treatment to drinking water

standards. The Baker WTP will utilize microfiltration and ultraviolet disinfection as the primary treatment processes.

In addition to developing its water treatment, local groundwater and recycled water systems, the District is diversifying its water supply portfolio by developing water banking projects for dry year reliability. These projects include the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project, situated on groundwater recharge lands that overlie the regional Kern County groundwater basin. The District has also secured access to certain participation rights in the Kern Water Bank to store water. The purpose of developing banking facilities is to improve the District's water supply reliability by enabling the District to store lower cost water it can acquire during wet hydrologic periods for use during dry periods. The District has entered into arrangements to acquire water for banking, including unbalanced exchanges and other transactions. The banking facilities will enhance the District's ability to respond to drought conditions and potential water supply interruptions and will provide the District the ability to reduce the cost of water delivered under such conditions. The District has also entered into an agreement with MWD and MWDOC to provide a means to deliver banked water to the District's service area.

**The Wastewater System.** The District's powers did not include sewage collection and treatment when the District was formed. When the District's principal act, the California Water District Law, was amended to permit California water districts to provide sewage services subject to voter approval, voters of the District approved the added scope of services at an election held in March, 1965.

The District began the construction of a wastewater system with the bonds of ID No. 1 issued in 1966 and subsequent bonds issued on behalf of ID Nos. 2(202) and 3(203). In addition to the nucleus sewage collection system acquired from Orange County Sanitation District No. 14, the original planned works included a treatment plant, reclamation and reclaimed water storage facilities. Subsequent plans of works contemplated an expansion of the Michelson Water Reclamation Plant, dual collection and treatment systems for reclaimable domestic wastewater and non-reclaimable industrial discharges, reclaimed water distribution facilities and wet-weather treated wastewater disposal.

The Michelson Water Recycling Plant ("MWRP"), then known as the Michelson Water Reclamation Plant, has been expanded in phases. The most recent expansion, anticipated to be completed during fiscal year 2014, will bring its capacity from 18 to 28 mgd. The District's wastewater system also includes facilities and contractual entitlements to serve the portions of its service area in the coastal, Lake Forest and Santa Margarita ("Chiquita") areas not tributary to MWRP, as well as regional treatment capacity in the facilities of Orange County Sanitation District for the sewage from the MWRP-tributary area that is in excess of its needs for production of recycled water.

The wastewater system to serve the coastal area not tributary to MWRP was first envisioned as two systems, one discharging to a regional treatment and disposal system and the other to a local treatment plant to be built. Ultimately, the collection system for the coastal area was instead designed

to deliver all of the sewage flow to the regional collection and treatment facilities of Orange County Sanitation District No. 5.

During fiscal year 1986, the District cooperated with Orange County Sanitation District (“OCSD”) to form Sanitation District 14 (functionally replaced by “Revenue Area 14” of OCSD, upon the 1998 consolidation of the several sanitation districts comprising OCSD’s predecessor, the County Sanitation Districts of Orange County), which overlays much of the District’s territory other than the coastal area. Under an agreement entered into between the District and OCSD, the District acquired equity interests in OCSD’s sewage processing facilities (the percentage of interest will vary over time pursuant to a formula set forth in the agreement between OCSD and the District). The agreement also provides for the purchase by the District of additional capacity in OCSD sewage processing facilities on an as-needed-basis determined from annual flows. These equity purchase costs are included in the costs regionally allocated to the improvement districts.

In 2000, as part of the consolidation of Los Alisos Water District with the District, the Los Alisos Water Reclamation Plant (“LAWRP”) was added to the wastewater system. Currently, approximately 85% of the District’s wastewater is treated by the MWRP and LAWRP operated by the District, and approximately 14% is treated by OCSD.

A future MWRP expansion up to 33 mgd has undergone environmental review and is planned by 2025, as needed to meet demand. Ultimately, the District plans to expand capacity for its treatment facilities to approximately 40.5 mgd in order to: (i) increase recycled water production and utilization; (ii) decrease exposure to external treatment costs and operational constraints; and (iii) decrease dependencies on imported water supplies.

The construction of IRWD’s regional sewer system also includes the network of gravity sewers, force mains, wastewater lift stations and siphons that convey wastewater to each treatment facility, which was developed as the system was expanded.

The processes for treating sewage and producing recycled water generate solids residuals. After evaluating alternative approaches to handling its wastewater solids, the District is proceeding with the construction of facilities for handling MWRP solids, currently conveyed to Fountain Valley for treatment by OCSD, as well as solids from the District’s LAWRP. The solids handling capital project is underway and is anticipated to be completed in fiscal year 2017.

**The Recycled Water System.** In addition to the water reclamation facilities described under the preceding subheading, the recycled water system consists of a dual system for distribution of the recycled water, primarily for irrigation, and seasonal storage to allow production in the low-demand winter season for use in the high-demand summer season. These facilities presently include the District’s Sand Canyon, Rattlesnake Canyon, and San Joaquin Reservoirs, which are recycled water reservoirs with capacities of 750 acre feet, 1,100 acre feet, and 2,500 acre feet respectively. In addition to the future expansion of reclamation capacity, based on demand as described above relative to the

wastewater system, the District plans to increase seasonal storage capacity. At this time, the expansion of Syphon Reservoir is being evaluated for that purpose. The cost of the Syphon expansion or a comparable seasonal storage project is included in the proposed sewer plans of works. As stated above, the recycled water system regional and local costs comprise a part of regional and local sewer costs under the plans of works.

**Enhancement and Replacement.** Apart from the ongoing system expansion and completion that will continue to buildout, the District has incorporated in its system planning efforts the updating of its infrastructure to meet the needs of existing and future customers. These system enhancement efforts will include capital projects that provide service cost savings and projects that provide reliability or redundancy beyond that necessary to satisfy the District's policy for basic reliability. Replacement and refurbishment improvements consist of repairs and restoration to existing water, recycled water and sewer system facilities. The District presently funds enhancement and replacement costs from reserves set aside for that purpose with contributions from user rates, general 1% tax levy revenues and other sources. The District may also evaluate the funding of enhancement and replacement costs through the improvement districts to the extent authorized general obligation bonds are available for such purposes and the enhancement and replacement costs are allocable among improvement districts and other funding sources in a fair and equitable manner.

## SECTION 2 IMPROVEMENT DISTRICT NO. 253

### 2.1 DESCRIPTION OF THE STUDY AREA

ID No. 253, as originally formed, represented the majority of the territory of ID No. 1 of the former Santiago County Water District, the area extending northward from Loma Ridge to the Fremont Canyon area. As a result of the current reorganization of ID No. 253, the land included in the improvement district consists of planned future development areas in portions of former ID No. 253 as well as planned future developments within other former improvement districts (principally former ID Nos. 230 and 250) that have been added to ID No. 253 by annexation. Areas of former ID No. 253 that contained permanent open space, including approximately 13,400 acres near the Lomas de Santiago ridgeline, have been excluded. The resulting Improvement District No. 253 is a developing improvement district that will function in tandem with existing ID Nos. 212 (former MCAS El Toro), 213 (former MCAS Tustin) and 288 (Portola Center) and new ID No. 285, where development is underway, to provide equitable regional capital cost sharing by the District's developing areas.

To simplify the text of this report, "north" refers to "Irvine north" running parallel to Sand Canyon Avenue. North arrows on exhibits show true north.

### 2.2 LAND USE AND DEVELOPMENT PHASING

**Land Use.** The District expects future development of the reorganized ID No. 253 to be predominantly residential with supporting commercial development, and expects development in ID No. 253 to continue through at least 2035.

**Figure II-1** shows the boundaries of reorganized ID No. 253, encompassing about 4,250 acres.

The reorganized ID No. 253 includes portions of the following planned development areas as depicted on **Figures II-1a through II-1e**:

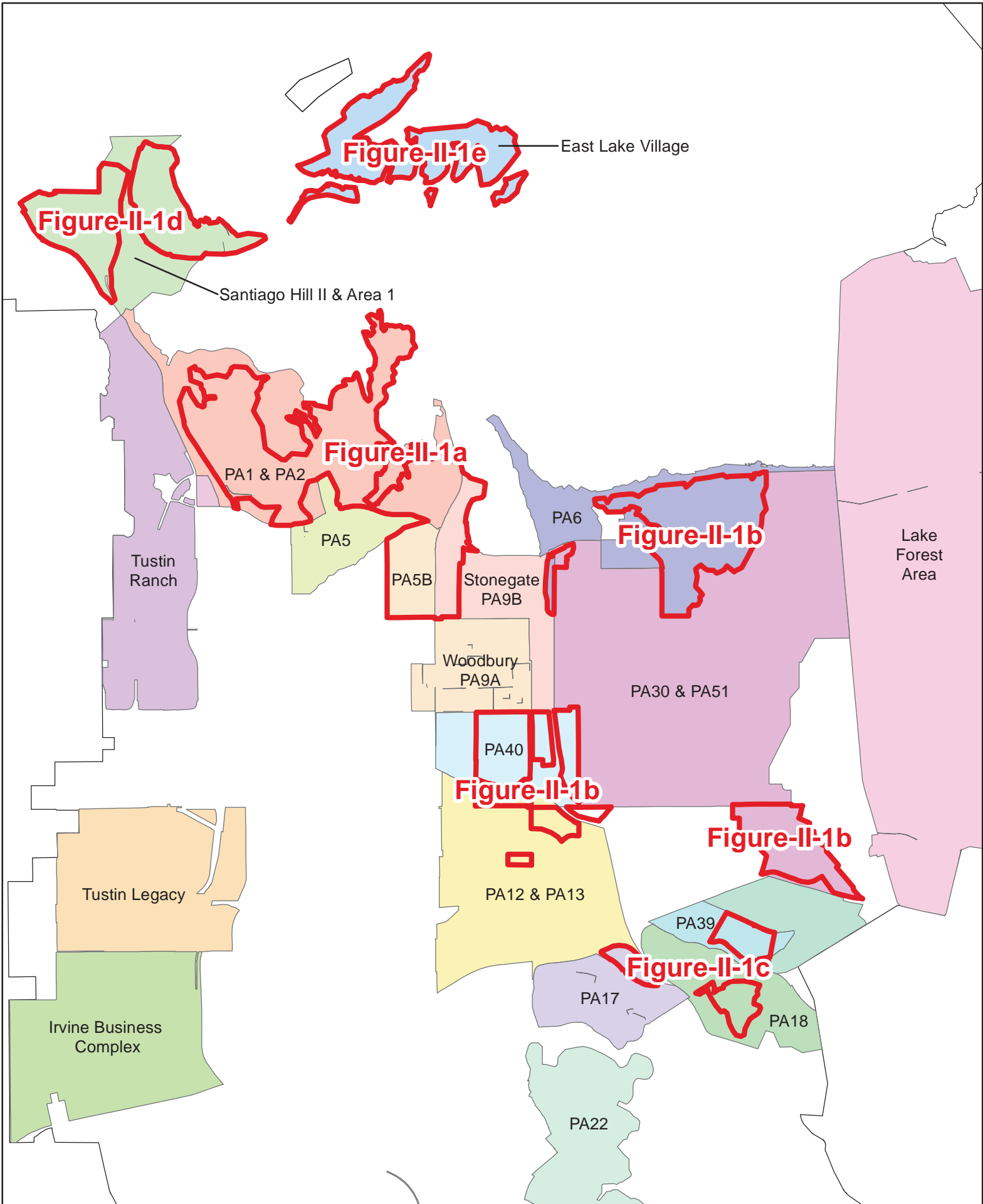
- **Figure II-1a** depicts portions of Planning Areas 1 and 2 (north of Portola Parkway, between the Eastern Transportation Corridor and Jeffrey Road), Planning Areas 5B, and 9B (north of the Irvine Blvd to Portola Parkway, bisected by Jeffrey Road);
- **Figure II-1b** depicts portions of Planning Area 6 (southeast of the intersection of the Eastern Transportation Corridor and the Foothill Transportation Corridor), Planning Areas 30 (northeast of the intersection of I-5 and I-405), and Planning Area 40 (north of I-5 generally bounded by Trabuco Road, Future O Street, and Jeffrey Road) ;

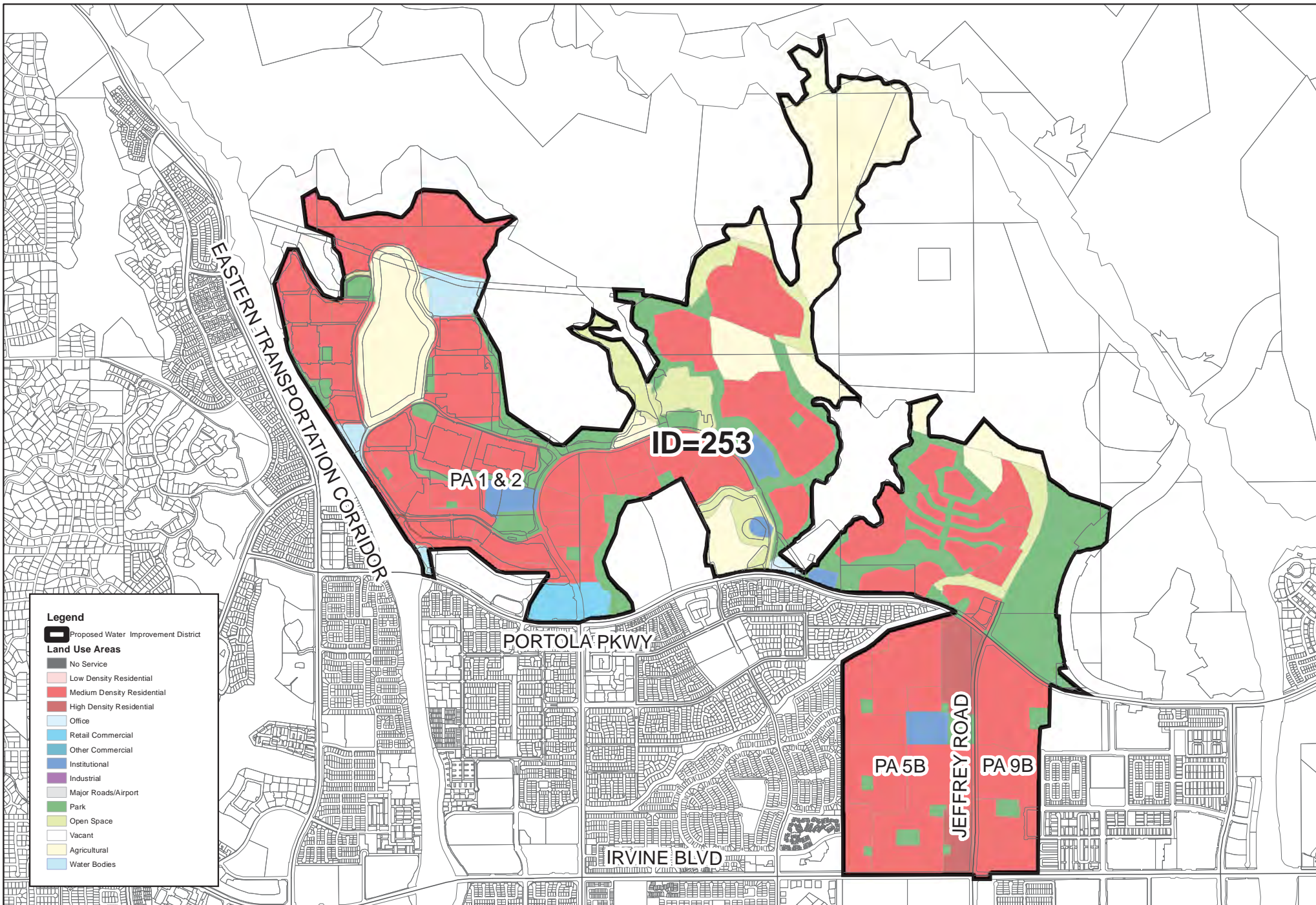
- **Figure II-1c** depicts portions of Planning Area 17 (southwest of the intersection of I-405 and SR-133), Planning Area 18 (south-east of the intersection SR-133 and I-405), Planning Area 39 (south of Irvine Center Drive, between I-405 and Bake Parkway);
- **Figure II-1d** depicts Santiago Hills II and East Orange Area 1 (east of Jamboree Road and north of the intersection of SR-241/Santiago Canyon Road and SR-261); supplemented by Santiago Hills Integration Study ;
- **Figure II-1e** depicts East Orange General Plan (“Lake Village” -- north of Santiago Canyon Road and southeast of Irvine Lake; also supplemented by Santiago Hills Integration Study);

**Development Phasing.** This Plan of Works follows and incorporates the phasing used in the subarea master plans applicable to the various planned development areas.

Phasing of development is subject to change. Depending upon real estate markets, city planning decisions and other factors, some phases or portions of phases could occur simultaneously rather than sequentially. The phasing of bond issues discussed in Section 5, have been selected to allow reasonable flexibility in phasing priorities.





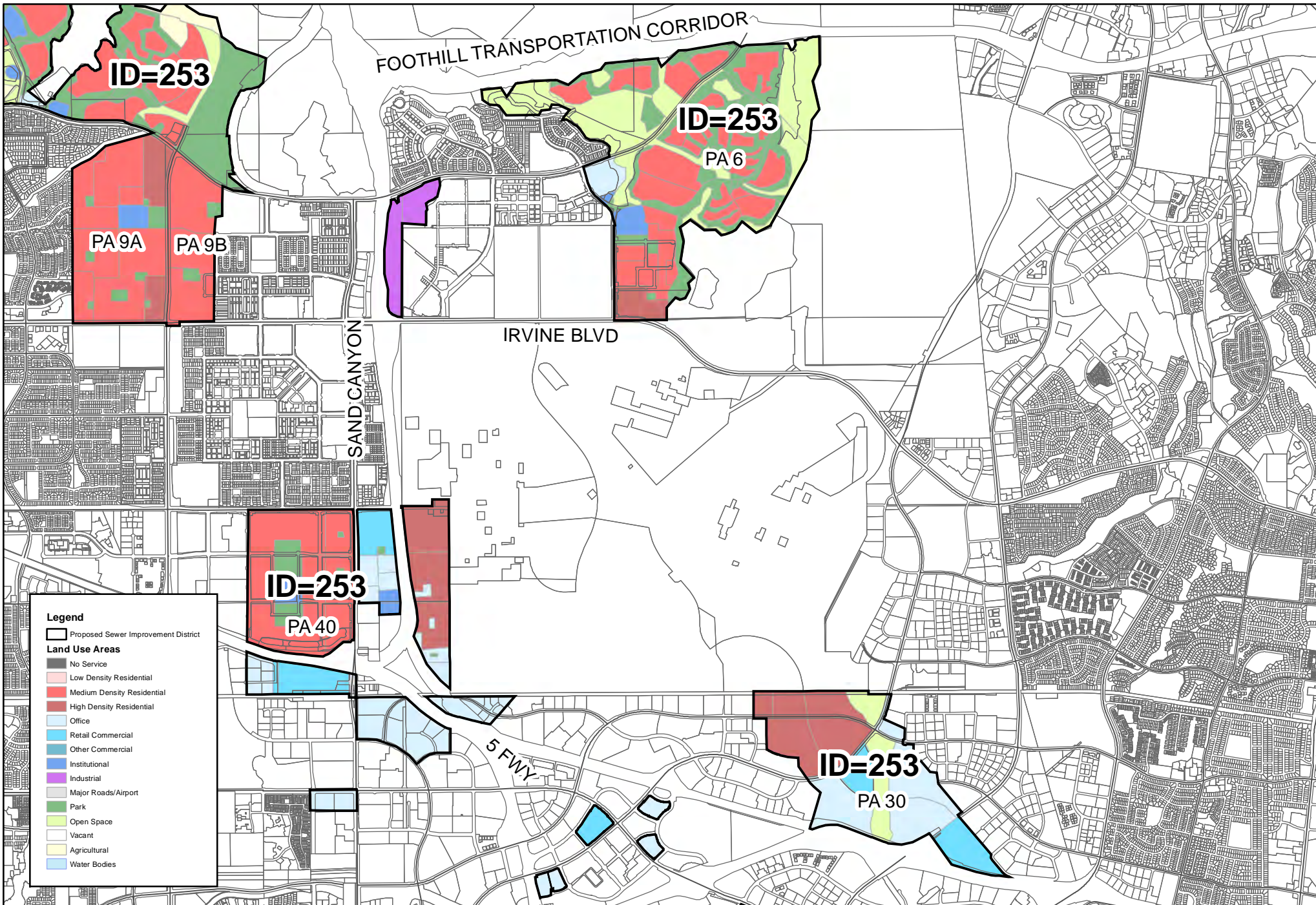


**IRVINE RANCH  
WATER DISTRICT**

**SEWER IMPROVEMENT DISTRICT 253  
PLANNING AREAS 1, 2, 5B, AND 9B PROPOSED LAND USE**

**FIGURE-II-1a**





**IRVINE RANCH  
WATER DISTRICT**

**SEWER IMPROVEMENT DISTRICT 253  
PA 6, PA 30, PA 40, PA 51 PROPOSED LAND USE**

**FIGURE-II-1b**

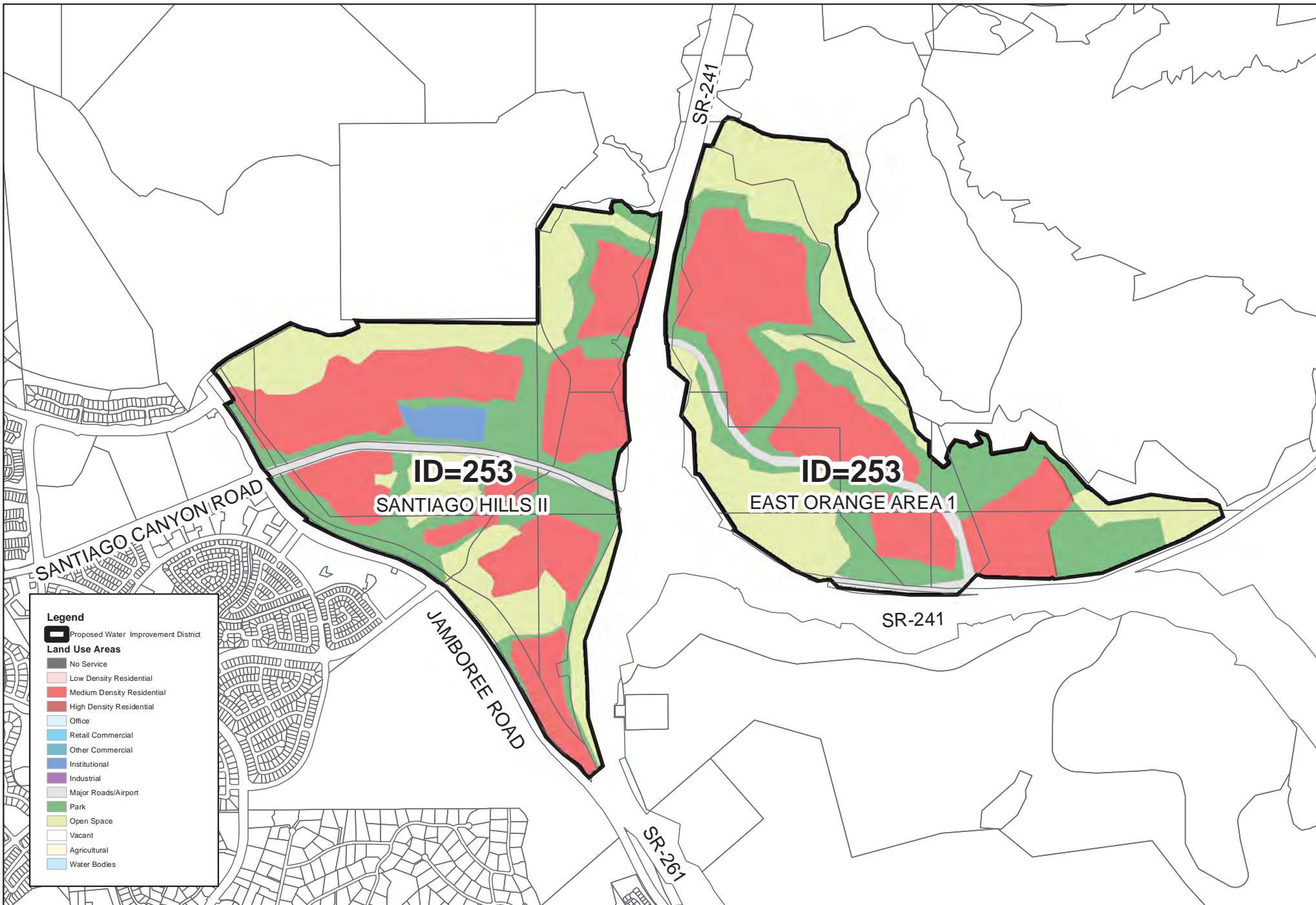


**IRVINE RANCH  
WATER DISTRICT**

**SEWER IMPROVEMENT DISTRICT 253  
PLANNING AREA 17, 18 AND 39 PROPOSED LAND USE**

**FIGURE-II-1c**

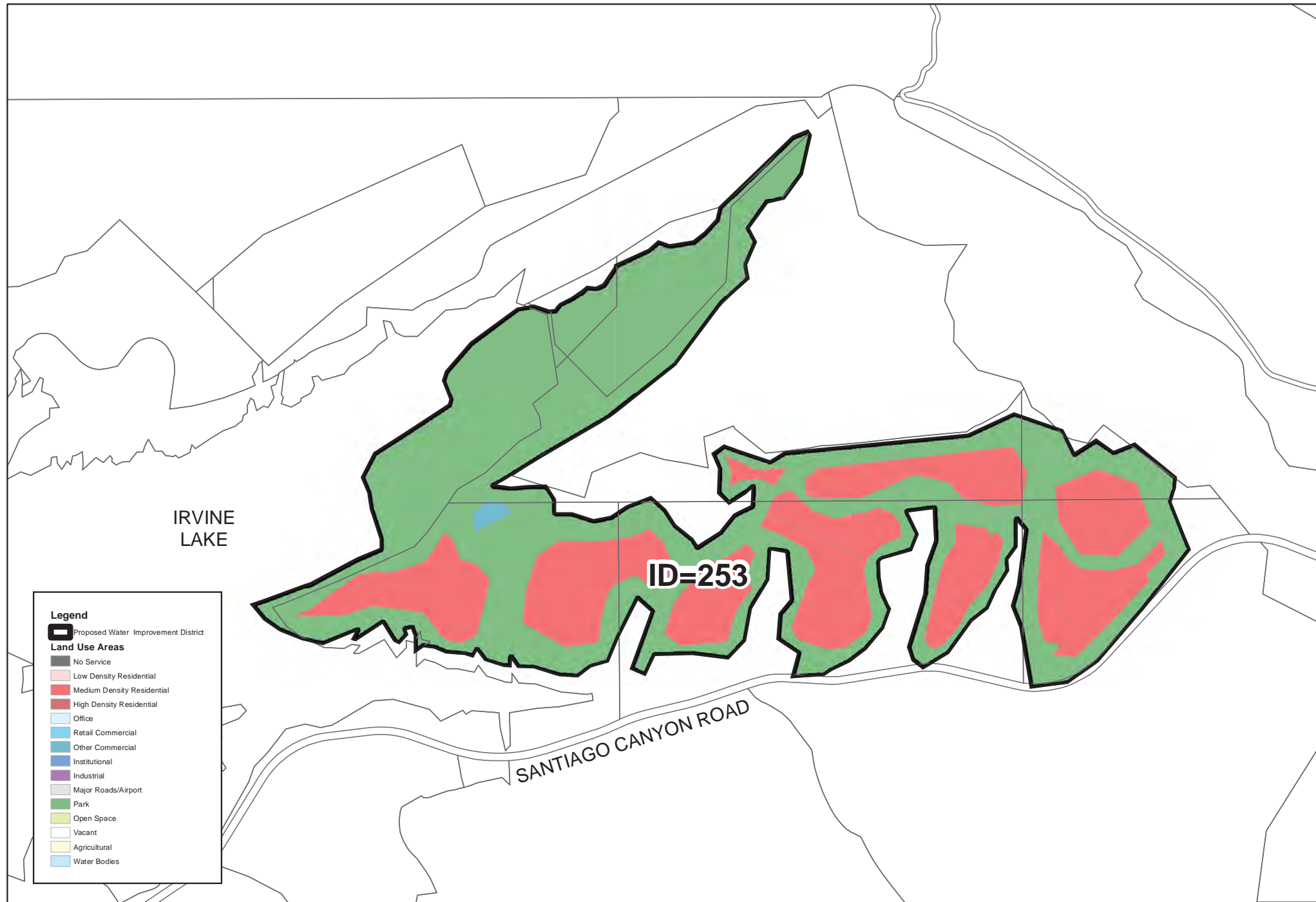




**IRVINE RANCH  
WATER DISTRICT**

**SEWER IMPROVEMENT DISTRICT 253  
SANTIAGO HILL II AND EAST ORANGE AREA 1 PROPOSED LAND USE**

**FIGURE-II-1d**



**Legend**

- Proposed Water Improvement District
- Land Use Areas**
- No Service
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Office
- Retail Commercial
- Other Commercial
- Institutional
- Industrial
- Major Roads/Airport
- Park
- Open Space
- Vacant
- Agricultural
- Water Bodies



**IRVINE RANCH  
WATER DISTRICT**

**SEWER IMPROVEMENT DISTRICT 253  
EAST LAKE VILLAGE AREA**

**FIGURE-II-1e**

### 2.3 DEMAND AND PEAKING FACTORS

**Water Use Factors.** **Table II-1** reflects most recently adopted duty factors from the IRWD Water Resources Master Plan (WRMP), summarizing the District's standard interior and exterior water use factors. The District employ local interior water use factors, shown in the table, as its sewer duty factors. Irrigation factors used to determine recycled water demands are also shown in the table. The factors in **Table II-1** were also used to develop **Table II-2** and **Table II-3**.

**Peaking Factors.** Potable water peaking factors, irrigation peaking factors, applied in calculation for sizing respective facilities, are set forth in the WRMP. Sewer peaking, applied in calculation for sizing sewer collection and treatment facilities, are set forth in the SCSMP.

**Table 3-1 Land Use and Water Use Factors (September 2012)**

Code	Land Use Description	Land Use Agency	Land Use Density		Local Demands			Irrigation Demands	
			Average	Units	Local - Interior	Local - Exterior	Total Local	% Irrigated Area	Irrigation Factor
<b><u>1100</u></b>	<b><u>Residential</u></b>				<b><u>Gal/DU/Day</u></b>			<b><u>Gal/Acre/Day</u></b>	
1111	Rural Density	Orange	0.3	du/acre	250	170	420	0%	1,000
1112	Rural Density	Irvine	0.3	du/acre	250	750	1,000	5%	2,800
1115	Rural Density	County	0.26	du/acre	300	350	650	5%	2,800
1121	Estate Density	Orange	1.2	du/acre	300	350	650	5%	2,800
1122	Estate Density	Irvine	0.5	du/acre	300	225	525	5%	2,800
1126	Estate Density	Lake Forest	0.5	du/acre	300	350	650	7%	3,000
1131	Low Density	Orange	4	du/acre	300	350	650	8%	2,500
1132	Low Density	Irvine	3	du/acre	225	180	405	16%	2,200
1133	Low Density	Newport Beach	1	du/acre	290	220	510	17%	2,800
1134	Low Density PC	Tustin	4.5	du/acre	450	1,550	2,000	17%	2,800
1135	Suburban Density	County	9.25	du/acre	165	95	260	15%	2,500
1136	Low Density	Lake Forest	3	du/acre	270	150	420	20%	2,800
1141	Low-Medium Density	Orange	10.5	du/acre	235	145	380	15%	2,500
1146	Low-Medium Density	Lake Forest	11	du/acre	205	150	355	10%	3,000
1153	Medium-Low Density	Newport Beach	2.75	du/acre	400	350	750	10%	2,800
1161	Medium Density	Orange	19.5	du/acre	200	150	350	15%	2,800
1162	Medium Density	Irvine	7.5	du/acre	200	100	300	15%	2,800
1163	Medium Density	Newport Beach	5	du/acre	225	205	430	20%	2,800
1164	Medium Density PC	Tustin	11.8	du/acre	155	95	250	15%	2,800
1166	Medium Density	Lake Forest	7.5	du/acre	140	60	200	15%	2,800
1172	Medium-High Density	Irvine	17.5	du/acre	130	30	160	22%	2,400
1175	Urban Density	County	29	du/acre	140	45	185	20%	2,800
1176	Medium-High Density	Lake Forest	17.5	du/acre	145	70	215	17%	2,500
1182	High Density	Irvine	32.5	du/acre	130	13	143	20%	2,800
1183	High Density	Newport Beach	12.25	du/acre	115	10	125	20%	3,200
1184	High Density PC	Tustin	17.4	du/acre	115	10	125	15%	2,800
1186	High Density	Lake Forest	32.5	du/acre	115	10	125	20%	2,800
1191	High Rise Density	Orange	35	du/acre	115	10	125	20%	2,800
1192	High Rise Density	Irvine	40	du/acre	115	10	125	20%	2,800
<b><u>1200</u></b>	<b><u>Commercial</u></b>				<b><u>Gal/KSF/Day</u></b>			<b><u>Gal/Acre/Day</u></b>	
1210	General Office		20	ksf/acre	62	10	72	20%	2,500
1221	Community Commercial		9	ksf/acre	142	33	175	20%	3,500
1222	Regional Commercial		10	ksf/acre	130	10	140	20%	3,500
1230	Commercial Recreation		8	ksf/acre	41	20	61	30%	3,000
1235	Hotel		45	rooms/acre	110	50	160	30%	2,800
1240	Institutional		8	ksf/acre	30	15	45	30%	2,750
1244	Hospital		9	ksf/acre	165	65	230	30%	2,850
1260	School		10	ksf/acre	20	8.0	28.0	50%	2,500
1261	UCI		10	ksf/acre	215	15	230	40%	3,800
1273	Military Air Field		0	ksf/acre	0	0	0	0%	0
1290	Hotel		45	rooms/acre	110	50	160	30%	2,800
1300	Industrial		9.091		600	25	625	20%	2,800
1310	Industrial - Light		18	ksf/acre	60	10	70	20%	2,800
1320	Industrial - Heavy		25	ksf/acre	2,000.0	18	2,018	20%	2,800
	<b><u>Open Space and Other</u></b>							<b><u>Gal/Acre/Day</u></b>	
1411	Airports		0	acre/acre	0	0	0	0%	0
1413	Freeways & Major Road		0	acre/acre	0	0	0	0%	0
1820	Community Park		1	acre/acre	0	0	0	86%	2,200
1830	Regional Park		1	acre/acre	0	0	0	75%	2,200
1840	Fuel Modification Zone		1	acre/acre	0	0	0	100%	1,000
1850	Wildlife Preserve		0	acre/acre	0	0	0	0%	0
1880	Open Space (Rec)		0	acre/acre	0	0	0	0%	0
1900	Vacant		1	acre/acre	0	0	0	0%	0
4100	Water		0		0	0	0	0%	0
<b><u>2000</u></b>	<b><u>Agriculture</u></b>			<b><u>acre/acre</u></b>				<b><u>Gal/Acre/Day</u></b>	
2100	Low-Irrigated AG Potable		1	acre/acre	0	0	0	80%	1,800
2110	Low-Irrigated AG Untreated		1	acre/acre	0	0	0	80%	1,800
2120	Low-Irrigated AG Recycled		1	acre/acre	0	0	0	80%	1,800
2200	High-Irrigated AG Potable		1	acre/acre	0	0	0	80%	3,100
2210	High-Irrigated AG Untreated		1	acre/acre	0	0	0	80%	3,100
2220	High-Irrigation AG Recycled		1	acre/acre	0	0	0	80%	3,100



**Table II-2 - Sewage Generation:** Tabulates the average daily wastewater flow at build-out (2035) within the reorganized ID No. 253 service area, using the District's *demand forecasting tool*.

**Table II-3 - Recycled Water Demands:** Tabulates the average daily Recycled Water Demands at build-out (2035) within the reorganized ID No. 253 service area, using the District’s *demand forecasting tool*.

PA	Land Use Code	Description	2035 Demands (AFY)
<b>Planning Area 1 and 2 - Orchard Hills</b>			
I-1,2	1132	Low Density	222.58
	1162	Medium Density	66.03
	1172	Medium-High Density	120.86
	1210	General Office	2.19
	1221	Community Commercial	20.22
	1240	Institutional	6.66
	1260	School	29.84
	1820	Community Park	109.87
	1830	Regional Park	348.98
	2120	Low-Irrigated AG Recycled	300.29
		Subtotal	1,227.52
<b>Planning Area 5B</b>			
I-5B	1132	Low Density	29.80
	1162	Medium Density	47.56
	1172	Medium-High Density	15.27
	1182	High Density	24.61
	1260	School	14.32
	1820	Community Park	29.98
			Subtotal
<b>Planning Area 6 - Portola Springs</b>			
I-6	1132	Low Density	30.99
	1162	Medium Density	58.39
	1172	Medium-High Density	59.90
	1182	High Density	15.73
	1210	General Office	10.53
	1240	Institutional	1.82
	1260	School	20.63
	1310	Industrial - Light	29.36
	1820	Community Park	37.26
	1830	Regional Park	397.29
	1840	Fuel Modification Zone	79.75
			Subtotal

PA	Land Use Code	Description	2035 Demands (AFY)
<b><u>Planning Area 9B - Stonegate</u></b>			
I-9B	1132	Low Density	28.57
	1162	Medium Density	35.57
	1820	Community Park	16.25
		Subtotal	80.39
<b><u>Planning Area 17 and 18 - Quail Hill and Hidden Canyon</u></b>			
I-17	1310	Industrial - Light	45.49
I-18	1132	Low Density	23.78
	1820	Community Park	3.00
	1840	Fuel Modification Zone	56.28
		Subtotal	128.54
<b><u>Planning Area 30 - Great Park Neighborhoods</u></b>			
I-30	1182	High Density	73.49
	1210	General Office	69.87
	1221	Community Commercial	42.89
		Subtotal	186.26
<b><u>PA-31, 32, 33a, and 35 - Spectrum Area</u></b>			
I-31	1210	General Office	37.36
I-32	1210	General Office	9.25
I-33	1192	High Rise Density	9.22
	1820	Community Park	3.12
I-35	1210	General Office	0.65
		Subtotal	59.60
<b><u>Planning Area 39</u></b>			
I-39	1172	Medium-High Density	23.69
	1182	High Density	29.45
	1230	Commercial Recreation	3.04
	1260	School	13.54
	1820	Community Park	23.29
		Subtotal	93.01
<b><u>Planning Area 12 and 40 - Cypress Village</u></b>			
I-12	1210	General Office	19.32
	1221	Community Commercial	28.96
I-40	1162	Medium Density	47.67
	1172	Medium-High Density	87.76
	1182	High Density	59.32
	1210	General Office	26.58

ID 253 Plan of Works

<b>PA</b>	<b>Land Use Code</b>	<b>Description</b>	<b>2035 Demands (AFY)</b>
	1221	Community Commercial	22.17
	1240	Institutional	8.69
	1260	School	18.80
	1820	Community Park	67.81
		Subtotal	387.08

**Total ID 253 Recycled Water Demand**

**3,065.61**

## SECTION 3 REGIONAL FACILITIES

### 3.1 DESCRIPTION

Through the reorganization consolidation process, 10 of IRWD's 18 sewer improvement districts will be consolidated into a single improvement district, containing both lands where development is essentially completed, as well as certain remaining lands proposed for development that are also included in reorganized ID No. 253, newly formed 285 and existing 288. Existing ID Nos. 1(201), 212, 213, 240, 252, and 256 are not included in the reorganization or consolidation actions. Regional sewer and recycled water project costs will continue to be allocated to each sewer improvement district based on that improvement district's pro-rata shares of the ultimate IRWD wastewater and recycled water demands.

Under the District's methodology for achieving equitable cost allocation, the improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. This incremental funding approach also recognizes that at any point in time prior to full buildout, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service.

For purposes of maintaining equity in facilities cost allocation, IRWD employs multiple treated water regional splits. For example, one regional split may include all IDs; another may include some IDs and exclude one or more IDs (sometimes referred to as a "sub-regional project"). In the latter instance, that split is applied to the cost of all projects that provide no benefit to the excluded improvement district(s); an improvement district would be included only in the regional splits for the projects from which it does derive benefit.

In this Plan of Works, the appropriate regional split has been applied to existing and proposed wastewater collection and treatment and recycled water supply, storage and distribution facilities needed to provide an adequate and reliable wastewater and recycled water system meeting the ultimate needs of ID No. 253.

Periodically, IRWD revises its sewer improvement district regional allocation to reflect changes in demand factors, land use planning, phasing of planned development and other factors which may influence wastewater treatment and recycled water demands, either within a specific improvement district or throughout IRWD. Revised regional splits are applied prospectively. The regional cost allocations known as regional splits are calculated based on IRWD's internal wastewater and recycled water demand forecasting tool.



### 3.2 COST ESTIMATES AND REGIONAL ALLOCATION

Based on the total IRWD sewage generation, the demands of ID No. 253 as calculated by the District's demand forecasting tool would yield a regional allocation 9.6%. Based on the total IRWD recycled water demands, the demands of ID No. 253 as calculated by the District's demand forecasting tool would yield a regional allocation 10.3%.

A description and cost estimate of the proposed regional sewer and recycled water facilities share allocated to ID No. 253 is shown in **Table III-1**.

As noted in the Introduction, the projects identified here may change to reflect changes in land use and development phasing. For purposes of determining the allowance for deferred costs, the project costs have been escalated at 10% per year.

## Table III-1 Regional Projects Proposed Facilities and Estimated Escalated Costs Improvement District 253

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
20113	OCSD CORF 12/13	Regional	9.6%	\$35,640	\$35,640	\$0	\$0	\$0
20114	OCSD CORF 13/14	Regional	9.6%	\$202,643	\$202,643	\$0	\$0	\$0
20115	OCSD CORF 14/15	Regional	9.6%	\$238,111	\$186,425	\$51,685	\$0	\$0
20116	OCSD CORF 15/16	Regional	9.6%	\$254,379	\$0	\$254,379	\$0	\$0
20117	OCSD CORF 16/17	Regional	9.6%	\$332,146	\$0	\$332,146	\$0	\$0
20118	OCSD CORF 17/18	Regional	9.6%	\$437,771	\$0	\$437,771	\$0	\$0
20119	OCSD CORF 18/19	Regional	9.6%	\$351,140	\$0	\$351,140	\$0	\$0
20120	OCSD CORF 19/20	Regional	9.6%	\$414,994	\$0	\$323,194	\$91,800	\$0
20214	MWRP EXPANSION PHASE II	Regional	9.6%	\$4,731	\$4,731	\$0	\$0	\$0
20356	OCSD CORF 20/21	Regional	9.6%	\$476,739	\$0	\$0	\$476,739	\$0
20357	OCSD CORF 21/22	Regional	9.6%	\$536,888	\$0	\$0	\$536,888	\$0
20358	OCSD CORF 22/23	Regional	9.6%	\$597,464	\$0	\$0	\$597,464	\$0
20360	OCSD CORF 23/24	Regional	9.6%	\$664,899	\$0	\$0	\$664,899	\$0
20362	OCSD CORF 24/25	Regional	9.6%	\$739,755	\$0	\$0	\$574,046	\$165,709
20468	FOOTHILL SEWER DIVERSION TO LAWRP	Regional	9.6%	\$108,894	\$17,330	\$91,564	\$0	\$0
20540	LONG TERM SEWER SYSTEM FLOW MONITORING	Regional	9.6%	\$40,355	\$19,011	\$21,344	\$0	\$0
20587	OCSD EQUITY 12/13	Regional	9.6%	\$0	\$0	\$0	\$0	\$0
20588	OCSD EQUITY 13/14	Regional	9.6%	\$11	\$11	\$0	\$0	\$0
20589	OCSD EQUITY 14/15	Regional	9.6%	\$133,619	\$85,958	\$47,660	\$0	\$0
20593	OCSD EQUITY 15/16	Regional	9.6%	\$208,663	\$0	\$208,663	\$0	\$0
20621	OCSD EQUITY 16/17	Regional	9.6%	\$243,520	\$0	\$243,520	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
20715	OCSD EQUITY 17/18	Regional	9.6%	\$586,328	\$0	\$586,328	\$0	\$0
20716	OCSD EQUITY 18/19	Regional	9.6%	\$655,351	\$0	\$655,351	\$0	\$0
20717	OCSD EQUITY 19/20	Regional	9.6%	\$658,965	\$0	\$421,840	\$237,126	\$0
20718	OCSD EQUITY 20/21	Regional	9.6%	\$442,887	\$0	\$0	\$442,887	\$0
20719	OCSD EQUITY 21/22	Regional	9.6%	\$281,822	\$0	\$0	\$281,822	\$0
20720	OCSD EQUITY 22/23	Regional	9.6%	\$159,892	\$0	\$0	\$159,892	\$0
20733	OCSD EQUITY 23/24	Regional	9.6%	\$176,186	\$0	\$0	\$176,186	\$0
20734	OCSD EQUITY 24/25	Regional	9.6%	\$194,160	\$0	\$0	\$123,800	\$70,360
20798	OCSD EQUITY 25/26	Regional	9.6%	\$206,874	\$0	\$0	\$0	\$206,874
20799	OCSD EQUITY 26/27	Regional	9.6%	\$188,047	\$0	\$0	\$0	\$188,047
20802	OCSD CORF 25/26	Regional	9.6%	\$822,527	\$0	\$0	\$0	\$822,527
20803	OCSD CORF 26/27	Regional	9.6%	\$913,004	\$0	\$0	\$0	\$913,004
20811	OCSD SOLIDS HANDLING 13/14	Regional	4.1%	\$57,421	\$57,421	\$0	\$0	\$0
20812	OCSD SOLIDS HANDLING 14/15	Regional	4.1%	\$69,507	\$69,507	\$0	\$0	\$0
20959	SEWER GEN SYS MODS 14/15	Regional	9.6%	\$32,037	\$32,037	\$0	\$0	\$0
21055	ENG PLANNING STUDY RESERVE 13/14	Regional	9.6%	\$18,174	\$18,174	\$0	\$0	\$0
21056	ENG PLANNING STUDY RESERVE 14/15	Regional	9.6%	\$19,991	\$19,991	\$0	\$0	\$0
21057	ENG PLANNING STUDY RESERVE 15/16	Regional	9.6%	\$21,997	\$0	\$21,997	\$0	\$0
21096	GIS SUPPORT APPLICATIONS 13/14	Regional	9.6%	\$6,357	\$6,357	\$0	\$0	\$0
21097	GIS SUPPORT APPLICATIONS 14/15	Regional	9.6%	\$6,993	\$6,993	\$0	\$0	\$0
21129	HYDRAULIC MODELING 13/14	Regional	9.6%	\$4,657	\$4,657	\$0	\$0	\$0
21131	HYDRAULIC MODELING 14/15	Regional	9.6%	\$5,123	\$5,123	\$0	\$0	\$0
21133	UNIVERSITY LS ODOR CONTROL SYSTEM	Regional	9.6%	\$26,970	\$26,970	\$0	\$0	\$0
21134	MANHOLE CONST MAIN AND SKY PARK SOUTH	Regional	9.6%	\$5,143	\$5,143	\$0	\$0	\$0
21146	MWRP BIOSOLIDS AND ENERGY RECOVERY	Regional	4.1%	\$10,310,431	\$4,461,454	\$5,848,977	\$0	\$0
21147	LAWRP SYSTEM UPGRADES	Regional	9.6%	\$77,658	\$43,341	\$34,317	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
21248	MWRP EXPANSION PHASE 3	Regional	9.6%	\$2,872,925	\$0	\$1,477,330	\$1,395,595	\$0
21339	AUTOMATION SYSTEM IMPROVEMENTS SEWER	Regional	9.6%	\$13,926	\$8,826	\$5,100	\$0	\$0
21455	IRWD PIPELINES RELOCATION FOR SC GRADE	Regional	9.6%	\$32,141	\$32,141	\$0	\$0	\$0
21578	OPS CENTER IMPROVEMENTS PH2 (WAREHOUSE)	Regional	9.6%	\$164,100	\$0	\$164,100	\$0	\$0
21655	SKYLIGHT PROTECTION	Regional	9.6%	\$3,696	\$3,696	\$0	\$0	\$0
21742	LTFP ID CONSOLIDATION	Regional	9.6%	\$8,233	\$8,233	\$0	\$0	\$0
30214	MWRP EXPANSION PHASE II	Regional	10.3%	\$3,784	\$3,784	\$0	\$0	\$0
30331	IRVINE LAKE SEISMIC STABILITY STUDY	Regional	10.3%	\$3,104	\$3,104	\$0	\$0	\$0
30342	LAWRP SYSTEM UPGRADES	Regional	10.3%	\$115,042	\$61,890	\$53,152	\$0	\$0
30374	SYPHON RESERVOIR INTERIM IMPROVEMENTS	Regional	10.3%	\$21,391	\$21,391	\$0	\$0	\$0
30380	SALT MANAGEMENT PLAN DEVELOPMENT	Regional	10.3%	\$12,486	\$12,486	\$0	\$0	\$0
30382	SYPHON RESERVOIR EXPANSION	Regional	10.3%	\$10,130,256	\$270,609	\$9,859,647	\$0	\$0
30396	RW SITE INSPECTION & TESTING COMPUTER	Regional	10.3%	\$5,620	\$5,620	\$0	\$0	\$0
30398	RW CONVERSION GRANTS FOR ON-SITE 13/14	Regional	10.3%	\$28,404	\$28,404	\$0	\$0	\$0
30399	RW CONVERSION FOR OFF-SITE 13/14	Regional	10.3%	\$16,564	\$16,564	\$0	\$0	\$0
30400	HEALTH DEPT FEES FOR 13/14	Regional	10.3%	\$9,619	\$9,619	\$0	\$0	\$0
30408	MULTI-ZONE REGIONAL PS - ZONE A TO SYPHON	Regional	10.3%	\$422,032	\$41,190	\$380,842	\$0	\$0
30412	SYPHON RESERVOIR EXPANSION - ENV.	Regional	10.3%	\$25,978	\$12,241	\$13,737	\$0	\$0
30415	CATHODIC PROTECTION FOR GAP PIPE SEGMENT	Regional	10.3%	\$13,789	\$13,789	\$0	\$0	\$0
30418	MWRP MBR LEAP AERATION CONVERSION	Regional	10.3%	\$132,458	\$0	\$132,458	\$0	\$0
30422	PA9 JEFFREY RD PIPELINES, 36" ZNA, 36" SYPHON	Regional	10.3%	\$177,416	\$177,416	\$0	\$0	\$0
30517	LAKE FOREST CONTROL AND TELEMTRY SYS	Regional	10.3%	\$4,045	\$4,045	\$0	\$0	\$0
31055	ENG PLANNING STUDY RESERVE 13/14	Regional	10.3%	\$19,997	\$19,997	\$0	\$0	\$0
31056	ENG PLANNING STUDY RESERVE 14/15	Regional	10.3%	\$21,997	\$21,997	\$0	\$0	\$0
31057	ENG PLANNING STUDY RESERVE 15/16	Regional	10.3%	\$24,204	\$0	\$24,204	\$0	\$0
31096	GIS SUPPORT APPLICATIONS 13/14	Regional	10.3%	\$6,821	\$6,821	\$0	\$0	\$0



Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
31097	GIS SUPPORT APPLICATIONS 14/15	Regional	10.3%	\$7,503	\$7,503	\$0	\$0	\$0
31129	HYDRAULIC MODELING 13/14	Regional	10.3%	\$4,997	\$4,997	\$0	\$0	\$0
31131	HYDRAULIC MODELING 14/15	Regional	10.3%	\$5,496	\$5,496	\$0	\$0	\$0
31248	MWRP EXPANSION PHASE 3	Regional	10.3%	\$1,945,134	\$0	\$974,851	\$970,283	\$0
31339	AUTOMATION SYSTEM IMPROVEMENTS RW	Regional	10.3%	\$27,332	\$17,321	\$10,011	\$0	\$0
31384	HYDRAULIC MODEL UPDATE / CALIBRATION -	Regional	10.3%	\$50,809	\$50,809	\$0	\$0	\$0
31578	OPS CENTER IMPROVEMENTS PH2 (WAREHOUSE)	Regional	10.3%	\$176,065	\$0	\$176,065	\$0	\$0
31582	GEN SYS MODS 13/14	Regional	10.3%	\$6,628	\$6,628	\$0	\$0	\$0
31648	GEN SYS MODS 14/15	Regional	10.3%	\$7,291	\$7,291	\$0	\$0	\$0
31655	SKYLIGHT PROTECTION	Regional	10.3%	\$3,966	\$3,966	\$0	\$0	\$0
31697	GEN SYS MODS 15/16	Regional	10.3%	\$8,023	\$0	\$8,023	\$0	\$0
				<b>\$38,504,132</b>	<b>\$6,196,792</b>	<b>\$23,211,393</b>	<b>\$6,729,426</b>	<b>\$2,366,521</b>

## SECTION 4 LOCAL MASTER PLAN FACILITIES

### 4.1 DESCRIPTION

The facilities detailed in the following section represent local facilities serving one or more of the planned development areas within the improvement district, based on the respective subarea master plans, as well as sub-regional projects serving this improvement district and other improvement district(s). For the purpose of this POW, local facilities include both local and sub-regional projects.

### 4.2 COST ESTIMATES

The proposed local master plan facilities for ID No. 253 are detailed in **Table IV-1** and shown on **Figure IV-1a** through **IV-1j** (sewer) and **Figure IV-1k** through **IV-1t** (recycled water). The figures, taken from the sub-area master plans, show both facilities inside and outside the improvement district's boundary, and some facilities shown may have already been constructed. The amounts shown in Table IV-1 reflect the facilities or portions there-of allocable to the improvement district. As noted in the Introduction, the projects identified here may change to reflect changes in land use and development phasing.

For the purpose of determining the allowance for deferred costs, the project costs have been escalated at 10% per year.

## Table IV-1 Local Projects

### Proposed Facilities and Estimated Escalated Costs

### Improvement District 253

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
20425	EAST ORANGE LAKE VILLAGE GRAVITY SEWER	Local	100.0%	\$2,570,933	\$0	\$2,570,933	\$0	\$0
20426	EAST ORANGE LAKE VILLAGE SEWER LIFT	Local	100.0%	\$1,996,510	\$0	\$1,996,510	\$0	\$0
20427	EAST ORANGE LAKE VILLAGE FORCE MAIN	Local	100.0%	\$2,960,435	\$0	\$2,960,435	\$0	\$0
21125	PA 9B SEWER IMPROVEMENTS	Local	100.0%	\$990	\$990	\$0	\$0	\$0
21138	SANTIAGO HILLS II SEWER FACILITIES	Local	100.0%	\$5,898,108	\$0	\$838,143	\$5,059,965	\$0
21605	PA 40 PHASE 3-5 SS FACILITIES	Sub-Regional	79.0%	\$2,023,478	\$0	\$2,023,478	\$0	\$0
30144	PA 5B RW PIPELINES	Local	100.0%	\$943,159	\$509,399	\$433,760	\$0	\$0
30245	PA1 SETTLERS RW PIPELINES - PHASE II	Local	100.0%	\$1,086,607	\$0	\$1,083,392	\$3,215	\$0
30246	PA1 WOLF TRAIL RW PIPELINES - PHASE II	Local	100.0%	\$881,703	\$0	\$879,131	\$2,572	\$0
30280	PA9B PHASE 5 GATEWAY PARK RW PIPES	Local	100.0%	\$729,399	\$8,954	\$720,445	\$0	\$0
30389	PA9 JEFFREY RD PIPELINES, 16" ZONE B AND 6"	Local	100.0%	\$467,170	\$467,170	\$0	\$0	\$0
30390	PA 9B RW AND SYPHON LATERAL PIPELINE,	Sub-Regional	10.3%	\$14,944	\$14,944	\$0	\$0	\$0
30409	MULTI-ZONE REGIONAL PS - ZONE B	Sub-Regional	22.7%	\$787,250	\$81,422	\$705,828	\$0	\$0
30410	MULTI-ZONE REGIONAL PS - ZONE C	Sub-Regional	21.7%	\$1,078,729	\$100,731	\$977,997	\$0	\$0
30416	PA 40 PHASE 3B RW CAPITAL FACILITIES	Local	100.0%	\$137,940	\$137,940	\$0	\$0	\$0
30446	PA18 ZN B-C BPS	Local	100.0%	\$1,696,024	\$1,696,024	\$0	\$0	\$0
30797	PA6 RW PIPELINES	Local	100.0%	\$928,222	\$671,605	\$256,617	\$0	\$0
31138	SANTIAGO HILLS II RW FACILITIES	Local	100.0%	\$8,929,298	\$0	\$774,810	\$8,154,488	\$0
31605	PA 40 PHASE 2 RW FACILITIES	Local	100.0%	\$678,923	\$357,819	\$321,104	\$0	\$0
31633	PA 40 PHASE 3-5 RW FACILITIES	Sub-Regional	79.0%	\$5,750,775	\$0	\$5,750,775	\$0	\$0
31640	PA 39 PHASE 2 RW FACILITIES	Local	100.0%	\$329,510	\$0	\$329,510	\$0	\$0
31641	PA 18 SOUTH RW FACILITIES	Local	100.0%	\$1,809,782	\$958,914	\$850,868	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
31739	PA 18S HIDDEN CANYON 36" ZONE B & 8"	Local	100.0%	\$268,950	\$268,950	\$0	\$0	\$0
32316	EAST ORANGE AREA I PH3 ZNF RES (0.6MG)	Local	100.0%	\$1,495,697	\$0	\$1,495,697	\$0	\$0
32322	SANTIAGO HILLS ILP CONN/ZNF BPS	Local	100.0%	\$3,526,437	\$0	\$3,526,437	\$0	\$0
32324	SANTIAGO HILLS ZNF RES	Local	100.0%	\$1,560,590	\$0	\$1,560,590	\$0	\$0
32331	EAST ORANGE AREA I PH3 ILP CONN & ZONE F-	Local	100.0%	\$4,603,262	\$0	\$279,251	\$4,324,011	\$0
39999	ILP North to Zone C Conversion	Sub-Regional	57.0%	\$4,973,360	\$0	\$4,973,360	\$0	\$0
				<b>\$58,128,184</b>	<b>\$5,274,863</b>	<b>\$35,309,069</b>	<b>\$17,544,252</b>	<b>\$0</b>





- Existing Trunk Sewer System (H.A.T.S.)
- Proposed Trunk Sewer System
- Proposed Force Main
- Direction of Flow
- Connection to Existing Trunk Sewer
- Facility Number (Reimbursable)
- Facility Number (Non-Reimbursable)
- Proposed Lift Station
- Potential SCWD Sewer System for East Orange Lake Village
- Phase I Construction
- Phase II Construction
- Phase III Construction
- Indicates Reimbursement Facilities

NOTE: Facilities shown here **AND** less than 12-inch diameter are considered back bone facilities but not reimbursement facilities. (8-inch force main is reimbursable).

East Orange Area 1  
Lift Station  
(Non-Reimbursable)

Potential  
From SCWD

ENGINEERING & PLANNING

NOV 28 2005

IRVINE RANCH  
WATER DISTRICT

SANTIAGO HILLS II AND EAST ORANGE AREA I  
EXHIBIT FOR REIMBURSEMENT AGREEMENT

**Wastewater System**



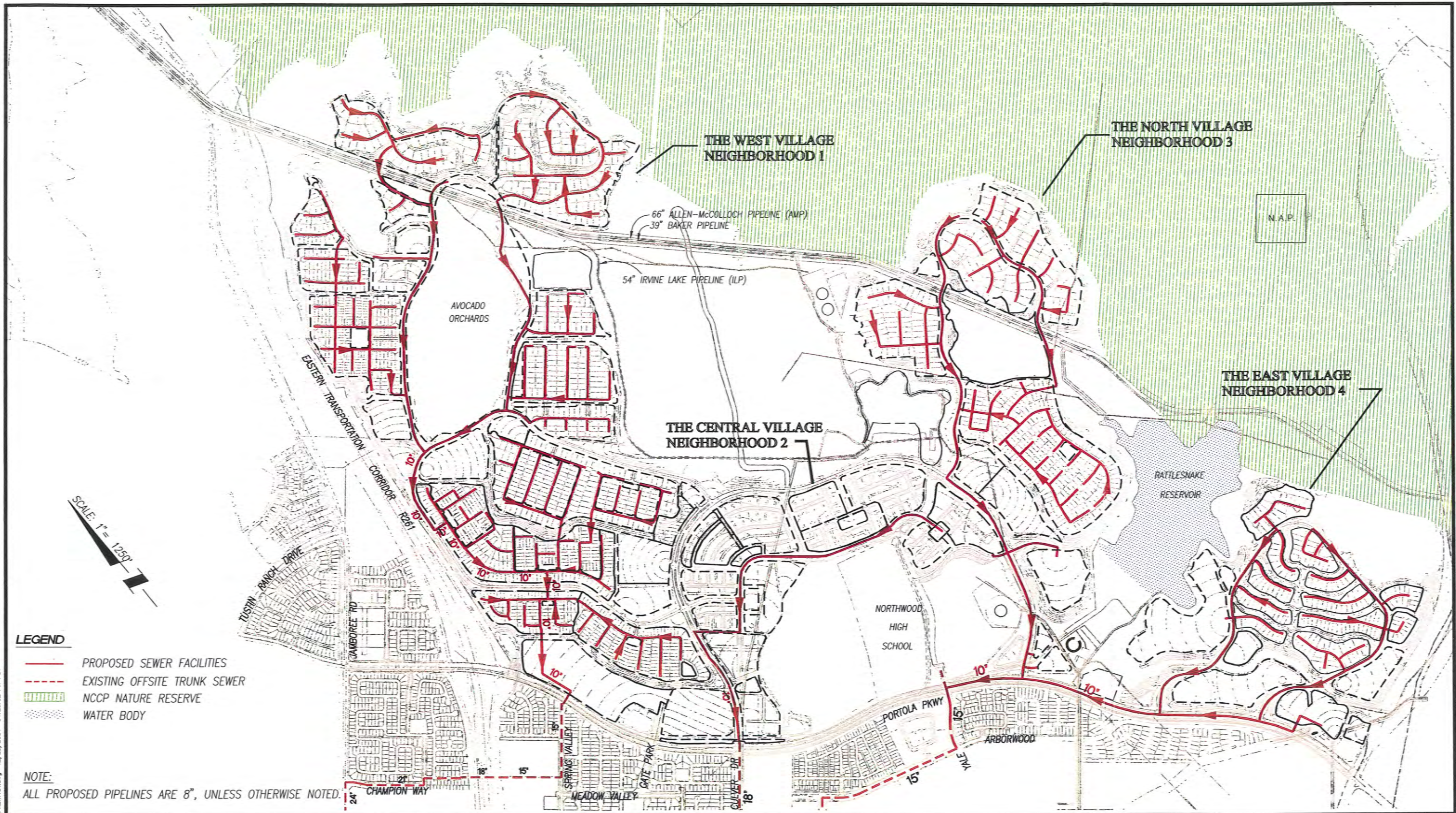
see Exhibit 7A



- Proposed Trunk Sewer System
- Proposed Force Main
- Direction of Flow
- 10 Facility Number
- 10" Pipe Sizes

Proposed  
 8 inch  
 10 inch  
 12 inch





SCALE: 1" = 1250'

- LEGEND**
- PROPOSED SEWER FACILITIES
  - - - EXISTING OFFSITE TRUNK SEWER
  - NCCP NATURE RESERVE
  - WATER BODY

**NOTE:**  
ALL PROPOSED PIPELINES ARE 8", UNLESS OTHERWISE NOTED.

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WATER DISTRICT

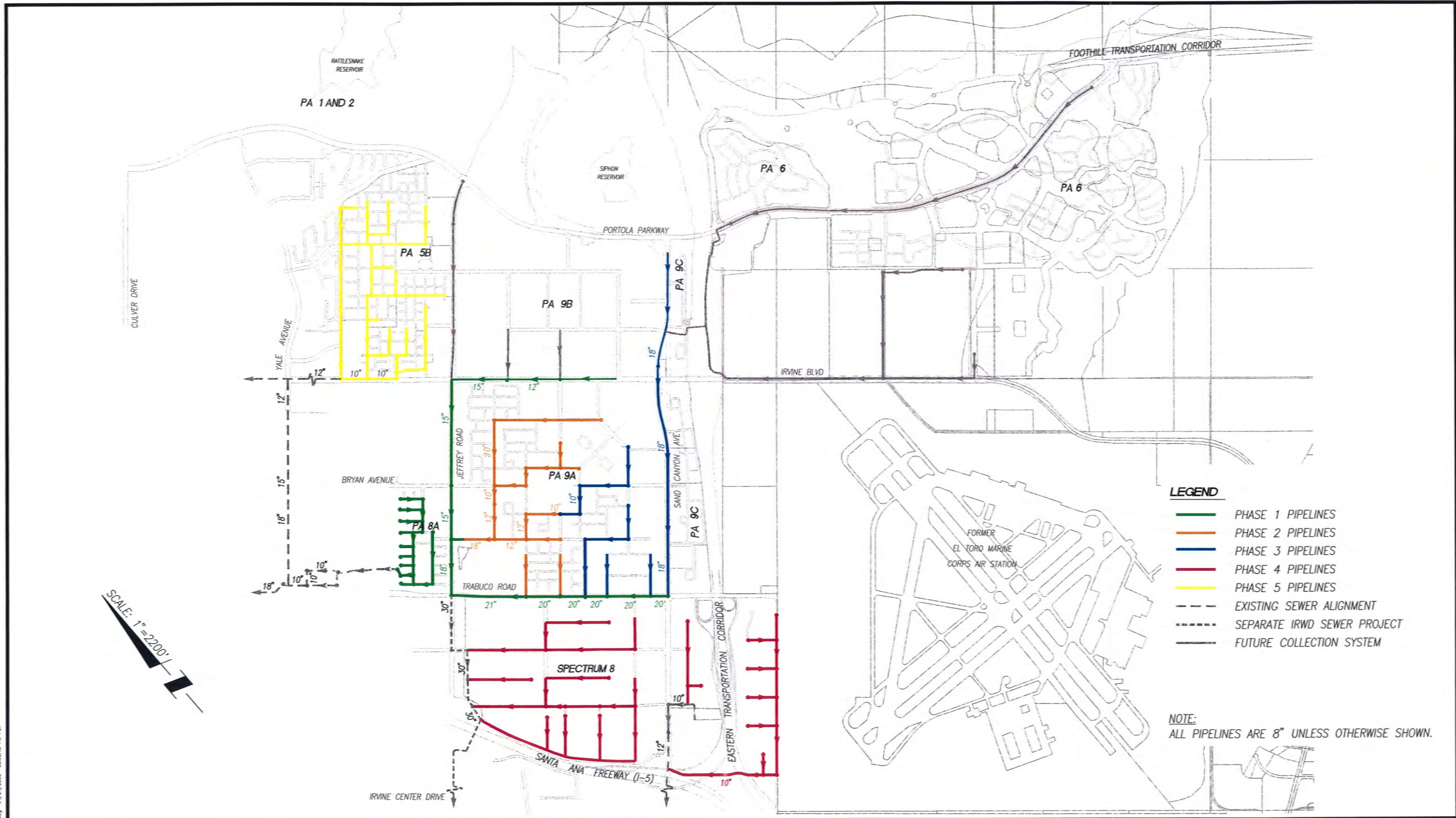


**PLANNING AREAS 1 AND 2 SAMP  
SEWER COLLECTION SYSTEM FACILITIES**

**FIGURE 4-1**

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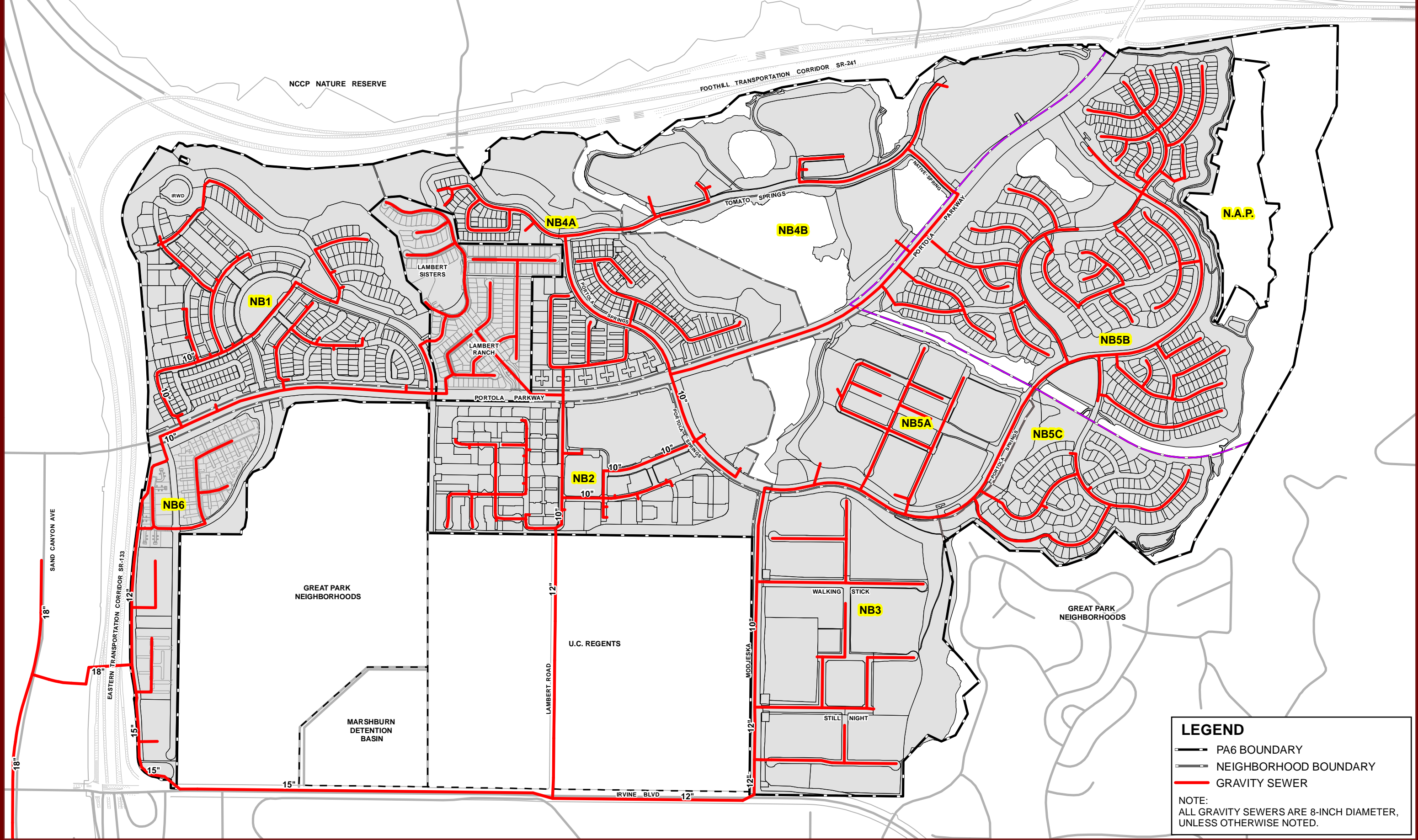


**PLANNING AREAS 5B, 8A, 9A, AND SPECTRUM 8 SAMP UPDATE  
SEWER COLLECTION SYSTEM FACILITIES PHASING**

**FIGURE 8-8**



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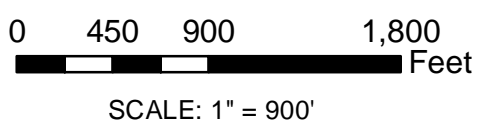


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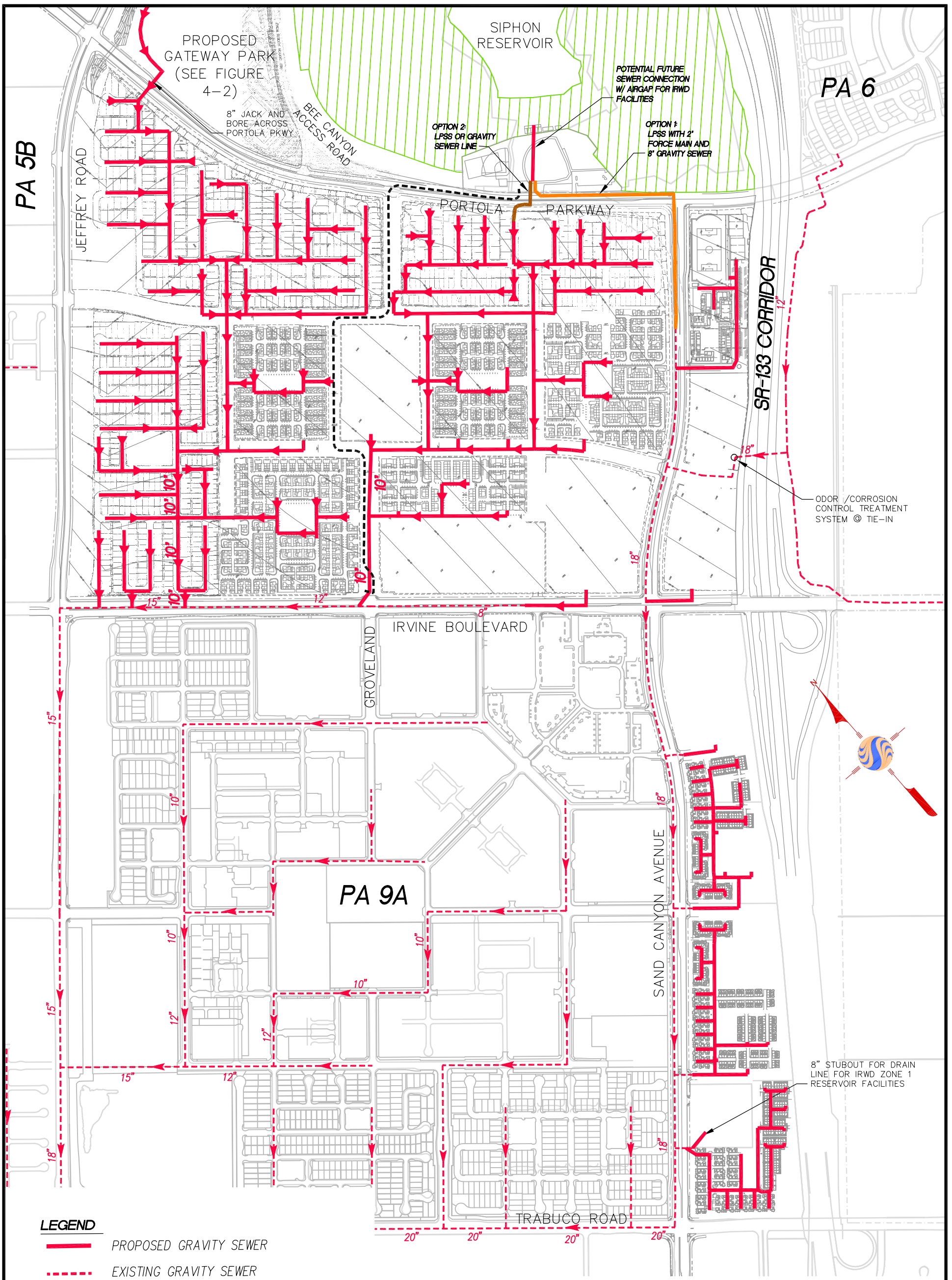
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WATER DISTRICT



### PLANNING AREA 6 SAMP UPDATE FOR NB3 AND NB6 SEWER COLLECTION SYSTEM FACILITIES

## FIGURE 4-1

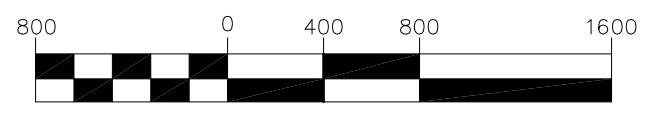




- LEGEND**
- PROPOSED GRAVITY SEWER
  - - - EXISTING GRAVITY SEWER
  - - - EXISTING RCB STORM DRAIN
  - ▨ NCCP NATURE RESERVE

ALL PIPELINES ARE 8" DIAMETER UNLESS OTHERWISE SHOWN.

**GRAPHIC SCALE**



( IN FEET )  
1 INCH = 800'

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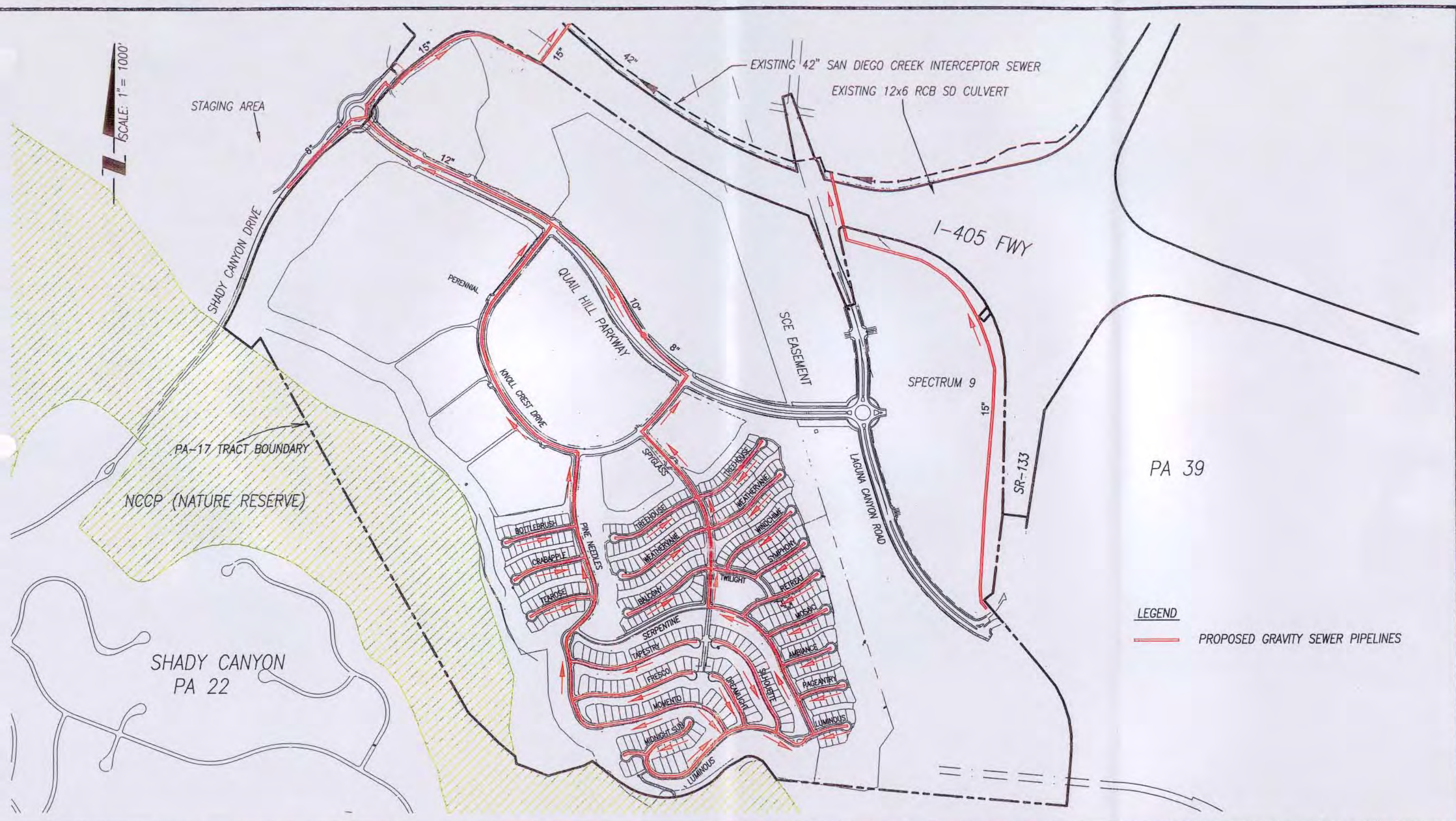
PREPARED FOR:



**PLANNING AREA 9B, 9C SAMP UPDATES**  
**SEWER SYSTEM**

**FIGURE 4-1**






**LEGEND**  
 — PROPOSED GRAVITY SEWER PIPELINES

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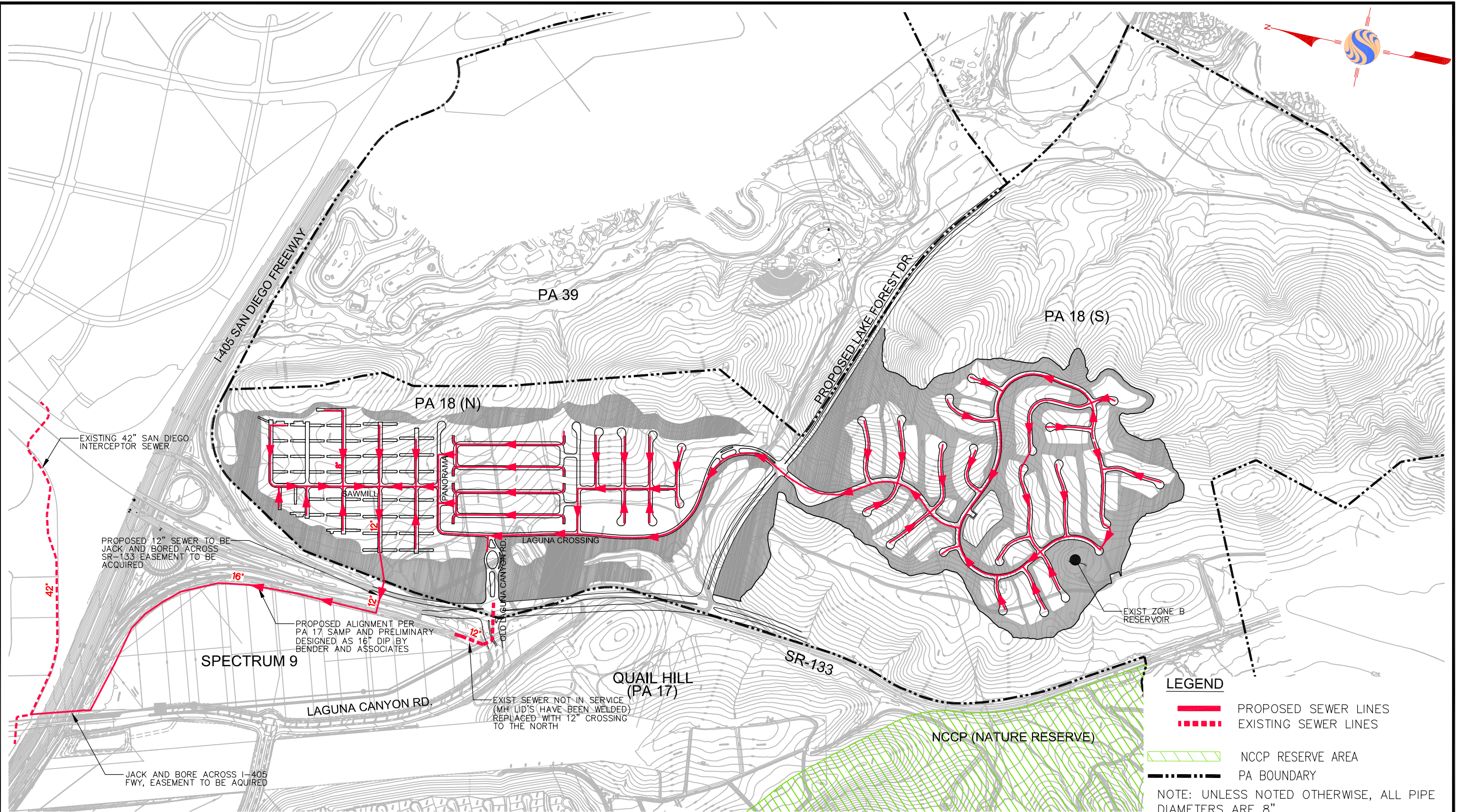
**QUAIL HILL (PA 17) SAMP  
 SEWER COLLECTION SYSTEM FACILITIES**

**FIG 4-1**

QUAIL HILL SAMP REVISED 02/20/2003



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**LEGEND**

- PROPOSED SEWER LINES
- - - - - EXISTING SEWER LINES
- ▨▨▨▨▨ NCCP RESERVE AREA
- PA BOUNDARY

NOTE: UNLESS NOTED OTHERWISE, ALL PIPE DIAMETERS ARE 8"

PREPARED BY:



PREPARED FOR:

IRVINE RANCH  
WATER DISTRICT



**PLANNING AREA 18 SAMP UPDATE**  
**PROPOSED WASTEWATER**  
**COLLECTION SYSTEM**


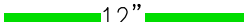

**FIGURE**  
**4-1**

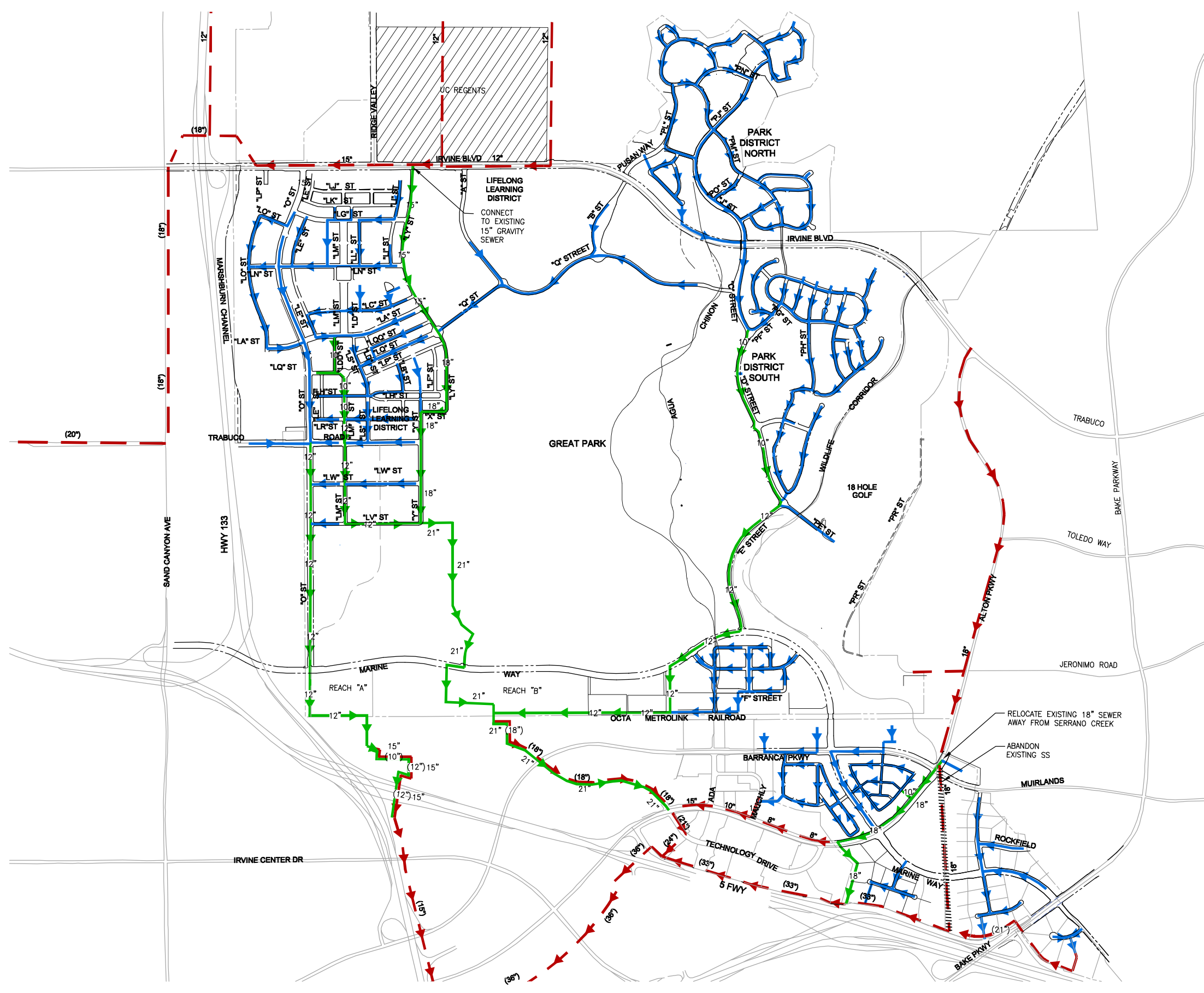


**NOTES:**

1. THE WASTEWATER FACILITIES WITHIN THE GREAT PARK ARE NOT SHOWN ON THIS FIGURE. AT THE TIME OF THE SAMP PREPARATION, THE REQUIRED WASTEWATER COLLECTION FACILITIES WERE NOT KNOWN. ONCE THE LAND USE PLAN IS FINALIZED, THE WASTEWATER SYSTEM WILL REQUIRE ANALYSIS AND APPROPRIATE LEVEL OF SAMP UPDATE OR ADDENDUM WILL BE REQUIRED. ADDITIONALLY, AT THE TIME, A DETERMINATION WILL BE MADE AS TO WHICH FACILITIES WILL BE PUBLIC AND WHICH WILL BE PRIVATE.
2. AS PART OF THE AGREEMENT WITH THE DEPARTMENT OF DEFENSE, THE LEAD ENTITY CONSTRUCTING BURIED PIPELINES WITHIN THE FORMER MARINE CORPS AIR STATION, EL TORO MUST SUBMIT A PROJECT ENVIRONMENT REVIEW FORM (PERF) TO THE NAVY AND THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL PRIOR TO COMMENCEMENT OF EXCAVATION ACTIVITIES.
3. ALL PIPELINES ARE 8" UNLESS SHOWN.

**LEGEND**

EXISTING SANITARY SEWER	 (12")
PROPOSED SANITARY SEWER (LARGER THAN 8 INCH)	 12"
8" PROPOSED SANITARY SEWER (SIZE NOT LABELED)	



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 LAST UPDATE: Friday, March 06, 2009 3:08:14 PM  
 PLOT DATE: Friday, March 06, 2009 3:44:37 PM  
 ANSI D - 3-8-05



AECOM USA, INC.  
 1501 QUAIL STREET  
 NEWPORT BEACH, CA 92660  
 PHONE (949) 476-3300

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 WATER DISTRICT

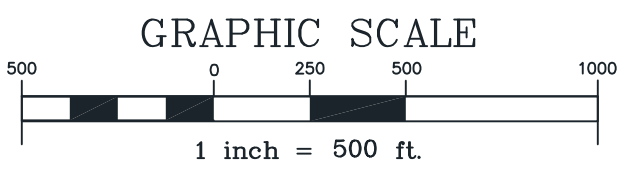
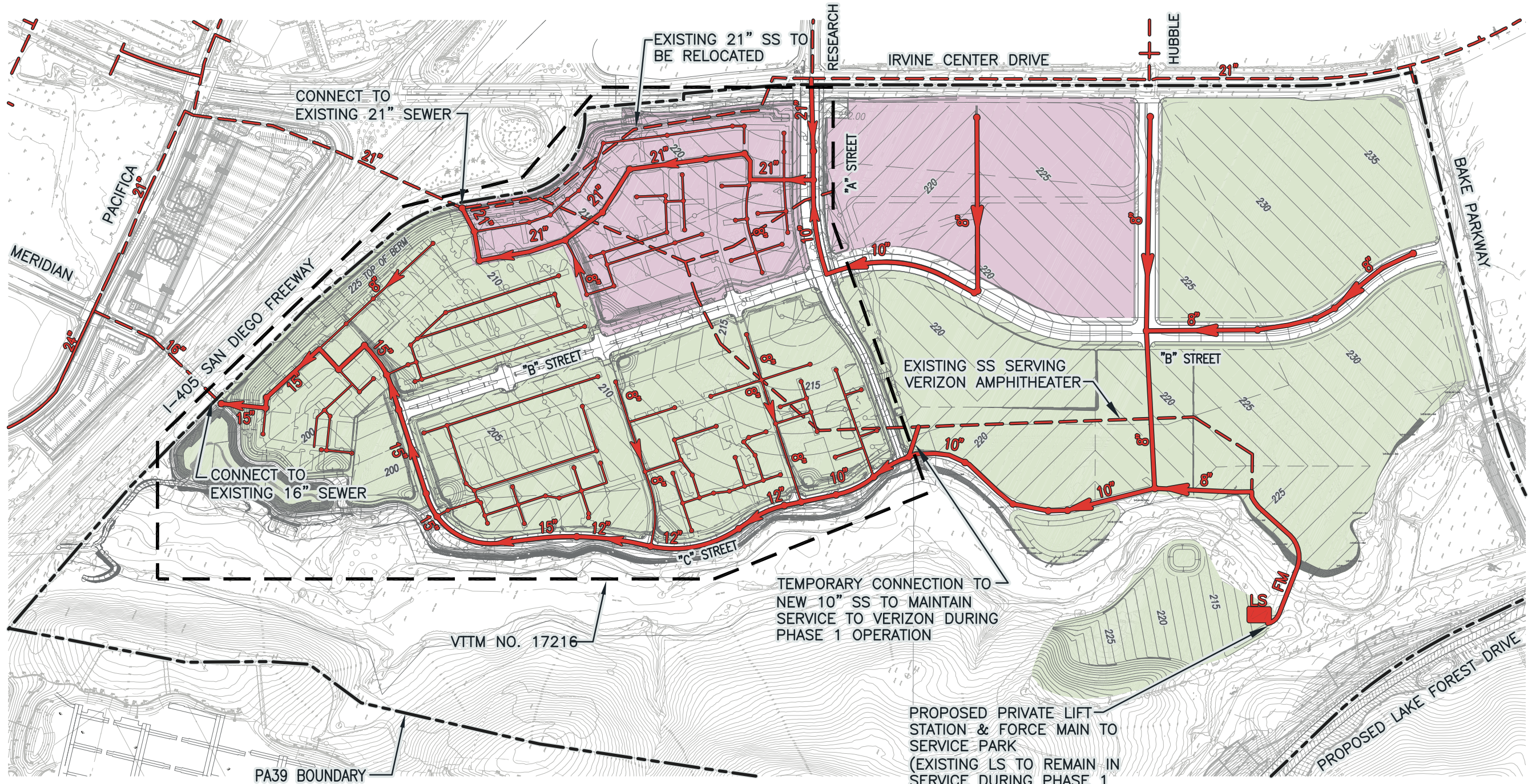


IRVINE RANCH WATER DISTRICT  
 GREAT PARK / GREAT PARK NEIGHBORHOODS  
 SUB-AREA MASTER PLAN  
 PROPOSED SEWER COLLECTION FACILITIES

FIG. 4-1



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**LEGEND**

- PROPOSED BACKBONE SANITARY SEWER PIPELINE
- PROPOSED IN-TRACT SANITARY SEWER PIPELINE
- - - EXISTING SANITARY SEWER PIPELINE
- SEWER DRAINAGE AREA "A"
- SEWER DRAINAGE AREA "B"

NOTE:  
ALL PIPES ARE 8-INCH UNLESS OTHERWISE NOTED.



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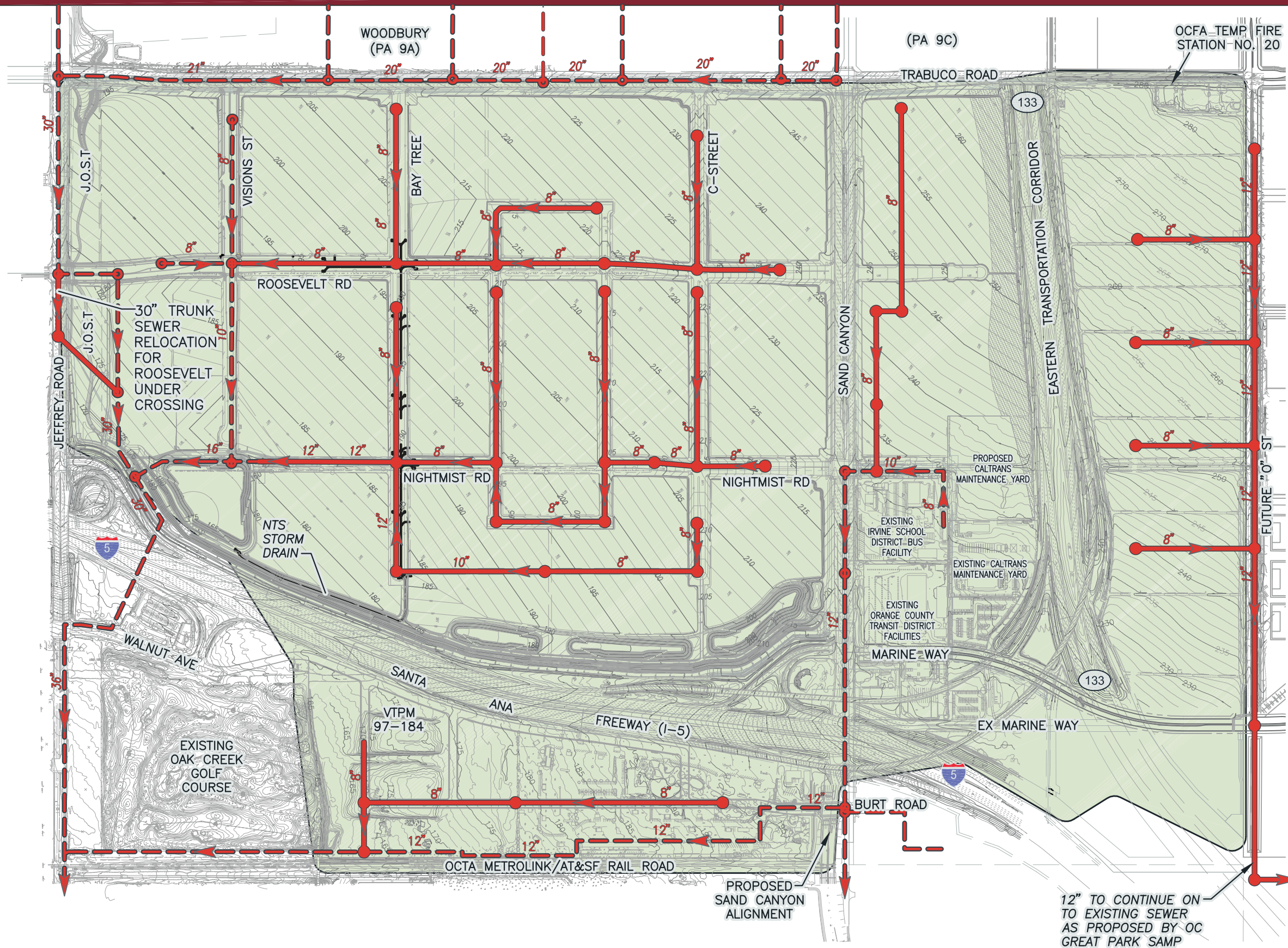
**PLANNING AREA 39 SAMP**

**PROPOSED  
SANITARY SEWER FACILITIES**

**FIGURE  
4-1**



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ORANGE COUNTY GREAT PARK

OCFA TEMP FIRE STATION NO. 20

**LEGEND**

- PROPOSED SEWER ALIGNMENT
- - - - EXISTING SEWER ALIGNMENT

NOTE: ALL PIPES ARE 8" UNLESS OTHERWISE NOTED.

SCALE: 1"=700'

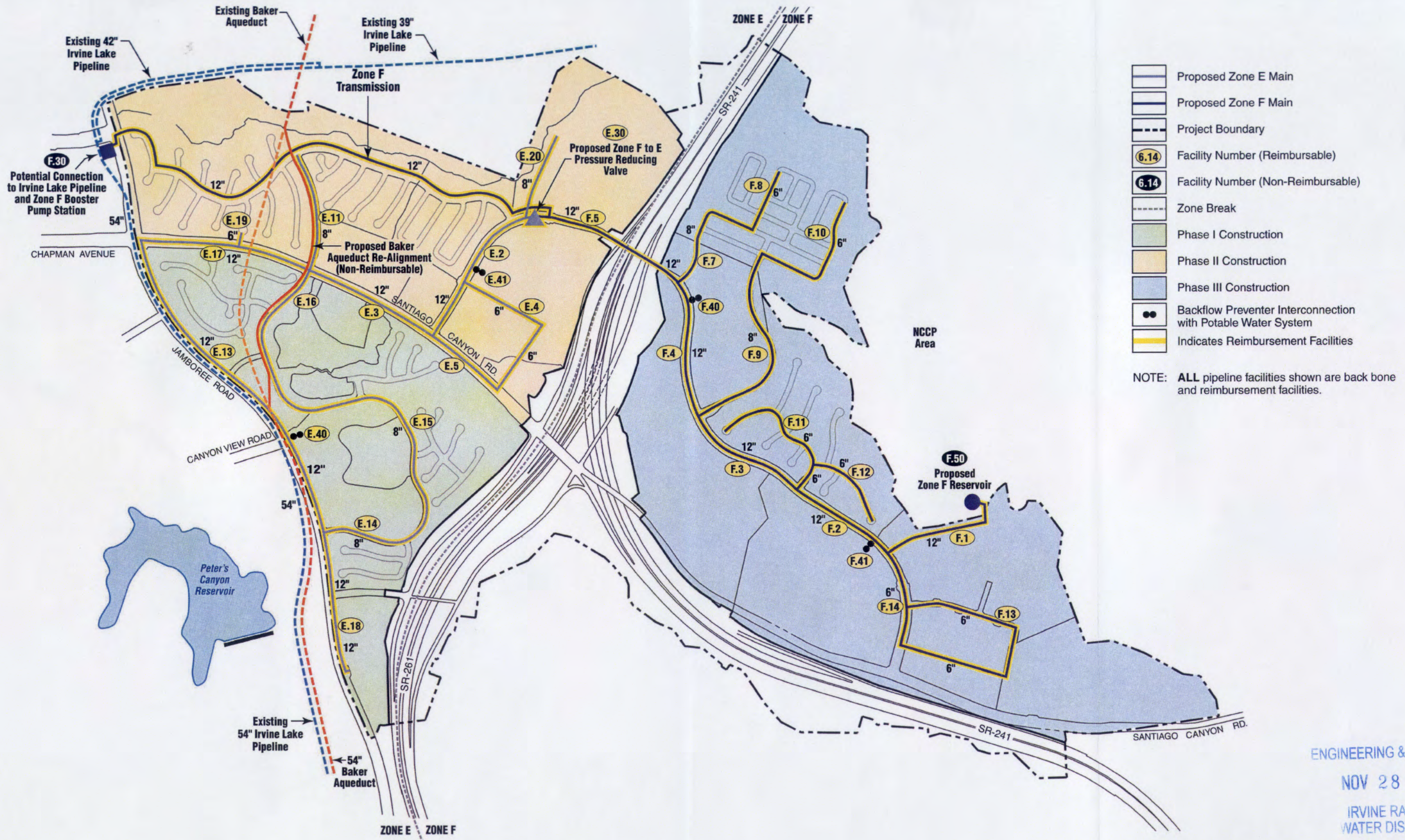


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**PLANNING AREA 40 SAMP**

**SEWER COLLECTION SYSTEM FACILITIES**





NOTE: ALL pipeline facilities shown are back bone and reimbursement facilities.

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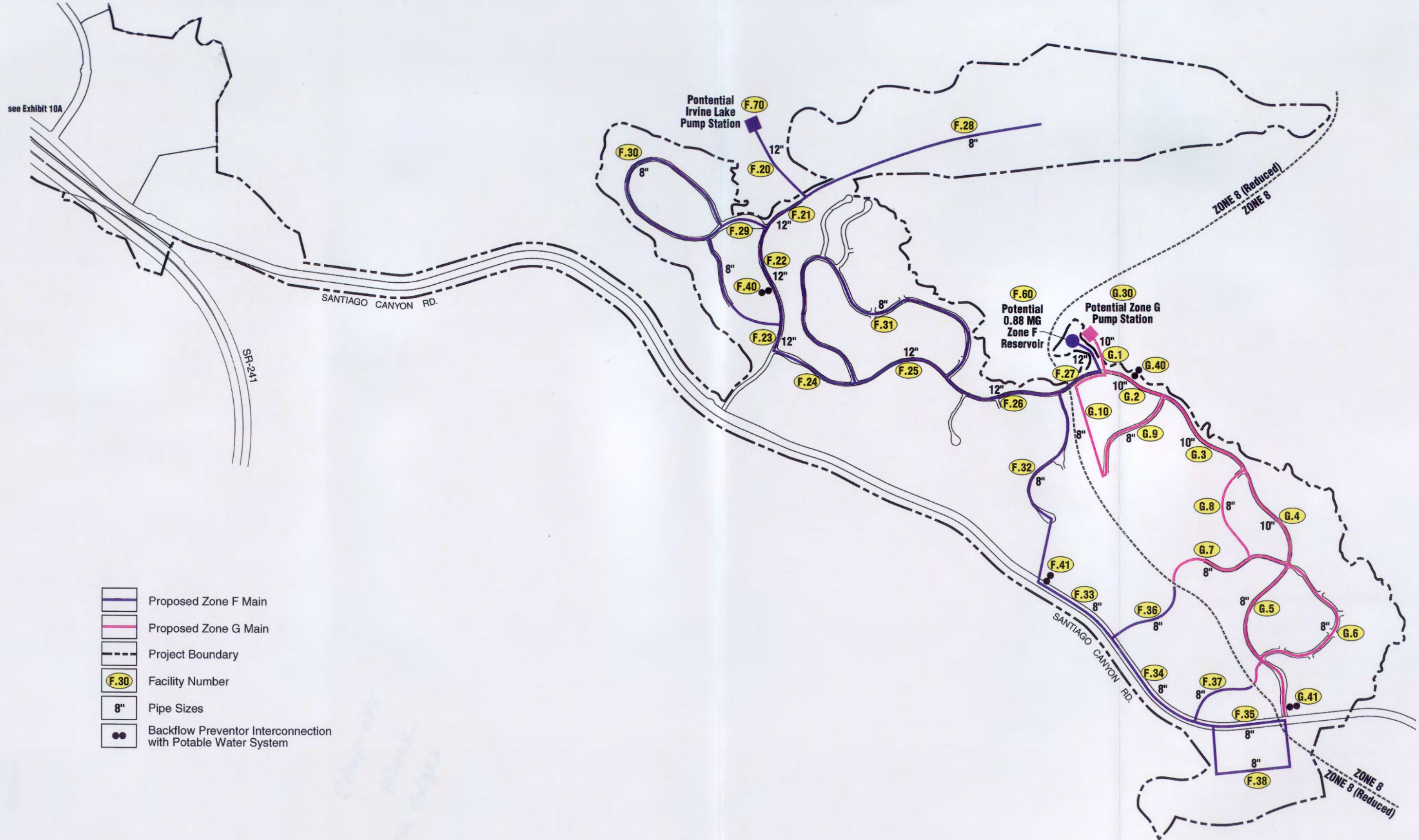
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





IRVINE RANCH  
WATER DISTRICT

SANTIAGO HILLS II AND EAST ORANGE AREA I  
EXHIBIT FOR REIMBURSEMENT AGREEMENT  
**Non-Potable Water System**

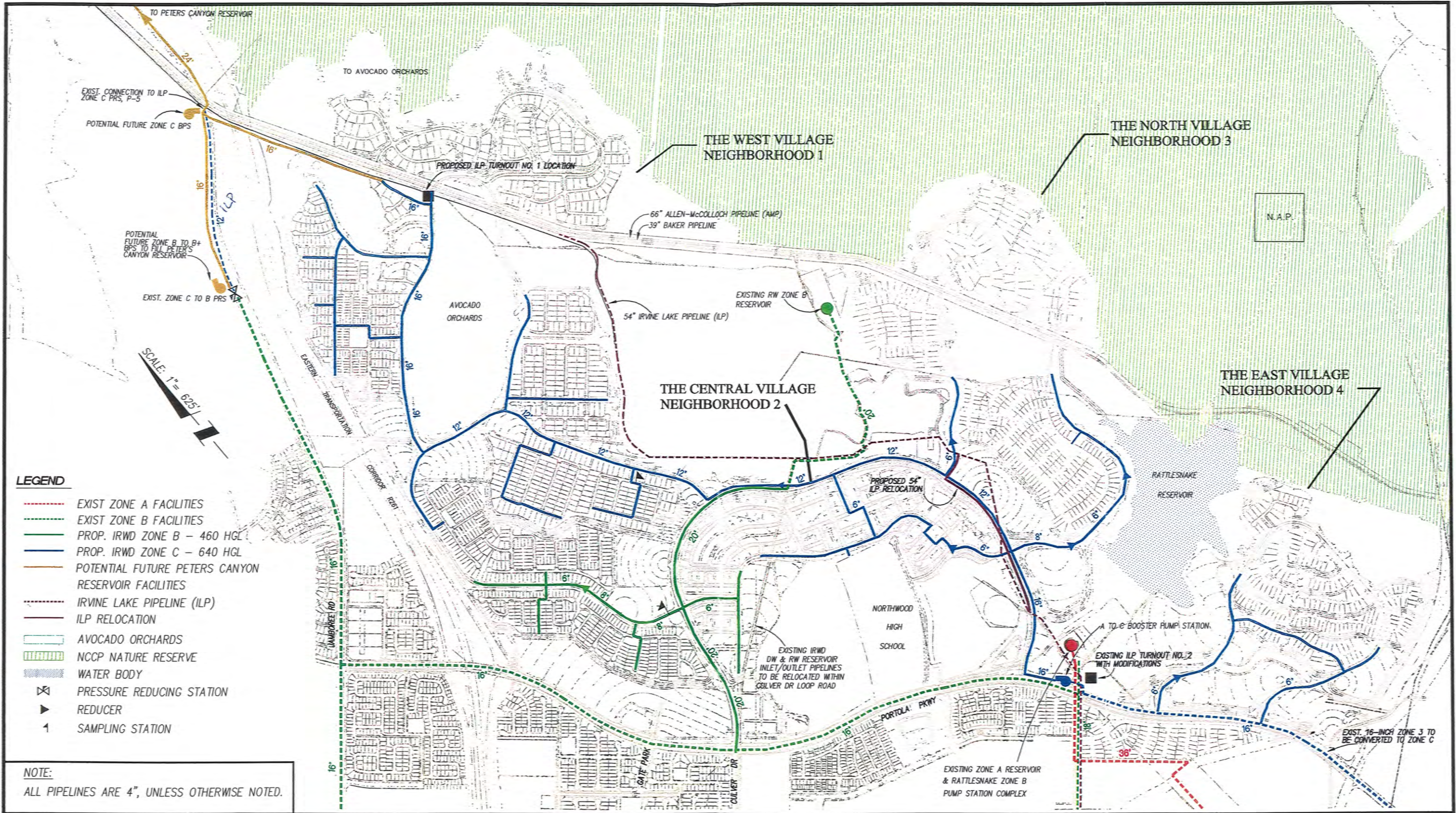


see Exhibit 10A



-  Proposed Zone F Main
-  Proposed Zone G Main
-  Project Boundary
-  Facility Number
-  Pipe Sizes
-  Backflow Preventer Interconnection with Potable Water System





**LEGEND**

- EXIST ZONE A FACILITIES
- EXIST ZONE B FACILITIES
- PROP. IRWD ZONE B - 460 HGL
- PROP. IRWD ZONE C - 640 HGL
- POTENTIAL FUTURE PETERS CANYON RESERVOIR FACILITIES
- IRVINE LAKE PIPELINE (ILP)
- ILP RELOCATION
- AVOCADO ORCHARDS
- NCCP NATURE RESERVE
- WATER BODY
- ⊗ PRESSURE REDUCING STATION
- ▶ REDUCER
- 1 SAMPLING STATION

**NOTE:**  
ALL PIPELINES ARE 4", UNLESS OTHERWISE NOTED.

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19 TECHNOLOGY DRIVE  
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WATER DISTRICT

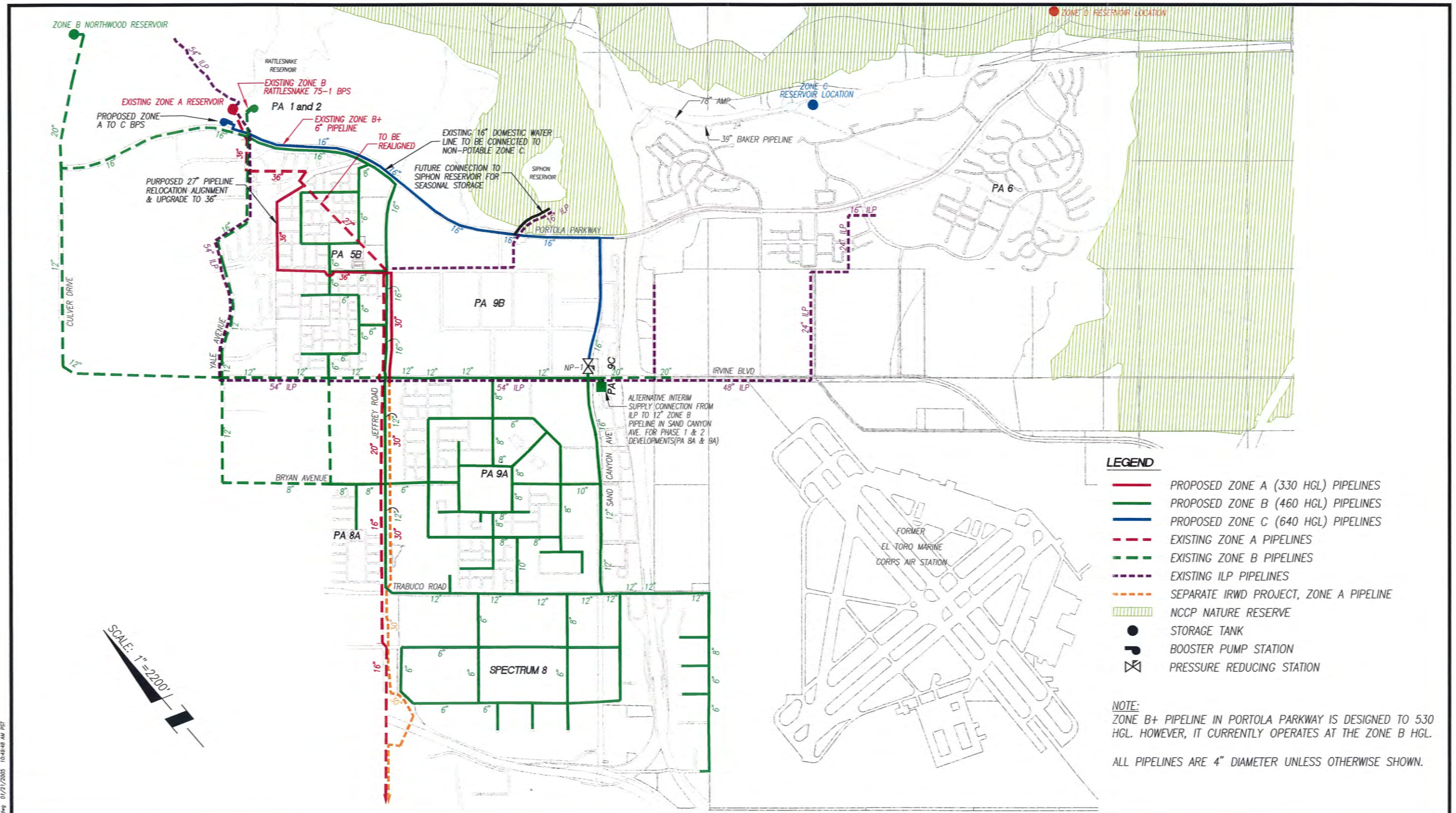


**PLANNING AREAS 1 AND 2 SAMP  
NONPOTABLE WATER SYSTEM FACILITIES**

**FIGURE 5-3**

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- LEGEND**
- PROPOSED ZONE A (330 HGL) PIPELINES
  - PROPOSED ZONE B (460 HGL) PIPELINES
  - PROPOSED ZONE C (640 HGL) PIPELINES
  - - - EXISTING ZONE A PIPELINES
  - - - EXISTING ZONE B PIPELINES
  - - - EXISTING ILP PIPELINES
  - - - SEPARATE IRWD PROJECT, ZONE A PIPELINE
  - NCCP NATURE RESERVE
  - STORAGE TANK
  - ⤵ BOOSTER PUMP STATION
  - ⊗ PRESSURE REDUCING STATION

**NOTE:**  
 ZONE B+ PIPELINE IN PORTOLA PARKWAY IS DESIGNED TO 530 HGL. HOWEVER, IT CURRENTLY OPERATES AT THE ZONE B HGL.  
 ALL PIPELINES ARE 4" DIAMETER UNLESS OTHERWISE SHOWN.

V:\projects\13699\_00\DWG\Pre\0213.dwg 01/21/2005 10:49:48 AM PST

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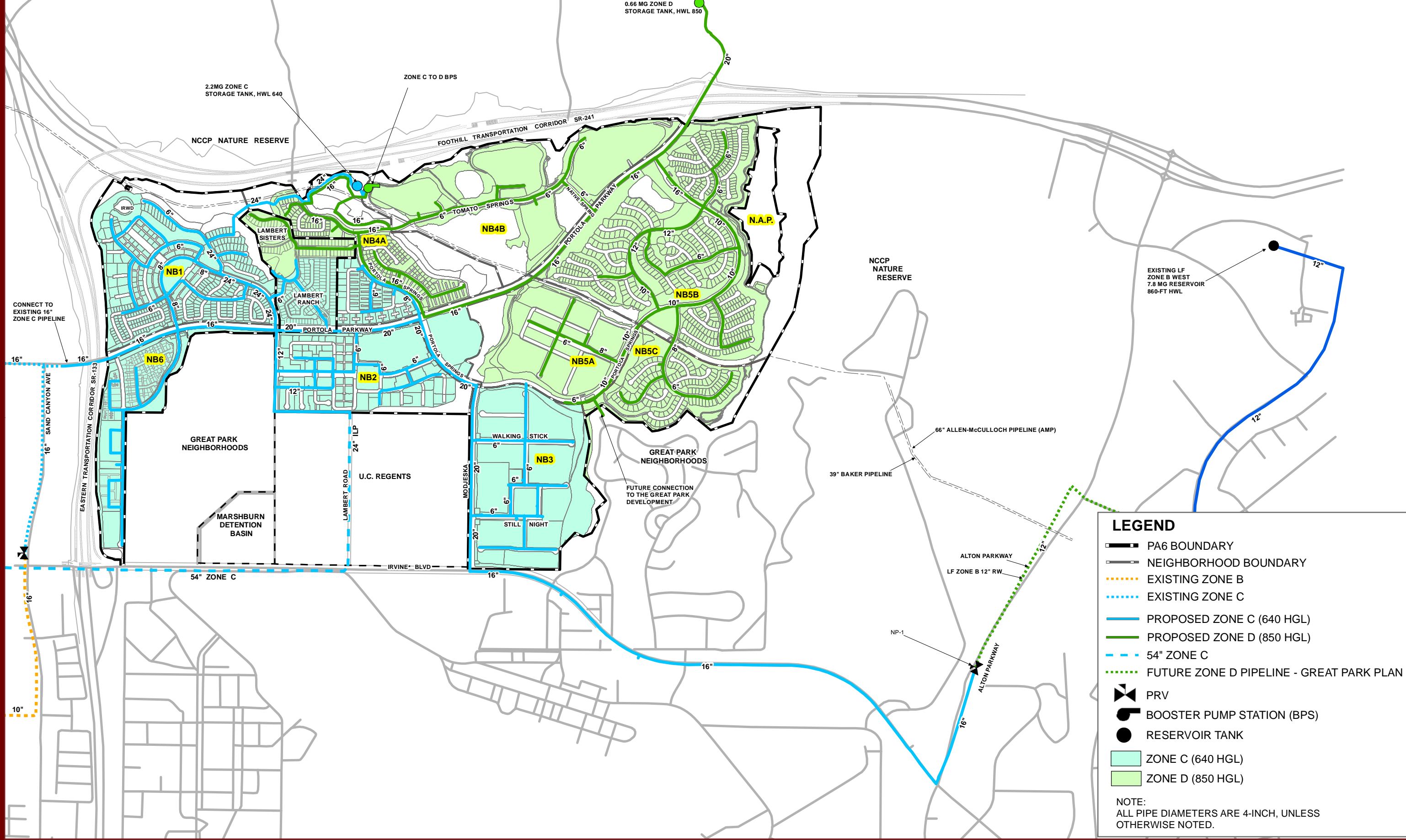
IRVINE RANCH  
 WATER DISTRICT

## PLANNING AREAS 5B, 8A, 9A, AND SPECTRUM 8 SAMP UPDATE NON-POTABLE WATER SYSTEM FACILITIES

FIGURE 5-3



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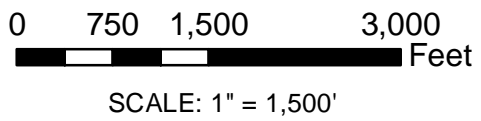


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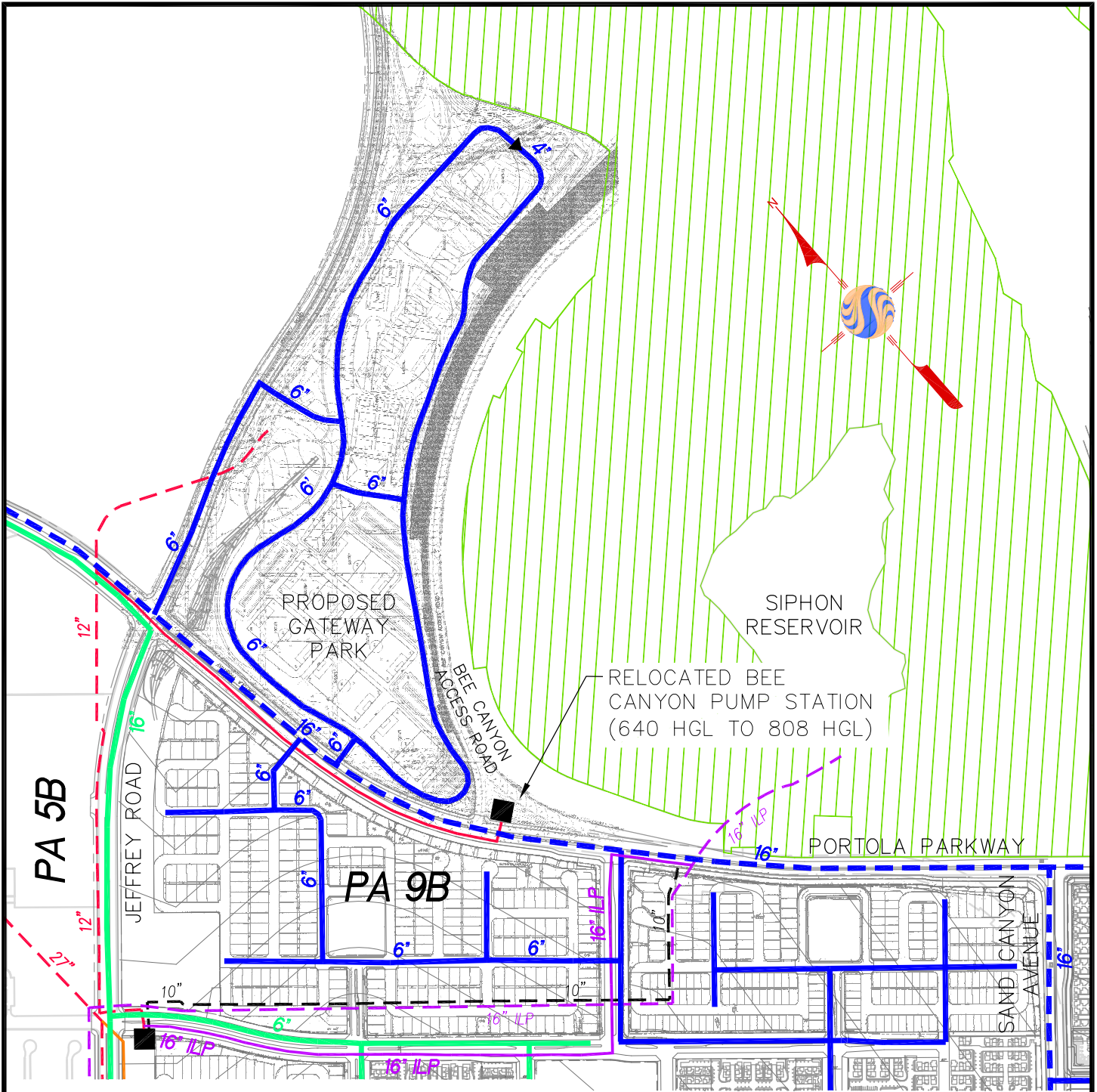
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WATER DISTRICT



**PLANNING AREA 6 SAMP  
UPDATE FOR NB3 AND NB6  
NONPOTABLE WATER FACILITIES**

**FIGURE 5-3**

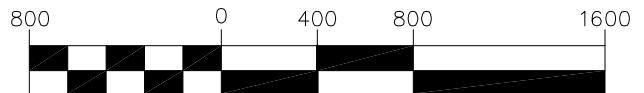


**LEGEND**

- PROPOSED ZONE C PIPELINES
- ▤ NCCP NATURE RESERVE

ALL PIPELINES ARE 4" DIAMETER UNLESS OTHERWISE SHOWN.

**GRAPHIC SCALE**



( IN FEET )  
1 INCH = 800'

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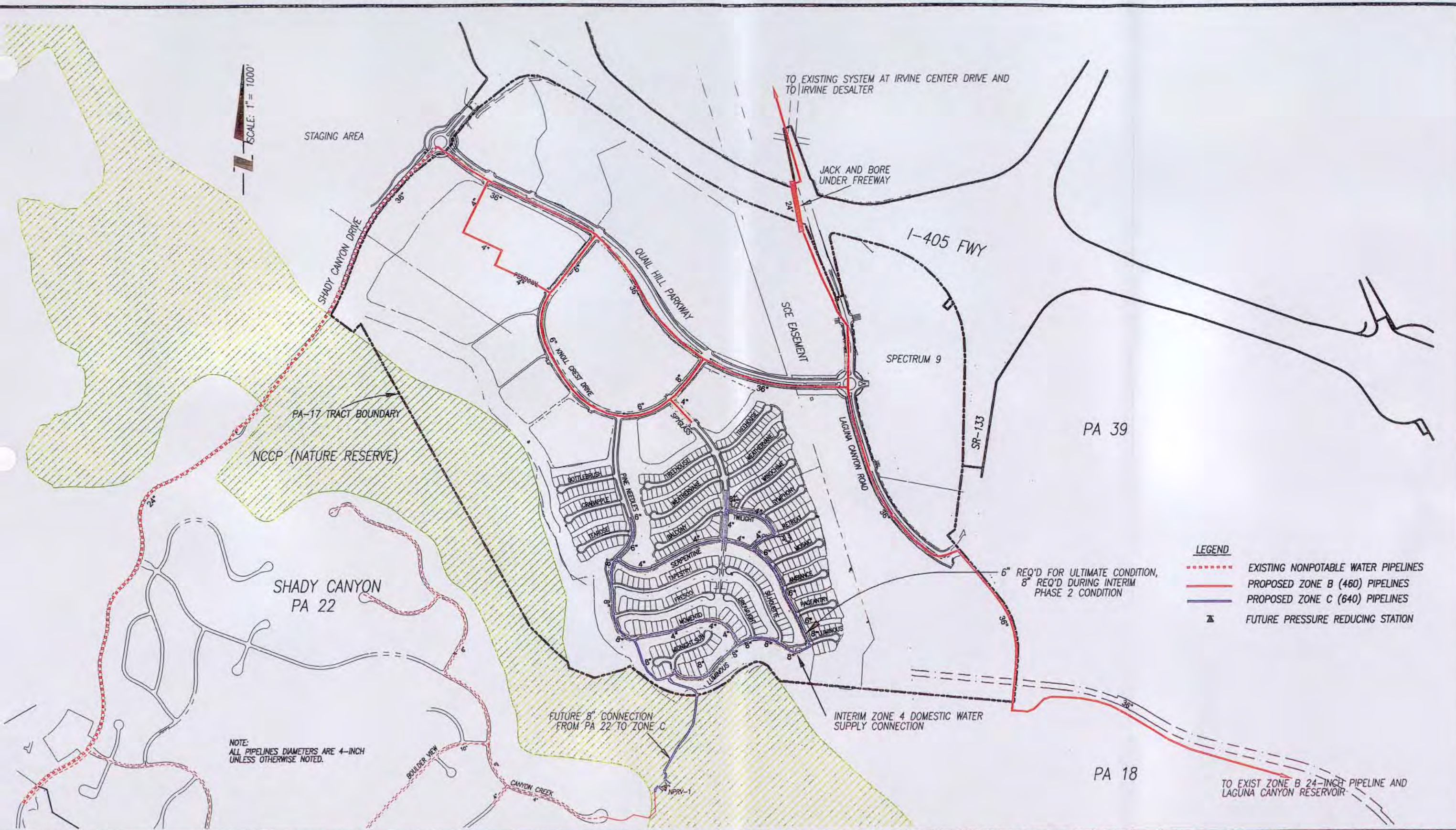
PREPARED FOR:



**PA 9B, 9C SAMP  
GATEWAY PARK  
NON-POTABLE WATER**

**FIGURE  
5-4**






SCALE: 1" = 1000'

**LEGEND**  
 - - - - - EXISTING NONPOTABLE WATER PIPELINES  
 ——— PROPOSED ZONE B (460) PIPELINES  
 ——— PROPOSED ZONE C (640) PIPELINES  
 ▲ FUTURE PRESSURE REDUCING STATION

NOTE: ALL PIPELINES DIAMETERS ARE 4-INCH UNLESS OTHERWISE NOTED.

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 WATER DISTRICT

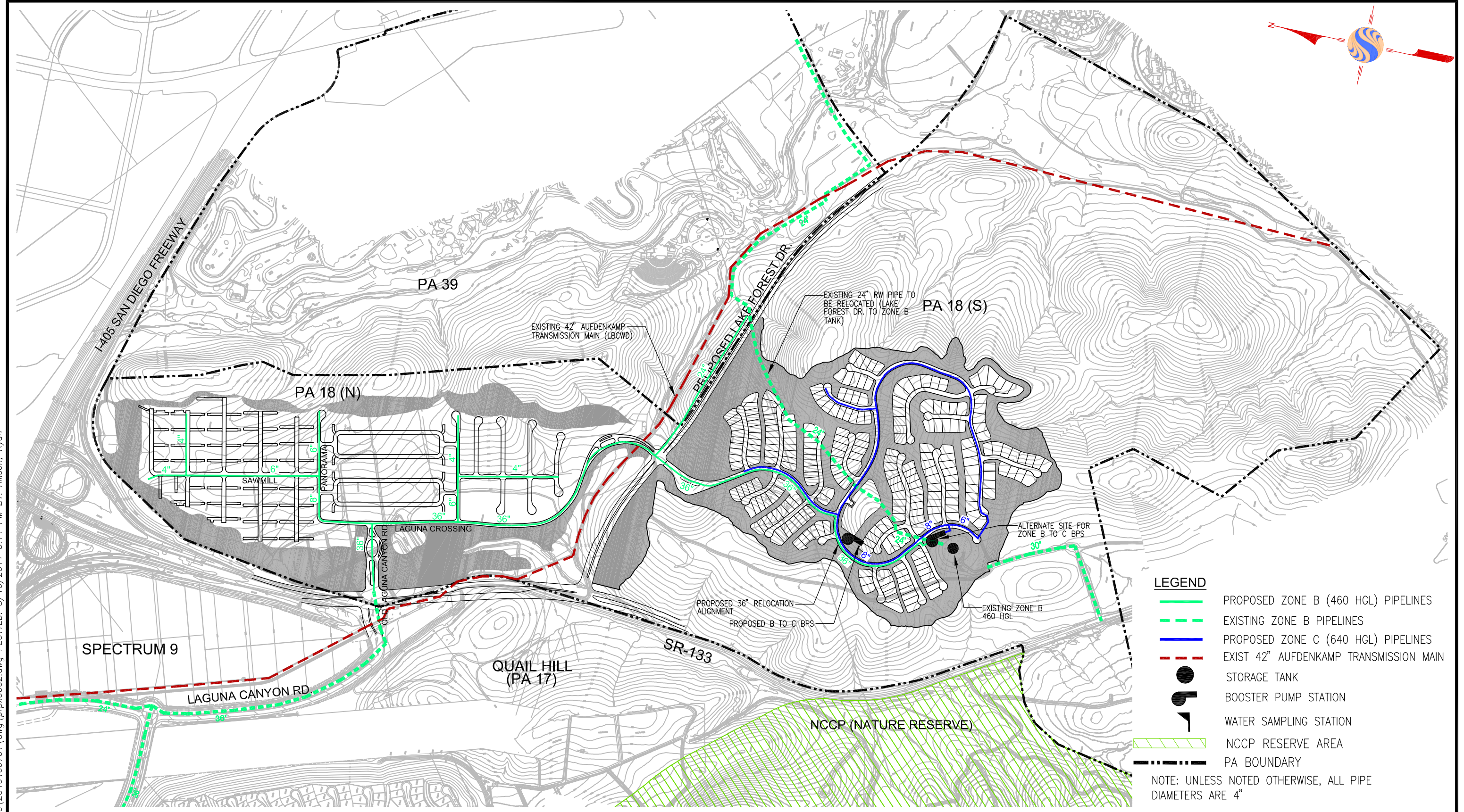
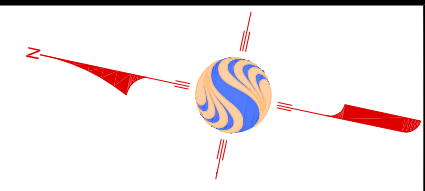


**QUAIL HILL (PA 17) SAMP  
 NON-POTABLE WATER SYSTEM FACILITIES**

**FIG 5-3**

REVISD 02/20/2003  
 QUAIL HILL SAMP





**LEGEND**

- PROPOSED ZONE B (460 HGL) PIPELINES
- - - EXISTING ZONE B PIPELINES
- PROPOSED ZONE C (640 HGL) PIPELINES
- - - EXIST 42" AUFDENKAMP TRANSMISSION MAIN
- STORAGE TANK
- ⊕ BOOSTER PUMP STATION
- ⊖ WATER SAMPLING STATION
- ▨ NCCP RESERVE AREA
- - - PA BOUNDARY

NOTE: UNLESS NOTED OTHERWISE, ALL PIPE DIAMETERS ARE 4"

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PREPARED BY:



PREPARED FOR:

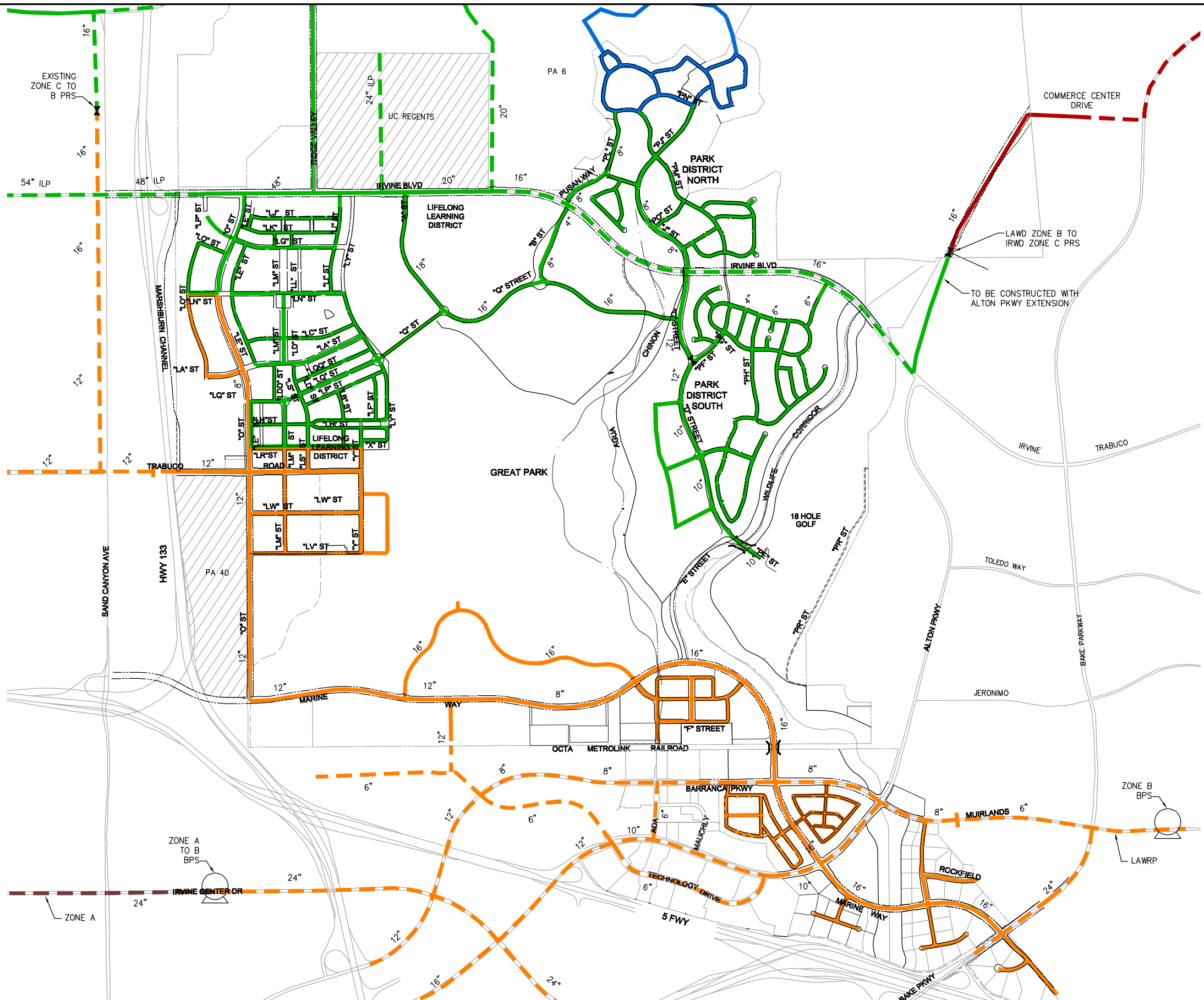
IRVINE RANCH  
WATER DISTRICT



**PLANNING AREA 18 SAMP UPDATE**  
**PROPOSED NON-POTABLE**  
**WATER FACILITIES**

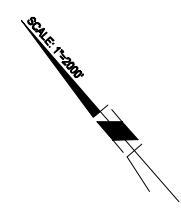
**FIGURE**  
**5-3**





- NOTES:**
1. THE RECLAIMED WATER FACILITIES WITHIN THE GREAT PARK ARE NOT SHOWN ON THIS FIGURE. AT THE TIME OF THE SAMP PREPARATION, THE REQUIRED RECLAIMED WATER DISTRIBUTION FACILITIES WERE NOT KNOWN. ONCE THE LAND USE PLAN IS FINALIZED, THE RECLAIMED WATER DISTRIBUTION SYSTEM WILL REQUIRE ANALYSIS AND APPROPRIATE LEVEL OF SAMP UPDATE OR ADDENDUM WILL BE REQUIRED. ADDITIONALLY, AT THE TIME, A DETERMINATION WILL BE MADE AS TO WHICH FACILITIES WILL BE PUBLIC AND WHICH WILL BE PRIVATE.
  2. AS PART OF THE AGREEMENT WITH THE DEPARTMENT OF DEFENSE, THE LEAD ENTITY CONSTRUCTING BURIED PIPELINES WITHIN THE FORMER MARINE CORPS AIR STATION, EL TORO MUST SUBMIT A PROJECT ENVIRONMENT REVIEW FORM (PERF) TO THE NAVY AND THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL PRIOR TO COMMENCEMENT OF EXCAVATION ACTIVITIES.
  3. ALL PIPELINES ARE 4" UNLESS SHOWN.

	PROPOSED	EXISTING
ZONE D (850 HGL)		
ZONE C (640 HGL)		
ZONE B (460 HGL)		



PATH/FILENAME: M:\PROJECTS\ETRA TECH, INC\HERITAGE FIELDS & GREAT PARK SAMP\BACKGROUND INFORMATION\2.7.08 SAMP KICKOFF\RM MET PLAN\M-EDWG  
 LAST UPDATE: Friday, March 06, 2009 3:08:19 PM  
 PLOT DATE: Friday, March 06, 2009 3:47:07 PM  
 ANS D - 3-8-05



AECOM USA, INC.  
 1501 QUAIL STREET  
 NEWPORT BEACH, CA 92660  
 PHONE (949) 476-3300

PREPARED FOR:  
**IRVINE RANCH WATER DISTRICT**

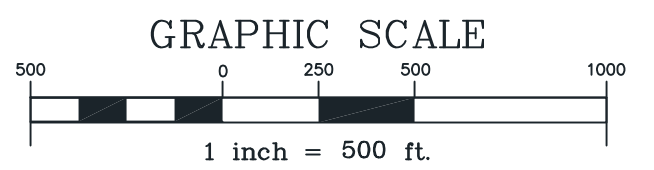
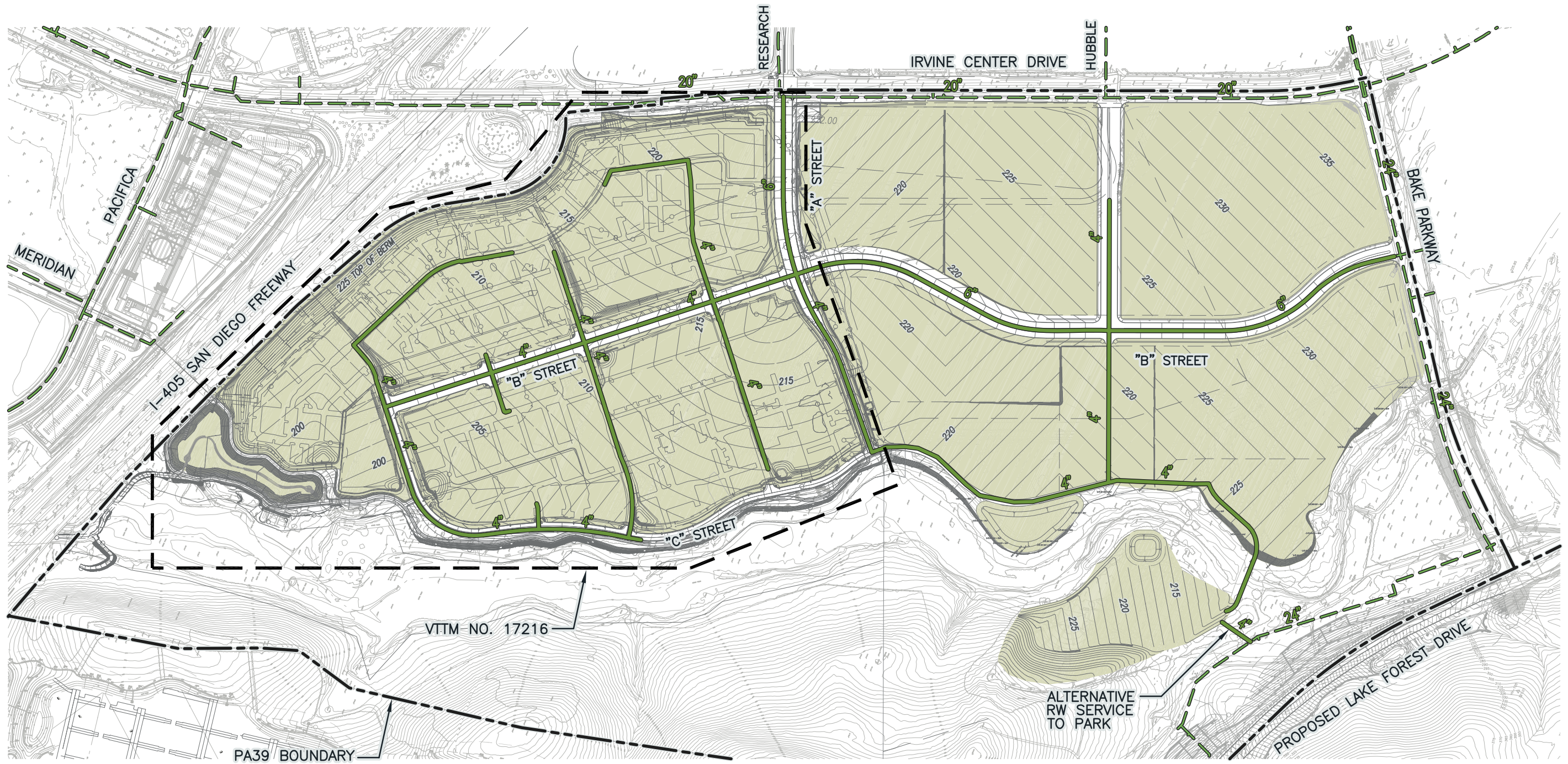


IRVINE RANCH WATER DISTRICT  
 GREAT PARK / GREAT PARK NEIGHBORHOODS  
 SUB-AREA MASTER PLAN  
**PROPOSED NON-POTABLE WATER FACILITIES**

FIG. 5-3



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**LEGEND**

	PROPOSED ZONE (460 HGL)
	EXISTING ZONE B (460 HGL)
	ZONE B (460 HGL)



PREPARED FOR THE:  
 IRVINE RANCH  
 WATER DISTRICT

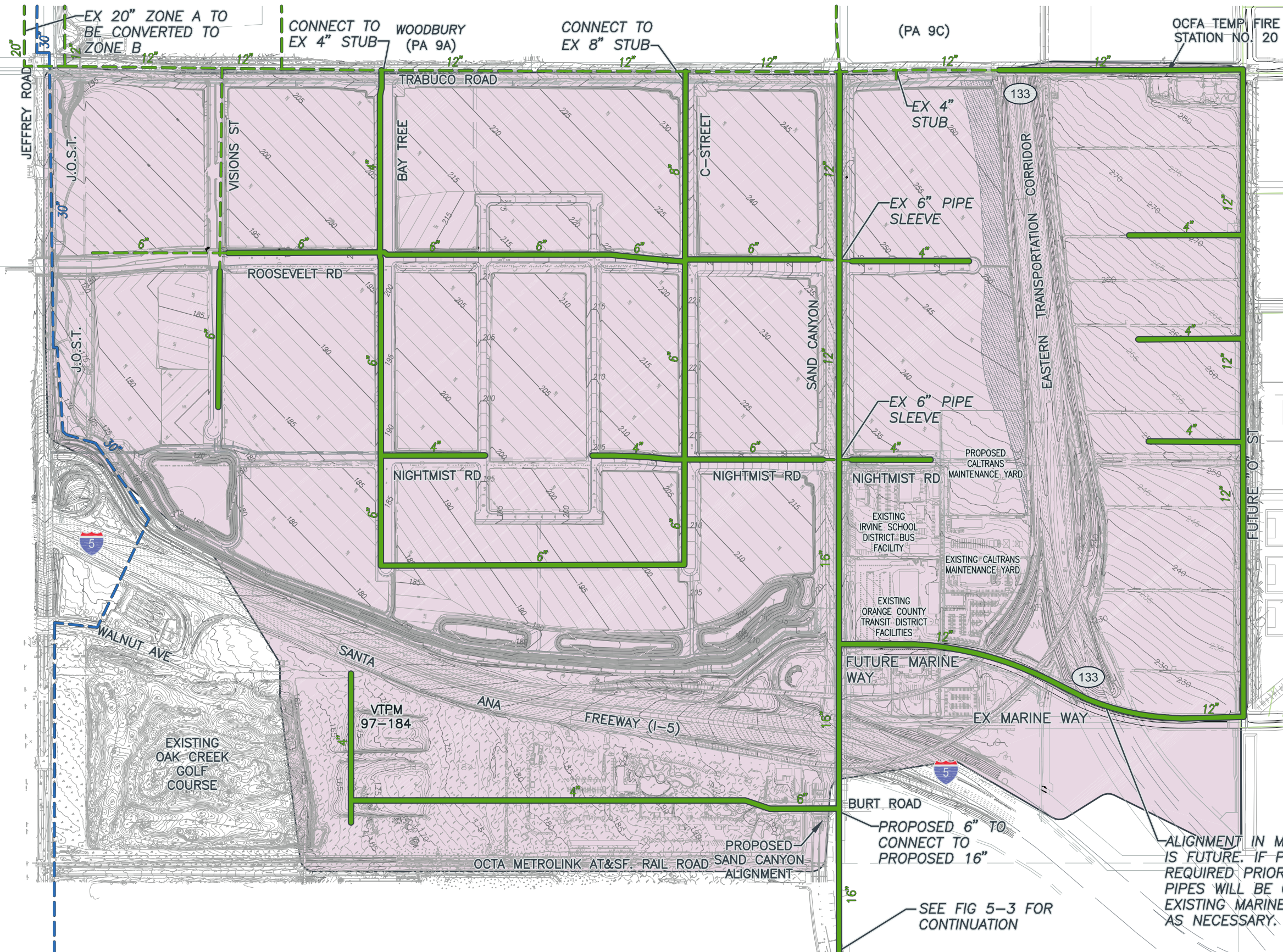
# PLANNING AREA 39 SAMP

## PROPOSED NON-POTABLE WATER FACILITIES

**FIGURE  
 5-2**






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ORANGE COUNTY GREAT PARK (PA 30 & 51)

### LEGEND

- PROPOSED ZONE B (460 HGL) PIPELINES
- - - EXISTING ZONE A
- - - EXISTING ZONE B
-  PRESSURE REDUCING STATION
-  STORAGE TANK
-  BOOSTER PUMP STATION

ALIGNMENT IN MARINE WAY AS SHOWN IS FUTURE. IF PIPELINES ARE REQUIRED PRIOR TO REALIGNMENT, PIPES WILL BE CONSTRUCTED IN EXISTING MARINE WAY AND RELOCATED AS NECESSARY.

SEE FIG 5-3 FOR CONTINUATION

SCALE: 1"=700'



PREPARED FOR THE:  
IRVINE RANCH WATER DISTRICT

## PLANNING AREA 40 SAMP

## NON-POTABLE WATER SYSTEM FACILITIES



SECTION 5 FINANCIAL PHASING SUMMARY

This section summarizes the phasing of the financial requirements in ID No. 253. A schedule of financial phasing requirements based on projected phasing of facilities is shown in **Table V-1**. Also shown in the table is the general class of items that will be covered in these projected amounts.

Table V-1 includes a 10% contingency to allow for unexpected inflation as well as changes in land use and development density.

It should be noted that this table does not represent actual bond issues. As facilities are needed which warrant or require bond funding, actual bond issuance needs will be determined.

ID No. 253 has existing authorized bonds in the amount of \$122,700,000, none of which have been issued.



**Table V-1**  
**Bond Authorization Summary**  
**Improvement District 253**

	2013-2015	2016-2020	2021-2025	2026-2035	Total Escalated Amt
<b>Escalated Local Subtotal</b>	\$5,077,765	\$20,877,631	\$17,544,252	\$0	\$43,499,648
<b>Escalated Regional Subtotal</b>	\$6,196,792	\$23,211,393	\$6,729,426	\$2,366,521	\$38,504,132
<b>Escalated Sub-Regional Subtotal</b>	\$197,098	\$14,431,438	\$0	\$0	\$14,628,536
<b>Contingency (10%)</b>	\$1,147,165	\$5,852,046	\$2,427,368	\$236,652	\$9,663,232
<b>Bond Reserve (6%)</b>	\$757,129	\$3,862,351	\$1,602,063	\$156,190	\$6,377,733
<b>Funded Reserve (6%)</b>	\$757,129	\$9,363,274	\$1,602,063	\$156,190	\$6,377,733
<b>Bond Discount (2%)</b>	\$1,193,353	\$7,022,456	\$534,021	\$52,063	\$2,125,911
<b>Bond Issuance Costs (1%)</b>	\$596,676	\$7,022,456	\$267,010	\$26,032	\$1,062,955
<b>Bond Authorization Total</b>	\$15,923,108	\$91,643,045	\$30,706,203	\$2,993,649	\$122,239,880

## SECTION 6 BENEFIT OF THE PLAN OF WORKS TO THE LANDS IN THE IMPROVEMENT DISTRICT

### 6.1 OVERVIEW

Under the California Water Code, the plan of works for an improvement district provides a plan and an estimate of the cost of the works that are needed to serve the improvement district and that will be financed through District-issued bonds, and reflects the determination by the District's Board of Directors that the territory within the improvement district will benefit from the works. To the extent practical, a plan of works will incorporate generalized facilities descriptions and flexibility in the selection of specific projects, so that a revised or supplemented plan will not be needed. If a revised or supplemented plan is adopted, it must benefit the territory within the improvement district. Similarly, when territory is annexed to or detached from an improvement district, including annexations and detachments implemented for the purpose of reorganizing improvement districts to be consolidated as coterminous improvement districts, there must be an accompanying evaluation of territory that will benefit by inclusion within the plan and therefore should be included, and territory that will not benefit and therefore should be excluded.

The benefits that lands receive from sewer and recycled water works are derived from multiple considerations. Primary is the ability of lands to receive service currently or when needed in the future. Other examples of benefits are system or facilities reliability through supply diversification, redundant treatment and disposal capacity, storage capability, system looping or other characteristics; regulatory compliance; environmental protection; and regional cost efficiencies in operation and maintenance. In the case of a consolidation of improvement districts, other benefits may include economies of scale, administrative simplification and enhancement of credit and reduced borrowing cost or debt service cost.

For purposes of evaluating benefit of improvement district consolidations, cost allocation is dictated in part by the requirements contained in the Water Code for structuring consolidations. In accordance with these requirements, the remaining authorized, unissued bonds of the consolidating improvement districts will become the authorized bonds that can be issued on behalf of the consolidated successor improvement district. Upon the consolidation, debt service for the outstanding bonds of the consolidating improvement districts will become obligations of the consolidated successor improvement district.

### 6.2 DESCRIPTION OF THE STUDY APPROACH

The reorganization of ID Nos. 153 and 253 is part of an overall restructuring of the District's improvement districts, which also includes the consolidation of ID Nos. 125 and 225 and the formation of ID Nos. 185 and 285. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations

and reorganizations.” In this regard, the District has undertaken a comprehensive evaluation and study of its long-term financial requirements, including:

- a detailed planning, engineering and financial assessment of the total costs of existing and future facilities in the water and wastewater systems;
- available bond authorization and other revenue sources to finance facilities to serve future development (“new capital”), augment system reliability and meet upgraded regulatory requirements for both existing and future demands (“enhancement”) and replace and refurbish the existing systems (“replacement”);
- debt service;
- simplification of the improvement district structure; and
- assurance of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

The existing improvement district structure has served the District for more than 40 years as the system was built and growth patterns necessitated a means of maintaining equity in the financing of facilities. Using the mechanisms of periodic formation of new improvement districts and authorization of bonds as well as regional cost allocations and system buy-ins, the District has been able to maintain fair and equitable cost sharing while accommodating both intense growth within its boundaries and several acquisitions of adjacent service areas. Construction and expansion of the systems were the key features of this financial structure. Although growth will continue for several more years, going forward the completion of the regional systems and provision for system reliability and replacement will become the predominant driver of the financial requirements. The District’s comprehensive evaluation of its financial requirements indicates that a simplification of the improvement district structure and related actions will provide a sustainable methodology for equitable cost allocation in the future.

As described in Section 1.3, a succession plan for the improvement district structure would reduce the number of improvement districts, ideally to one water improvement district and one sewer improvement district, through consolidations and reorganizations to be implemented as and when considerations for separation of the various improvement districts no longer remain. The District’s financial review identified steps that were currently feasible in achieving that objective as well as the parts of the current structure which need to be maintained at this time until factors relating to the preservation of equitable cost sharing merit the evaluation of further consolidation steps.

General obligation bonds have been the District’s principal tool for financing facilities. Under this form of financing, the obligation for repayment of bonds issued on behalf of an improvement district is secured by the power of the District to levy and collect *ad valorem* assessments without limitation as to rate or amount on land only (enforceable by customary rights to foreclose and sell property for delinquent assessments) or, in lieu of assessments, in the District’s discretion, charges for water or sewer service, as applicable, all within the subject improvement district. The District also uses



connection charge revenues to pay a portion of the debt service costs. For new capital cost within developing improvement districts, the District plans to continue its historical practice of targeting a 50-50 allocation as a fair means of sharing improvement district debt service costs between the aggregate contributions of connection charge revenues and property tax revenues. The evaluation of financial requirements and modifications of the District's improvement district structure therefore involve an examination of outstanding and future bond debt service, bonding authority, allocation of costs, and resultant contributions of connection charges and *ad valorem* property taxes over time.

### 6.3 LONG-TERM FINANCIAL REQUIREMENTS MODELING

As introduced in the preceding section, the foundation of the evaluation of the benefit of the Plan of Works to the lands in the Improvement District is the District's comprehensive review of its long-term financial requirements. To assist the District in this evaluation, the District employed modeling of a baseline condition defined by the improvement district structure as it existed prior to the current reorganization and consolidation steps. The baseline modeling facilitated various aspects of the long-term financial requirements evaluation:

- refinement of capital cost allocations according to the functional benefits (e.g., development expansion, reliability, regulatory compliance, environmental protection, system refurbishment) of the facilities to various areas and user categories;
- use of existing bond proceeds and available bond authorization and other revenue sources for the financing of future facilities within the new capital expansion, enhancement and replacement project classifications;
- use of the District's allocation of the general 1% *ad valorem* property tax levy;
- benefit of the simplification of the improvement district structure and the aggregated regional and local systems;
- identification of areas where the structure must be retained or modified to equitably address special considerations; and
- measurement of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

Modeling of modified aspects of the baseline enabled the District to test the effectiveness of modifications to various capital –project related fiscal and financing practices in developing a new improvement district and cost allocation structure to effectively maintain equity as the development phase within the District progresses toward buildout. Details of the modeling process described in this section, including review and analysis of interim results and identification of refined and additional modeling efforts, are compiled in a Technical Appendix that serves as a reference document for this Plan of Works.

#### 6.4 REGIONAL SYSTEM BENEFIT

The Plan of Works for ID No. 253's predecessor, ID No. 1 of Santiago County Water District (SCWD), contemplated that the sewage collection, treatment and disposal needs of its ultimate population of about 38,000 would be furnished through a trunk sewer system that would discharge sewage from the southern portion of the improvement district to Limestone and Santiago Canyons and into a proposed SCWD tertiary wastewater reclamation plant that would also received flows pumped from the Fremont Canyon area. Reclaimed water produced by the plant and untreated water that could, by agreement with IRWD, be received from the Santiago Lateral through Irvine Lake were the contemplated sources to be used to supply irrigation demands. In 1985, when the reorganization of Orange County Sanitation District No. 14 was undertaken to include much of IRWD's territory, a portion of SCWD's ID No. 1 was also included. At that time the remainder of ID No. 1 now included in IRWD's ID No. 253 was designated within OCSD's sphere of influence. The OCSD-sphere portion of ID No. 1 (ID No. 253) was annexed to OCSD in 2006, in conjunction with the consolidation of SCWD with IRWD. These organizational changes formed the groundwork for serving ID No. 253 through MWRP and OCSD's Revenue Area 14, thus integrating the regional system for ID No. 253 within the regional system that serves most of IRWD.

The majority of the regional wastewater treatment, disposal and reclamation facilities exist. Based on its ultimate demands, ID No. 253] will need to contribute its proportional share of the cost of completing the regional system, including any expansion such as the acquisition of additional MWRP capacity, and including new components necessary to provide basic reliability. The areas reorganized within ID No. 253 were primarily within former ID Nos. 230, 250, 253 and to a lesser extent, other improvement districts. At this stage of completion of IRWD's regional system, former distinctions among the improvement districts from which the areas reorganized as ID No. 153 originated are no longer material in regard to service from the regional system. Historically, these distinctions included the extent and duration of individual improvement districts' reliance on the untreated system to serve agricultural water, proximity to different completed and yet-to-be-completed segments of the treated water feeders, interceptor and trunk sewers and treatment facilities, uncertainties in the progression (location and pace) of development, and planning determinations that were yet to be made by the District in the elements of the major facilities components and supply sources, such as pipeline and well field capacity. All of these factors have either disappeared or diminished in importance, and the regional benefits among the areas reorganized within ID No. 253 are now essentially uniform.

As one example of the gradual diminishing of the earlier distinctions among the individual improvement districts' plans for supply and delivery alternatives, the 1974 plans of works initially contemplated separate treatment plants connected to the untreated delivery system for each of ID Nos. 103 and 105. In 1977, the initial plan for local (or regional) treatment of raw water in ID No. 103 (shared with ID No. 109), was shifted to a backup alternative, in favor of ID No. 103's pro rata participation in the District's capacity to be obtained in the proposed regional treated water system now known as the Allen McColloch Pipeline (AMP) to serve its supplemental water needs. By 1978, this was again modified to include participation by ID No. 103 in the District's acquisition of capacity in the AMP in combination

with participation in the construction of the District's own well field in the main Orange County groundwater basin as a more economical and preferred domestic supply alternative source. The local treatment plants as originally contemplated were not built, but the District is presently participating in the construction of the Baker Plant as a regional treatment plant that will benefit the entire service area.

This progression continued, with the distinctions becoming fewer as the planning of the regional system evolved and the system was constructed. With only approximately 10-12 percent of the equivalent dwelling units (EDUs) remaining to be built in ID Nos. 253 and 285, these distinctions are no longer prominent. The regional system and its integrated treatment and reclamation facilities provide uniform benefit to all of the component areas of ID No. 253 by satisfying basic treatment, disposal and recycled water supply and peaking needs and providing protection against emergency outages. Connection fees, adjusted by planning areas if and to the extent necessary to differentiate the fee amounts to adjust for varying local and sub-regional project benefits, and ad valorem taxation will adequately allocate the cost share of ID No. 153 [253] among its various planned development areas in proportion to their benefit.

Through the regional split, the areas within the reorganized ID No. 253 have shared the cost of IRWD's regional reclamation plants, as well as the treatment and disposal facilities of Orange County Sanitation District and its Revenue Area 14 under agreements between the District and OCSD. Not all of ID No. 253's and other improvement districts' service areas are tributary to all of the plants. However, the plants and their tributary regional collection systems are considered to function as one regional system and optimize the District's sewage collection and water reclamation systems and provide dual or backup treatment capability to for various parts of the service area. The District is continuing to develop its capability for multiple discharge options among the tributary areas of the plants. Thus all areas participate proportionally in the regional system. All areas receive the uniform sewer rate, which provides the benefit of reduced cost through treatment options. An exception to this is ID No. 240, which is sewered only to OCSD's regional plant and is not within OCSD's Revenue Area 14 nor tributary to the MWRP, LAWRP, or Chiquita plants. IRWD does provide sewage collection and recycled water service to ID No. 240. ID No. 256 in large part remains on individual septic systems, and it is uncertain whether and when that community will desire to convert to a public sewer system. ID No. 252 is not tributary to IRWD plants but may benefit from future recycled water facilities. ID Nos. 240, 252 and 256 are not included in the current reorganization and consolidation of improvement districts.

As described in Section 3, the District uses a demand forecasting tool to allocate regional system costs among improvement districts. This ensures that ID No. 253 as a whole will be allocated a share of the regional system costs in proportion to the benefit it will receive from the system. See **Table III-1**.

#### 6.5 REGIONAL COST ALLOCATION – INCLUSION IN IMPROVEMENT DISTRICT NO. 225

In parallel with the reorganization of ID No. 253 itself, ID No. 253's territory will be retained as part of the reorganization of several improvement districts to form a consolidated improvement district designated ID No. 225. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations



and Reorganizations.” All of the developing areas reorganized into ID Nos. 253 are retained or reorganized within the boundaries of the underlying improvement district, ID No. 225. This assures that the developing areas will share in the cost of existing local and sub-regional facilities from which they benefit, such as sewer trunk facilities, previously built with the proceeds of bonds of one of the improvement districts consolidated in the underlying improvement district.

Like ID No. 253, ID No. 225 will continue to share proportionally in the cost of completing the regional system, such as treatment plant expansion costs and the new capital portion of the cost of solids handling facilities. This occurs because under the District’s incremental approach, although the regional system provides service prior to its completion, it remains incomplete, and future regional projects will add components necessary to provide basic reliability, benefitting the developed areas as well as future development. To prevent overpayment by the areas included within both improvement districts’ regional allocations, the regional allocation for ID No. 225 will exclude demands of 253, and the 50/50 allocation of debt service responsibilities between connection fees and property taxes will be applied on an aggregated basis for the area within ID No. 253, between the overlying and underlying improvement districts.

#### 6.6 LOCAL FACILITIES COST ALLOCATION

Historically, planned developments within a geographic area have been grouped together in an improvement district notwithstanding the fact that each development may be served by distinct local facilities, as the cost of these are generally uniform over the improvement district. This is also considered to be the case for the various geographic areas comprising ID No. 253. To the extent necessary to achieve fair and equitable allocation of local facilities costs, planning areas can be used to recognize any unequal costs of sub-regional and local facilities benefiting only one, or some but not all, of the planned developments in the territory of the consolidated ID No. 253.

As with regional system benefits discussed above, connection fees, adjusted by planning areas if and to the extent necessary to reflect unique local facilities costs not fairly allocable to the entire improvement district, and *ad valorem* taxation will adequately allocate the cost share of the ID among its various planned development areas in proportion to their benefit. The segregation between the ID Nos. 253, 285, 288, existing ID Nos. 212 and 213, and the consolidated developed ID No. 225 is considered adequate to ensure that capital cost allocation recognizes the area-specific local facilities costs yet to be incurred in the planned development areas.

#### 6.7 IMPROVEMENT DISTRICT NO. 253 BENEFIT

The District has reviewed and analyzed benefit to the lands from the reorganized ID No. 253 in several ways: (1) similarities or differences in future service needs among the areas identified for inclusion by annexation to, or by retention in, the reorganized as ID No. 253; (2) the benefit or lack of benefit to the areas identified for exclusion from the reorganized as ID No. 253; and (3) regional cost allocation among ID No. 253 and other areas receiving benefit from the regional facilities. Also evaluated

were (4) areas not included in any improvement district and (5) certain areas retained as separate improvement districts.

**(1) Included areas.** The areas reorganized as ID No. 253 comprise several non-contiguous planned development areas that were previously in different improvement districts. Therefore, it is appropriate to assess whether any one or more of these areas possess essential distinctions, in terms of benefit from the planned local facilities or regional facilities (including treatment and disposal), that would warrant exclusion from the ID No. 253 territory. The areas included in the reorganized ID No. 253 are described in Section 2. With respect to regional facilities, all areas will be benefitted by the integrated wastewater collection and treatment and recycled water systems. Based on the available planning information for the expected development of each planned area, all of which are predominantly residential with other use, it is concluded that the areas are similarly benefitted by the Plan of Works and that the *ad valorem* assessments for debt service and connection fees for the classifications applicable to the anticipated uses will fairly allocate cost within the ID based on demands. Connection fees, which can be adjusted through planning areas if and to the extent necessary to reflect unique local or sub-regional facilities costs not fairly allocable to the entire improvement district, and *ad valorem* taxation will adequately allocate the cost share of the improvement district among its various planned development areas in proportion to their benefit. Simultaneous inclusion of the ID No. 253 lands within the underlying improvement district, ID No. 225, assures that the developing areas will share in the cost of existing local and sub-regional facilities from which they benefit, such as trunk sewers, previously built with the proceeds of bonds of one or more of the improvement districts consolidated in the underlying improvement district. The exclusion of ID No. 253 demands from the ID No. 225 regional split, and allocation of debt service responsibilities between connection fees and property taxes on an aggregated 50/50 basis between the overlying and underlying improvement districts will prevent overpayment as a result of inclusion within both improvement districts' regional allocations.

**(2) Excluded areas.** The District also analyzed whether any areas proposed to be excluded from the reorganized ID No. 253 would receive benefit from ID No. 253 planned works, and should not be excluded. The areas excluded consist of substantially developed areas of ID Nos. 105, 130 [230, 250] and other improvement districts which will, instead, be included in the reorganized ID No. 125 [225], open space, and areas contained within another developing improvement district. Also excluded are the areas not included in any improvement district and certain areas retained as separate improvement districts, discussed under separate headings below.

The excluded developed areas will contribute their regional cost share for the completion of the regional system and for the previously constructed local facilities through ID No. 225. The developed areas will continue to be benefitted by the regional facilities financed and to be financed by ID No. 253. However, it is concluded that exclusion of the developed areas is justified in terms of benefit, because, through the reorganized ID No. 225, their allocation of the cost of the regional system benefits will continue to be proportional.

The 13,400 acres reserved as permanent open space near the Lomas de Santiago ridgeline, which is not proposed to remain within any improvement district, and other smaller permanent open space areas will not receive benefit from the planned works and are excluded from ID No. 253, 225 and other improvement districts. This is warranted by the fact that the area will have no demand served by the system.

Finally, areas contained within developing ID Nos. 253, 212, 213, 285 and 288 are logically maintained as separate improvement districts based on their separate local facilities costs and stages of development. To the extent there are sub-regional facilities from which any of these improvement districts benefit in common, they will share the cost of those facilities with the other participating improvement districts through a proportionate allocation based on benefit received. Exclusion of the [other] separate developing improvement districts from ID No. 253 will facilitate the allocation of local facilities costs. Having these remain separate improvement districts does not negatively impact the regional cost allocation or bond authorization, nor would combining them produce any advantage.

**(3) Regional cost allocation.** Also considered was whether the reorganization achieves equity in relation to the other cost allocations within the regional split. Under the District's historic and continuing methodology for achieving equitable cost allocation, all improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. This incremental funding approach also recognizes that at any point in time prior to full buildout, a portion of the cost of the development of the regional system has been born by ad valorem assessments on lands not yet fully developed and receiving service. Adjustment of this methodology will be applied as discussed in Section 6.5 to recognize inclusion of areas in both ID No. 253 and underlying ID No. 225. A similar regional allocation would be applied to replacements and enhancement projects, to the extent funded by the improvement districts. Contribution by areas not included in an improvement district is discussed in the heading below.

**(4) Areas not included in an improvement district.** The District's regional cost allocation approach took into consideration that some areas (referred to collectively with the shorthand references "110" and "210" in keeping with the District's numbering system for designating improvement districts) funded a portion of the District's earliest regional system costs through payment of debt service on general obligation waterworks bonds of the overall District in the 1960s (e.g., original construction of the San Joaquin Reservoir and IRWD's capacity in the East Orange County Feeder No. 2 and other transmission facilities, Frances Mutual Water Company wells, the Aufdenkamp Transmission Main and the original sewage treatment and reclamation system components financed by ID. No. 1(201). Based on their initial financial participation in the original waterworks bonds and sewer ID No. 1 bonds, these earlier-developing areas were not included in the improvement districts formed during the 1970s. Similarly, certain areas added to the District through annexation and consolidation have funded a proportionate share of existing regional facilities costs, sometimes referred to as "acquisition balances," through user rate components. The "110" and "210" areas as excluded from ID Nos. 125



and 225. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations."

The District has performed calculations to determine whether historic allocations of cost, to the areas included in the improvement districts and the excluded areas, require future cost participation by excluded areas in order to ensure that the improvement districts do not bear a disproportionate cost of the system. Included in this evaluation are costs of the service delivery systems as well as other regional costs such as administrative headquarters and telemetry. Based on this evaluation, the District has determined that funding of future regional facilities costs of the District, (i.e., costs other than those costs financed by previous bonds and outstanding bonds assumed as obligations of the improvement districts being consolidated) should include participation of the areas that comprise "110" and "210," in proportionate amounts that will be determined taking into account revenue contribution, and benefit received from future capital facilities.

**(5) Retention of certain improvement districts.** Individual cost allocation considerations dictate that certain improvement districts be retained as separate improvement districts at this time.

ID No. 154 contains an area in which general planning information shows that some development could occur. However, the owner indicates no plans beyond current uses.

ID No. 240 discharges wastewater only to OCSD's regional plant and is not tributary to the MWRP, LAWRP, or Chiquita plants. For that reason it is not within OCSD's Revenue Area 14. IRWD does provide sewage collection and recycled water service to ID No. 240, and collection system and recycled water system costs are proportionately allocated to ID No. 240.

ID No. 256 in large part remains on individual septic systems, and it is uncertain whether and when that community will desire to convert to a public sewer system. If and when this occurs, the District will evaluate the appropriate method for recovering the cost of the conversion from the benefitted area, such as retention of the separate improvement district and/or an underlying improvement district.

ID No. 252 is not tributary to IRWD plants but may benefit from future recycled water facilities. This requires retention of the improvement district so that applicable recycled water system costs can be separately allocated. The ID No. 252 formation conditions provided for this through the allocation of a proportionate share of ID No. 250 debt service costs. With the consolidation of ID No. 250 as part of ID No. 225, ID No. 225's debt service costs would be used for this allocation.

## 6.8 REDEVELOPMENT COST

In recent years, some areas of the District have begun to experience redevelopment activity. This has necessitated the consideration of the fair allocation of cost that should be borne by these areas, and how demands should be included in the demands of the improvement districts. The District is

## ID 253 Plan of Works

applying methodology to ensure proportional cost contributions for regional system and for added local system needs generated by redevelopment.

## SECTION 7 IMPLEMENTATION OF PLAN OF WORKS

### 7.1 GENERAL

The Plan of Works has been prepared by IRWD pursuant to the provisions of California Water Code Section 36410 *et seq.*

It is by this means that IRWD implements the various portions of its Wastewater Treatment Master Plan and Sewer Collection System Master Plan, as to wastewater system facilities, and its Water Resources Master Plan, as to recycled water system facilities. IRWD, from time to time as needed, will issue increments of the propose bonds and construct the described facilities in order to meet its responsibility to have facilities available to serve the needs of approved development.

As hereinafter discussed, this Plan of Works will be implemented on a phased basis. Accomplishment of this obligation by IRWD necessitates issuance of bonds in the amount estimated in this Plan of Works.

It is acknowledged that, from time to time, the means of accomplishing the purposes of ID No. 253 may be altered and projects identified in this Plan of Works may be changed or replaced by other projects, by reason of changes in development phasing, changes in technology and refinements to facilities planning developed through IRWD's ongoing master planning and subarea master planning. Costs may include acquisition, construction, replacement, reconstruction and additions to facilities.

### 7.2 AUTHORIZATION AND ISSUANCE OF BONDS

The authorized and unissued bonds of the reorganized ID No. 253 are estimated to be sufficient to accomplish this Plan of Works. Authorized bonds may be sold and the proceeds used only as specified in the Plan of Works, subject to changes in the projects or substitutions of other projects to reflect changes in development phasing, changes in technology and refinements in master planning and subarea master planning.



**REVISED  
 PLAN OF WORKS  
 PROVIDING FOR SEWER COLLECTION, TREATMENT AND  
 WATER RECYCLING FOR  
 IRVINE RANCH WATER DISTRICT  
 IMPROVEMENT DISTRICT NO. 225**

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## SECTION 1 INTRODUCTION

### 1.1 OBJECTIVES

This Revised Plan of Works is a means by which the fiscal requirements of the Improvement District are identified, including bond authorization, in order to provide for the construction, planning and design of facilities necessary to provide service within the Improvement District. The obligation of the Irvine Ranch Water District (“IRWD” or the “District”) is to plan to meet the projected service needs of the specific property within the Improvement District.

The Sewer Treatment Master Plan (“WTMP”) and its predecessor planning documents have accomplished the planning of the District’s sewer collection and treatment. The Sewage Collection System Master Plan (SCSMP) also addresses the planning of the collection system. Recycled water supply, which is within the fiscal requirements of sewer plans of works, including this Plan of Works, is part of the scope of the Water Resources Master Plan (“WRMP”). Sub-area master plans (“SAMP”) are created to plan in more detail the local facilities needed for development planning areas that may overlie all or part of an improvement district. SAMPs are generally prepared as the property owners and the city planning agency begin the development process.

Plans of works are used to describe local facilities and proportional participation in regional facilities that the improvement districts will need, relying on the WTMP, WRMP, SCSMP, and SAMPs for the detailed engineering and planning analysis. The role of the plan of works is founded in statute (Water Code 35950 *et seq.*) and is to define a plan for the facilities needed to serve the improvement district and make an estimate of their cost as necessary to support the voter authorization and issuance of general obligation bonds of the District for the improvement district. The plan of works thus provides the linkage between the engineering plan and the corresponding financial requirements by setting forth the basis for a determination by the Board of Directors in a noticed hearing that the plan benefits all the territory within the improvement district including any territory that has been annexed to it.

Plans of Works incorporate generalized facilities descriptions and some flexibility in the selection of specific projects. This allows the District to accommodate changes in development phasing, changes in technology and facilities planning developed through IRWD’s ongoing master planning and subarea master planning, and corresponding changes in costs of acquisition, construction, replacement, reconstruction and additions to facilities. The Board of Directors may determine that it is necessary to change a previously adopted plan of works. This has occurred in some instances in conjunction with a revision in the cost estimate making it necessary to propose a supplemental authorization of bonds, and it has also occurred in conjunction with improvement district reorganization. This Plan of Works has been prepared in connection with the reorganization and consolidation of several improvement districts as Improvement District No. 125. See Section 1.3.

The facilities generally identified in this Plan of Works may also change without a modification of the Plan of Works, in order to substitute other facilities to accommodate land use planning or



development phasing determinations as they evolve, or in accordance with facilities planning modifications and refinements identified through IRWD’s ongoing master planning and subarea master planning. The general purpose of the facilities in the Plan of Works is to meet the sewer collection and treatment and recycled water requirements of the Improvement District, including basic system redundancy and reliability in accordance with the policies of the District. As the facilities are needed, IRWD will choose those projects that provide sewer collection and treatment and recycled water services most economically. Projects may include acquisition, construction, reconstruction and addition to facilities. The fiscal requirements identified in the Plan of Works include the development phase, during which the system will be expanded and a share of the existing regional system will be acquired as needed to serve the Improvement District, and will continue thereafter, representing the Improvement District’s participation along with other improvement districts in the completion of the IRWD regional system.

This Plan of Works has the following general objectives: (1) update the description of the capital facilities for the sewer system; (2) provide a revised plan of works to supersede and replace the existing plan of works of the improvement district being reorganized; and (3) evaluate the benefit of the revised plan of works to the territory of the reorganized improvement district. (2) provide a consolidated and revised plan of works to supersede and replace the individual plans of works of the improvement districts being reorganized and consolidated; (3) evaluate the benefit of the revised and consolidated plan of works to the territory of the consolidated ID.

The further objectives of this Plan of Works are to determine logical planning areas and the need for facilities. This includes (1) a proportionate share of regional sewer collection and treatment and recycled water facilities; and (2) adequate local planning and system layouts based on the projected ultimate development within the improvement district. The Improvement District represents the consolidation of former improvement districts that, prior to their consolidation, authorized and incurred bonded indebtedness to finance their respective local facilities. Substantially all of the remaining local facilities will be financed by the developing improvement districts (ID Nos. 112, 113, 153, 185, 188, 212, 213, 253, 285 and 288), and therefore the Improvement District No. 225’s remaining fiscal requirements as described in this Plan of Works exclude local facilities and represent only the Improvement District’s participation along with other improvement districts in the construction of the IRWD regional system. See Section 4.

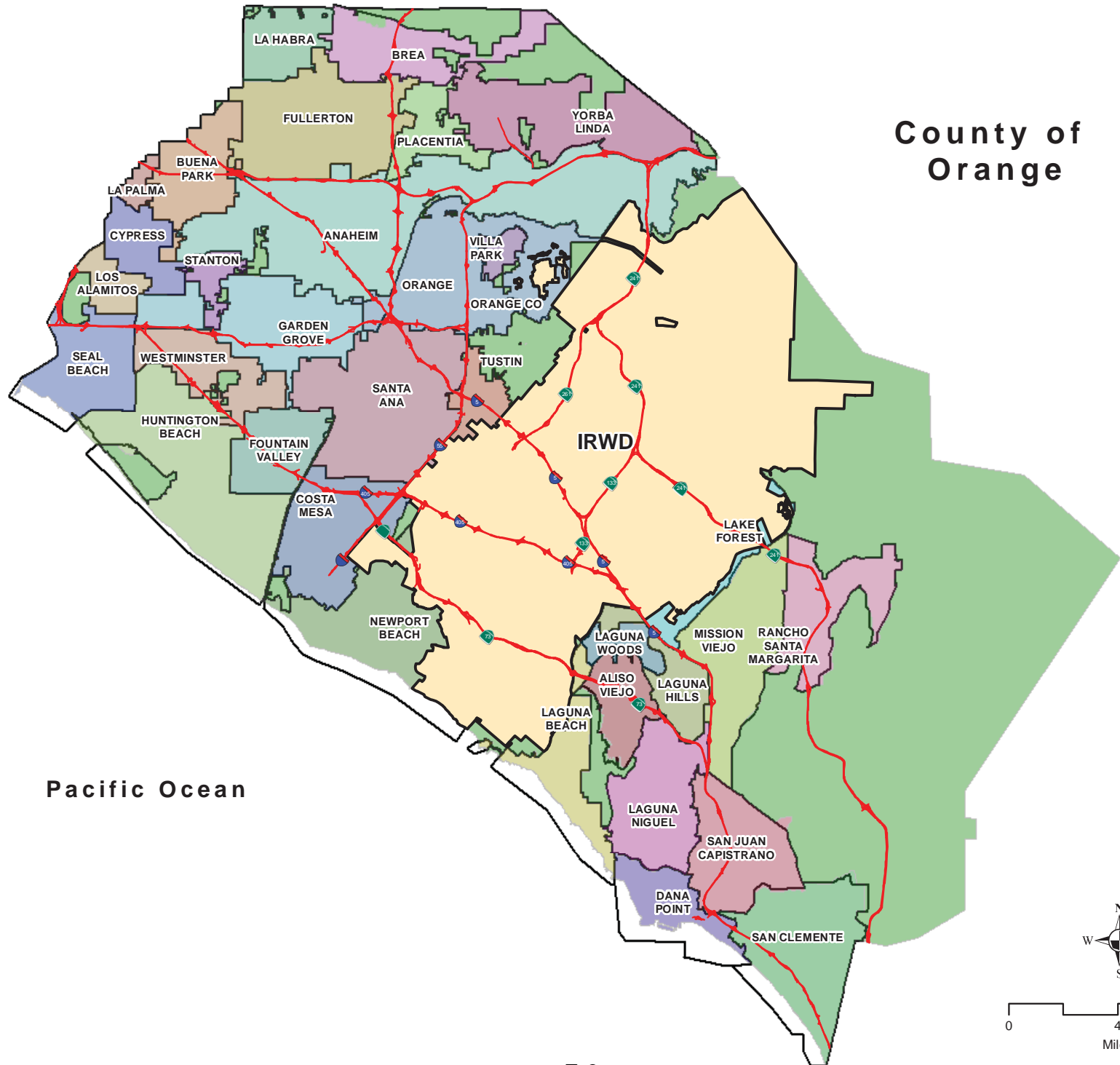
## 1.2 DESCRIPTION OF THE IRVINE RANCH WATER DISTRICT

The District was established in January, 1961, as a California Water district under the provisions of Section 34000 *et seq.* of the California Water Code (the “Act”). Presently the District has four primary services – supplying potable water, collecting and treating sewer, producing and distributing recycled and other non-potable water and implementing urban runoff treatment programs. Historically, the District has provided agricultural water service as needed until residential or commercial development occurs, and provided potable and recycled water services and sewage collection and treatment service

when development occurs. Recycled water is used for irrigation of agricultural areas, parks, parkways, greenbelt areas and school grounds, and is used for individual yard landscaping in certain areas, industrial processing, toilet and urinal flushing and other purposes permitted by regulations. IRWD has also implemented a plan for natural treatment system service to divert urban runoff of water used for irrigation and other outdoor uses and treat the runoff by natural processes in water quality wetlands and similar facilities. See **Figure I-1** for a location Map of IRWD.

The District serves a 178-square-mile area extending from the Pacific Ocean and over a central flat, alluvial plain to the foothills, which includes all of the City of Irvine and portions of the cities of Tustin, Newport Beach, Costa Mesa, Orange and Lake Forest, as well as certain unincorporated areas of the County. The District serves a total estimated population of approximately 340,000 through approximately 105,000 water and approximately 100,400 sewer service connections.

# County of Orange



Pacific Ocean



### 1.3 THE IMPROVEMENT DISTRICTS

**Historical Background.** At the time of the District's initial formation, the District's objective was to secure a supplemental water supply for irrigation and domestic use from The Metropolitan Water District of Southern California ("MWD"). This was accomplished through the installation of regional water transmission pipelines in cooperation with other districts in and the construction of the San Joaquin Reservoir, financed by the sale in 1961 and 1963 of general obligation waterworks bonds of the overall District aggregating \$10,500,000.

After the initial authorization of waterworks bonds for the overall District, all water and sewer bonds were authorized within improvement districts formed by the District to encompass specific geographic areas. The first improvement district formation occurred in 1965, when sewage collection and treatment were added to the District's powers and Improvement District No. 1, a sewer improvement district, was formed to provide financing for the District's first collection, treatment and reclamation systems. Between 1965 and 2008, the District formed 18 water improvement districts and 16 sewer improvement districts covering specific areas within the District's boundaries, some of them overlapping.

The District formed the improvement districts<sup>1</sup> in order to allocate funding responsibility for capital facilities to the areas which would benefit from such capital facilities. Local facilities addressed particular needs that varied by geographic area, proximity to existing infrastructure, elevation and other factors. Improvement districts were also used to separate areas based on projected timing of development so that local capital facilities construction could be matched to development approval decisions as they occurred. In addition, improvement districts served as a mechanism to share the funding of the District's regional facilities to be used by improvement districts in common, such as major water importation facilities and water and sewer treatment plants. The plans of works derived information from District planning documents and from land development plans as the basis for determining, for water improvement districts, the water requirements and the size, location and phasing of water delivery facilities to be constructed from the existing feeders and supply sources, and, for sewer improvement districts, the sewage generation and recycled water requirements and the size, location and phasing of sewer collection and recycled water delivery facilities to be constructed from the existing trunk sewers and recycled water distribution system to serve the various planning areas and service elevations or zones. As changes occurred in development planning, annexations and detachments were used to modify the boundaries of some of the improvement districts.

<sup>1</sup> Most of the improvement districts were formed by the District's Board of Directors, but Improvement district formation was in some cases accomplished by the District's predecessor district or the Orange County Local Agency Formation Commission, in the case of certain areas included in the District by annexation or consolidation with another district.

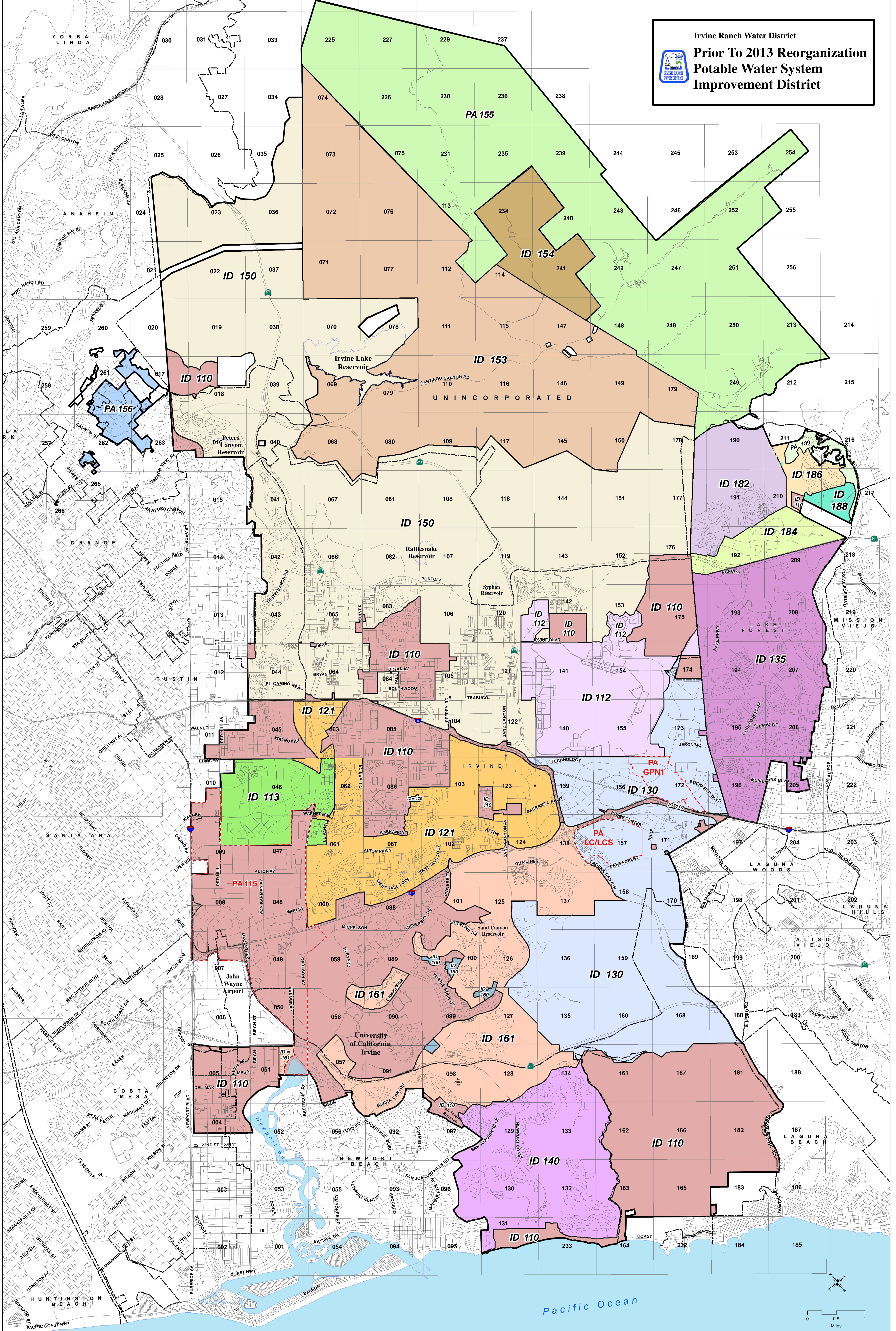
**Water Improvement Districts.** The initial financing of the District's water facilities was undertaken in the early 1960s with bonds of the District. During the 1970s, the District formulated a water facilities master plan and formed many of the water improvement districts that have existed until the current reorganization and consolidation. The first water improvement district to be formed was Improvement District ("ID") No. 104, formed in 1972, followed by the formation of ID Nos. 103 and 105 in 1974, and ID Nos. 102, 106 and 109 in 1976. When water improvement districts were formed, the District excluded lands (sometimes referred to collectively with the shorthand reference "110" in keeping with the District's numbering system for designating improvement districts) that were determined to have funded a portion of the District's earliest regional system costs through payment of debt service on general obligation waterworks bonds of the overall District in the 1960s.

ID No. 104 incorporated the coastal area of the District from the Pacific Ocean to the crest of the San Joaquin Hills. ID No. 103 covered the planned industrial and commercial developments, then known as the Irvine Center Planned Community or "Regional Triangle" and the Irvine Industrial Complex-East, in the vicinity of the intersection of the Santa Ana and San Diego Freeways and adjacent to the Marine Corps Air Station, El Toro. ID No. 105, containing about 22,000 acres in the northernmost portion of the District extending from the Santa Ana Freeway to the northerly, easterly and westerly boundaries of IRWD, was formed initially to build a pipeline to replace the Highline Canal System for the delivery of water from Irvine Lake for agricultural irrigation purposes; its first plan of works contemplated that these untreated water facilities would be augmented with later phases of works to deliver domestic water. ID No. 102 was formed to include the central part of Irvine, between the Santa Ana and San Diego Freeways. ID No. 106 encompassed the Turtle Rock, Quail Hill and Bonita Canyon areas of the San Joaquin Hills, extending north to the San Diego Freeway. ID No. 109 covered the portion of the San Joaquin Hills extending eastward from proposed Sand Canyon Avenue to the eastern boundary of the District.

As urban growth continued, further phases were added to the District's planned water system in the mid - to late 1970s, and it became necessary to increase the authorization of bonds to finance them. To accomplish that objective for some of the initial water improvement districts, the District revised the plans of works and elections were conducted to obtain supplemental bond authorizations (ID No. 103 in 1976, 1977 and 1978, ID No. 105 in 1976 and 1978, and ID No. 109 in 1978). In other improvement districts, the District formed overlapping improvement districts with new bond authorizations: ID Nos. 121, 141 and 142, and 161 were formed in 1978, overlapping portions of ID Nos. 102, 104, and 106, respectively.

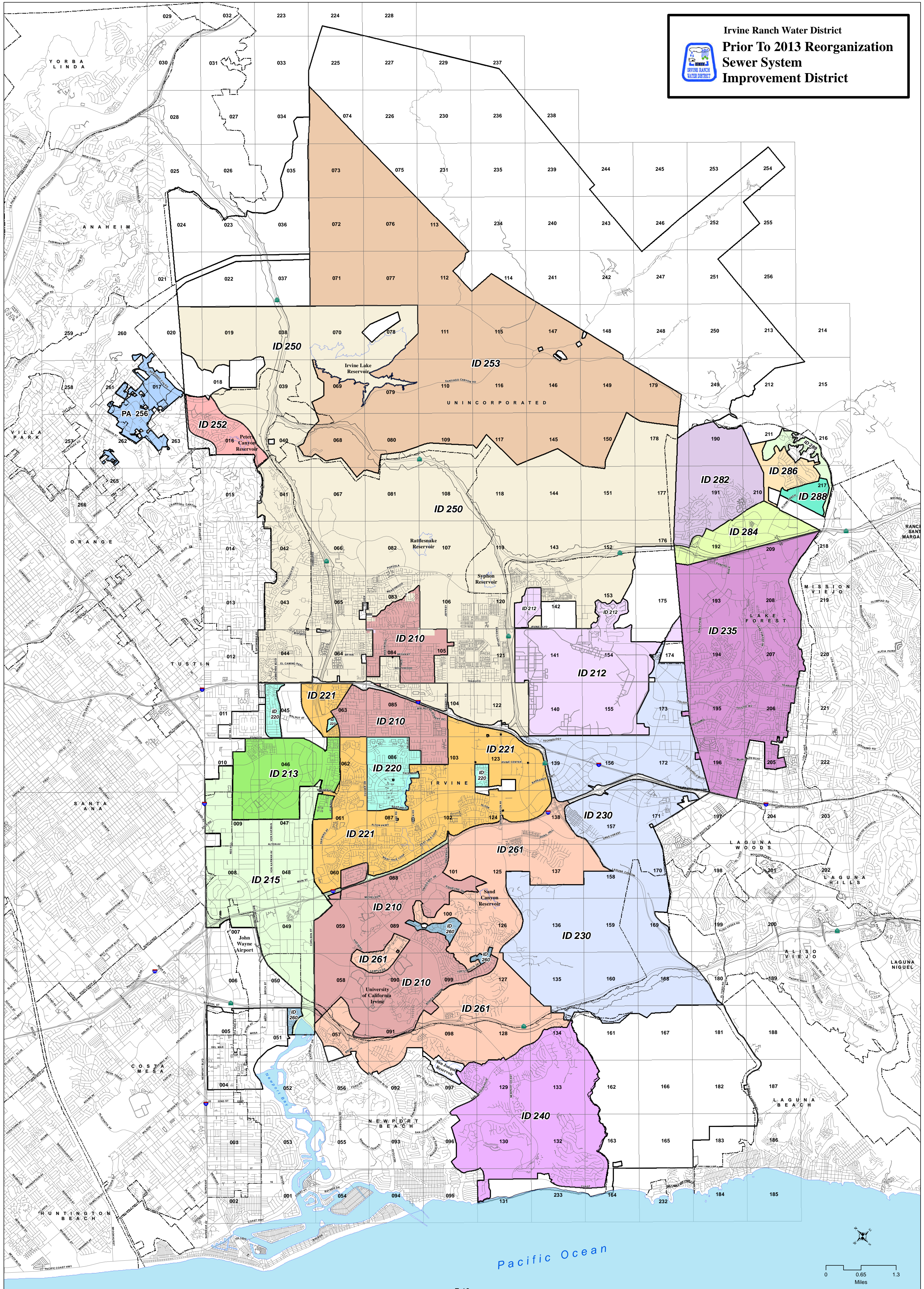


Irvine Ranch Water District  
**Prior To 2013 Reorganization  
 Potable Water System  
 Improvement District**

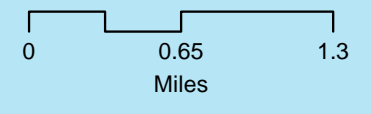




Irvine Ranch Water District  
 Prior To 2013 Reorganization  
 Sewer System  
 Improvement District



Pacific Ocean





Beginning in the late 1980s, other water improvement districts were formed as areas were added to the District by annexation and consolidation and as former military bases were closed and underwent reuse planning. In 1988, ID Nos. 182 and 184 were formed over the Foothill Ranch (Whiting Ranch) area located in the foothills and canyons north of El Toro in eastern Orange County, an area that was annexed to IRWD in 1982. ID No. 182 covered the northern, predominantly residential portion of this planning area and ID No. 184 covered the southern, predominantly commercial portion. Later in 1988, ID Nos. 186 and 188 were formed over the annexed Glenn Ranch area lying to the east of Foothill Ranch and including a portion of the community of Portola Hills. ID No. 186 covered the northern, predominantly residential portion of this planning area and ID No. 188 covered the southern, predominantly commercial portion.

ID No. 135, encompassing the territory of the former Los Alisos Water District (“LAWD”), was formed as part of the proceedings for LAWD’s consolidation with IRWD on December 31, 2000, to provide a vehicle for issuing and servicing LAWD’s remaining water bond authorization. ID No. 135 lies to the northeast of the intersection of the Santa Ana and San Diego Freeways, and covers a majority portion of the City of Lake Forest.

ID No. 113 was formed in 2004 over the property within the former Marine Corps Air Station Tustin, a facility established in 1942 to support U.S. Navy lighter-than-air aircraft (blimps) conducting anti-submarine patrol off the California coast during World War II and later used to support Marine Corps helicopter operations until its closure in 1999. The former helicopter base, now known as Tustin Legacy, is currently being redeveloped with residential, commercial, institutional and recreational uses.

The formation of ID Nos. 153 and 154 took place in conjunction with the July 1, 2006 consolidation of the former Santiago County Water District (SCWD) with IRWD, to serve as the successors to two improvement districts formed by SCWD in 1978, ID No. 1 (water and sewer) in the area extending northward from Loma Ridge to the Fremont Canyon area, and ID No. 2 (water) including portions of Black Star, Baker and Hall Canyons. As part of the district consolidation, the majority of the territory of SCWD’s ID No. 1 became ID No. 153 (with respect to ID No. 1’s water bond authorization), and all of the territory of SCWD’s water ID No. 2 became ID No. 154 of IRWD.

The most recent IRWD water improvement district formation took place in 2008, when the District formed ID No. 112 over the lands in the eastern portion of the District north of the Santa Ana Freeway, within the former Marine Corps Air Station El Toro, a base originally established in 1942 to support U.S. Marine Corps aviation activities during World War II, and encompassing the planning areas now known as Heritage Field and the Great Park.

**Sewer Improvement Districts.** The first sewer improvement district to be formed by the District was Improvement District No. 1, in 1965. ID No. 1 encompassed an area lying south of the San Diego Freeway and ranging from two to seven miles inland from the Pacific Ocean, including most of the University of California Irvine campus. ID No. 1 assumed the obligations of Orange County Sanitation

District No. 14 for the cost of a nucleus collection system when District No. 14 was disbanded,<sup>2</sup> and ID No. 1's planned works also included a treatment plant and IRWD's initial reclamation and reclaimed water storage facilities. ID No. 1 is presently known as ID No. 1(201) or "210." Like "110", the "210" area was excluded from later improvement district formations based on initial contribution.

After ID No. 1, sewer improvement district formations generally paralleled the water improvement district formations discussed in the preceding section. In the case of most of the improvement districts formed before 1978, each sewer improvement district preceded its water counterpart by a few years; after that, each water improvement district and its corresponding sewer improvement district were generally formed concurrently and were coterminous.

In 1971, sewer ID Nos. 2 (subsequently known as 202) and 3 (subsequently known as 203) were formed over areas generally corresponding to the areas that, a few years later, were included in water ID Nos. 102 and 103, described above. Their plans of works contemplated an expansion of the Michelson Water Reclamation Plant, dual collection and treatment systems for reclaimable domestic sewer and non-reclaimable industrial discharges, reclaimed water distribution facilities and wet weather treated sewer disposal. ID No. 204 was formed in 1972 at the same time as the corresponding water ID No. 104. ID No. 204's plan of works initially envisioned two systems delivering sewage from the coastal area, one discharging to a regional treatment and disposal system and the other to a local treatment plant to be built. Ultimately, the collection system was instead designed to deliver all of the sewage flow from ID No. 204 (and from the later-formed ID Nos. 241 and 242) to the interceptor and trunk sewers and regional treatment facilities financed by Orange County Sanitation District No. 5. ID No. 206 was formed in 1975, covering the area corresponding to ID No. 106 which was formed the following year.

As happened in the water system, the addition of further phases of facilities to the planned sewer system in the late 1970s made it necessary to increase the authorized bonds to finance them. In 1978, the District formed ID Nos. 221, 241, 242, 250, 261 and 290 (coterminous with the counterpart water ID Nos. 121, 141, 142, 105, 161 and 109, respectively).

Beginning in the 1980s, the addition of areas to the District by annexations and consolidations and the closure of former military bases generally led to the formations of sewer improvement districts at the same time as the corresponding water improvement district formations, described above.<sup>3</sup> ID Nos. 282, 284, 286 and 288 were formed in 1988 (coterminous with ID Nos. 182, 184, 186 and 188, respectively). ID No. 235, encompassing the territory of the former LAWD and coterminous with ID No. 135, was formed upon LAWD's consolidation with IRWD on December 31, 2000, to issue and service

<sup>2</sup> The disbanded Sanitation District was the original "District No. 14." Another District No. 14 of the Orange County Sanitation Districts was formed in 1986, over much of IRWD's territory (except for the coastal portion within Orange County Sanitation District No. 5), for the purpose of acquiring regional collection, treatment and disposal capacity in the OCSD facilities to augment IRWD's Michelson Water Reclamation Plant. See Section 1.4.

<sup>3</sup> An improvement district unrelated to the addition of service area to the District, ID No. 252, was formed in 2005, encompassing a small portion of the area formerly within ID No. 250.



LAWD's remaining sewer bond authorization. Upon the July 1, 2006 consolidation of the former Santiago County Water District with IRWD, ID No. 253 (coterminous with ID No. 153) was formed as the successor to Santiago County Water District ID No. 1's 1978 sewer bond authorization). ID Nos. 213 (coterminous with ID No. 113) and 212 (coterminous with ID No. 112) were formed in 2004 and 2008, respectively. In 2008, ID No. 256 was formed through annexation proceedings that were conducted to include the former territory of Orange Park Acres Mutual Water Company in IRWD. ID No. 256 has no authorized bonds, but was formed to provide a potential vehicle for such authorization if and when the residents of the area, now served predominantly by septic tanks, determine to finance a public sewer collection system to allow a conversion to sewer service.

**Regional Allocation.** As regional water system have been built, buy-ins and allocations among the improvement districts have been utilized to maintain proportionate sharing of regional system costs. Allocations among the improvement districts have similarly been utilized to maintain proportionate cost allocation of regional sewer system costs. Regional potable water and regional sewer allocations are based on demands. For the portion of the regional costs relating to the reclamation system, historically allocation was weighted, with two-thirds of the cost of the storage, transmission and disposal facilities making up the regional irrigation system allocated based on the improvement districts' prorated shares of the sewage generation and one-third of the cost prorated based on their share of irrigation water demands. That practice was subsequently discontinued, and the District instituted its current practice of establishing separate regional allocations for sewer facilities, based on sewage generation, and recycled water facilities, based on recycled water demand, for each sewer improvement district. Cost variations among tributary collection system areas have also been factored into the regional sewer allocation. The regional split for the area within ID No. 240 reflects that ID No. 240 has participated in the financing of the Orange County Sanitation District's treatment facilities and does not discharge sewer to the MWRP collection system.

Regional allocation includes facilities serving all improvement districts as well as sub-regional facilities serving two or more, but not all, improvement districts. Consistent with regional allocation, as certain areas were added to IRWD's service area through annexations, consolidations, and military base conversions, in some areas acquisition balances were established to recover regional system cost, and in others new improvement districts were formed to assure that those areas would contribute proportionately to regional facilities and pay for local facilities and expanded regional facilities to serve their demands. Regional allocation will continue to be used with the reorganized improvement districts to assure proportionate cost-sharing of the District's regional system.

Under the District's historic and continuing methodology for achieving equitable cost allocation, the improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. As a result an improvement district can reach full development, but its regional system funding participation will continue. A similar regional allocation would be applied to replacement and enhancement projects, to the extent funded by the improvement districts. This incremental funding

approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service.

As discussed in more detail in Section 6, the District will also allocate future regional cost sharing to “110” and “210” areas excluded from earlier improvement district capital funding, based upon an analysis of historic cost contributions of these areas and benefit received from future capital facilities.

**Consolidation of Improvement Districts.** As development progresses to completion in improvement districts and the need for having separate improvement districts to match capital facilities construction timing and other specific local facilities needs of different geographic areas diminishes, consolidation of various improvement districts can produce efficiencies for the District, its customers and property owners. The California Water Code allows the Board of Directors, in a noticed hearing process, to reorganize its improvement district boundaries and to consolidate coterminous improvement districts. The statutory provisions for the consolidation of improvement districts specify that a consolidated improvement district may levy and collect the assessments and charges necessary to satisfy the obligations of its predecessor improvement districts, and that the authorized and unissued bonds of the predecessor improvement districts may be issued and sold as the bonds of the consolidated improvement district.

Ultimately, the District envisions a succession plan that would reduce the number of its improvement districts, ideally to one water improvement district and one sewer improvement district, through consolidations and reorganizations to be implemented as and when considerations for separation of the various improvement districts no longer remain. The current reorganizations and consolidations significantly advance this plan. The timing of the remainder of this plan will be dictated by various factors relating to the preservation of equitable cost sharing as development continues to build-out and as the regional system benefits for various geographic areas are merged.

**Previous Consolidations.** Under the statutory consolidation provisions, some of the original improvement districts described in the preceding sections have been consolidated. The consolidations that were implemented prior to the current consolidation included two groups of the original improvement districts. The first of these consolidations took place in the coastal area. In 1989, after completing annexations to and detachments from ID Nos. 104, 141 and 142 to exclude permanent open space areas and create coterminous boundaries for the improvement districts’ remaining territories, they were consolidated, with the resulting consolidated improvement district designated as ID No. 140. Simultaneously, ID Nos. 204, 241 and 242 were consolidated as coterminous improvement districts, with the resulting consolidated improvement district designated ID No. 240. Following a similar process in 2008, ID Nos. 103 and 109 were consolidated and designated as ID No. 130 and ID Nos. 3(203) and 290 were consolidated and designated as ID No. 230.

**The Current Consolidations and Reorganizations.** With the 1989 and 2008 improvement district consolidations, the District began to implement a transition of its improvement district financing

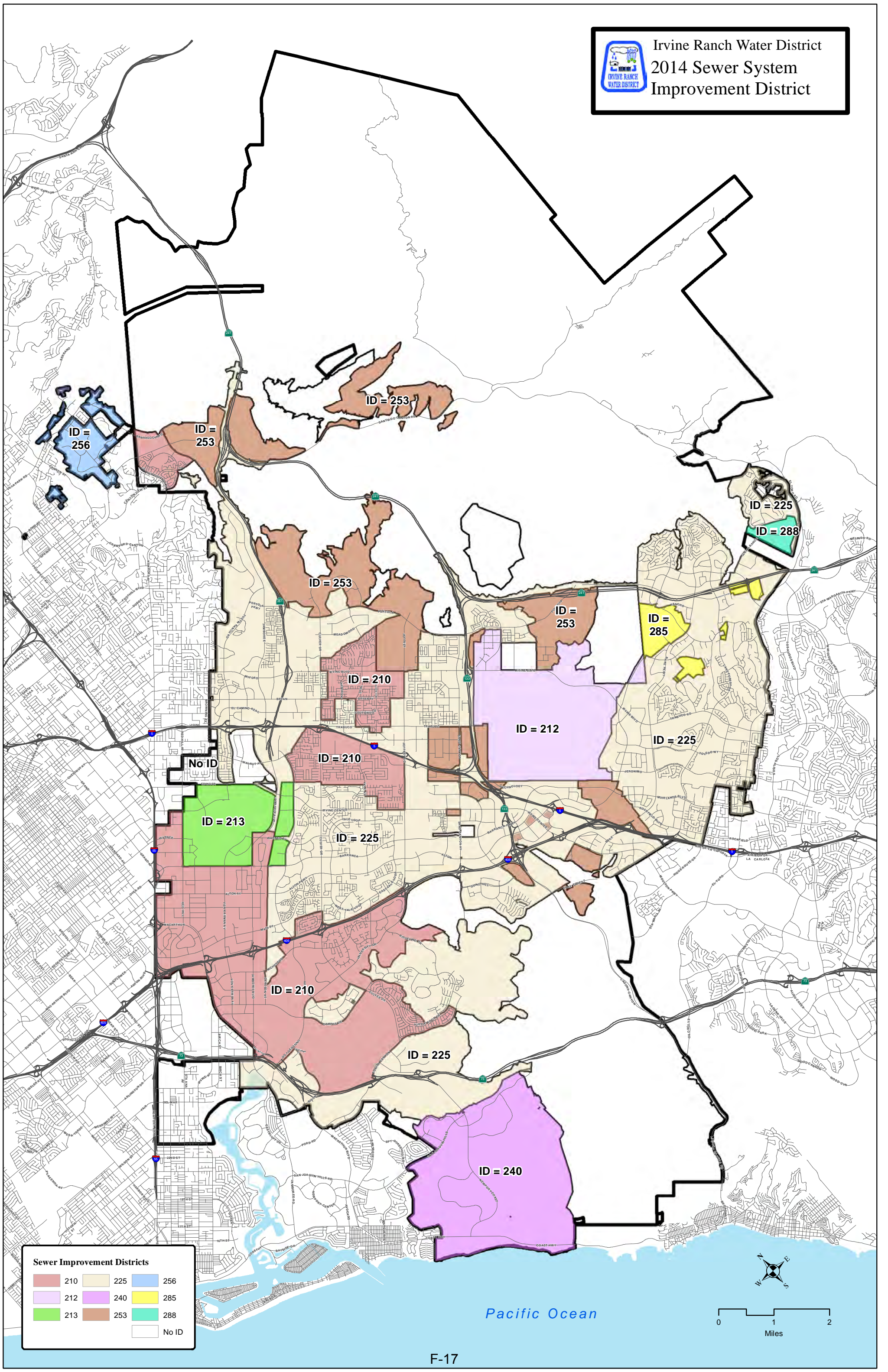
structure from a developing to a developed condition. The current consolidations continue that transition. Based on the District's investigation of the merits of implementing further reorganization and consolidation of its improvement districts, the current reorganization and consolidation have been formulated on a comprehensive, District-wide basis, to provide a sustainable platform for capital funding through the build-out of the District and the completion of the system. The current reorganization and consolidation preserve the District's long-term funding approach in which regional facilities and capacity are acquired incrementally by all improvement districts until the regional system as a whole is complete and regional cost allocations are used to maintain equitable cost-sharing. The interrelated consolidation actions, expected to be effective January 1, 2014, include the following key components:

- Reorganization and consolidation of the substantially developed and certain partially developing improvement districts into a single water improvement district and a single sewer improvement district, ID Nos. 125 and 225;
- Reorganization of several remaining developing areas into one existing and one new water improvement district (ID Nos. 153 and 185) and one existing and one new sewer improvement district (ID Nos. 253 and 285). These developing areas are also retained within the improvement districts reorganized and consolidated as ID Nos. 125 and 225, with the effect that ID Nos. 125 and 225 will underlay these developing improvement districts and ensure cost participation of these developing improvement districts in local and sub-regional facilities already built by the former improvement districts being consolidated (see Chapter 6);
- Retention of existing ID Nos. 112, 113, 188, 212, 213 and 288 as separate developing improvement districts;
- Retention of existing ID Nos. 154, 252 and 256 pending future evaluation of applicable equity considerations;
- Establishment of a planning area over the area of former ID No. 135, consolidated within the developed water improvement district ID No. 125, until completion of financial programs currently in progress to place the former ID No. 135's user rates under the same structure as other developed areas;
- Retention of existing ID No. 240 as a separate improvement district, unless and until separate regional sewer cost allocations are no longer necessary;
- Implementation of separate charges or other mechanisms, as necessary, to recover a proportional allocation of cost for future regional facilities from the "110" and "210" areas that are not participating in proportional regional cost allocation by inclusion in an improvement district.



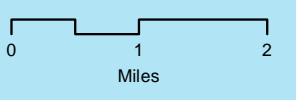






**Sewer Improvement Districts**

210	225	256
212	240	285
213	253	288
No ID		





Throughout the construction of the District's capital facilities, the District has separated the financing of its water and sewer (including recycled water) systems. The District believes this historical separation continues to be justified, based on differences between the two systems in terms of the factors that govern the allocation of benefits and cost responsibilities among the areas served by each system. For this reason, the above described actions do not include any consolidations of water improvement districts with sewer improvement districts, and the District has no plans at this time to do so. The separation can be reexamined in the future.

This Plan of Works will supersede the individual plan of works previously adopted for the consolidated improvement districts by IRWD (or its predecessors Los Alisos Water District, with respect to ID Nos. 135 and 235). The previous plans of works were adopted at the time of ID formation (or at the time of initial and supplemental bond authorizations, in the case of ID Nos. 135 and 235). In some cases, plans of works were later revised in connection with additional bond authorizations and improvement district consolidations.

#### 1.4 THE WATER, SEWER AND RECYCLED WATER SYSTEMS

**The Water System.** The initial domestic water system included the San Joaquin Reservoir<sup>4</sup> and IRWD's capacity in the East Orange County Feeder No. 2 and other transmission facilities, financed by the sale of general obligation waterworks bonds of the overall District in the 1960s. The District also acquired from the U.S. Government an 18-inch transmission main used to deliver a water supply to the Tustin and El Toro military bases from Metropolitan Water District's East Orange County Feeder and later from East Orange County Feeder No. 2. For the delivery of untreated water supplies, the District acquired capacity in the regional untreated delivery system of the Santiago Aqueduct Commission.

The District's Water Resources Master Plan ("WRMP"), initially formulated in 1972 and updated periodically, sought to provide for ultimate demands and reliability. With the formation of the first few improvement districts and the authorization and sale of improvement district bonds in the early 1970s, the system was expanded, adding local master planned facilities for each of the developing areas as development progressed and building the regional system in which the improvement districts participated in proportion to their demands. Through cooperative efforts with Municipal Water District of Orange County ("MWDOC"), neighboring water districts and cities, an area wide system was acquired, storage was constructed and transmission pipelines were acquired and installed to receive Colorado River imports via MWD facilities. This supplemental source of water was augmented by northern California supplies with commencement of deliveries through the State Water Project system in July, 1976.

In 1978, additional water capacity needed to serve the District was estimated at 140 cubic feet per second ("cfs") (ultimate peak month demand). A supplementary water source plan envisioned in

<sup>4</sup> The San Joaquin Reservoir was initially constructed as a domestic water facility. Due to water quality considerations, that use was eventually discontinued, and IRWD acquired the facility from its agency partners and converted it to a recycled water seasonal storage facility.



the 1970s and embodied in the 1978 plans of works consisted of the purchase of a 60 cfs share of a proposed regional pipeline (then known as the “Diemer Intertie” and now known as the Allen McColloch Pipeline or “AMP”) and an 80 cfs wellfield in the main Orange County groundwater basin. The AMP was constructed by MWDOC, with 79 cfs participation by IRWD, and IRWD constructed two transmission mains capable of supplying 45 cfs from AMP into the distribution system. These facilities, along with two wells in the Tustin area with a combined capacity of 4 cfs, and the Zone 1 Reservoir to provide internal operational storage and avoid the need to supply peak hour demands from feeder connections, comprised the first phase of the domestic water system. Construction of the 80 cfs wellfield, known as the “Dyer Road Wellfield,” took place in the 1980’s.

As the domestic water system was built, it was anticipated that commercial agriculture would be phased out by residential, industrial and commercial development, and it was assumed that the existing irrigation system would provide agricultural water until no longer needed. The cost of the untreated water system and its supply, storage and transmission facilities, consisting of the Irvine lake Pipeline and improvements to Irvine Lake, were apportioned primarily to ID No. 105. In the 1970s, the ID No. 105 plans of works noted that the Irvine Lake Pipeline supply would require treatment for use as a domestic water supply, and an untreated delivery system from Irvine Lake, through either the Santiago Aqueduct Commission facilities or a new Irvine Lake Pipeline, as well as a treatment plant identified in the 1972 WRMP, were included in the planned works for that improvement district.

In the early to mid 1980s, as the district’s water supply needs were updated, other regional system improvements were planned and financed by the improvement districts, including the continued construction of the regional supply, transmission and storage facilities, administration and operations facilities and telemetry.

The AMP, Dyer Road Wellfield and major delivery facilities were completed as contemplated in the existing plans of works. With those core imported and groundwater supply and delivery facilities and the associated distribution system in place, the District’s current WRMP targets a reliable water supply mix and includes the development of sufficient groundwater production capacity to pump up to the District’s basin production percentage set by the Orange County Water District.

In accordance with current IRWD policy, basic operational reliability and redundancy for the water system is evaluated with reference to the capacity needed to sustain an outage of a major supply system component, assuming demand reduction obtainable through customer cooperation.

Wells in addition to those in the Dyer Road Wellfield have been constructed or improved in Orange Park Acres, Lake Forest and Irvine to provide additional groundwater supplies. The groundwater production and treatment components of the Irvine Desalter Project produce both domestic and recycled water supplies

In 2009-10, the District commenced the engineering design for a new water treatment plant, the Baker Water Treatment Plant (the “Baker WTP”). Construction of the Baker WTP is anticipated to be

complete in July 2015. This project, to be constructed by the District in cooperation with neighboring water districts, will improve operational supply capacity and regional reliability through the treatment of local and imported raw water sources to drinking water standards. When constructed, the Baker WTP is expected to treat to drinking water standards approximately 28 million gallons per day (“mgd”) of raw imported water purchased from MWD. During emergencies and planned raw imported water outages, water from Irvine Lake is expected to be supplied to the Baker WTP for treatment to drinking water standards. The Baker WTP will utilize microfiltration and ultraviolet disinfection as the primary treatment processes.

In addition to developing its water treatment, local groundwater and recycled water systems, the District is diversifying its water supply portfolio by developing water banking projects for dry year reliability. These projects include the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project, situated on groundwater recharge lands that overlie the regional Kern County groundwater basin. The District has also secured access to certain participation rights in the Kern Water Bank to store water. The purpose of developing banking facilities is to improve the District’s water supply reliability by enabling the District to store lower cost water it can acquire during wet hydrologic periods for use during dry periods. The District has entered into arrangements to acquire water for banking, including unbalanced exchanges and other transactions. The banking facilities will enhance the District’s ability to respond to drought conditions and potential water supply interruptions and will provide the District the ability to reduce the cost of water delivered under such conditions. The District has also entered into an agreement with MWD and MWDOC to provide a means to deliver banked water to the District’s service area.

**The Sewer System.** The District’s powers did not include sewage collection and treatment when the District was formed. When the District’s principal act, the California Water District Law, was amended to permit California water districts to provide sewage services subject to voter approval, voters of the District approved the added scope of services at an election held in March, 1965.

The District began the construction of a sewer system with the bonds of ID No. 1 issued in 1966 and subsequent bonds issued on behalf of ID Nos. 2(202) and 3(203). In addition to the nucleus sewage collection system acquired from Orange County Sanitation District No. 14, the original planned works included a treatment plant, reclamation and reclaimed water storage facilities. Subsequent plans of works contemplated an expansion of the Michelson Water Reclamation Plant, dual collection and treatment systems for reclaimable domestic sewer and non-reclaimable industrial discharges, reclaimed water distribution facilities and wet-weather treated sewer disposal.

The Michelson Water Recycling Plant (“MWRP”), then known as the Michelson Water Reclamation Plant, has been expanded in phases. The most recent expansion, anticipated to be completed during fiscal year 2014, will bring its capacity from 18 to 28 mgd. The District’s sewer system also includes facilities and contractual entitlements to serve the portions of its service area in the coastal, Lake Forest and Santa Margarita (“Chiquita”) areas not tributary to MWRP, as well as regional treatment capacity in

the facilities of Orange County Sanitation District for the sewage from the MWRP-tributary area that is in excess of its needs for production of recycled water.

The sewer system to serve the coastal area not tributary to MWRP was first envisioned as two systems, one discharging to a regional treatment and disposal system and the other to a local treatment plant to be built. Ultimately, the collection system for the coastal area was instead designed to deliver all of the sewage flow to the regional collection and treatment facilities of Orange County Sanitation District No. 5.

During fiscal year 1986, the District cooperated with Orange County Sanitation District (“OCSD”) to form Sanitation District 14 (functionally replaced by “Revenue Area 14” of OCSD, upon the 1998 consolidation of the several sanitation districts comprising OCSD’s predecessor, the County Sanitation Districts of Orange County), which overlays much of the District’s territory other than the coastal area. Under an agreement entered into between the District and OCSD, the District acquired equity interests in OCSD’s sewage processing facilities (the percentage of interest will vary over time pursuant to a formula set forth in the agreement between OCSD and the District). The agreement also provides for the purchase by the District of additional capacity in OCSD sewage processing facilities on an as-needed-basis determined from annual flows. These equity purchase costs are included in the costs regionally allocated to the improvement districts.

In 2000, as part of the consolidation of Los Alisos Water District with the District, the Los Alisos Water Reclamation Plant (“LAWRP”) was added to the sewer system. Currently, approximately 85% of the District’s sewer is treated by the MWRP and LAWRP operated by the District, and approximately 14% is treated by OCSD.

A future MWRP expansion up to 33 mgd has undergone environmental review and is planned by 2025, as needed to meet demand. Ultimately, the District plans to expand capacity for its treatment facilities to approximately 40.5 mgd in order to: (i) increase recycled water production and utilization; (ii) decrease exposure to external treatment costs and operational constraints; and (iii) decrease dependencies on imported water supplies.

The construction of IRWD’s regional sewer system also includes the network of gravity sewers, force mains, sewer lift stations and siphons that convey sewer to each treatment facility, which was developed as the system was expanded.

The processes for treating sewage and producing recycled water generate solids residuals. After evaluating alternative approaches to handling its sewer solids, the District is proceeding with the construction of facilities for handling MWRP solids, currently conveyed to Fountain Valley for treatment by OCSD, as well as solids from the District’s LAWRP. The solids handling capital project is underway and is anticipated to be completed in fiscal year 2017.



**The Recycled Water System.** In addition to the water reclamation facilities described under the preceding subheading, the recycled water system consists of a dual system for distribution of the recycled water, primarily for irrigation, and seasonal storage to allow production in the low-demand winter season for use in the high-demand summer season. These facilities presently include the District's Sand Canyon, Rattlesnake Canyon, and San Joaquin Reservoirs, which are recycled water reservoirs with capacities of 750 acre feet, 1,100 acre feet, and 2,500 acre feet respectively. In addition to the future expansion of reclamation capacity, based on demand as described above relative to the sewer system, the District plans to increase seasonal storage capacity. At this time, the expansion of Syphon Reservoir is being evaluated for that purpose. The cost of the Syphon expansion or a comparable seasonal storage project is included in the proposed sewer plans of works. As stated above, the recycled water system regional and local costs comprise a part of regional and local sewer costs under the plans of works.

**Enhancement and Replacement.** Apart from the ongoing system expansion and completion that will continue to buildout, the District has incorporated in its system planning efforts the updating of its infrastructure to meet the needs of existing and future customers. These system enhancement efforts will include capital projects that provide service cost savings and projects that provide reliability or redundancy beyond that necessary to satisfy the District's policy for basic reliability. Replacement and refurbishment improvements consist of repairs and restoration to existing water, recycled water and sewer system facilities. The District presently funds enhancement and replacement costs from reserves set aside for that purpose with contributions from user rates, general 1% tax levy revenues and other sources. The District may also evaluate the funding of enhancement and replacement costs through the improvement districts to the extent authorized general obligation bonds are available for such purposes and the enhancement and replacement costs are allocable among improvement districts and other funding sources in a fair and equitable manner.

## SECTION 2 IMPROVEMENT DISTRICT NO. 225

### 2.1 DESCRIPTION OF THE STUDY AREA

As a result of the current reorganization of ID No. 225, the land included in the improvement district consists of predominately existing development areas in portions of former ID Nos. 2 (220), 221,230, 235, 206 (260), 261, 282, 284, and 286 as well as existing developments within other former improvement districts (principally former ID Nos. 230 and 250) that have been added to ID No. 225 by annexation. Areas of former ID that contained permanent open space have been excluded. The resulting Improvement District No. 225 is a developed improvement district that will function in tandem with existing ID No. 210 to provide equitable regional capital cost sharing by the District's developed areas.

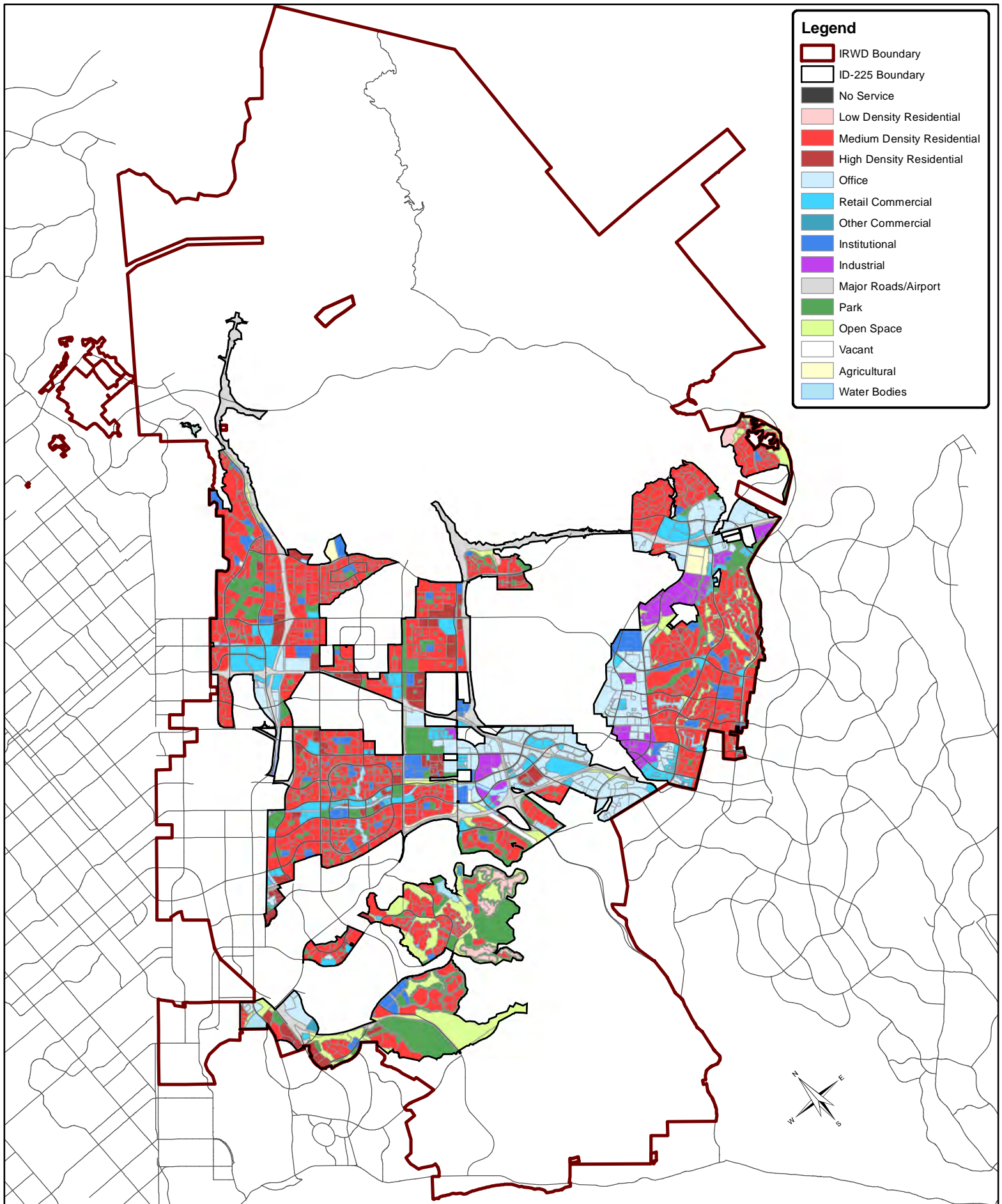
To simplify the text of this report, "north" refers to "Irvine north" running parallel to Sand Canyon Avenue. North arrows on exhibits show true north.

### 2.2 LAND USE AND DEVELOPMENT PHASING

**Land Use.** Though development in ID No. 225 is substantially complete, The District expects some continued "infill" development to continue to occur over the next 15 years. The development of the ID No. 225 to be predominantly combination of residential with supporting local commercial, regional commercial and office, and some industrial development. **Figure II-1** shows the boundaries of ID No. 225, encompassing about 32,862 acres.

**Development Phasing.** This Plan of Works follows and incorporates the phasing used in the subarea master plans applicable to the various planned development areas.

Phasing of development is subject to change. Depending upon real estate markets, city planning decisions and other factors, some phases or portions of phases could occur simultaneously rather than sequentially. The phasing of bond issues discussed in Section 5, have been selected to allow reasonable flexibility in phasing priorities.





### 2.3 DEMAND AND PEAKING FACTORS

**Water Use Factors.** **Table II-1** reflects most recently adopted duty factors from the IRWD Water Resources Master Plan (WRMP), summarizing the District's standard interior and exterior water use factors. The District employ local interior water use factors, shown in the table, as its sewer duty factors. Irrigation factors used to determine recycled water demands are also shown in the table. The factors in **Table II-1** were also used to develop **Table II-2**.

**Peaking Factors.** Potable water peaking factors, irrigation peaking factors, applied in calculation for sizing respective facilities, are set forth in the WRMP. Sewer peaking, applied in calculation for sizing sewer collection and treatment facilities, are set forth in the SCSMP.

**Table 3-1 Land Use and Water Use Factors (September 2012)**

Code	Land Use Description	Land Use Agency	Land Use Density		Local Demands			Irrigation Demands	
			Average	Units	Local - Interior	Local - Exterior	Total Local	% Irrigated Area	Irrigation Factor
<b><u>1100</u></b>	<b><u>Residential</u></b>				<b><u>Gal/DU/Day</u></b>			<b><u>Gal/Acre/Day</u></b>	
1111	Rural Density	Orange	0.3	du/acre	250	170	420	0%	1,000
1112	Rural Density	Irvine	0.3	du/acre	250	750	1,000	5%	2,800
1115	Rural Density	County	0.26	du/acre	300	350	650	5%	2,800
1121	Estate Density	Orange	1.2	du/acre	300	350	650	5%	2,800
1122	Estate Density	Irvine	0.5	du/acre	300	225	525	5%	2,800
1126	Estate Density	Lake Forest	0.5	du/acre	300	350	650	7%	3,000
1131	Low Density	Orange	4	du/acre	300	350	650	8%	2,500
1132	Low Density	Irvine	3	du/acre	225	180	405	16%	2,200
1133	Low Density	Newport Beach	1	du/acre	290	220	510	17%	2,800
1134	Low Density PC	Tustin	4.5	du/acre	450	1,550	2,000	17%	2,800
1135	Suburban Density	County	9.25	du/acre	165	95	260	15%	2,500
1136	Low Density	Lake Forest	3	du/acre	270	150	420	20%	2,800
1141	Low-Medium Density	Orange	10.5	du/acre	235	145	380	15%	2,500
1146	Low-Medium Density	Lake Forest	11	du/acre	205	150	355	10%	3,000
1153	Medium-Low Density	Newport Beach	2.75	du/acre	400	350	750	10%	2,800
1161	Medium Density	Orange	19.5	du/acre	200	150	350	15%	2,800
1162	Medium Density	Irvine	7.5	du/acre	200	100	300	15%	2,800
1163	Medium Density	Newport Beach	5	du/acre	225	205	430	20%	2,800
1164	Medium Density PC	Tustin	11.8	du/acre	155	95	250	15%	2,800
1166	Medium Density	Lake Forest	7.5	du/acre	140	60	200	15%	2,800
1172	Medium-High Density	Irvine	17.5	du/acre	130	30	160	22%	2,400
1175	Urban Density	County	29	du/acre	140	45	185	20%	2,800
1176	Medium-High Density	Lake Forest	17.5	du/acre	145	70	215	17%	2,500
1182	High Density	Irvine	32.5	du/acre	130	13	143	20%	2,800
1183	High Density	Newport Beach	12.25	du/acre	115	10	125	20%	3,200
1184	High Density PC	Tustin	17.4	du/acre	115	10	125	15%	2,800
1186	High Density	Lake Forest	32.5	du/acre	115	10	125	20%	2,800
1191	High Rise Density	Orange	35	du/acre	115	10	125	20%	2,800
1192	High Rise Density	Irvine	40	du/acre	115	10	125	20%	2,800
<b><u>1200</u></b>	<b><u>Commercial</u></b>				<b><u>Gal/KSF/Day</u></b>			<b><u>Gal/Acre/Day</u></b>	
1210	General Office		20	ksf/acre	62	10	72	20%	2,500
1221	Community Commercial		9	ksf/acre	142	33	175	20%	3,500
1222	Regional Commercial		10	ksf/acre	130	10	140	20%	3,500
1230	Commercial Recreation		8	ksf/acre	41	20	61	30%	3,000
1235	Hotel		45	rooms/acre	110	50	160	30%	2,800
1240	Institutional		8	ksf/acre	30	15	45	30%	2,750
1244	Hospital		9	ksf/acre	165	65	230	30%	2,850
1260	School		10	ksf/acre	20	8.0	28.0	50%	2,500
1261	UCI		10	ksf/acre	215	15	230	40%	3,800
1273	Military Air Field		0	ksf/acre	0	0	0	0%	0
1290	Hotel		45	rooms/acre	110	50	160	30%	2,800
1300	Industrial		9.091		600	25	625	20%	2,800
1310	Industrial - Light		18	ksf/acre	60	10	70	20%	2,800
1320	Industrial - Heavy		25	ksf/acre	2,000.0	18	2,018	20%	2,800
	<b><u>Open Space and Other</u></b>							<b><u>Gal/Acre/Day</u></b>	
1411	Airports		0	acre/acre	0	0	0	0%	0
1413	Freeways & Major Road		0	acre/acre	0	0	0	0%	0
1820	Community Park		1	acre/acre	0	0	0	86%	2,200
1830	Regional Park		1	acre/acre	0	0	0	75%	2,200
1840	Fuel Modification Zone		1	acre/acre	0	0	0	100%	1,000
1850	Wildlife Preserve		0	acre/acre	0	0	0	0%	0
1880	Open Space (Rec)		0	acre/acre	0	0	0	0%	0
1900	Vacant		1	acre/acre	0	0	0	0%	0
4100	Water		0		0	0	0	0%	0
<b><u>2000</u></b>	<b><u>Agriculture</u></b>			<b><u>acre/acre</u></b>				<b><u>Gal/Acre/Day</u></b>	
2100	Low-Irrigated AG Potable		1	acre/acre	0	0	0	80%	1,800
2110	Low-Irrigated AG Untreated		1	acre/acre	0	0	0	80%	1,800
2120	Low-Irrigated AG Recycled		1	acre/acre	0	0	0	80%	1,800
2200	High-Irrigated AG Potable		1	acre/acre	0	0	0	80%	3,100
2210	High-Irrigated AG Untreated		1	acre/acre	0	0	0	80%	3,100
2220	High-Irrigation AG Recycled		1	acre/acre	0	0	0	80%	3,100

**Table II-2 - Sewage Generation:** Tabulates the average daily sewer flow at build-out (2035) within the ID No. 225 service area, using the District's *demand forecasting tool*.

Land Use Code	Description	Land Use Agency	2035 Sewer Flows (MGD)
<b><u>Residential</u></b>			
1122	Estate Density	Irvine	0.05
1132	Low Density	Irvine	1.39
1134	Low Density PC	Tustin	0.04
1135	Suburban Density	County	0.54
1136	Low Density	Lake Forest	1.84
1141	Low-Medium Density	Orange	0.01
1146	Low-Medium Density	Lake Forest	0.02
1162	Medium Density	Irvine	4.28
1163	Medium Density	Newport Beach	0.22
1164	Medium Density PC	Tustin	1.39
1166	Medium Density	Lake Forest	0.73
1172	Medium-High Density	Irvine	3.19
1175	Urban Density	County	0.21
1176	Medium-High Density	Lake Forest	0.32
1182	High Density	Irvine	1.80
1183	High Density	Newport Beach	0.27
1184	High Density PC	Tustin	0.04
1186	High Density	Lake Forest	0.07
1192	High Rise Density	Irvine	0.10
<b><u>Commercial</u></b>			
1210	General Office		2.33
1221	Community Commercial		1.33
1222	Regional Commercial		0.39
1240	Institutional		0.15
1244	Hospital		0.06
1260	School		0.12
1290	Hotel		0.03
<b><u>Industrial</u></b>			
1300	Industrial		0.12
1310	Industrial - Light		0.92

**Total**

**21.97 MGD**



**Table II-3 – Recycled Water Demands:** Tabulates the average daily recycled water demands at build-out (2035) within the ID No. 225 service area, using the District’s *demand forecasting tool*.

<b>Land Use Code</b>	<b>Description</b>	<b>Land Use Agency</b>	<b>2035 Recycled Water Demands (AFY)</b>
<b><u>Residential</u></b>			
1112	Rural Density	Irvine	2
1122	Estate Density	Irvine	28
1132	Low Density	Irvine	538
1134	Low Density PC	Tustin	83
1136	Low Density	Lake Forest	375
1146	Low-Medium Density	Lake Forest	4
1162	Medium Density	Irvine	1,316
1163	Medium Density	Newport Beach	133
1164	Medium Density PC	Tustin	401
1166	Medium Density	Lake Forest	127
1172	Medium-High Density	Irvine	1,188
1176	Medium-High Density	Lake Forest	42
1182	High Density	Irvine	483
1183	High Density	Newport Beach	91
1184	High Density PC	Tustin	6
1186	High Density	Lake Forest	4
1192	High Rise Density	Irvine	12
<b><u>Commercial &amp; Industrial</u></b>			
1210	General Office		1,038
1221	Community Commercial		704
1222	Regional Commercial		175
1230	Commercial Recreation		23
1240	Institutional		371
1244	Hospital		33
1260	School		764
1290	Hotel		3
1301	Industrial		442
<b><u>Other</u></b>			
1820	Community Park		2,446
1830	Regional Park		3,226
1840	Fuel Modification Zone		316
2120	Low-Irrigated AG Recycled		92
2220	High-Irrigation AG Recycled		126

**Total**

**14,607 AFY**

## SECTION 3 REGIONAL FACILITIES

### 3.1 DESCRIPTION

Through the reorganization consolidation process, 10 of IRWD's 18 sewer improvement districts will be consolidated into a single improvement district, containing both lands where development is essentially completed, as well as certain remaining lands proposed for development that are also included in reorganized ID No. 253, newly formed 285 and existing 288. Existing ID Nos. 1(201), 212, 213, 240, 252, and 256 are not included in the reorganization or consolidation actions. Regional sewer and recycled water project costs will continue to be allocated to each sewer improvement district based on that improvement district's pro-rata shares of the ultimate IRWD sewer and recycled water demands.

Under the District's methodology for achieving equitable cost allocation, the improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. This incremental funding approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service.

For purposes of maintaining equity in facilities cost allocation, IRWD employs multiple treated water regional splits. For example, one regional split may include all IDs; another may include some IDs and exclude one or more IDs (sometimes referred to as a "sub-regional project"). In the latter instance, that split is applied to the cost of all projects that provide no benefit to the excluded improvement district(s); an improvement district would be included only in the regional splits for the projects from which it does derive benefit.

In this Plan of Works, the appropriate regional split has been applied to existing and proposed sewer collection and treatment and recycled water supply, storage and distribution facilities needed to provide an adequate and reliable sewer and recycled water system meeting the ultimate needs of ID No. 225.

Periodically, IRWD revises its sewer improvement district regional allocation to reflect changes in demand factors, land use planning, phasing of planned development and other factors which may influence sewer treatment and recycled water demands, either within a specific improvement district or throughout IRWD. Revised regional splits are applied prospectively. The regional cost allocations known as regional splits are calculated based on IRWD's internal demand forecasting tool.

### 3.2 COST ESTIMATES AND REGIONAL ALLOCATION

Based on the total IRWD sewage generation, the demands of ID No. 253 as calculated by the District's demand forecasting tool would yield a regional allocation 9.6%. Based on the total IRWD recycled water demands, the demands of ID No. 253 as calculated by the District's demand forecasting tool would yield a regional allocation 10.3%.

A description and cost estimate of the proposed regional domestic water facilities share allocated to ID No. 225 is shown in **Table III-1**.

As noted in the Introduction, the projects identified here may change to reflect changes in land use and development phasing. For purposes of determining the allowance for deferred costs, the project costs have been escalated at 48.5% per year.



## Table III-1 Regional Projects Proposed Facilities and Estimated Escalated Costs Improvement District 225

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
20113	OCSD CORF 12/13	Regional	48.5%	\$180,056	\$180,056	\$0	\$0	\$0
20114	OCSD CORF 13/14	Regional	48.5%	\$1,023,770	\$1,023,770	\$0	\$0	\$0
20115	OCSD CORF 14/15	Regional	48.5%	\$1,202,954	\$941,836	\$261,119	\$0	\$0
20116	OCSD CORF 15/16	Regional	48.5%	\$1,285,144	\$0	\$1,285,144	\$0	\$0
20117	OCSD CORF 16/17	Regional	48.5%	\$1,678,031	\$0	\$1,678,031	\$0	\$0
20118	OCSD CORF 17/18	Regional	48.5%	\$2,211,654	\$0	\$2,211,654	\$0	\$0
20119	OCSD CORF 18/19	Regional	48.5%	\$1,773,988	\$0	\$1,773,988	\$0	\$0
20120	OCSD CORF 19/20	Regional	48.5%	\$2,096,586	\$0	\$1,632,803	\$463,784	\$0
20214	MWRP EXPANSION PHASE II	Regional	48.5%	\$23,901	\$23,901	\$0	\$0	\$0
20356	OCSD CORF 20/21	Regional	48.5%	\$2,408,525	\$0	\$0	\$2,408,525	\$0
20357	OCSD CORF 21/22	Regional	48.5%	\$2,712,401	\$0	\$0	\$2,712,401	\$0
20358	OCSD CORF 22/23	Regional	48.5%	\$3,018,437	\$0	\$0	\$3,018,437	\$0
20360	OCSD CORF 23/24	Regional	48.5%	\$3,359,123	\$0	\$0	\$3,359,123	\$0
20362	OCSD CORF 24/25	Regional	48.5%	\$3,737,305	\$0	\$0	\$2,900,129	\$837,176
20468	FOOTHILL SEWER DIVERSION TO LAWRP	Regional	48.5%	\$550,143	\$87,553	\$462,590	\$0	\$0
20540	LONG TERM SEWER SYSTEM FLOW MONITORING	Regional	48.5%	\$203,876	\$96,046	\$107,830	\$0	\$0
20587	OCSD EQUITY 12/13	Regional	48.5%	\$0	\$0	\$0	\$0	\$0
20588	OCSD EQUITY 13/14	Regional	48.5%	\$53	\$53	\$0	\$0	\$0
20589	OCSD EQUITY 14/15	Regional	48.5%	\$675,054	\$434,269	\$240,785	\$0	\$0
20593	OCSD EQUITY 15/16	Regional	48.5%	\$1,054,184	\$0	\$1,054,184	\$0	\$0
20621	OCSD EQUITY 16/17	Regional	48.5%	\$1,230,285	\$0	\$1,230,285	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
20715	OCSD EQUITY 17/18	Regional	48.5%	\$2,962,179	\$0	\$2,962,179	\$0	\$0
20716	OCSD EQUITY 18/19	Regional	48.5%	\$3,310,886	\$0	\$3,310,886	\$0	\$0
20717	OCSD EQUITY 19/20	Regional	48.5%	\$3,329,146	\$0	\$2,131,169	\$1,197,978	\$0
20718	OCSD EQUITY 20/21	Regional	48.5%	\$2,237,504	\$0	\$0	\$2,237,504	\$0
20719	OCSD EQUITY 21/22	Regional	48.5%	\$1,423,788	\$0	\$0	\$1,423,788	\$0
20720	OCSD EQUITY 22/23	Regional	48.5%	\$807,790	\$0	\$0	\$807,790	\$0
20733	OCSD EQUITY 23/24	Regional	48.5%	\$890,105	\$0	\$0	\$890,105	\$0
20734	OCSD EQUITY 24/25	Regional	48.5%	\$980,911	\$0	\$0	\$625,446	\$355,465
20798	OCSD EQUITY 25/26	Regional	48.5%	\$1,045,147	\$0	\$0	\$0	\$1,045,147
20799	OCSD EQUITY 26/27	Regional	48.5%	\$950,030	\$0	\$0	\$0	\$950,030
20802	OCSD CORF 25/26	Regional	48.5%	\$4,155,473	\$0	\$0	\$0	\$4,155,473
20803	OCSD CORF 26/27	Regional	48.5%	\$4,612,571	\$0	\$0	\$0	\$4,612,571
20811	OCSD SOLIDS HANDLING 13/14	Regional	20.8%	\$290,095	\$290,095	\$0	\$0	\$0
20812	OCSD SOLIDS HANDLING 14/15	Regional	20.8%	\$351,153	\$351,153	\$0	\$0	\$0
20959	SEWER GEN SYS MODS 14/15	Regional	48.5%	\$161,853	\$161,853	\$0	\$0	\$0
21055	ENG PLANNING STUDY RESERVE 13/14	Regional	48.5%	\$91,815	\$91,815	\$0	\$0	\$0
21056	ENG PLANNING STUDY RESERVE 14/15	Regional	48.5%	\$100,997	\$100,997	\$0	\$0	\$0
21057	ENG PLANNING STUDY RESERVE 15/16	Regional	48.5%	\$111,129	\$0	\$111,129	\$0	\$0
21096	GIS SUPPORT APPLICATIONS 13/14	Regional	48.5%	\$32,117	\$32,117	\$0	\$0	\$0
21097	GIS SUPPORT APPLICATIONS 14/15	Regional	48.5%	\$35,328	\$35,328	\$0	\$0	\$0
21129	HYDRAULIC MODELING 13/14	Regional	48.5%	\$23,527	\$23,527	\$0	\$0	\$0
21131	HYDRAULIC MODELING 14/15	Regional	48.5%	\$25,880	\$25,880	\$0	\$0	\$0
21133	UNIVERSITY LS ODOR CONTROL SYSTEM	Regional	48.5%	\$136,256	\$136,256	\$0	\$0	\$0
21134	MANHOLE CONST MAIN AND SKY PARK SOUTH	Regional	48.5%	\$25,981	\$25,981	\$0	\$0	\$0
21146	MWRP BIOSOLIDS AND ENERGY RECOVERY	Regional	20.8%	\$52,089,157	\$22,539,638	\$29,549,519	\$0	\$0
21147	LAWRP SYSTEM UPGRADES	Regional	48.5%	\$392,336	\$218,964	\$173,371	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
21248	MWRP EXPANSION PHASE 3	Regional	48.5%	\$14,514,256	\$0	\$7,463,594	\$7,050,661	\$0
21339	AUTOMATION SYSTEM IMPROVEMENTS SEWER	Regional	48.5%	\$70,353	\$44,590	\$25,763	\$0	\$0
21455	IRWD PIPELINES RELOCATION FOR SC GRADE	Regional	48.5%	\$162,381	\$162,381	\$0	\$0	\$0
21578	OPS CENTER IMPROVEMENTS PH2 (WAREHOUSE)	Regional	48.5%	\$829,045	\$0	\$829,045	\$0	\$0
21655	SKYLIGHT PROTECTION	Regional	48.5%	\$18,673	\$18,673	\$0	\$0	\$0
21742	LTFP ID CONSOLIDATION	Regional	48.5%	\$41,592	\$41,592	\$0	\$0	\$0
30214	MWRP EXPANSION PHASE II	Regional	51.0%	\$18,737	\$18,737	\$0	\$0	\$0
30331	IRVINE LAKE SEISMIC STABILITY STUDY	Regional	51.0%	\$15,371	\$15,371	\$0	\$0	\$0
30342	LAWRP SYSTEM UPGRADES	Regional	51.0%	\$569,628	\$306,446	\$263,181	\$0	\$0
30374	SYPHON RESERVOIR INTERIM IMPROVEMENTS	Regional	51.0%	\$105,917	\$105,917	\$0	\$0	\$0
30380	SALT MANAGEMENT PLAN DEVELOPMENT	Regional	51.0%	\$61,822	\$61,822	\$0	\$0	\$0
30382	SYPHON RESERVOIR EXPANSION	Regional	51.0%	\$50,159,519	\$1,339,909	\$48,819,610	\$0	\$0
30396	RW SITE INSPECTION & TESTING COMPUTER	Regional	51.0%	\$27,826	\$27,826	\$0	\$0	\$0
30398	RW CONVERSION GRANTS FOR ON-SITE 13/14	Regional	51.0%	\$140,643	\$140,643	\$0	\$0	\$0
30399	RW CONVERSION FOR OFF-SITE 13/14	Regional	51.0%	\$82,018	\$82,018	\$0	\$0	\$0
30400	HEALTH DEPT FEES FOR 13/14	Regional	51.0%	\$47,629	\$47,629	\$0	\$0	\$0
30408	MULTI-ZONE REGIONAL PS - ZONE A TO SYPHON	Regional	51.0%	\$2,089,672	\$203,952	\$1,885,721	\$0	\$0
30412	SYPHON RESERVOIR EXPANSION - ENV.	Regional	51.0%	\$128,627	\$60,610	\$68,017	\$0	\$0
30415	CATHODIC PROTECTION FOR GAP PIPE SEGMENT	Regional	51.0%	\$68,274	\$68,274	\$0	\$0	\$0
30418	MWRP MBR LEAP AERATION CONVERSION	Regional	51.0%	\$655,859	\$0	\$655,859	\$0	\$0
30422	PA9 JEFFREY RD PIPELINES, 36" ZNA, 36" SYPHON	Regional	51.0%	\$878,470	\$878,470	\$0	\$0	\$0
30517	LAKE FOREST CONTROL AND TELEMETRY SYS	Regional	51.0%	\$20,028	\$20,028	\$0	\$0	\$0
31055	ENG PLANNING STUDY RESERVE 13/14	Regional	51.0%	\$99,017	\$99,017	\$0	\$0	\$0
31056	ENG PLANNING STUDY RESERVE 14/15	Regional	51.0%	\$108,918	\$108,918	\$0	\$0	\$0
31057	ENG PLANNING STUDY RESERVE 15/16	Regional	51.0%	\$119,844	\$0	\$119,844	\$0	\$0
31096	GIS SUPPORT APPLICATIONS 13/14	Regional	51.0%	\$33,772	\$33,772	\$0	\$0	\$0



Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
31097	GIS SUPPORT APPLICATIONS 14/15	Regional	51.0%	\$37,149	\$37,149	\$0	\$0	\$0
31129	HYDRAULIC MODELING 13/14	Regional	51.0%	\$24,740	\$24,740	\$0	\$0	\$0
31131	HYDRAULIC MODELING 14/15	Regional	51.0%	\$27,214	\$27,214	\$0	\$0	\$0
31248	MWRP EXPANSION PHASE 3	Regional	51.0%	\$9,631,245	\$0	\$4,826,930	\$4,804,314	\$0
31339	AUTOMATION SYSTEM IMPROVEMENTS RW	Regional	51.0%	\$135,332	\$85,766	\$49,567	\$0	\$0
31384	HYDRAULIC MODEL UPDATE / CALIBRATION -	Regional	51.0%	\$251,580	\$251,580	\$0	\$0	\$0
31578	OPS CENTER IMPROVEMENTS PH2 (WAREHOUSE)	Regional	51.0%	\$871,779	\$0	\$871,779	\$0	\$0
31582	GEN SYS MODS 13/14	Regional	51.0%	\$32,819	\$32,819	\$0	\$0	\$0
31648	GEN SYS MODS 14/15	Regional	51.0%	\$36,100	\$36,100	\$0	\$0	\$0
31655	SKYLIGHT PROTECTION	Regional	51.0%	\$19,635	\$19,635	\$0	\$0	\$0
31697	GEN SYS MODS 15/16	Regional	51.0%	\$39,724	\$0	\$39,724	\$0	\$0
				<b>\$193,173,834</b>	<b>\$31,222,688</b>	<b>\$116,095,300</b>	<b>\$33,899,985</b>	<b>\$11,955,861</b>

## SECTION 4 LOCAL MASTER PLAN FACILITIES

### 4.1 DESCRIPTION

The facilities detailed in the following section represent local facilities serving areas within the improvement district, based on the respective subarea master plans, as well as sub-regional projects serving this improvement district and other improvement district(s). For the purpose of this POW, local facilities include both local and sub-regional projects.

### 4.2 COST ESTIMATES

The proposed local master plan facilities for ID No. 225 are detailed in **Table IV-1**. Only one local project was identified for newly formed ID No. 225. The amounts shown in Table IV-1 reflect the facilities or portions there-of allocable to the improvement district. As noted in the Introduction, the projects identified here may change to reflect changes in land use and development phasing.

For the purpose of determining the allowance for deferred costs, the project costs have been escalated at 10% per year.

**Table IV-1 Local Projects  
Proposed Facilities and Estimated Escalated Costs  
Improvement District 225**

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
30390	PA 9B RW AND SYPHON LATERAL PIPELINE,	Sub-Regional	51.0%	\$73,996	\$73,996	\$0	\$0	\$0
30409	MULTI-ZONE REGIONAL PS - ZONE B	Sub-Regional	23.1%	\$801,123	\$82,857	\$718,266	\$0	\$0
30410	MULTI-ZONE REGIONAL PS - ZONE C	Sub-Regional	27.8%	\$1,381,966	\$129,048	\$1,252,918	\$0	\$0
39999	ILP North to Zone C Conversion	Sub-Regional	43.0%	\$3,751,833	\$0	\$3,751,833	\$0	\$0
				<b>\$6,008,917</b>	<b>\$285,900</b>	<b>\$5,723,016</b>	<b>\$0</b>	<b>\$0</b>



## SECTION 5 FINANCIAL PHASING SUMMARY

This section summarizes the phasing of the financial requirements in ID No. 225. A schedule of financial phasing requirements based on projected phasing of facilities is shown in **Table V-1**. Also shown in the table is the general class of items that will be covered in these projected amounts.

Table V-1 includes a 10% contingency to allow for unexpected inflation as well as changes in land use and development density.

It should be noted that this table does not represent actual bond issues. As facilities are needed which warrant or require bond funding, actual bond issuance needs will be determined.

ID No. 225 will, as the successor consolidated improvement district, have authorized and unissued bonds in the amount of \$406,894,840, representing the combined authorized and unissued bonds of the consolidating improvement districts.

**Table V-1**  
**Bond Authorization Summary**  
**Improvement District 225**

	2013-2015	2016-2020	2021-2025	2026-2035	Total Escalated Amt
<b>Escalated Regional Subtotal</b>	<b>\$31,222,688</b>	<b>\$116,095,300</b>	<b>\$33,899,985</b>	<b>\$11,955,861</b>	<b>\$193,173,834</b>
<b>Escalated Sub-Regional Subtotal</b>	<b>\$285,900</b>	<b>\$5,723,016</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,008,917</b>
<b>Contingency (10%)</b>	<b>\$3,150,859</b>	<b>\$12,181,832</b>	<b>\$3,389,998</b>	<b>\$1,195,586</b>	<b>\$19,918,275</b>
<b>Bond Reserve (6%)</b>	<b>\$2,079,567</b>	<b>\$8,040,009</b>	<b>\$2,237,399</b>	<b>\$789,087</b>	<b>\$13,146,062</b>
<b>Funded Reserve (6%)</b>	<b>\$2,079,567</b>	<b>\$19,490,931</b>	<b>\$2,237,399</b>	<b>\$789,087</b>	<b>\$13,146,062</b>
<b>Bond Discount (2%)</b>	<b>\$2,499,384</b>	<b>\$14,618,198</b>	<b>\$745,800</b>	<b>\$263,029</b>	<b>\$4,382,021</b>
<b>Bond Issuance Costs (1%)</b>	<b>\$1,249,692</b>	<b>\$14,618,198</b>	<b>\$372,900</b>	<b>\$131,514</b>	<b>\$2,191,010</b>
<b>Bond Authorization Total</b>	<b>\$42,567,656</b>	<b>\$190,767,483</b>	<b>\$42,883,481</b>	<b>\$15,124,164</b>	<b>\$251,966,179</b>

## SECTION 6 BENEFIT OF THE PLAN OF WORKS TO THE LANDS IN THE IMPROVEMENT DISTRICT

### 6.1 OVERVIEW

Under the California Water Code, the plan of works for an improvement district provides a plan and an estimate of the cost of the works that are needed to serve the improvement district and that will be financed through District-issued bonds, and reflects the determination by the District's Board of Directors that the territory within the improvement district will benefit from the works. To the extent practical, a plan of works will incorporate generalized facilities descriptions and flexibility in the selection of specific projects, so that a revised or supplemented plan will not be needed. If a revised or supplemented plan is adopted, it must benefit the territory within the improvement district. Similarly, when territory is annexed to or detached from an improvement district, including annexations and detachments implemented for the purpose of reorganizing improvement districts to be consolidated as coterminous improvement districts, there must be an accompanying evaluation of territory that will benefit by inclusion within the plan and therefore should be included, and territory that will not benefit and therefore should be excluded.

The benefits that lands receive from sewer and recycled water works are derived from multiple considerations. Primary is the ability of lands to receive service currently or when needed in the future. Other examples of benefits are system or facilities reliability through supply diversification, redundant treatment and disposal capacity, storage capability, system looping or other characteristics; regulatory compliance; environmental protection; and regional cost efficiencies in operation and maintenance. In the case of a consolidation of improvement districts, other benefits may include economies of scale, administrative simplification and enhancement of credit and reduced borrowing cost or debt service cost.

For purposes of evaluating benefit of improvement district consolidations, cost allocation is dictated in part by the requirements contained in the Water Code for structuring consolidations. In accordance with these requirements, the remaining authorized, unissued bonds of the consolidating improvement districts will become the authorized bonds that can be issued on behalf of the consolidated successor improvement district. Upon the consolidation, debt service for the outstanding bonds of the consolidating improvement districts will become obligations of the consolidated successor improvement district.

### 6.2 DESCRIPTION OF THE STUDY APPROACH

The consolidation of ID Nos. 125 and 225 is part of an overall restructuring of the District's improvement districts, which also includes the reorganization of ID Nos. 153 and 253 and the formation of ID Nos. 185 and 285. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations." In this regard, the District has undertaken a comprehensive evaluation and study of its long-term financial requirements, including:



- a detailed planning, engineering and financial assessment of the total costs of existing and future facilities in the water and sewer systems;
- available bond authorization and other revenue sources to finance facilities to serve future development (“new capital”), augment system reliability and meet upgraded regulatory requirements for both existing and future demands (“enhancement”) and replace and refurbish the existing systems (“replacement”);
- debt service;
- simplification of the improvement district structure; and
- assurance of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

The existing improvement district structure has served the District for more than 40 years as the system was built and growth patterns necessitated a means of maintaining equity in the financing of facilities. Using the mechanisms of periodic formation of new improvement districts and authorization of bonds as well as regional cost allocations and system buy-ins, the District has been able to maintain fair and equitable cost sharing while accommodating both intense growth within its boundaries and several acquisitions of adjacent service areas. Construction and expansion of the systems were the key features of this financial structure. Although growth will continue for several more years, going forward the completion of the regional systems and provision for system reliability and replacement will become the predominant driver of the financial requirements. The District’s comprehensive evaluation of its financial requirements indicates that a simplification of the improvement district structure and related actions will provide a sustainable methodology for equitable cost allocation in the future.

As described in Section 1.3, a succession plan for the improvement district structure would reduce the number of improvement districts, ideally to one water improvement district and one sewer improvement district, through consolidations and reorganizations to be implemented as and when considerations for separation of the various improvement districts no longer remain. The District’s financial review identified steps that were currently feasible in achieving that objective as well as the parts of the current structure which need to be maintained at this time until factors relating to the preservation of equitable cost sharing merit the evaluation of further consolidation steps.

General obligation bonds have been the District’s principal tool for financing facilities. Under this form of financing, the obligation for repayment of bonds issued on behalf of an improvement district is secured by the power of the District to levy and collect *ad valorem* assessments without limitation as to rate or amount on land only (enforceable by customary rights to foreclose and sell property for delinquent assessments) or, in lieu of assessments, in the District’s discretion, charges for water or sewer service, as applicable, all within the subject improvement district. The District also uses connection charge revenues to pay a portion of the debt service costs. For new capital cost within developing improvement districts, the District plans to continue its historical practice of targeting a 50-50 allocation as a fair means of sharing improvement district debt service costs between the aggregate

contributions of connection charge revenues and property tax revenues. The evaluation of financial requirements and modifications of the District's improvement district structure therefore involve an examination of outstanding and future bond debt service, bonding authority, allocation of costs, and resultant contributions of connection charges and *ad valorem* property taxes over time.

### 6.3 LONG-TERM FINANCIAL REQUIREMENTS MODELING

As introduced in the preceding section, the foundation of the evaluation of the benefit of the Plan of Works to the lands in the Improvement District is the District's comprehensive review of its long-term financial requirements. To assist the District in this evaluation, the District employed modeling of a baseline condition defined by the improvement district structure as it existed prior to the current reorganization and consolidation steps. The baseline modeling facilitated various aspects of the long-term financial requirements evaluation:

- refinement of capital cost allocations according to the functional benefits (e.g., development expansion, reliability, regulatory compliance, environmental protection, system refurbishment) of the facilities to various areas and user categories;
- use of existing bond proceeds and available bond authorization and other revenue sources for the financing of future facilities within the new capital expansion, enhancement and replacement project classifications;
- use of the District's allocation of the general 1% *ad valorem* property tax levy;
- benefit of the simplification of the improvement district structure and the aggregated regional and local systems;
- identification of areas where the structure must be retained or modified to equitably address special considerations; and
- measurement of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

Modeling of modified aspects of the baseline enabled the District to test the effectiveness of modifications to various capital – project related fiscal and financing practices in developing a new improvement district and cost allocation structure to effectively maintain equity as the development phase within the District progresses toward buildout. Details of the modeling process described in this section, including review and analysis of interim results and identification of refined and additional modeling efforts, are compiled in a Technical Appendix that serves as a reference document for this Plan of Works.

### 6.4 REGIONAL SYSTEM BENEFIT

The Plans of Works for the improvement districts consolidated as ID No. 225 were adopted or amended in 1978, except for ID No. 235, described in further detail below. In combination with local facilities specific to the individual improvement district, the 1978 Plans of Works provided for financing

of shares in a common regional system that included acquisition of capacity in the AMP and participation in the construction of the District's own well field in the main Orange County groundwater basin. Like IRWD, LAWD issued bonds in the early 1960s to construct a plan of works for the acquisition and distribution of a supplemental imported Colorado River water supply, in cooperation with neighboring districts. LAWD's share of the construction of the Santiago Aqueduct, extending 14 miles from Metropolitan Water District's Santiago Lateral, was financed by the sale in 1961 of general obligation waterworks bonds aggregating \$1,410,000. Following the acquisition of sewerage powers in 1963, LAWD obtained its initial authorization of sewer bonds in the amount of \$6,140,000 in 1964, to complete a plan of works, the first phase of which consisted of trunk and sub-trunk sewers serving the two major drainage basins of LAWD and delivering the sewer to a proposed treatment and water reclamation plant. Population growth generated the need for additional storage reservoirs and a filtration plant in the water system, and a treatment plant expansion, additional trunk and interceptor sewers and participation in a regional plant with ultimate ocean outfall facilities. As a result, in 1968, LAWD's 1961 water bond and 1964 sewer bond authorizations were supplemented by additional authorizations of \$17,600,000 and \$9,584,000, respectively. Subsequently, LAWD acquired capacity in the AMP as well as some groundwater production facilities, and abandoned its filtration plant. When LAWD consolidated with IRWD in 2000, ID No. 135, as LAWD's successor, had constructed regional water importation facilities comparable to IRWD's, but had not constructed comparable groundwater production capacity. IRWD's melded water rate structure is not applied in ID No. 135. Following the consolidation of ID No. 135 within ID No. 125, a planning area will be retained over the former ID No. 135 to facilitate the continuation of the separate water rate structure until satisfaction of equity considerations make the separate structure no longer necessary. Among the factors to be evaluated in placing the former ID No. 135 area in a parity rate structure will be the value derived from assets of the former LAWD and the contribution of ad valorem assessments from the area to ID No. 125 debt service.

The majority of the regional sewer treatment, disposal and reclamation facilities exist. Based on its ultimate demands, ID No. 225 will need to contribute its proportional share of the cost of completing the regional system, including any expansion such as the acquisition of additional MWRP capacity, and including new components necessary to provide basic reliability. The areas reorganized within ID No. 253 were primarily within former ID Nos. 230, 250, 253 and to a lesser extent, other improvement districts. The areas consolidated within ID No. 225 were formerly within several separate improvement districts. At this stage of completion of IRWD's regional system, former distinctions among the improvement districts from which the areas consolidated as ID No. 225 are no longer material in regard to service from the regional system. Historically, these distinctions included the extent and duration of individual improvement districts' reliance on the untreated system to serve agricultural water, proximity to different completed and yet-to-be-completed segments of the treated water feeders, interceptor and trunk sewers and treatment facilities, uncertainties in the progression (location and pace) of development, and planning determinations that were yet to be made by the District in the elements of the major facilities components and supply sources, such as pipeline and well field capacity. All of these factors have either disappeared or diminished in importance, and the regional benefits among the areas reorganized within ID No. 225 are now essentially uniform.



As one example of the gradual diminishing of the earlier distinctions among the individual improvement districts' plans for supply and delivery alternatives, the 1974 plans of works initially contemplated separate treatment plants connected to the untreated delivery system for each of ID Nos. 103 and 105. In 1977, the initial plan for local (or regional) treatment of raw water in ID No. 103 (shared with ID No. 109), was shifted to a backup alternative, in favor of ID No. 103's pro rata participation in the District's capacity to be obtained in the proposed regional treated water system now known as the Allen McColloch Pipeline (AMP) to serve its supplemental water needs. By 1978, this was again modified to include participation by ID No. 103 in the District's acquisition of capacity in the AMP in combination with participation in the construction of the District's own well field in the main Orange County groundwater basin as a more economical and preferred domestic supply alternative source. The local treatment plants as originally contemplated were not built, but the District is presently participating in the construction of the Baker Plant as a regional treatment plant that will benefit the entire service area.

This progression continued, with the distinctions becoming fewer as the planning of the regional system evolved and the system was constructed. With only approximately 10-12 percent of the equivalent dwelling units (EDUs) remaining to be built in ID Nos. 253 and 285, these distinctions are no longer prominent. The regional system and its integrated treatment and reclamation facilities provide uniform benefit to all of the component areas of ID No. 225 by satisfying basic treatment, disposal and recycled water supply and peaking needs and providing protection against emergency outages. Connection fees, adjusted by planning areas if and to the extent necessary to differentiate the fee amounts to adjust for varying local and sub-regional project benefits, and ad valorem taxation will adequately allocate the cost share of ID No. 253 among its various planned development areas in proportion to their benefit.

Through the regional split, the areas within the consolidated ID No. 225 have shared the cost of IRWD's regional reclamation plants, as well as the treatment and disposal facilities of Orange County Sanitation District and its Revenue Area 14 under agreements between the District and OCSD. Not all of ID No. 225 and other improvement districts' service areas are tributary to all of the plants. However, the plants and their tributary regional collection systems are considered to function as one regional system and optimize the District's sewage collection and water reclamation systems and provide dual or backup treatment capability for various parts of the service area. The District is continuing to develop its capability for multiple discharge options among the tributary areas of the plants. Thus all areas participate proportionally in the regional system. All areas receive the uniform sewer rate which provides the benefit of reduced cost through treatment options. An exception to this is ID No. 240, which is sewered only to OCSD's regional plant and is not within OCSD's Revenue Area 14 nor tributary to the MWRP, LAWRP, or Chiquita plants. IRWD does provide sewage collection and recycled water service to ID No. 240. ID No. 256 in large part remains on individual septic systems, and it is uncertain whether and when that community will desire to convert to a public sewer system. ID No. 252 is not tributary to IRWD plants but may benefit from future recycled water facilities. ID Nos. 240, 252 and 256 are not included in the current reorganization and consolidation of improvement districts.

As described in Section 3, the District uses a demand forecasting tool to allocate regional system costs among improvement districts. This ensures that ID No. 225 as a whole will be allocated a share of the regional system costs in proportion to the benefit it will receive from the system. See **Table III-1**.

#### 6.5 REGIONAL COST ALLOCATION – INCLUSION IN IMPROVEMENT DISTRICT NO. 225

In parallel with the consolidation of ID No. 225 itself, portions of ID No. 225's territory will be retained as part of several improvement districts to form a reorganized improvement district designated ID No. 253. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations." All of the developing areas reorganized into ID Nos. 253 are retained or reorganized within the boundaries of the underlying improvement district, ID No. 225. This assures that the developing areas will share in the cost of existing local and sub-regional facilities from which they benefit, such as sewer trunk facilities, previously built with the proceeds of bonds of one of the improvement districts consolidated in the underlying improvement district.

Like ID No. 253, ID No. 225 will continue to share proportionally in the cost of completing the regional system, such as treatment plant expansion costs and the new capital portion of the cost of solids handling facilities. This occurs because under the District's incremental approach, although the regional system provides service prior to its completion, it remains incomplete, and future regional projects will add components necessary to provide basic reliability, benefitting the developed areas as well as future development. To prevent overpayment by the areas included within both improvement districts' regional allocations, the regional allocation for ID No. 225 will exclude demands of 253, and the 50/50 allocation of debt service responsibilities between connection fees and property taxes will be applied on an aggregated basis for the area within 253, between the overlying and underlying improvement districts.

#### 6.6 LOCAL FACILITIES COST ALLOCATION

Historically, planned developments within a geographic area have been grouped together in an improvement district notwithstanding the fact that each development may be served by distinct local facilities, as the cost of these are generally uniform over the improvement district. This is also considered the case for the various geographic areas comprising ID No. 253. To the extent necessary to achieve fair and equitable allocation of local facilities costs, planning areas can be used to recognize any unequal costs of sub-regional and local facilities benefiting only one, or some but not all, of the planned developments in the territory of the consolidated ID No. 253.

As with regional system benefits discussed above, connection fees, adjusted by planning areas if and to the extent necessary to reflect unique local facilities costs not fairly allocable to the entire improvement district, and *ad valorem* taxation will adequately allocate the cost share of the ID among its various planned development areas in proportion to their benefit. The segregation between the ID Nos. 253, 285, 288, existing ID Nos. 212 and 213, and the consolidated developed ID No. 225 is

considered adequate to ensure that capital cost allocation recognizes the area-specific local facilities costs yet to be incurred in the planned development areas.

Each developed area has already completed and paid for its local capital facilities. The combined collection and distribution system is of equal benefit to each customer. Local systems for the developing improvement districts will be borne by them exclusively, and the consolidated developing improvement district will not bear any of the cost of their local systems. Moreover, local facilities construction for each development area generally has preceded development, and differing connection fees have offset some or all of any disparities among local facilities cost among consolidating improvement districts.

#### 6.7 IMPROVEMENT DISTRICT NO. 225 BENEFIT

The District has reviewed and analyzed benefit to the lands from the reorganized ID No. 225 in several ways: (1) similarities or differences in future service needs among the areas identified for inclusion by annexation to, or by retention in, the reorganized as ID No. 225; (2) the benefit or lack of benefit to the areas identified for exclusion from the reorganized as ID No. 225 ; and (3) regional cost allocation among ID No. 225 and other areas receiving benefit from the regional facilities. Also evaluated were (4) areas not included in any improvement district and (5) certain areas retained as separate improvement districts.

**(1) Included areas.** The areas reorganized as ID No. 253 comprise several non-contiguous planned development areas that were previously in different improvement districts. Therefore, it is appropriate to assess whether any one or more of these areas possess essential distinctions, in terms of benefit from the planned local facilities or regional facilities (including source of water supply treatment and disposal), that would warrant exclusion from the ID No. 253 territory. The areas included in the reorganized ID No. 253 are described in Section 2. With respect to regional facilities, all areas will be benefitted by the integrated groundwater and imported water supplies integrated sewer collection and treatment and recycled water systems. Based on the available planning information for the expected development of each planned area, all of which are predominantly residential with other use, it is concluded that the areas are similarly benefitted by the Plan of Works and that the *ad valorem* assessments for debt service and connection fees for the classifications applicable to the anticipated uses will fairly allocate cost within the ID based on demands. Connection fees, which can be adjusted through planning areas if and to the extent necessary to reflect unique local or sub-regional facilities costs not fairly allocable to the entire improvement district, and *ad valorem* taxation will adequately allocate the cost share of the improvement district among its various planned development areas in proportion to their benefit. Simultaneous inclusion of the ID No. 253 lands within the underlying improvement district, ID No. 225, assures that the developing areas will share in the cost of existing local and sub-regional facilities from which they benefit, such as trunk sewers, previously built with the proceeds of bonds of one or more of the improvement districts consolidated in the underlying improvement district. The exclusion of ID No. 253 demands from the ID No. 225 regional split, and allocation of debt service responsibilities between connection fees and property taxes on an aggregated



50/50 basis between the overlying and underlying improvement districts will prevent overpayment as a result of inclusion within both improvement districts' regional allocations.

The regional recycled water system and sewer collection system are considered to benefit all of the areas of former improvement districts reorganized as ID No. 225 in proportion to demand. To satisfy the remaining financing obligations of ID No. 225 to complete the regional supply system, there is no need for retaining separate allocations of regional cost sharing, as all of the improvement districts are substantially developed and are allocated proportionate shares based on demand. The supply, storage and non-local distribution and collection systems are essentially complete. The remaining regional cost obligations will consist primarily of regional treatment plant expansions, reliability and system enhancement and replacement projects. Apart from demand, no basis exists for allocating differing proportional cost responsibilities for these projects among the consolidating improvement districts.

**(2) Excluded areas.** The District also analyzed whether any areas proposed to be excluded from the reorganized ID No. 253 would receive benefit from ID No. 253 planned works, and should not be excluded. The areas excluded consist of substantially developed areas of ID Nos. 230, 250 and other improvement districts which will, instead, be included in the reorganized ID No. 225, open space, and areas contained within another developing improvement district. Also excluded are the areas not included in any improvement district and certain areas retained as separate improvement districts, discussed under separate headings below.

The excluded developed areas will contribute their regional cost share for the completion of the regional system and for the previously constructed local facilities through ID No. 225. The developed areas will continue to be benefitted by the regional facilities financed and to be financed by ID No. 253. However, it is concluded that exclusion of the developed areas is justified in terms of benefit, because, through the reorganized ID No. 225, their allocation of the cost of the regional system benefits will continue to be proportional.

The 13,400 acres reserved as permanent open space near the Lomas de Santiago ridgeline, which is not proposed to remain within any improvement district, and other smaller permanent open space areas will not receive benefit from the planned works and are excluded from ID No. 253, 225 and other improvement districts. This is warranted by the fact that the area will have no demand served by the system.

Finally, areas contained within developing ID Nos. 253, 212, 213, 285 and 288 are logically maintained as separate improvement districts based on their separate local facilities costs and stages of development. To the extent there are sub-regional facilities from which any of these improvement districts benefit in common, they will share the cost of those facilities with the other participating improvement districts through a proportionate allocation based on benefit received. Exclusion of the other separate developing improvement districts from ID No. 225 will facilitate the allocation of local

facilities costs. Having these remain separate improvement districts does not negatively impact the regional cost allocation or bond authorization, nor would combining them produce any advantage.

**(3) Regional cost allocation.** Also considered was whether the reorganization achieves equity in relation to the other cost allocations within the regional split. Under the District's historic and continuing methodology for achieving equitable cost allocation, all improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. This incremental funding approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional system has been born by ad valorem assessments on lands not yet fully developed and receiving service. Adjustment of this methodology will be applied as discussed in Section 6.5 to recognize inclusion of areas in both ID No. 253 and underlying ID No. 225. A similar regional allocation would be applied to replacements and enhancement projects, to the extent funded by the improvement districts. Contribution by areas not included in an improvement district is discussed in the heading below.

**(4) Areas not included in an improvement district.** The District's regional cost allocation approach took into consideration that some areas (referred to collectively with the shorthand references "110" and "210" in keeping with the District's numbering system for designating improvement districts) funded a portion of the District's earliest regional system costs through payment of debt service on general obligation waterworks bonds of the overall District in the 1960s (e.g., original construction of the San Joaquin Reservoir and IRWD's capacity in the East Orange County Feeder No. 2 and other transmission facilities, Frances Mutual Water Company wells, the Aufdenkamp Transmission Main and the original sewage treatment and reclamation system components financed by ID No. 1 (201). Based on their initial financial participation in the original waterworks bonds and sewer ID No. 1 bonds, these earlier-developing areas were not included in the improvement districts formed during the 1970s. Similarly, certain areas added to the District through annexation and consolidation have funded a proportionate share of existing regional facilities costs, sometimes referred to as "acquisition balances," through user rate components. The "110" and "210" areas as excluded from ID Nos. 125 and 225. See Section 1.3,"THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations."

The District has performed calculations to determine whether historic allocations of cost, to the areas included in the improvement districts and the excluded areas, require future cost participation by excluded areas in order to ensure that the improvement districts do not bear a disproportionate cost of the system. Included in this evaluation are costs of the service delivery systems as well as other regional costs such as administrative headquarters and telemetry. Based on this evaluation, the District has determined that funding of future regional facilities costs of the District, (i.e., costs other than those costs financed by previous bonds and outstanding bonds assumed as obligations of the improvement districts being consolidated) should include participation of the areas that comprise "110" and "210," in

proportionate amounts that will be determined taking into account revenue contribution, and benefit received from future capital facilities.

**(5) Retention of certain improvement districts.** Individual cost allocation considerations dictate that certain improvement districts be retained as separate improvement districts at this time.

ID No. 154 is contains an area in which general planning information shows that some development could occur. However, the owner indicates no plans beyond current uses.

ID No. 240 discharges sewer only to OCSD's regional plant and is not tributary to the MWRP, LAWRP, or Chiquita plants. For that reason it is not within OCSD's Revenue Area 14. IRWD does provide sewage collection and recycled water service to ID No. 240, and collection system and recycled water system costs are proportionately allocated to ID No. 240.

ID No. 256 in large part remains on individual septic systems, and it is uncertain whether and when that community will desire to convert to a public sewer system. If and when this occurs, the District will evaluate the appropriate method for recovering the cost of the conversion from the benefitted area, such as retention of the separate improvement district and/or an underlying improvement district.

ID No. 252 is not tributary to IRWD plants but may benefit from future recycled water facilities. This requires retention of the improvement district so that applicable recycled water system costs can be separately allocated. The ID No. 252 formation conditions provided for this through the allocation of a proportionate share of ID No. 250 debt service costs. With the consolidation of ID No. 250 as part of ID No. 225, ID No. 225's debt service costs would be used for this allocation.

## 6.8 REDEVELOPMENT COST

In recent years, some areas of the District have begun to experience redevelopment activity. This has necessitated the consideration of the fair allocation of cost that should be borne by these areas, and how demands should be included in the demands of the improvement districts. The District is applying methodology to ensure proportional cost contributions for regional system and for added local system needs generated by redevelopment.



## SECTION 7 IMPLEMENTATION OF PLAN OF WORKS

### 7.1 GENERAL

The Plan of Works has been prepared by IRWD pursuant to the provisions of California Water Code Section 36410 *et seq.*

It is by this means that IRWD implements the various portions of its Sewer Treatment Master Plan and Sewer Collection System Master Plan, as to sewer system facilities, and its Water Resources Master Plan, as to recycled water system facilities. IRWD, from time to time as needed, will issue increments of the propose bonds and construct the described facilities in order to meet its responsibility to have facilities available to serve the needs of approved development.

As hereinafter discussed, this Plan of Works will be implemented on a phased basis. Accomplishment of this obligation by IRWD necessitates issuance of bonds in the amount estimated in this Plan of Works.

It is acknowledged that, from time to time, the means of accomplishing the purposes of ID No. 225 may be altered and projects identified in this Plan of Works may be changed or replaced by other projects, by reason of changes in development phasing, changes in technology and refinements to facilities planning developed through IRWD's ongoing master planning and subarea master planning. Costs may include acquisition, construction, replacement, reconstruction and additions to facilities.

### 7.2 AUTHORIZATION AND ISSUANCE OF BONDS

The authorized and unissued bonds of the consolidated ID No. 225 are estimated to be sufficient to accomplish this Plan of Works. Authorized bonds may be sold and the proceeds used only as specified in the Plan of Works, subject to changes in the projects or substitutions of other projects to reflect changes in development phasing, changes in technology and refinements in master planning and subarea master planning.

**REVISED  
 PLAN OF WORKS  
 PROVIDING FOR DOMESTIC WATER SUPPLY, STORAGE, TRANSMISSION  
 AND DISTRIBUTION FACILITIES FOR  
 IRVINE RANCH WATER DISTRICT  
 IMPROVEMENT DISTRICT NO. 185**

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## SECTION 1 INTRODUCTION

### 1.1 OBJECTIVES

This Plan of Works is a means by which the fiscal requirements of the Improvement District are identified, including bond authorization, in order to provide for the construction, planning and design of facilities necessary to provide service within the Improvement District. The obligation of the Irvine Ranch Water District (“IRWD” or the “District”) is to plan to meet the projected service needs of the specific property within the Improvement District.

For the overall District, the planning of the water supply, storage and distribution system has been accomplished by the Water Resources Master Plan (“WRMP”) and its predecessor planning documents. The WRMP describes the facilities and entitlements needed to provide for ultimate demands and reliability over the entire District, both for the existing population and future development. IRWD also prepares an Urban Water Management Plan (“UWMP”), a document required by statute and focused on specific elements. However, the WRMP is a comprehensive compilation of data and analyses that IRWD considers necessary for its planning needs, and as such, IRWD considers the WRMP its primary water planning document. The WRMP also includes recycled water supply, which is within the fiscal requirements of the sewer plans of works.] Subarea master plans (“SAMP”) are created to plan in more detail the local facilities needed for development planning areas that may overlie all or part of an improvement district. SAMPs are generally prepared as the property owner and the city planning agency begin the development process.

Plans of works are used to describe local facilities and proportional participation in regional facilities that the improvement districts will need, relying on the WRMP and SAMPs for the detailed engineering and planning analysis. The role of the plan of works is founded in statute (Water Code 35950 *et seq.*) and is to define a plan for the facilities needed to serve the improvement district and make an estimate of their cost as necessary to support the voter authorization and issuance of general obligation bonds of the District for the improvement district. The plan of works thus provides the linkage between the engineering plan and the corresponding financial requirements by setting forth the basis for a determination by the Board of Directors in a noticed hearing that the plan benefits all the territory within the improvement district including any territory that has been annexed to it.

Plans of Works incorporate generalized facilities descriptions and some flexibility in the selection of specific projects. This allows the District to accommodate changes in development phasing, changes in technology and facilities planning developed through IRWD’s ongoing master planning and subarea master planning, and corresponding changes in costs of acquisition, construction, replacement, reconstruction and additions to facilities. The Board of Directors may determine that it is necessary to change a previously adopted plan of works. This has occurred in some instances in conjunction with a revision in the cost estimate making it necessary to propose a supplemental authorization of bonds, and it has also occurred in conjunction with improvement district reorganization. This Plan of Works has

been prepared in connection with the reorganization of Improvement District No. 153 to include a number of planned development areas within the improvement districts concurrently consolidated as Improvement District No. 125. This Plan of Works has been prepared in connection with the formation of Improvement District No. 285 including a number of planned development areas within the former Improvement District No. 135; Improvement District No. 135 and 235 and other improvement districts are being reorganized and consolidated as Improvement District No. 125 and 225. See Section 1.3.

The facilities generally identified in this Plan of Works may also change without a modification of the Plan of Works, in order to substitute other facilities to accommodate land use planning or development phasing determinations as they evolve, or in accordance with facilities planning modifications and refinements identified through IRWD's ongoing master planning and subarea master planning. The general purpose of the facilities in the Plan of Works is to meet the domestic water requirements of the Improvement District, including basic system redundancy and reliability in accordance with the policies of the District. As the facilities are needed, IRWD will choose those projects which provide domestic water services most economically. Projects may include acquisition, construction, reconstruction and addition to facilities. The fiscal requirements identified in the Plan of Works include the development phase, during which the system will be expanded and a share of the existing regional system will be acquired as needed to serve the Improvement District, and will continue thereafter, representing the Improvement District's participation along with other improvement districts in the completion of the IRWD regional system.

This Plan of Works has the following general objectives: (1) update the description of the water system capital facilities; (2) provide a revised plan of works to supersede and replace the existing plan of works of the improvement district being reorganized; and (3) evaluate the benefit of the revised plan of works to the territory of the reorganized improvement district.

The further objectives of this Plan of Works are to determine logical planning areas and the need for facilities. This includes (1) a proportionate share of regional domestic water supply, storage and transmission facilities; and (2) adequate local planning and system layouts based on the projected ultimate development within the improvement district.

## 1.2 DESCRIPTION OF THE IRVINE RANCH WATER DISTRICT

The District was established in January, 1961, as a California Water district under the provisions of Section 34000 *et seq.* of the California Water Code (the "Act"). Presently the District has four primary services – supplying potable water, collecting and treating sewer, producing and distributing recycled and other non-potable water and implementing urban runoff treatment programs. Historically, the District has provided agricultural water service as needed until residential or commercial development occurs, and provided potable and recycled water services and sewage collection and treatment service when development occurs. Recycled water is used for irrigation of agricultural areas, parks, parkways, greenbelt areas and school grounds, and is used for individual yard landscaping in certain areas, industrial processing, toilet and urinal flushing and other purposes permitted by regulations. IRWD has

also implemented a plan for natural treatment system service to divert urban runoff of water used for irrigation and other outdoor uses and treat the runoff by natural processes in water quality wetlands and similar facilities. . See **Figure I-1** for a location Map of IRWD.

The District serves a 178-square-mile area extending from the Pacific Ocean and over a central flat, alluvial plain to the foothills, which includes all of the City of Irvine and portions of the cities of Tustin, Newport Beach, Costa Mesa, Orange and Lake Forest, as well as certain unincorporated areas of the County. The District serves a total estimated population of approximately 340,000 through approximately 105,000 water and approximately 100,400 sewer service connections.

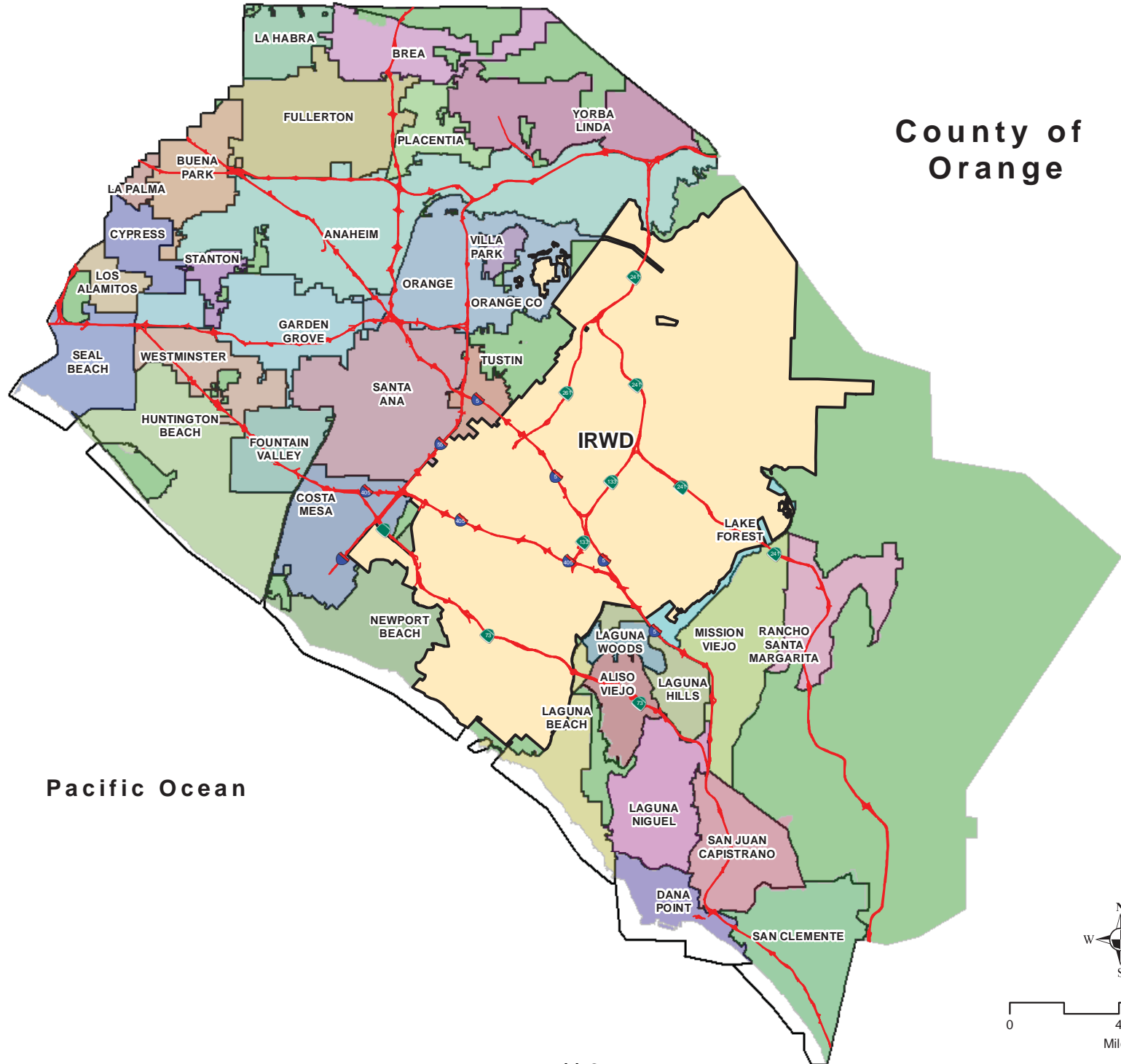
### 1.3 THE IMPROVEMENT DISTRICTS

**Historical Background.** At the time of the District's initial formation, the District's objective was to secure a supplemental water supply for irrigation and domestic use from The Metropolitan Water District of Southern California ("MWD"). This was accomplished through the installation of regional water transmission pipelines in cooperation with other districts in and the construction of the San Joaquin Reservoir, financed by the sale in 1961 and 1963 of general obligation waterworks bonds of the overall District aggregating \$10,500,000.

After the initial authorization of waterworks bonds for the overall District, all water and sewer bonds were authorized within improvement districts formed by the District to encompass specific geographic areas. The first improvement district formation occurred in 1965, when sewage collection and treatment were added to the District's powers and Improvement District No. 1, a sewer improvement district, was formed to provide financing for the District's first collection, treatment and reclamation systems. Between 1965 and 2008, the District formed 18 water improvement districts and 16 sewer improvement districts covering specific areas within the District's boundaries, some of them overlapping.



# County of Orange



Pacific Ocean

The District formed the improvement districts<sup>1</sup> in order to allocate funding responsibility for capital facilities to the areas which would benefit from such capital facilities. Local facilities addressed particular needs that varied by geographic area, proximity to existing infrastructure, elevation and other factors. Improvement districts were also used to separate areas based on projected timing of development so that local capital facilities construction could be matched to development approval decisions as they occurred. In addition, improvement districts served as a mechanism to share the funding of the District's regional facilities to be used by improvement districts in common, such as major water importation facilities and water and sewer treatment plants. The plans of works derived information from District planning documents and from land development plans as the basis for determining, for water improvement districts, the water requirements and the size, location and phasing of water delivery facilities to be constructed from the existing feeders and supply sources, and, for sewer improvement districts, the sewage generation and recycled water requirements and the size, location and phasing of sewer collection and recycled water delivery facilities to be constructed from the existing trunk sewers and recycled water distribution system to serve the various planning areas and service elevations or zones. As changes occurred in development planning, annexations and detachments were used to modify the boundaries of some of the improvement districts.

**Water Improvement Districts.** The initial financing of the District's water facilities was undertaken in the early 1960s with bonds of the District. During the 1970s, the District formulated a water facilities master plan and formed many of the water improvement districts that have existed until the current reorganization and consolidation. The first water improvement district to be formed was Improvement District ("ID") No. 104, formed in 1972, followed by the formation of ID Nos. 103 and 105 in 1974, and ID Nos. 102, 106 and 109 in 1976. When water improvement districts were formed, the District excluded lands (sometimes referred to collectively with the shorthand reference "110" in keeping with the District's numbering system for designating improvement districts) that were determined to have funded a portion of the District's earliest regional system costs through payment of debt service on general obligation waterworks bonds of the overall District in the 1960s.

ID No. 104 incorporated the coastal area of the District from the Pacific Ocean to the crest of the San Joaquin Hills. ID No. 103 covered the planned industrial and commercial developments, then known as the Irvine Center Planned Community or "Regional Triangle" and the Irvine Industrial Complex-East, in the vicinity of the intersection of the Santa Ana and San Diego Freeways and adjacent to the Marine Corps Air Station, El Toro. ID No. 105, containing about 22,000 acres in the northernmost portion of the District extending from the Santa Ana Freeway to the northerly, easterly and westerly boundaries of IRWD, was formed initially to build a pipeline to replace the Highline Canal System for the delivery of

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<sup>1</sup> Most of the improvement districts were formed by the District's Board of Directors, but Improvement district formation was in some cases accomplished by the District's predecessor district or the Orange County Local Agency Formation Commission, in the case of certain areas included in the District by annexation or consolidation with another district.

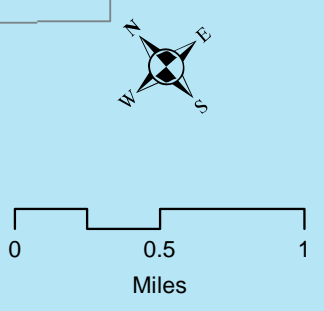
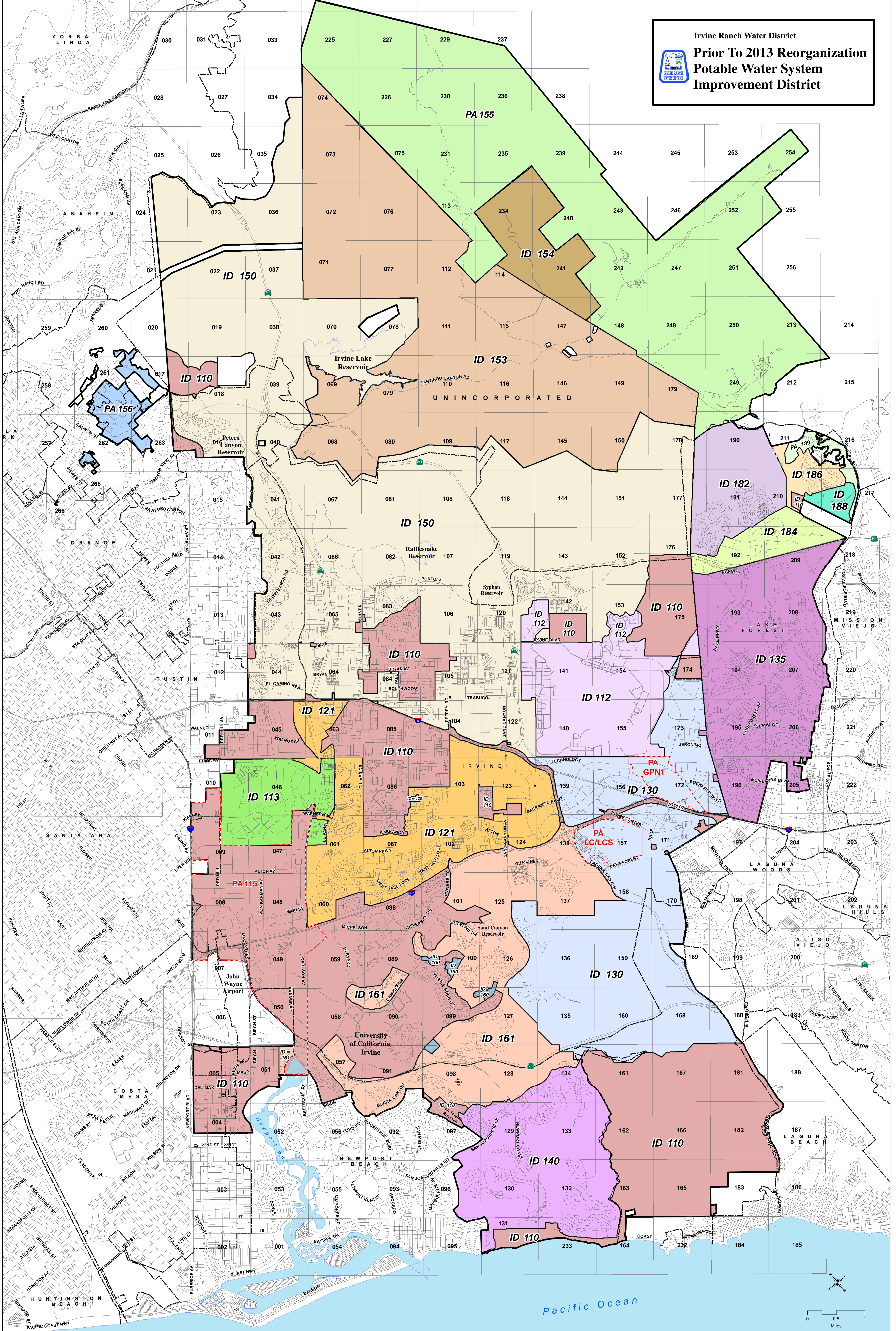
water from Irvine Lake for agricultural irrigation purposes; its first plan of works contemplated that these untreated water facilities would be augmented with later phases of works to deliver domestic water. ID No. 102 was formed to include the central part of Irvine, between the Santa Ana and San Diego Freeways. ID No. 106 encompassed the Turtle Rock, Quail Hill and Bonita Canyon areas of the San Joaquin Hills, extending north to the San Diego Freeway. ID No. 109 covered the portion of the San Joaquin Hills extending eastward from proposed Sand Canyon Avenue to the eastern boundary of the District.

As urban growth continued, further phases were added to the District's planned water system in the mid- to late 1970s, and it became necessary to increase the authorization of bonds to finance them. To accomplish that objective for some of the initial water improvement districts, the District revised the plans of works and elections were conducted to obtain supplemental bond authorizations (ID No. 103 in 1976, 1977 and 1978, ID No. 105 in 1976 and 1978, and ID No. 109 in 1978). In other improvement districts, the District formed overlapping improvement districts with new bond authorizations: ID Nos. 121, 141 and 142, and 161 were formed in 1978, overlapping portions of ID Nos. 102, 104, and 106, respectively.

Beginning in the late 1980s, other water improvement districts were formed as areas were added to the District by annexation and consolidation and as former military bases were closed and underwent reuse planning. In 1988, ID Nos. 182 and 184 were formed over the Foothill Ranch (Whiting Ranch) area located in the foothills and canyons north of El Toro in eastern Orange County, an area that was annexed to IRWD in 1982. ID No. 182 covered the northern, predominantly residential portion of this planning area and ID No. 184 covered the southern, predominantly commercial portion. Later in 1988, ID Nos. 186 and 188 were formed over the annexed Glenn Ranch area lying to the east of Foothill Ranch and including a portion of the community of Portola Hills. ID No. 186 covered the northern, predominantly residential portion of this planning area and ID No. 188 covered the southern, predominantly commercial portion.

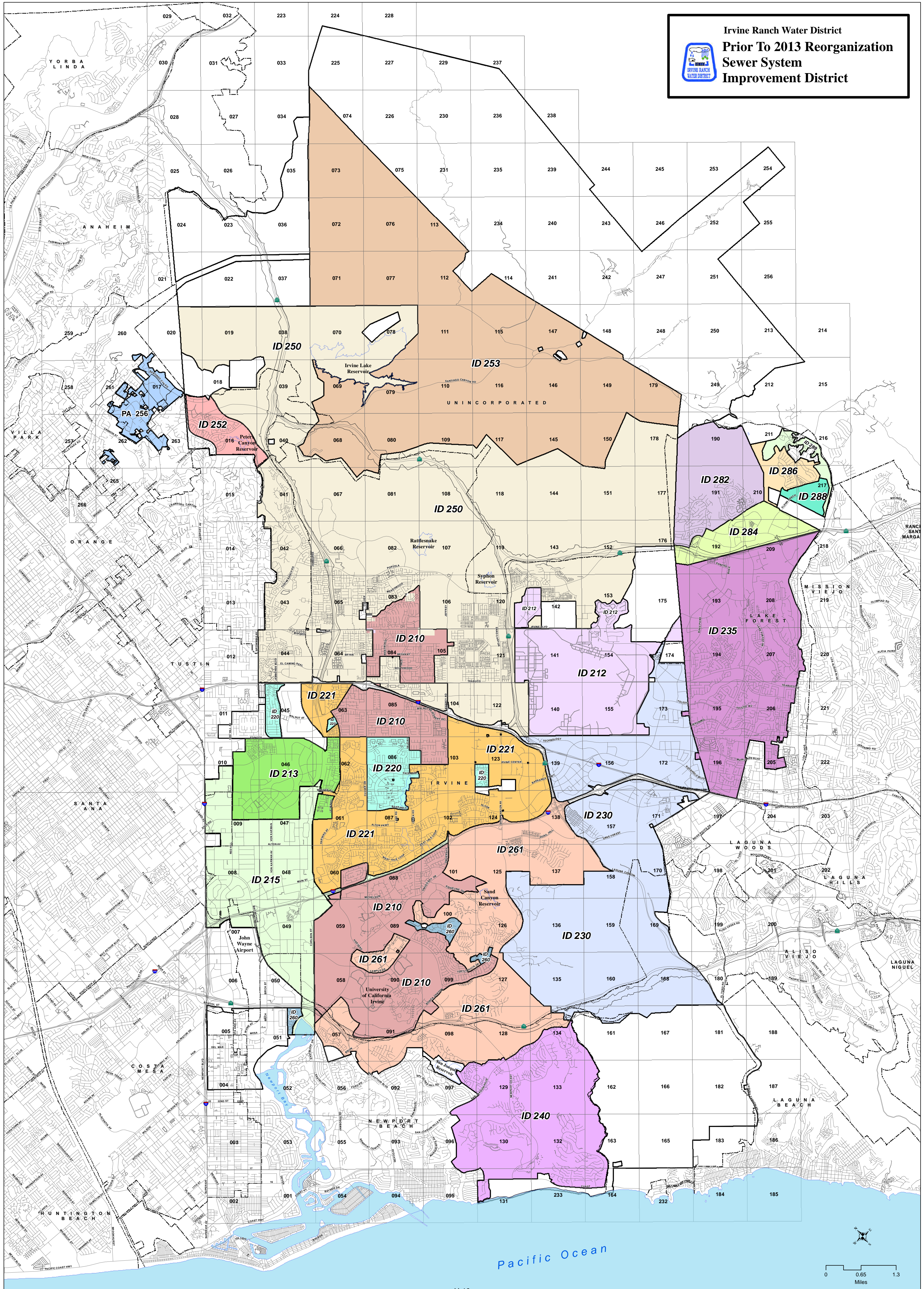


Irvine Ranch Water District  
**Prior To 2013 Reorganization  
 Potable Water System  
 Improvement District**





Irvine Ranch Water District  
 Prior To 2013 Reorganization  
 Sewer System  
 Improvement District





ID No. 135, encompassing the territory of the former Los Alisos Water District (“LAWD”), was formed as part of the proceedings for LAWD’s consolidation with IRWD on December 31, 2000, to provide a vehicle for issuing and servicing LAWD’s remaining water bond authorization. ID No. 135 lies to the northeast of the intersection of the Santa Ana and San Diego Freeways, and covers a majority portion of the City of Lake Forest.

ID No. 113 was formed in 2004 over the property within the former Marine Corps Air Station Tustin, a facility established in 1942 to support U.S. Navy lighter-than-air aircraft (blimps) conducting anti-submarine patrol off the California coast during World War II and later used to support Marine Corps helicopter operations until its closure in 1999. The former helicopter base, now known as Tustin Legacy, is currently being redeveloped with residential, commercial, institutional and recreational uses.

The formation of ID Nos. 153 and 154 took place in conjunction with the July 1, 2006 consolidation of the former Santiago County Water District (SCWD) with IRWD, to serve as the successors to two improvement districts formed by SCWD in 1978, ID No. 1 (water and sewer) in the area extending northward from Loma Ridge to the Fremont Canyon area, and ID No. 2 (water) including portions of Black Star, Baker and Hall Canyons. As part of the district consolidation, the majority of the territory of SCWD’s ID No. 1 became ID No. 153 (with respect to ID No. 1’s water bond authorization), and all of the territory of SCWD’s water ID No. 2 became ID No. 154 of IRWD.

The most recent IRWD water improvement district formation took place in 2008, when the District formed ID No. 112 over the lands in the eastern portion of the District north of the Santa Ana Freeway, within the former Marine Corps Air Station El Toro, a base originally established in 1942 to support U.S. Marine Corps aviation activities during World War II, and encompassing the planning areas now known as Heritage Field and the Great Park.

**Sewer Improvement Districts.** The first sewer improvement district to be formed by the District was Improvement District No. 1, in 1965. ID No. 1 encompassed an area lying south of the San Diego Freeway and ranging from two to seven miles inland from the Pacific Ocean, including most of the University of California Irvine campus. ID No. 1 assumed the obligations of Orange County Sanitation District No. 14 for the cost of a nucleus collection system when District No. 14 was disbanded,<sup>2</sup> and ID No. 1’s planned works also included a treatment plant and IRWD’s initial reclamation and reclaimed water storage facilities. ID No. 1 is presently known as ID No. 1(201) or “210.” Like “110”, the “210” area was excluded from later improvement district formations based on initial contribution.

After ID No. 1, sewer improvement district formations generally paralleled the water improvement district formations discussed in the preceding section. In the case of most of the improvement districts formed before 1978, each sewer improvement district preceded its water

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<sup>2</sup> The disbanded Sanitation District was the original “District No. 14.” Another District No. 14 of the Orange County Sanitation Districts was formed in 1986, over much of IRWD’s territory (except for the coastal portion within Orange County Sanitation District No. 5), for the purpose of acquiring regional collection, treatment and disposal capacity in the OCSD facilities to augment IRWD’s Michelson Water Reclamation Plant. See Section 1.4.



counterpart by a few years; after that, each water improvement district and its corresponding sewer improvement district were generally formed concurrently and were coterminous.

In 1971, sewer ID Nos. 2 (subsequently known as 202) and 3 (subsequently known as 203) were formed over areas generally corresponding to the areas that, a few years later, were included in water ID Nos. 102 and 103, described above. Their plans of works contemplated an expansion of the Michelson Water Reclamation Plant, dual collection and treatment systems for reclaimable domestic sewer and non-reclaimable industrial discharges, reclaimed water distribution facilities and wet weather treated sewer disposal. ID No. 204 was formed in 1972 at the same time as the corresponding water ID No. 104. ID No. 204's plan of works initially envisioned two systems delivering sewage from the coastal area, one discharging to a regional treatment and disposal system and the other to a local treatment plant to be built. Ultimately, the collection system was instead designed to deliver all of the sewage flow from ID No. 204 (and from the later-formed ID Nos. 241 and 242) to the interceptor and trunk sewers and regional treatment facilities financed by Orange County Sanitation District No. 5. ID No. 206 was formed in 1975, covering the area corresponding to ID No. 106 which was formed the following year.

As happened in the water system, the addition of further phases of facilities to the planned sewer system in the late 1970s made it necessary to increase the authorized bonds to finance them. In 1978, the District formed ID Nos. 221, 241, 242, 250, 261 and 290 (coterminous with the counterpart water ID Nos. 121, 141, 142, 105, 161 and 109, respectively).

Beginning in the 1980s, the addition of areas to the District by annexations and consolidations and the closure of former military bases generally led to the formations of sewer improvement districts at the same time as the corresponding water improvement district formations, described above.<sup>3</sup> ID Nos. 282, 284, 286 and 288 were formed in 1988 (coterminous with ID Nos. 182, 184, 186 and 188, respectively). ID No. 235, encompassing the territory of the former LAWD and coterminous with ID No. 135, was formed upon LAWD's consolidation with IRWD on December 31, 2000, to issue and service LAWD's remaining sewer bond authorization. Upon the July 1, 2006 consolidation of the former Santiago County Water District with IRWD, ID No. 253 (coterminous with ID No. 153) was formed as the successor to Santiago County Water District ID No. 1's 1978 sewer bond authorization). ID Nos. 213 (coterminous with ID No. 113) and 212 (coterminous with ID No. 112) were formed in 2004 and 2008, respectively. In 2008, ID No. 256 was formed through annexation proceedings that were conducted to include the former territory of Orange Park Acres Mutual Water Company in IRWD. ID No. 256 has no authorized bonds, but was formed to provide a potential vehicle for such authorization if and when the residents of the area, now served predominantly by septic tanks, determine to finance a public sewer collection system to allow a conversion to sewer service.

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<sup>3</sup> An improvement district unrelated to the addition of service area to the District, ID No. 252, was formed in 2005, encompassing a small portion of the area formerly within ID No. 250.

**Regional Allocation.** As the regional water system has been built, buy-ins and allocations among the improvement districts have been utilized to maintain proportionate sharing of regional system costs. Allocations among the improvement districts have similarly been utilized to maintain proportionate cost allocation of regional sewer system costs. Regional potable water and regional sewer allocations are based on demands. For the portion of the regional costs relating to the reclamation system, historically allocation was weighted, with two-thirds of the cost of the storage, transmission and disposal facilities making up the regional irrigation system allocated based on the improvement districts' prorated shares of the sewage generation and one-third of the cost prorated based on their share of irrigation water demands. That practice was subsequently discontinued, and the District instituted its current practice of establishing separate regional allocations for sewer facilities, based on sewage generation, and recycled water facilities, based on recycled water demand, for each sewer improvement district. Cost variations among tributary collection system areas have also been factored into the regional sewer allocation. The regional split for the area within ID No. 240 reflects that ID No. 240 has participated in the financing of the Orange County Sanitation District's treatment facilities and does not discharge sewer to the MWRP collection system.

Regional allocation includes facilities serving all improvement districts as well as sub-regional facilities serving two or more, but not all, improvement districts. Consistent with regional allocation, as certain areas were added to IRWD's service area through annexations, consolidations, and military base conversions, in some areas acquisition balances were established to recover regional system cost, and in others new improvement districts were formed to assure that those areas would contribute proportionately to regional facilities and pay for local facilities and expanded regional facilities to serve their demands. Regional allocation will continue to be used with the reorganized improvement districts to assure proportionate cost-sharing of the District's regional system.

Under the District's historic and continuing methodology for achieving equitable cost allocation, the improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. A similar regional allocation would be applied to replacement and enhancement projects, to the extent funded by the improvement districts. This incremental funding approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service.

As discussed in more detail in Section 6, the District will also allocate future regional cost sharing to "110" areas excluded from earlier improvement district capital funding, based upon an analysis of historic cost contributions of these areas.

**Consolidation of Improvement Districts.** As development progresses to completion in improvement districts and the need for having separate improvement districts to match capital facilities construction timing and other specific local facilities needs of different geographic areas diminishes, consolidation of various improvement districts can produce efficiencies for the District, its customers

and property owners. The California Water Code allows the Board of Directors, in a noticed hearing process, to reorganize its improvement district boundaries and to consolidate coterminous improvement districts. The statutory provisions for the consolidation of improvement districts specify that a consolidated improvement district may levy and collect the assessments and charges necessary to satisfy the obligations of its predecessor improvement districts, and that the authorized and unissued bonds of the predecessor improvement districts may be issued and sold as the bonds of the consolidated improvement district.

Ultimately, the District envisions a succession plan that would reduce the number of its improvement districts, ideally to one water improvement district and one sewer improvement district, through consolidations and reorganizations to be implemented as and when considerations for separation of the various improvement districts no longer remain. The current reorganizations and consolidations significantly advance this plan. The timing of the remainder of this plan will be dictated by various factors relating to the preservation of equitable cost sharing as development continues to build-out and as the regional system benefits for various geographic areas are merged.

**Previous Consolidations.** Under the statutory consolidation provisions, some of the original improvement districts described in the preceding sections have been consolidated. The consolidations that were implemented prior to the current consolidation included two groups of the original improvement districts. The first of these consolidations took place in the coastal area. In 1989, after completing annexations to and detachments from ID Nos. 104, 141 and 142 to exclude permanent open space areas and create coterminous boundaries for the improvement districts' remaining territories, they were consolidated, with the resulting consolidated improvement district designated as ID No. 140. Simultaneously, ID Nos. 204, 241 and 242 were consolidated as coterminous improvement districts, with the resulting consolidated improvement district designated ID No. 240. Following a similar process in 2008, ID Nos. 103 and 109 were consolidated and designated as ID No. 130 and ID Nos. 3(203) and 290 were consolidated and designated as ID No. 230.

**The Current Consolidations and Reorganizations.** With the 1989 and 2008 improvement district consolidations, the District began to implement a transition of its improvement district financing structure from a developing to a developed condition. The current consolidations continue that transition. Based on the District's investigation of the merits of implementing further reorganization and consolidation of its improvement districts, the current reorganization and consolidation have been formulated on a comprehensive, District-wide basis, to provide a sustainable platform for capital funding through the build-out of the District and the completion of the system. The current reorganization and consolidation preserve the District's long-term funding approach in which regional facilities and capacity are acquired incrementally by all improvement districts until the regional system as a whole is complete and regional cost allocations are used to maintain equitable cost-sharing. The interrelated consolidation actions, expected to be effective January 1, 2014, include the following key components:



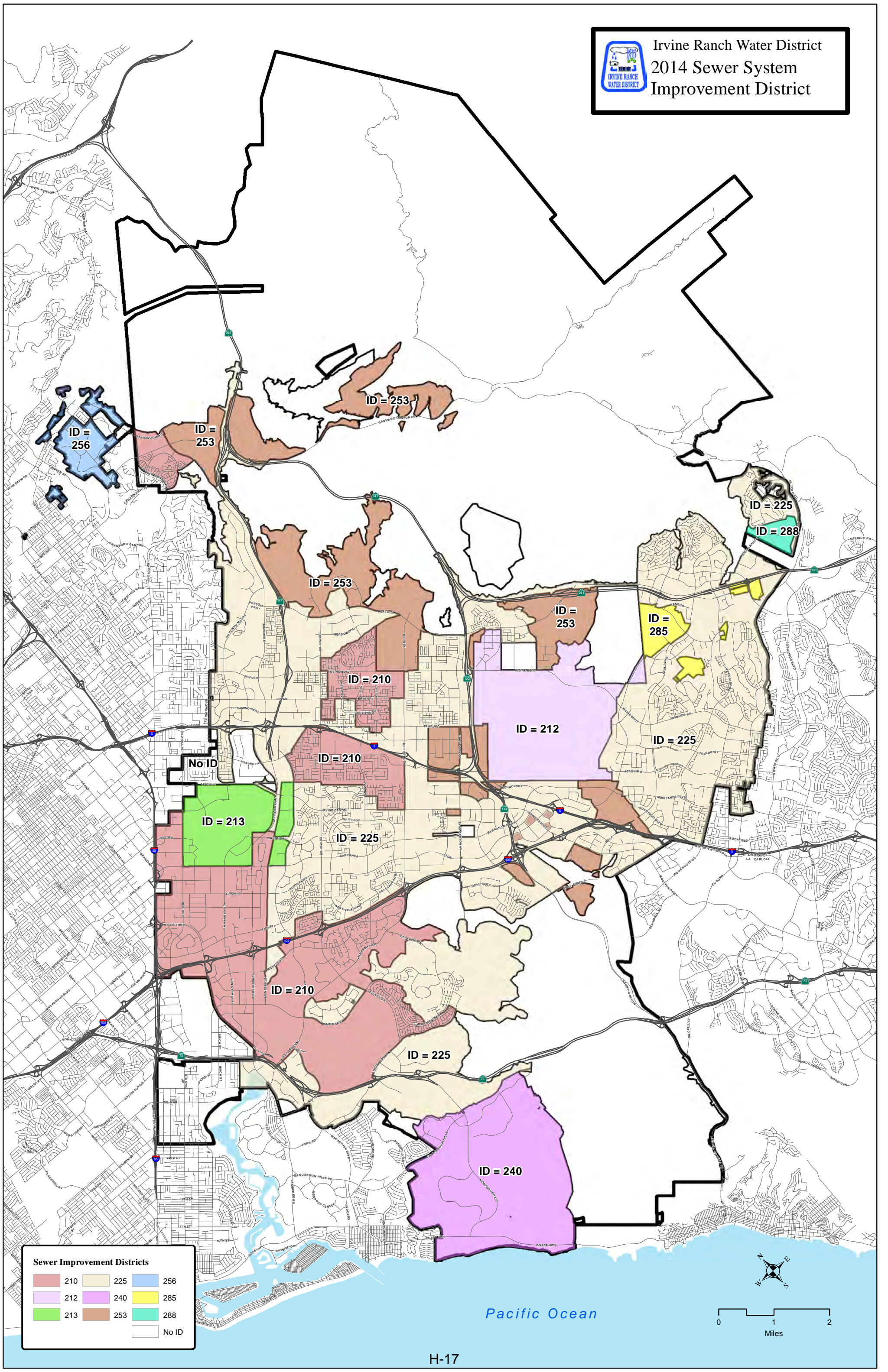
- Reorganization and consolidation of the substantially developed and certain partially developing improvement districts into a single water improvement district and a single sewer improvement district, ID Nos. 125 and 225;
- Reorganization of several remaining developing areas into one existing and one new water improvement district (ID Nos. 153 and 185) and one existing and one new sewer improvement district (ID Nos. 253 and 285). These developing areas are also retained within the improvement districts reorganized and consolidated as ID Nos. 125 and 225, with the effect that ID Nos. 125 and 225 will underlay these developing improvement districts and ensure cost participation of these developing improvement districts in local and sub-regional facilities already built by the former improvement districts being consolidated (see Chapter 6);
- Retention of existing ID Nos. 112, 113, 188, 212, 213 and 288 as separate developing improvement districts;
- Retention of existing ID Nos. 154, 252 and 256 pending future evaluation of applicable equity considerations;
- Establishment of a planning area over the area of former ID No. 135, consolidated within the developed water improvement district ID No. 125, until completion of financial programs currently in progress to place the former ID No. 135's user rates under the same structure as other developed areas;
- Retention of existing ID No. 240 as a separate improvement district, unless and until separate regional sewer cost allocations are no longer necessary;
- Implementation of separate charges or other mechanisms, as necessary, to recover a proportional allocation of cost for future regional facilities from the "110" and "210" areas that are not participating in proportional regional cost allocation by inclusion in an improvement district.

Throughout the construction of the District's capital facilities, the District has separated the financing of its water and sewer (including recycled water) systems. The District believes this historical separation continues to be justified, based on differences between the two systems in terms of the factors that govern the allocation of benefits and cost responsibilities among the areas served by each system. For this reason, the above described actions do not include any consolidations of water improvement districts with sewer improvement districts, and the District has no plans at this time to do so. The separation can be reexamined in the future.



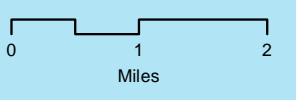






**Sewer Improvement Districts**

210	225	256
212	240	285
213	253	288
No ID		





#### 1.4 THE WATER, SEWER AND RECYCLED WATER SYSTEMS

**The Water System.** The initial domestic water system included the San Joaquin Reservoir<sup>4</sup> and IRWD's capacity in the East Orange County Feeder No. 2 and other transmission facilities, financed by the sale of general obligation waterworks bonds of the overall District in the 1960s. The District also acquired from the U.S. Government an 18-inch transmission main used to deliver a water supply to the Tustin and El Toro military bases from Metropolitan Water District's East Orange County Feeder and later from East Orange County Feeder No. 2. For the delivery of untreated water supplies, the District acquired capacity in the regional untreated delivery system of the Santiago Aqueduct Commission.

The District's Water Resources Master Plan ("WRMP"), initially formulated in 1972 and updated periodically, sought to provide for ultimate demands and reliability. With the formation of the first few improvement districts and the authorization and sale of improvement district bonds in the early 1970s, the system was expanded, adding local master planned facilities for each of the developing areas as development progressed and building the regional system in which the improvement districts participated in proportion to their demands. Through cooperative efforts with Municipal Water District of Orange County ("MWDOC"), neighboring water districts and cities, an areawide system was acquired, storage was constructed and transmission pipelines were acquired and installed to receive Colorado River imports via MWD facilities. This supplemental source of water was augmented by northern California supplies with commencement of deliveries through the State Water Project system in July, 1976.

In 1978, additional water capacity needed to serve the District was estimated at 140 cubic feet per second ("cfs") (ultimate peak month demand). A supplementary water source plan envisioned in the 1970s and embodied in the 1978 plans of works consisted of the purchase of a 60 cfs share of a proposed regional pipeline (then known as the "Diemer Intertie" and now known as the Allen McColloch Pipeline or "AMP") and an 80 cfs wellfield in the main Orange County groundwater basin. The AMP was constructed by MWDOC, with 79 cfs participation by IRWD, and IRWD constructed two transmission mains capable of supplying 45 cfs from AMP into the distribution system. These facilities, along with two wells in the Tustin area with a combined capacity of 4 cfs, and the Zone 1 Reservoir to provide internal operational storage and avoid the need to supply peak hour demands from feeder connections, comprised the first phase of the domestic water system. Construction of the 80 cfs wellfield, known as the "Dyer Road Wellfield," took place in the 1980s.

As the domestic water system was built, it was anticipated that commercial agriculture would be phased out by residential, industrial and commercial development, and it was assumed that the existing irrigation system would provide agricultural water until no longer needed. The cost of the untreated

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<sup>4</sup> The San Joaquin Reservoir was initially constructed as a domestic water facility. Due to water quality considerations, that use was eventually discontinued, and IRWD acquired the facility from its agency partners and converted it to a recycled water seasonal storage facility.

water system and its supply, storage and transmission facilities, consisting of the Irvine Lake Pipeline and improvements to Irvine Lake, were apportioned primarily to ID No. 105. In the 1970s, the ID No. 105 plans of works noted that the Irvine Lake Pipeline supply would require treatment for use as a domestic water supply, and an untreated delivery system from Irvine Lake, through either the Santiago Aqueduct Commission facilities or a new Irvine Lake Pipeline, as well as a treatment plant identified in the 1972 WRMP, were included in the planned works for that improvement district.

In the early to mid 1980s, as the district's water supply needs were updated, other regional system improvements were planned and financed by the improvement districts, including the continued construction of the regional supply, transmission and storage facilities, administration and operations facilities and telemetry.

The AMP, Dyer Road Wellfield and major delivery facilities were completed as contemplated in the existing plans of works. With those core imported and groundwater supply and delivery facilities and the associated distribution system in place, the District's current WRMP targets a reliable water supply mix and includes the development of sufficient groundwater production capacity to pump up to the District's basin production percentage set by the Orange County Water District.

In accordance with current IRWD policy, basic operational reliability and redundancy for the water system is evaluated with reference to the capacity needed to sustain an outage of a major supply system component, assuming demand reduction obtainable through customer cooperation.

Wells in addition to those in the Dyer Road Wellfield have been constructed or improved in Orange Park Acres, Lake Forest and Irvine to provide additional groundwater supplies. The groundwater production and treatment components of the Irvine Desalter Project produce both domestic and recycled water supplies

In 2009-10, the District commenced the engineering design for a new water treatment plant, the Baker Water Treatment Plant (the "Baker WTP"). Construction of the Baker WTP is anticipated to be complete in July 2015. This project, to be constructed by the District in cooperation with neighboring water districts, will improve operational supply capacity and regional reliability through the treatment of local and imported raw water sources to drinking water standards. When constructed, the Baker WTP is expected to treat to drinking water standards approximately 28 million gallons per day ("mgd") of raw imported water purchased from MWD. During emergencies and planned raw imported water outages, water from Irvine Lake is expected to be supplied to the Baker WTP for treatment to drinking water standards. The Baker WTP will utilize microfiltration and ultraviolet disinfection as the primary treatment processes.

In addition to developing its water treatment, local groundwater and recycled water systems, the District is diversifying its water supply portfolio by developing water banking projects for dry year reliability. These projects include the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project, situated on groundwater recharge lands that overlie the regional Kern

County groundwater basin. The District has also secured access to certain participation rights in the Kern Water Bank to store water. The purpose of developing banking facilities is to improve the District's water supply reliability by enabling the District to store lower cost water it can acquire during wet hydrologic periods for use during dry periods. The District has entered into arrangements to acquire water for banking, including unbalanced exchanges and other transactions. The banking facilities will enhance the District's ability to respond to drought conditions and potential water supply interruptions and will provide the District the ability to reduce the cost of water delivered under such conditions. The District has also entered into an agreement with MWD and MWDOC to provide a means to deliver banked water to the District's service area.

**The Sewer System.** The District's powers did not include sewage collection and treatment when the District was formed. When the District's principal act, the California Water District Law, was amended to permit California water districts to provide sewage services subject to voter approval, voters of the District approved the added scope of services at an election held in March, 1965.

The District began the construction of a sewer system with the bonds of ID No. 1 issued in 1966 and subsequent bonds issued on behalf of ID Nos. 2(202) and 3(203). In addition to the nucleus sewage collection system acquired from Orange County Sanitation District No. 14, the original planned works included a treatment plant, reclamation and reclaimed water storage facilities. Subsequent plans of works contemplated an expansion of the Michelson Water Reclamation Plant, dual collection and treatment systems for reclaimable domestic sewer and non-reclaimable industrial discharges, reclaimed water distribution facilities and wet-weather treated sewer disposal.

The Michelson Water Recycling Plant ("MWRP"), then known as the Michelson Water Reclamation Plant, has been expanded in phases. The most recent expansion, anticipated to be completed during fiscal year 2014, will bring its capacity from 18 to 28 mgd. The District's sewer system also includes facilities and contractual entitlements to serve the portions of its service area in the coastal, Lake Forest and Santa Margarita ("Chiquita") areas not tributary to MWRP, as well as regional treatment capacity in the facilities of Orange County Sanitation District for the sewage from the MWRP-tributary area that is in excess of its needs for production of recycled water.

The sewer system to serve the coastal area not tributary to MWRP was first envisioned as two systems, one discharging to a regional treatment and disposal system and the other to a local treatment plant to be built. Ultimately, the collection system for the coastal area was instead designed to deliver all of the sewage flow to the regional collection and treatment facilities of Orange County Sanitation District No. 5.

During fiscal year 1986, the District cooperated with Orange County Sanitation District ("OCSD") to form Sanitation District 14 (functionally replaced by "Revenue Area 14" of OCSD, upon the 1998 consolidation of the several sanitation districts comprising OCSD's predecessor, the County Sanitation Districts of Orange County), which overlays much of the District's territory other than the coastal area. Under an agreement entered into between the District and OCSD, the District acquired equity interests



in OCSD's sewage processing facilities (the percentage of interest will vary over time pursuant to a formula set forth in the agreement between OCSD and the District). The agreement also provides for the purchase by the District of additional capacity in OCSD sewage processing facilities on an as-needed-basis determined from annual flows. These equity purchase costs are included in the costs regionally allocated to the improvement districts.

In 2000, as part of the consolidation of Los Alisos Water District with the District, the Los Alisos Water Reclamation Plant ("LAWRP") was added to the sewer system. Currently, approximately 85% of the District's sewer is treated by the MWRP and LAWRP operated by the District, and approximately 14% is treated by OCSD.

A future MWRP expansion up to 33 mgd has undergone environmental review and is planned by 2025, as needed to meet demand. Ultimately, the District plans to expand capacity for its treatment facilities to approximately 40.5 mgd in order to: (i) increase recycled water production and utilization; (ii) decrease exposure to external treatment costs and operational constraints; and (iii) decrease dependencies on imported water supplies.

The construction of IRWD's regional sewer system also includes the network of gravity sewers, force mains, sewer lift stations and siphons that convey sewer to each treatment facility, which was developed as the system was expanded.

The processes for treating sewage and producing recycled water generate solids residuals. After evaluating alternative approaches to handling its sewer solids, the District is proceeding with the construction of facilities for handling MWRP solids, currently conveyed to Fountain Valley for treatment by OCSD, as well as solids from the District's LAWRP. The solids handling capital project is underway and is anticipated to be completed in fiscal year 2017.

**The Recycled Water System.** In addition to the water reclamation facilities described under the preceding subheading, the recycled water system consists of a dual system for distribution of the recycled water, primarily for irrigation, and seasonal storage to allow production in the low-demand winter season for use in the high-demand summer season. These facilities presently include the District's Sand Canyon, Rattlesnake Canyon, and San Joaquin Reservoirs, which are recycled water reservoirs with capacities of 750 acre feet, 1,100 acre feet, and 2,500 acre feet respectively. In addition to the future expansion of reclamation capacity, based on demand as described above relative to the sewer system, the District plans to increase seasonal storage capacity. At this time, the expansion of Syphon Reservoir is being evaluated for that purpose. The cost of the Syphon expansion or a comparable seasonal storage project is included in the proposed sewer plans of works. As stated above, the recycled water system regional and local costs comprise a part of regional and local sewer costs under the plans of works.

**Enhancement and Replacement.** Apart from the ongoing system expansion and completion that will continue to build-out, the District has incorporated in its system planning efforts the updating

of its infrastructure to meet the needs of existing and future customers. These system enhancement efforts will include capital projects that provide service cost savings and projects that provide reliability or redundancy beyond that necessary to satisfy the District's policy for basic reliability. Replacement and refurbishment improvements consist of repairs and restoration to existing water, recycled water and sewer system facilities. The District presently funds enhancement and replacement costs from reserves set aside for that purpose with contributions from user rates, general 1% tax levy revenues and other sources. The District may also evaluate the funding of enhancement and replacement costs through the improvement districts to the extent authorized general obligation bonds are available for such purposes and the enhancement and replacement costs are allocable among improvement districts and other funding sources in a fair and equitable manner.

## SECTION 2 IMPROVEMENT DISTRICT NO. 285

### 2.1 DESCRIPTION OF THE STUDY AREA

ID No. 185, represented the majority of the future development area of ID 135 (former Los Alisos Water District). The development areas included in the newly formed ID No. 185 include development areas identified in the City of Lake Forest's Opportunity Study Area, which identified properties zoned predominately as commercial and industrial but as a result of the closing of the El Toro Marine Corp Air Station were eligible to be converted to residential. The resulting Improvement District No. 185 is a developing improvement district that will function in tandem with existing ID Nos. 212 (former MCAS El Toro), 113 (former MCAS Tustin) and 188 (Portola Center) and new ID No. 153, where development is underway, to provide equitable regional capital cost sharing by the District's developing areas.

To simplify the text of this report, "north" refers to "Irvine north" running parallel to Sand Canyon Avenue. North arrows on exhibits show true north.

### 2.2 LAND USE AND DEVELOPMENT PHASING

**Land Use.** The District expects future development of the reorganized ID No. 185 to be predominantly residential with supporting commercial development, and expects development in ID No. 285 to continue through at least 2035. **Figure II-1** shows the boundaries and proposed land use of newly formed ID No. 185, encompassing about 578 acres.

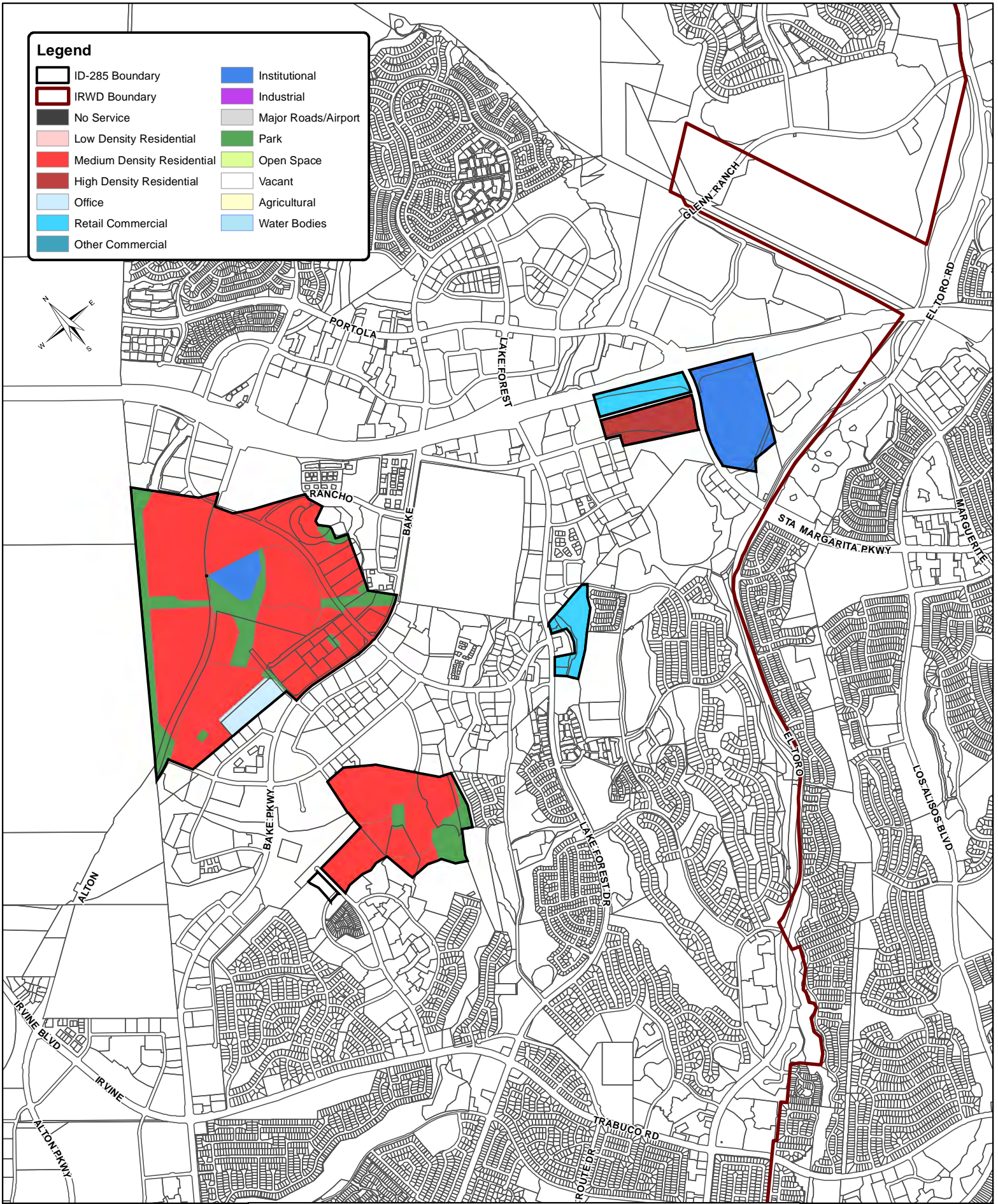
**Development Phasing.** This Plan of Works follows and incorporates the phasing used in the subarea master plans applicable to the various planned development areas.

Phasing of development is subject to change. Depending upon real estate markets, city planning decisions and other factors, some phases or portions of phases could occur simultaneously rather than sequentially. The phasing of bond issues discussed in Section 5, have been selected to allow reasonable flexibility in phasing priorities.



**Legend**

	ID-285 Boundary		Institutional
	IRWD Boundary		Industrial
	No Service		Major Roads/Airport
	Low Density Residential		Park
	Medium Density Residential		Open Space
	High Density Residential		Vacant
	Office		Agricultural
	Retail Commercial		Water Bodies
	Other Commercial		



### 2.3 DEMAND AND PEAKING FACTORS

**Water Use Factors.** **Table II-1** reflects most recently adopted duty factors from the IRWD Water Resources Master Plan (WRMP), summarizing the District's standard interior and exterior water use factors. The District employ local interior water use factors, shown in the table, as its sewer duty factors. Irrigation factors used to determine recycled water demands are also shown in the table. The factors in **Table II-1** were also used to develop **Table II-2**

**Peaking Factors.** Potable water peaking factors, irrigation peaking factors, applied in calculation for sizing respective facilities, are set forth in the WRMP. Sewer peaking, applied in calculation for sizing sewer collection and treatment facilities, are set forth in the SCSMP.

**Table 3-1 Land Use and Water Use Factors (September 2012)**

Code	Land Use Description	Land Use Agency	Land Use Density		Local Demands			Irrigation Demands	
			Average	Units	Local - Interior	Local - Exterior	Total Local	% Irrigated Area	Irrigation Factor
<b><u>1100</u></b>	<b><u>Residential</u></b>				<b><u>Gal/DU/Day</u></b>			<b><u>Gal/Acre/Day</u></b>	
1111	Rural Density	Orange	0.3	du/acre	250	170	420	0%	1,000
1112	Rural Density	Irvine	0.3	du/acre	250	750	1,000	5%	2,800
1115	Rural Density	County	0.26	du/acre	300	350	650	5%	2,800
1121	Estate Density	Orange	1.2	du/acre	300	350	650	5%	2,800
1122	Estate Density	Irvine	0.5	du/acre	300	225	525	5%	2,800
1126	Estate Density	Lake Forest	0.5	du/acre	300	350	650	7%	3,000
1131	Low Density	Orange	4	du/acre	300	350	650	8%	2,500
1132	Low Density	Irvine	3	du/acre	225	180	405	16%	2,200
1133	Low Density	Newport Beach	1	du/acre	290	220	510	17%	2,800
1134	Low Density PC	Tustin	4.5	du/acre	450	1,550	2,000	17%	2,800
1135	Suburban Density	County	9.25	du/acre	165	95	260	15%	2,500
1136	Low Density	Lake Forest	3	du/acre	270	150	420	20%	2,800
1141	Low-Medium Density	Orange	10.5	du/acre	235	145	380	15%	2,500
1146	Low-Medium Density	Lake Forest	11	du/acre	205	150	355	10%	3,000
1153	Medium-Low Density	Newport Beach	2.75	du/acre	400	350	750	10%	2,800
1161	Medium Density	Orange	19.5	du/acre	200	150	350	15%	2,800
1162	Medium Density	Irvine	7.5	du/acre	200	100	300	15%	2,800
1163	Medium Density	Newport Beach	5	du/acre	225	205	430	20%	2,800
1164	Medium Density PC	Tustin	11.8	du/acre	155	95	250	15%	2,800
1166	Medium Density	Lake Forest	7.5	du/acre	140	60	200	15%	2,800
1172	Medium-High Density	Irvine	17.5	du/acre	130	30	160	22%	2,400
1175	Urban Density	County	29	du/acre	140	45	185	20%	2,800
1176	Medium-High Density	Lake Forest	17.5	du/acre	145	70	215	17%	2,500
1182	High Density	Irvine	32.5	du/acre	130	13	143	20%	2,800
1183	High Density	Newport Beach	12.25	du/acre	115	10	125	20%	3,200
1184	High Density PC	Tustin	17.4	du/acre	115	10	125	15%	2,800
1186	High Density	Lake Forest	32.5	du/acre	115	10	125	20%	2,800
1191	High Rise Density	Orange	35	du/acre	115	10	125	20%	2,800
1192	High Rise Density	Irvine	40	du/acre	115	10	125	20%	2,800
<b><u>1200</u></b>	<b><u>Commercial</u></b>				<b><u>Gal/KSF/Day</u></b>			<b><u>Gal/Acre/Day</u></b>	
1210	General Office		20	ksf/acre	62	10	72	20%	2,500
1221	Community Commercial		9	ksf/acre	142	33	175	20%	3,500
1222	Regional Commercial		10	ksf/acre	130	10	140	20%	3,500
1230	Commercial Recreation		8	ksf/acre	41	20	61	30%	3,000
1235	Hotel		45	rooms/acre	110	50	160	30%	2,800
1240	Institutional		8	ksf/acre	30	15	45	30%	2,750
1244	Hospital		9	ksf/acre	165	65	230	30%	2,850
1260	School		10	ksf/acre	20	8.0	28.0	50%	2,500
1261	UCI		10	ksf/acre	215	15	230	40%	3,800
1273	Military Air Field		0	ksf/acre	0	0	0	0%	0
1290	Hotel		45	rooms/acre	110	50	160	30%	2,800
1300	Industrial		9.091		600	25	625	20%	2,800
1310	Industrial - Light		18	ksf/acre	60	10	70	20%	2,800
1320	Industrial - Heavy		25	ksf/acre	2,000.0	18	2,018	20%	2,800
	<b><u>Open Space and Other</u></b>							<b><u>Gal/Acre/Day</u></b>	
1411	Airports		0	acre/acre	0	0	0	0%	0
1413	Freeways & Major Road		0	acre/acre	0	0	0	0%	0
1820	Community Park		1	acre/acre	0	0	0	86%	2,200
1830	Regional Park		1	acre/acre	0	0	0	75%	2,200
1840	Fuel Modification Zone		1	acre/acre	0	0	0	100%	1,000
1850	Wildlife Preserve		0	acre/acre	0	0	0	0%	0
1880	Open Space (Rec)		0	acre/acre	0	0	0	0%	0
1900	Vacant		1	acre/acre	0	0	0	0%	0
4100	Water		0		0	0	0	0%	0
<b><u>2000</u></b>	<b><u>Agriculture</u></b>			<b><u>acre/acre</u></b>				<b><u>Gal/Acre/Day</u></b>	
2100	Low-Irrigated AG Potable		1	acre/acre	0	0	0	80%	1,800
2110	Low-Irrigated AG Untreated		1	acre/acre	0	0	0	80%	1,800
2120	Low-Irrigated AG Recycled		1	acre/acre	0	0	0	80%	1,800
2200	High-Irrigated AG Potable		1	acre/acre	0	0	0	80%	3,100
2210	High-Irrigated AG Untreated		1	acre/acre	0	0	0	80%	3,100
2220	High-Irrigation AG Recycled		1	acre/acre	0	0	0	80%	3,100



**Table II-2 - Treated Water Demand:** Tabulates the average daily water demand at build-out (2035) within the reorganized ID No. 153 [185] service area, using the District's *demand forecasting tool*.

Land Use Code	Description	Land Use Agency	2035 Recycled Water Demands (AFY)
<b><u>Residential</u></b>			
1135	Suburban Density	County	184.7
1136	Low Density	Lake Forest	422.7
1166	Medium Density	Lake Forest	155.5
1176	Medium-High Density	Lake Forest	92.7
1186	High Density	Lake Forest	66.5
<b><u>Commercial</u></b>			
1210	General Office		11.5
1221	Community Commercial		44.8
1240	Institutional		22.4
1260	School		4.3
<b><u>Other</u></b>			
1820	Community Park		0.3
1830	Regional Park		0.6
2200	High-Irrigated AG Potable		336.7

**Total**

**1,342.6 AFY**

## SECTION 3 REGIONAL FACILITIES

### 3.1 DESCRIPTION

Through the current consolidation process, 11 of IRWD's 16 water improvement districts will be consolidated into a single improvement district, containing both lands where development is essentially completed, as well as certain remaining lands proposed for development that are also included in reorganized ID No. 153 and newly formed 185. Existing water ID Nos. 112, 113, 154 and 188 are not included in the reorganization or consolidation actions. Regional water project costs will continue to be allocated to each water improvement district based on that improvement district's pro-rata share of the ultimate IRWD treated water demand.

Under the District's methodology for achieving equitable cost allocation, the improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. This incremental funding approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service.

For purposes of maintaining equity in facilities cost allocation, IRWD employs multiple treated water regional splits. For example, one regional split may include all IDs; another may include some IDs and exclude one or more IDs (sometimes referred to as a "sub-regional project"). In the latter instance, that split is applied to the cost of all projects that provide no benefit to the excluded improvement district(s); an improvement district would be included only in the regional splits for the projects from which it does derive benefit.

In this Plan of Works, the appropriate regional split has been applied to existing and proposed treated water supply, storage and transmission facilities needed to provide an adequate and reliable water system meeting the ultimate needs of ID No. 185.

Periodically, IRWD revises its treated water improvement district regional allocation to reflect changes in demand factors, land use planning, phasing of planned development and other factors which may influence treated water demands, either within a specific improvement district or throughout IRWD. Revised regional splits are applied prospectively. The regional cost allocations known as regional splits are calculated based on IRWD's internal water demand forecasting tool.

### 3.2 COST ESTIMATES AND REGIONAL ALLOCATION

A description and cost estimate of the proposed regional domestic water facilities share allocated to ID No. 185 is shown in **Table III-1**.

As noted in the Introduction, the projects identified here may change to reflect changes in land use and development phasing. For purposes of determining the allowance for deferred costs, the project costs have been escalated at 10% per year.



## Table III-1 Regional Projects Proposed Facilities and Estimated Escalated Costs Improvement District 185

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
10204	LAKE FOREST WELL 8 DRILLING	Regional	1.6%	\$8,883	\$4,193	\$4,689	\$0	\$0
10205	LAKE FOREST WELL 8 WELLHEAD	Regional	1.6%	\$9,008	\$3,582	\$5,426	\$0	\$0
10294	LAKE FOREST WELL 6 DRILLING	Regional	1.6%	\$8,883	\$4,193	\$4,689	\$0	\$0
10295	LAKE FOREST WELL 6 WELLHEAD	Regional	1.6%	\$9,008	\$3,582	\$5,426	\$0	\$0
10391	DATS & WELL 77 LEASE PAYMENT 13/14	Regional	1.6%	\$7,499	\$7,499	\$0	\$0	\$0
10392	DATS & WELL 77 LEASE PAYMENT 14/15	Regional	1.6%	\$8,577	\$8,577	\$0	\$0	\$0
10393	DATS & WELL 77 LEASE PAYMENT 15/16	Regional	1.6%	\$9,865	\$683	\$9,181	\$0	\$0
10394	DATS & WELL 77 LEASE PAYMENT 16/17	Regional	1.6%	\$11,393	\$0	\$11,393	\$0	\$0
10395	DATS & WELL 77 LEASE PAYMENT 17/18	Regional	1.6%	\$13,101	\$0	\$13,101	\$0	\$0
10396	DATS & WELL 77 LEASE PAYMENT 18/19	Regional	1.6%	\$15,098	\$0	\$15,098	\$0	\$0
10397	DATS & WELL 77 LEASE PAYMENT 19/20	Regional	1.6%	\$17,400	\$0	\$17,303	\$96	\$0
10428	51 & 52 WELLHEADS, PIPELINE & TREATMENT	Regional	1.6%	\$646,579	\$0	\$646,579	\$0	\$0
11055	ENG PLANNING STUDY RESERVE 13/14	Regional	1.6%	\$3,494	\$3,494	\$0	\$0	\$0
11056	ENG PLANNING STUDY RESERVE 14/15	Regional	1.6%	\$3,843	\$3,843	\$0	\$0	\$0
11057	ENG PLANNING STUDY RESERVE 15/16	Regional	1.6%	\$4,228	\$0	\$4,228	\$0	\$0
11096	GIS SUPPORT APPLICATIONS 13/14	Regional	1.6%	\$1,060	\$1,060	\$0	\$0	\$0
11097	GIS SUPPORT APPLICATIONS 14/15	Regional	1.6%	\$1,165	\$1,165	\$0	\$0	\$0
11129	HYDRAULIC MODELING 13/14	Regional	1.6%	\$776	\$776	\$0	\$0	\$0
11131	HYDRAULIC MODELING 14/15	Regional	1.6%	\$854	\$854	\$0	\$0	\$0
11163	CROSS VALLEY CANAL CAPACITY PURCHASE	Regional	1.6%	\$1,522	\$1,522	\$0	\$0	\$0
11218	BAKER WTP	Regional	1.6%	\$1,435,739	\$916,594	\$519,145	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
11271	OCWD ANNEXATION FEE 14/15	Regional	1.6%	\$8,282	\$8,282	\$0	\$0	\$0
11275	OCWD ANNEXATION FEE 15/16	Regional	1.6%	\$9,386	\$0	\$9,386	\$0	\$0
11277	OCWD ANNEXATION FEE 16/17	Regional	1.6%	\$10,631	\$0	\$10,631	\$0	\$0
11278	OCWD ANNEXATION FEE 17/18	Regional	1.6%	\$12,047	\$0	\$12,047	\$0	\$0
11279	OCWD ANNEXATION FEE 18/19	Regional	1.6%	\$13,649	\$0	\$13,649	\$0	\$0
11280	OCWD ANNEXATION FEE 19/20	Regional	1.6%	\$15,932	\$0	\$15,836	\$96	\$0
11281	OCWD ANNEXATION FEE 20/21	Regional	1.6%	\$18,054	\$0	\$0	\$18,054	\$0
11282	OCWD ANNEXATION FEE 21/22	Regional	1.6%	\$20,456	\$0	\$0	\$20,456	\$0
11284	OCWD ANNEXATION FEE 22/23	Regional	1.6%	\$23,178	\$0	\$0	\$23,178	\$0
11285	OCWD ANNEXATION FEE 23/24	Regional	1.6%	\$26,266	\$0	\$0	\$26,266	\$0
11286	OCWD ANNEXATION FEE 24/25	Regional	1.6%	\$29,762	\$0	\$0	\$29,491	\$271
11289	STRAND RANCH FACILITIES AND MONITORING	Regional	1.6%	\$5,830	\$5,819	\$11	\$0	\$0
11325	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR	Regional	1.6%	\$2,552	\$2,552	\$0	\$0	\$0
11331	TIC WELLS 109/112/114	Regional	1.6%	\$421,457	\$0	\$0	\$421,457	\$0
11339	AUTOMATION SYSTEM IMPROVEMENTS DW	Regional	1.6%	\$4,246	\$2,691	\$1,555	\$0	\$0
11368	WATER BANKING EXPANSION	Regional	1.6%	\$51,549	\$32,669	\$18,880	\$0	\$0
11384	HYDRAULIC MODEL UPDATE / CALIBRATION -	Regional	1.6%	\$4,479	\$4,479	\$0	\$0	\$0
11405	OPA / REGIONAL GROUNDWATER PROJECT	Regional	1.6%	\$76,569	\$76,569	\$0	\$0	\$0
11408	OPA / REGIONAL TRANSMISSION MAIN	Regional	1.6%	\$3,201	\$3,201	\$0	\$0	\$0
11455	IRWD PIPELINES RELOCATION FOR SC GRADE	Regional	1.6%	\$13,664	\$13,664	\$0	\$0	\$0
11473	WELL 106 REPLACEMENT DRILLING & SITE	Regional	1.6%	\$41,030	\$41,030	\$0	\$0	\$0
11560	LAKE FOREST DW OFFSITE IMPROVEMENTS	Regional	1.6%	\$21,594	\$11,717	\$9,878	\$0	\$0
11578	OPS CENTER IMPROVEMENTS PH2 (WAREHOUSE)	Regional	1.6%	\$27,350	\$0	\$27,350	\$0	\$0
11582	GEN SYS MODS 13/14	Regional	1.6%	\$2,388	\$2,388	\$0	\$0	\$0
11596	WATER BANKING AGREEMENTS	Regional	1.6%	\$2,114	\$2,114	\$0	\$0	\$0
11627	WELL 115 REPLACEMENT WELL/WELLHEAD &	Regional	0.9%	\$39,206	\$39,206	\$0	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
11631	GROUNDWATER DISPOSAL SYSTEM CONCEPT	Regional	1.6%	\$5,257	\$5,257	\$0	\$0	\$0
11637	JACKSON RANCH SOLAR PROJECT	Regional	1.6%	\$1,510	\$1,510	\$0	\$0	\$0
11645	STOCKDALE WEST RANCH JOINT BANKING	Regional	1.6%	\$100,813	\$94,656	\$6,156	\$0	\$0
11648	GEN SYS MODS 14/15	Regional	1.6%	\$2,627	\$2,627	\$0	\$0	\$0
11655	SKYLIGHT PROTECTION	Regional	1.6%	\$616	\$616	\$0	\$0	\$0
11665	SJM BUILDING CAMPUS MOLD REMEDIATION	Regional	0.8%	\$370	\$370	\$0	\$0	\$0
11675	MANNING BPS PERMANENT GENERATOR	Regional	1.6%	\$3,935	\$3,935	\$0	\$0	\$0
11686	EOCWD - IRWD JOINT WELL PLANNING REPORT	Regional	1.6%	\$857	\$857	\$0	\$0	\$0
11687	RMS AT 5 DOMESTIC WATER RESERVOIRS	Regional	1.6%	\$49,733	\$37,494	\$12,239	\$0	\$0
11697	GEN SYS MODS 15/16	Regional	1.6%	\$2,891	\$0	\$2,891	\$0	\$0
11726	STRAND RANCH KERN RIVER EXPORTABILITY	Regional	1.6%	\$2,087	\$2,087	\$0	\$0	\$0
11738	WATER BANKING PLANNING	Regional	1.6%	\$4,854	\$4,854	\$0	\$0	\$0
11742	LTFP ID CONSOLIDATION	Regional	1.6%	\$1,372	\$1,372	\$0	\$0	\$0
12326	SCWD INTEGRATION STUDY REGIONAL PIPES	Regional	1.6%	\$416,918	\$0	\$416,918	\$0	\$0
12328	SCWD INTEGRATION STUDY REGIONAL PUMPS	Regional	1.6%	\$143,829	\$0	\$143,829	\$0	\$0
12329	SCWD INTEGRATION STUDY PIPES FOR 150 / 153	Regional	1.6%	\$457,017	\$0	\$457,017	\$0	\$0
15051	WELLS 51/52/53 TREATMENT ALTERNATIVES	Regional	1.6%	\$2,350	\$2,350	\$0	\$0	\$0
15052	JOINT WELL FIELD WITH ANAHEIM - WELLHEADS	Regional	1.6%	\$482,157	\$0	\$320,274	\$161,883	\$0
15423	TUSTIN LEGACY WELLS 1, 2, 3 & 4	Regional	1.6%	\$498,405	\$0	\$498,405	\$0	\$0
15428	WELL 53 SITE ACQUISITION & WELL DRILLING	Regional	1.6%	\$49,284	\$22,340	\$26,944	\$0	\$0
19420	OCWD ANNEXATION	Regional	1.6%	\$2,455	\$2,455	\$0	\$0	\$0
				<b>\$5,352,183</b>	<b>\$1,390,780</b>	<b>\$3,260,156</b>	<b>\$700,976</b>	<b>\$271</b>



## SECTION 4 LOCAL MASTER PLAN FACILITIES

### 4.1 DESCRIPTION

The facilities detailed in the following section represent local facilities serving one or more of the planned development areas within the improvement district, based on the respective subarea master plans, as well as sub-regional projects serving this improvement district and other improvement district(s). For the purpose of this POW, local facilities include both local and sub-regional projects.

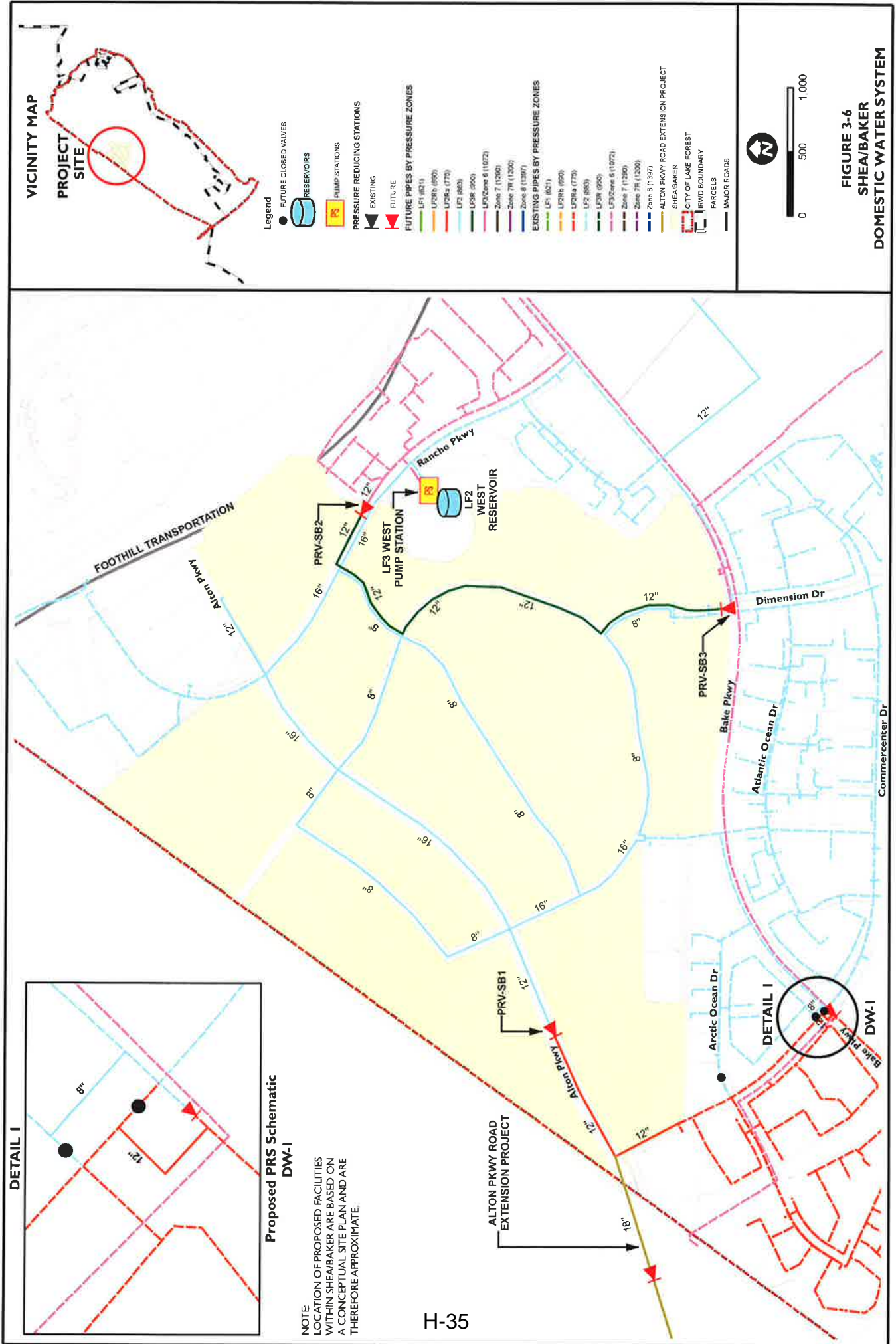
### 4.2 COST ESTIMATES

The proposed local master plan facilities for ID No. 185 are detailed in **Table IV-1** and shown on **Figure IV-1a** through **IV-1j**. These figures, taken from the sub-area master plans, show both facilities inside and outside the improvement district's boundary, and some facilities shown may have already been constructed. The amounts shown in Table IV-1 reflect the facilities or portions there-of allocable to the improvement district. As noted in the Introduction, the projects identified here may change to reflect changes in land use and development phasing.

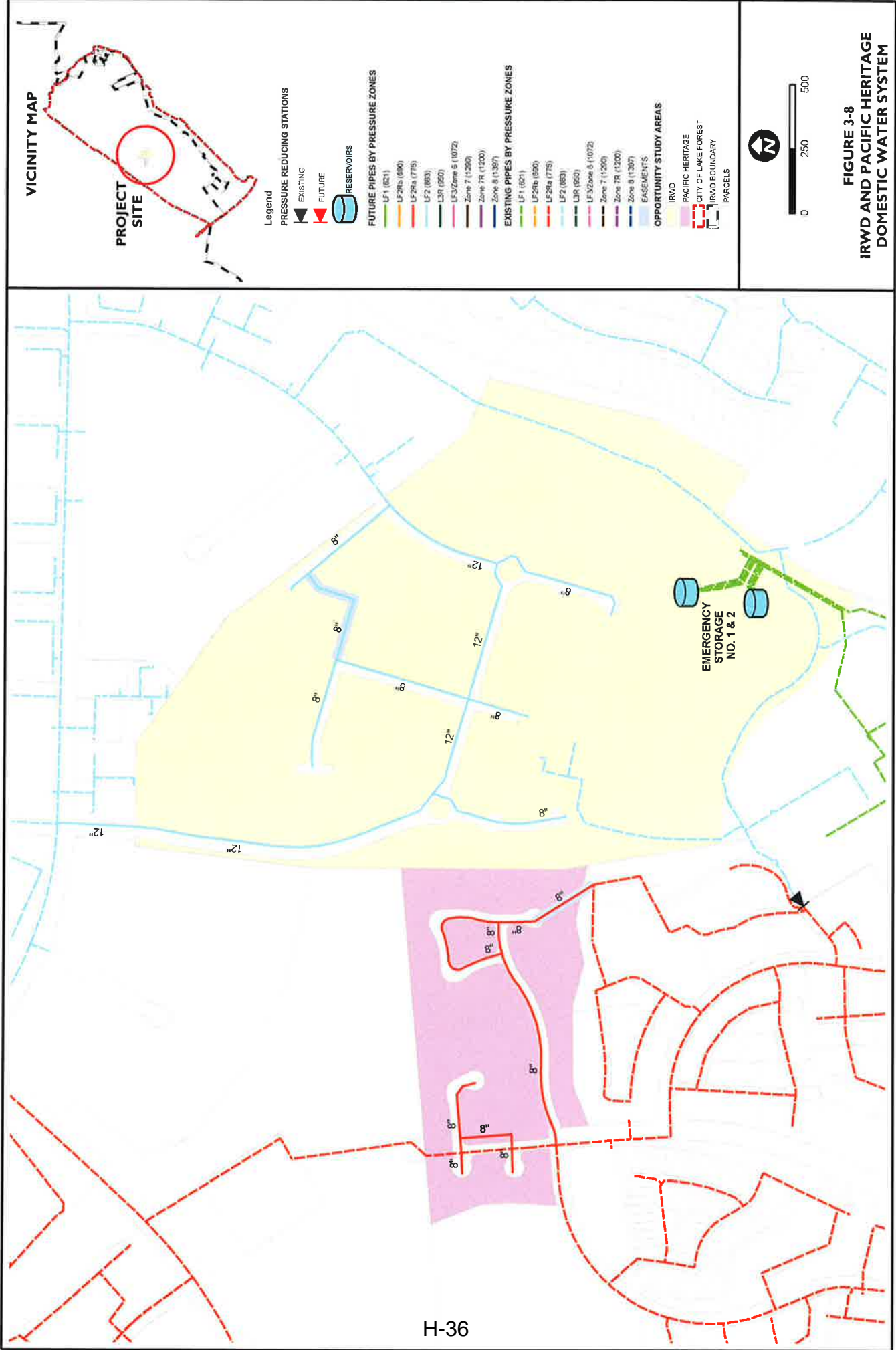
For the purpose of determining the allowance for deferred costs, the project costs have been escalated at 10% per year.

**Table IV-1 Local Projects  
Proposed Facilities and Estimated Escalated Costs  
Improvement District 185**

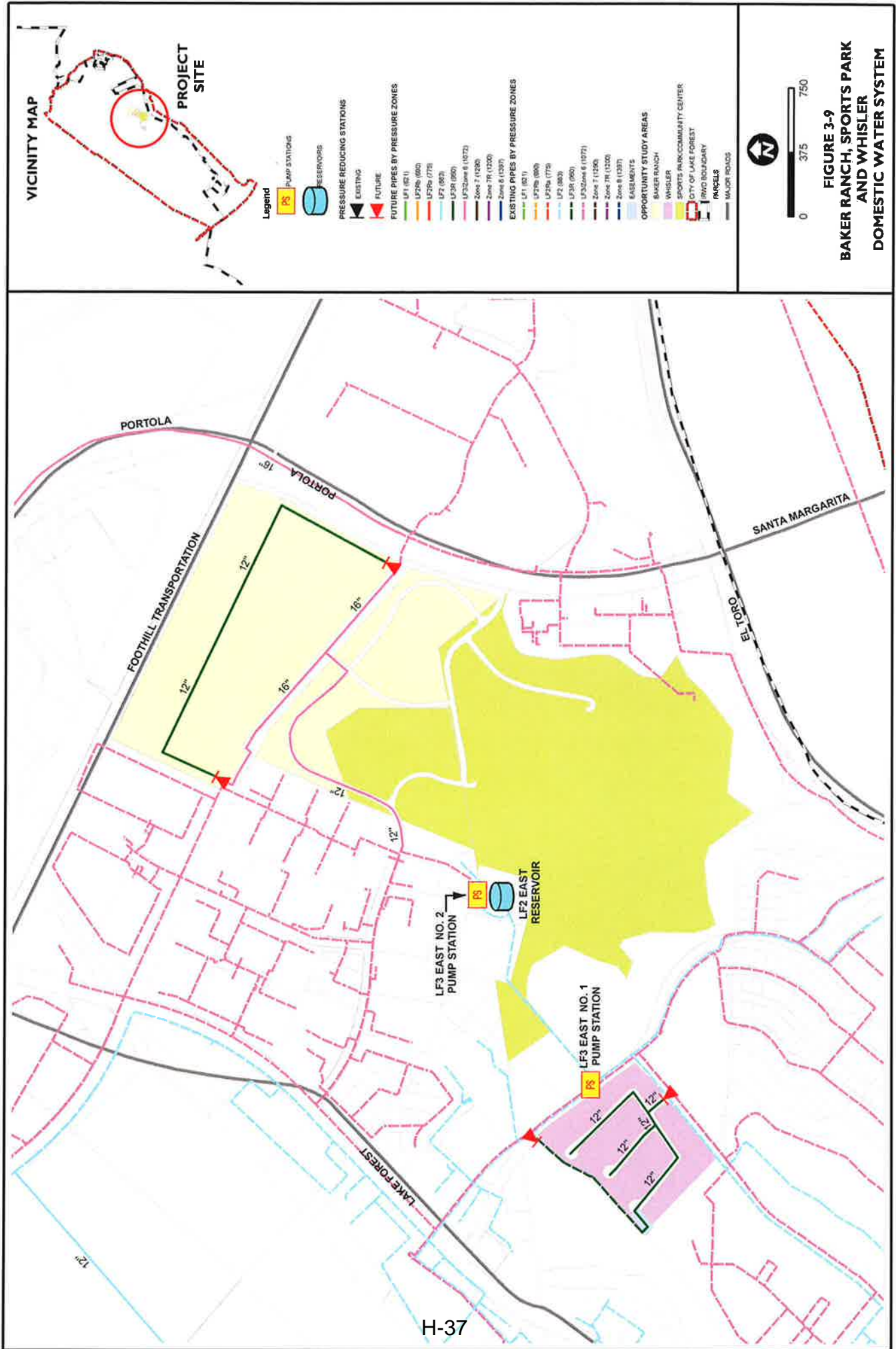
Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
11562	LAKE FOREST DW OPPORTUNITY AREAS	Local	100.0%	\$4,647,917	\$2,571,118	\$2,076,799	\$0	\$0
11661	BAKER RANCH PHASE 1 DW ZONE 3R & ZONE 2	Local	100.0%	\$350,460	\$350,460	\$0	\$0	\$0
11662	BAKER RANCH PHASE 2 DW ZONE 3R & 2	Local	100.0%	\$354,530	\$354,530	\$0	\$0	\$0
				<b>\$5,352,907</b>	<b>\$3,276,108</b>	<b>\$2,076,799</b>	<b>\$0</b>	<b>\$0</b>







**FIGURE 3-8**  
**IRWD AND PACIFIC HERITAGE**  
**DOMESTIC WATER SYSTEM**



**SECTION 5 FINANCIAL PHASING SUMMARY**

This section summarizes the phasing of the financial requirements in ID No. 185. A schedule of financial phasing requirements based on projected phasing of facilities is shown in **Table V-1**. Also shown in the table is the general class of items that will be covered in these projected amounts.

Table V-1 includes a 10% contingency to allow for unexpected inflation as well as changes in land use and development density.

It should be noted that this table does not represent actual bond issues. As facilities are needed which warrant or require bond funding, actual bond issuance needs will be determined.

It is proposed that bonds in the amount of \$13,500,000 be authorized for ID No. 185.



**Table V-1**  
**Bond Authorization Summary**  
**Improvement District 185**

	2013-2015	2016-2020	2021-2025	2026-2035	Total Escalated Amt
<b>Escalated Local Subtotal</b>	<b>\$3,276,108</b>	<b>\$2,076,799</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,352,907</b>
<b>Escalated Regional Subtotal</b>	<b>\$1,390,780</b>	<b>\$3,260,156</b>	<b>\$700,976</b>	<b>\$271</b>	<b>\$5,352,183</b>
<b>Contingency (10%)</b>	<b>\$466,689</b>	<b>\$533,696</b>	<b>\$70,098</b>	<b>\$27</b>	<b>\$1,070,509</b>
<b>Bond Reserve (6%)</b>	<b>\$308,015</b>	<b>\$352,239</b>	<b>\$46,264</b>	<b>\$18</b>	<b>\$706,536</b>
<b>Funded Reserve (6%)</b>	<b>\$308,015</b>	<b>\$853,913</b>	<b>\$46,264</b>	<b>\$18</b>	<b>\$706,536</b>
<b>Bond Discount (2%)</b>	<b>\$116,073</b>	<b>\$640,435</b>	<b>\$15,421</b>	<b>\$6</b>	<b>\$235,512</b>
<b>Bond Issuance Costs (1%)</b>	<b>\$58,036</b>	<b>\$640,435</b>	<b>\$7,711</b>	<b>\$3</b>	<b>\$117,756</b>
<b>Bond Authorization Total</b>	<b>\$5,923,715</b>	<b>\$8,357,672</b>	<b>\$886,735</b>	<b>\$342</b>	<b>\$13,541,939</b>

## SECTION 6 BENEFIT OF THE PLAN OF WORKS TO THE LANDS IN THE IMPROVEMENT DISTRICT

### 6.1 OVERVIEW

Under the California Water Code, the plan of works for an improvement district provides a plan and an estimate of the cost of the works that are needed to serve the improvement district and that will be financed through District-issued bonds, and reflects the determination by the District's Board of Directors that the territory within the improvement district will benefit from the works. To the extent practical, a plan of works will incorporate generalized facilities descriptions and flexibility in the selection of specific projects, so that a revised or supplemented plan will not be needed. If a revised or supplemented plan is adopted, it must benefit the territory within the improvement district. Similarly, when territory is annexed to or detached from an improvement district, including annexations and detachments implemented for the purpose of reorganizing improvement districts to be consolidated as coterminous improvement districts, there must be an accompanying evaluation of territory that will benefit by inclusion within the plan and therefore should be included, and territory that will not benefit and therefore should be excluded.

The benefits that lands receive from water works are derived from multiple considerations. Primary is the ability of lands to receive service currently or when needed in the future. Other examples of benefits are system or facilities reliability through supply diversification, redundant capacity, storage capability, system looping or other characteristics; regulatory compliance; environmental protection; and regional cost efficiencies in operation and maintenance. In the case of a consolidation of improvement districts, other benefits may include economies of scale, administrative simplification and enhancement of credit and reduced borrowing cost or debt service cost.

For purposes of evaluating benefit of improvement district consolidations, cost allocation is dictated in part by the requirements contained in the Water Code for structuring consolidations. In accordance with these requirements, the remaining authorized, unissued bonds of the consolidating improvement districts will become the authorized bonds that can be issued on behalf of the consolidated successor improvement district. Upon the consolidation, debt service for the outstanding bonds of the consolidating improvement districts will become obligations of the consolidated successor improvement district.

### 6.2 DESCRIPTION OF THE STUDY APPROACH

The formation of ID Nos. 185 and 285 is part of an overall restructuring of the District's improvement districts, which also includes the reorganization of ID Nos. 153 and 253 and the consolidation of ID Nos. 125 and 225. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations." In this regard, the District has undertaken a comprehensive evaluation and study of its long-term financial requirements, including:

- a detailed planning, engineering and financial assessment of the total costs of existing and future facilities in the water and sewer systems;
- available bond authorization and other revenue sources to finance facilities to serve future development (“new capital”), augment system reliability and meet upgraded regulatory requirements for both existing and future demands (“enhancement”) and replace and refurbish the existing systems (“replacement”);
- debt service;
- simplification of the improvement district structure; and
- assurance of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

The existing improvement district structure has served the District for more than 40 years as the system was built and growth patterns necessitated a means of maintaining equity in the financing of facilities. Using the mechanisms of periodic formation of new improvement districts and authorization of bonds as well as regional cost allocations and system buy-ins, the District has been able to maintain fair and equitable cost sharing while accommodating both intense growth within its boundaries and several acquisitions of adjacent service areas. Construction and expansion of the systems were the key features of this financial structure. Although growth will continue for several more years, going forward the completion of the regional systems and provision for system reliability and replacement will become the predominant driver of the financial requirements. The District’s comprehensive evaluation of its financial requirements indicates that a simplification of the improvement district structure and related actions will provide a sustainable methodology for equitable cost allocation in the future.

As described in Section 1.3, a succession plan for the improvement district structure would reduce the number of improvement districts, ideally to one water improvement district and one sewer improvement district, through consolidations and reorganizations to be implemented as and when considerations for separation of the various improvement districts no longer remain. The District’s financial review identified steps that were currently feasible in achieving that objective as well as the parts of the current structure which need to be maintained at this time until factors relating to the preservation of equitable cost sharing merit the evaluation of further consolidation steps.

General obligation bonds have been the District’s principal tool for financing facilities. Under this form of financing, the obligation for repayment of bonds issued on behalf of an improvement district is secured by the power of the District to levy and collect *ad valorem* assessments without limitation as to rate or amount on land only (enforceable by customary rights to foreclose and sell property for delinquent assessments) or, in lieu of assessments, in the District’s discretion, charges for water or sewer service, as applicable, all within the subject improvement district. The District also uses connection charge revenues to pay a portion of the debt service costs. For new capital cost within developing improvement districts, the District plans to continue its historical practice of targeting a 50-50 allocation as a fair means of sharing improvement district debt service costs between the aggregate



contributions of connection charge revenues and property tax revenues. The evaluation of financial requirements and modifications of the District's improvement district structure therefore involve an examination of outstanding and future bond debt service, bonding authority, allocation of costs, and resultant contributions of connection charges and *ad valorem* property taxes over time.

### 6.3 LONG-TERM FINANCIAL REQUIREMENTS MODELING

As introduced in the preceding section, the foundation of the evaluation of the benefit of the Plan of Works to the lands in the Improvement District is the District's comprehensive review of its long-term financial requirements. To assist the District in this evaluation, the District employed modeling of a baseline condition defined by the improvement district structure as it existed prior to the current reorganization and consolidation steps. The baseline modeling facilitated various aspects of the long-term financial requirements evaluation:

- refinement of capital cost allocations according to the functional benefits (e.g., development expansion, reliability, regulatory compliance, environmental protection, system refurbishment) of the facilities to various areas and user categories;
- use of existing bond proceeds and available bond authorization and other revenue sources for the financing of future facilities within the new capital expansion, enhancement and replacement project classifications;
- use of the District's allocation of the general 1% *ad valorem* property tax levy;
- benefit of the simplification of the improvement district structure and the aggregated regional and local systems;
- identification of areas where the structure must be retained or modified to equitably address special considerations; and
- measurement of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

Modeling of modified aspects of the baseline enabled the District to test the effectiveness of modifications to various capital –project related fiscal and financing practices in developing a new improvement district and cost allocation structure to effectively maintain equity as the development phase within the District progresses toward build-out. Details of the modeling process described in this section, including review and analysis of interim results and identification of refined and additional modeling efforts, are compiled in a Technical Appendix that serves as a reference document for this Plan of Works.

#### 6.4 REGIONAL SYSTEM BENEFIT

The Plan of Works for ID No. 153's predecessor, ID No. 1 of Santiago County Water District (SCWD), contemplated that its ultimate population of about 38,000 would be furnished with a domestic water supply through participation in the Allen-McColloch Pipeline (AMP). A portion of the AMP capacity would be purchased, and it was also proposed that SCWD's existing untreated capacity, delivered to a filtration plant jointly owned by SCWD, IRWD and East Orange County Water District, be exchanged for AMP capacity. SCWD eventually relinquished the untreated capacity – confirm? delete?. As the consolidated successor district, IRWD has incorporated the SCWD imported water capacity and delivery system into its regional system. The 1978 plans of works for the improvement districts from which most of the lands annexed into the reorganized ID No. 153 originated, primarily ID Nos. 130 and 150, similarly contemplated a water supply obtained through the District's acquisition of capacity in the AMP in combination with participation in the construction of the District's own well field in the main Orange County groundwater basin. The lands reorganized as ID No. 153 are therefore on equivalent footing in terms of the regional supply system from which they will be served. This includes jointly constructed delivery and storage capacity to serve the territory of existing ID No. 153 as well as development in former ID No. 150. The original plan of works for SCWD's ID No. 1 further contemplated two pressure zone systems, one for the area north of Irvine Lake and one for the area south of Irvine Lake. All of the current planned development included in the reorganized ID No. 153 is located in the south area pressure zone.

The majority of the imported water feeder system and IRWD's delivery system components and the groundwater production and delivery facilities are in place. Based on its ultimate demands, ID No. 185 will need to contribute its proportional share of the cost of completing the regional system, including any expansion such as the acquisition of additional Allen-McColloch Pipeline capacity and groundwater production capacity, and including new components necessary to provide basic reliability. The areas reorganized within ID No. 153 were formerly within ID Nos. 130, 150, 153 and other improvement districts. At this stage of completion of IRWD's regional system, former distinctions among the improvement districts from which the areas reorganized as ID No. 153 originated are no longer material in regard to service from the regional system. Historically, these distinctions included the extent and duration of individual improvement districts' reliance on the untreated system to serve agricultural water, proximity to different completed and yet-to-be-completed segments of the treated water feeders, interceptor and trunk sewers and treatment facilities, uncertainties in the progression (location and pace) of development, and planning determinations that were yet to be made by the District in the elements of the major facilities components and supply sources, such as pipeline and well field capacity. All of these factors have either disappeared or diminished in importance, and the regional benefits among the areas reorganized within ID No. 185 are now essentially uniform.

As one example of the gradual diminishing of the earlier distinctions among the individual improvement districts' plans for supply and delivery alternatives, the 1974 plans of works initially contemplated separate treatment plants connected to the untreated delivery system for each of ID Nos. 103 and 105. In 1977, the initial plan for local (or regional) treatment of raw water in ID No. 103 (shared

with ID No. 109), was shifted to a backup alternative, in favor of ID No. 103's pro rata participation in the District's capacity to be obtained in the proposed regional treated water system now known as the Allen McColloch Pipeline (AMP) to serve its supplemental water needs. By 1978, this was again modified to include participation by ID No. 103 in the District's acquisition of capacity in the AMP in combination with participation in the construction of the District's own well field in the main Orange County groundwater basin as a more economical and preferred domestic supply alternative source. The local treatment plants as originally contemplated were not built, but the District is presently participating in the construction of the Baker Plant as a regional treatment plant that will benefit the entire service area.

This progression continued, with the distinctions becoming fewer as the planning of the regional system evolved and the system was constructed. With only approximately 10-12 percent of the equivalent dwelling units (EDUs) remaining to be built in ID Nos. 153 and 185, these distinctions are no longer prominent. The regional delivery system and its integrated supply sources provide uniform benefit to all of the component areas of ID No. 185 by satisfying basic supply and peaking needs and providing protection against emergency outages. Connection fees, adjusted by planning areas if and to the extent necessary to differentiate the fee amounts to adjust for varying local and sub-regional project benefits, and ad valorem taxation will adequately allocate the cost share of ID No. 185 among its various planned development areas in proportion to their benefit.

The areas within the reorganized ID No. 153 have shared imported water and groundwater facilities through the regional split. Notwithstanding that some of ID No. 153's territory is not within the boundary of the Orange County Water District and that under OCWD practices, the demand of this area does not increase the quantity of groundwater produced by IRWD without a BEA impact, groundwater is considered to reduce IRWD's dependence on imported supply and thus all areas participate proportionally in the regional supply source mix. All areas of ID No. 153 receive the base allocation melded water rate which provides the benefit of reduced cost through the supply mix. ID No. 185, which is within the planning area containing the former ID No. 135, will receive the base allocation melded water rate which provides the benefit of reduced cost through the supply mix, once the planning area's rate structure is placed on a parity with the IRWD melded rate structure.

As described in Section 3, the District uses a demand forecasting tool to allocate regional system costs among improvement districts. This ensures that ID No. 185 as a whole will be allocated a share of the regional system costs in proportion to the benefit it will receive from the system. See **Table III-1**.

## 6.5 REGIONAL COST ALLOCATION – INCLUSION IN IMPROVEMENT DISTRICT NO. 125

In parallel with the reorganization of ID No. 185 itself, ID No. 185's territory will be retained as part of the reorganization of several improvement districts to form a consolidated improvement district designated ID No. 125. All of the developing areas reorganized into ID Nos. 185 are retained or reorganized within the boundaries of the underlying improvement district, ID No. 125. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations." This assures



that the developing areas will share in the cost of existing local and sub-regional facilities from which they benefit, such as storage reservoirs, previously built with the proceeds of bonds of one of the improvement districts consolidated in the underlying improvement district.

Like ID No. 185, ID No. 125 will continue to share proportionally in the cost of completing the regional system, including any expansion such as the acquisition of additional Allen-McColloch Pipeline capacity and groundwater production capacity. This occurs because under the District's incremental approach, although the regional system provides service prior to its completion, it remains incomplete, and future regional projects will add components necessary to provide basic reliability, benefitting the developed areas as well as future development. To prevent overpayment by the areas included within both improvement districts' regional allocations, the regional allocation for ID No. 125 will exclude demands of 185, and the 50/50 allocation of debt service responsibilities between connection fees and property taxes will be applied on an aggregated basis for the area within 185, between the overlying and underlying improvement districts.

#### 6.6 LOCAL FACILITIES COST ALLOCATION

Historically, planned developments within a geographic area have been grouped together in an improvement district notwithstanding the fact that each development may be served by distinct local facilities, as the cost of these are generally uniform over the improvement district. This is also considered to be the case for the various geographic areas comprising ID No.185. To the extent necessary to achieve fair and equitable allocation of local facilities costs, planning areas can be used to recognize any unequal costs of sub-regional and local facilities benefiting only one, or some but not all, of the planned developments in the territory of the consolidated ID No. 185.

As with regional system benefits discussed above, connection fees, adjusted by planning areas if and to the extent necessary to reflect unique local facilities costs not fairly allocable to the entire improvement district, and *ad valorem* taxation will adequately allocate the cost share of the ID among its various planned development areas in proportion to their benefit. The segregation between the ID Nos. 153, 185, 188, existing ID Nos. 112 and 113, and the consolidated developed ID No. 125 is considered adequate to ensure that capital cost allocation recognizes the area-specific local facilities costs yet to be incurred in the planned development areas.

#### 6.7 IMPROVEMENT DISTRICT NO. 185 BENEFIT

The District has reviewed and analyzed benefit to the lands from the reorganized ID No. 185 in several ways: (1) similarities or differences in future service needs among the areas identified for inclusion by annexation to, or by retention in, the reorganized as ID No. 185; (2) the benefit or lack of benefit to the areas identified for exclusion from the reorganized as ID No. 185; and (3) regional cost allocation among ID No. 185 and other areas receiving benefit from the regional facilities. Also evaluated

were (4) areas not included in any improvement district and (5) certain areas retained as separate improvement districts.

**(1) Included areas.** The areas reorganized as ID No. 185 comprise several non-contiguous planned development areas [that were previously in different improvement districts][delete for 185 285]. [Therefore, it is appropriate to assess whether any one or more of these areas possess essential distinctions, in terms of benefit from the planned local facilities or regional facilities (including source of water supply that would warrant exclusion from the ID No.185 territory. The areas included in the reorganized ID No. 185 are described in Section 2. With respect to regional facilities, all areas will be benefitted by the integrated groundwater and imported water supplies. Based on the available planning information for the expected development of each planned area, all of which are predominantly residential with other use, it is concluded that the areas are similarly benefitted by the Plan of Works and that the *ad valorem* assessments for debt service and connection fees for the classifications applicable to the anticipated uses will fairly allocate cost within the ID based on demands. Connection fees, which can be adjusted through planning areas if and to the extent necessary to reflect unique local or sub-regional facilities costs not fairly allocable to the entire improvement district, and *ad valorem* taxation will adequately allocate the cost share of the improvement district among its various planned development areas in proportion to their benefit. Simultaneous inclusion of the ID No. 185 lands within the underlying improvement district, ID No. 225, assures that the developing areas will share in the cost of existing local and sub-regional facilities from which they benefit, such as storage reservoirs, previously built with the proceeds of bonds of one or more of the improvement districts consolidated in the underlying improvement district. The exclusion of ID No. 185 demands from the ID No. 225 regional split, and allocation of debt service responsibilities between connection fees and property taxes on an aggregated 50/50 basis between the overlying and underlying improvement districts will prevent overpayment as a result of inclusion within both improvement districts' regional allocations.

**(2) Excluded areas.** The District also analyzed whether any areas proposed to be excluded from the reorganized ID No. 153 [185] [285] would receive benefit from ID No. 185 planned works, and should not be excluded. The areas excluded consist of substantially developed areas of ID Nos. 105, 130 [230, 250] and other improvement districts 135 which will, instead, be included in the reorganized ID No. 125 open space, and areas contained within another developing improvement district. Also excluded are the areas not included in any improvement district and certain areas retained as separate improvement districts, discussed under separate headings below.

The excluded developed areas will contribute their regional cost share for the completion of the regional system and for the previously constructed local facilities through ID No. 125. The developed areas will continue to be benefitted by the regional facilities financed and to be financed by ID No. 185. However, it is concluded that exclusion of the developed areas is justified in terms of benefit, because, through the reorganized ID No. 125, their allocation of the cost of the regional system benefits will continue to be proportional.

The 13,400 acres reserved as permanent open space near the Lomas de Santiago ridgeline, which is not proposed to remain within any improvement district, and other smaller permanent open space areas will not receive benefit from the planned works and are excluded from ID No. 153, 125 and other improvement districts. This is warranted by the fact that the area will have no demand served by the system.

Finally, areas contained within developing ID Nos. 112, 113, 153, 185, and 188 are logically maintained as separate improvement districts based on their separate local facilities costs and stages of development. To the extent there are sub-regional facilities from which any of these improvement districts benefit in common, they will share the cost of those facilities with the other participating improvement districts through a proportionate allocation based on benefit received. Exclusion of the [other] separate developing improvement districts from ID No. 185 will facilitate the allocation of local facilities costs. Having these remain separate improvement districts does not negatively impact the regional cost allocation or bond authorization, nor would combining them produce any advantage.

**(3) Regional cost allocation.** Also considered was whether the reorganization achieves equity in relation to the other cost allocations within the regional split. Under the District's historic and continuing methodology for achieving equitable cost allocation, all improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. This incremental funding approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service. Adjustment of this methodology will be applied as discussed in Section 6.5 to recognize inclusion of some areas in both ID No. 153 or other overlying improvement districts and underlying ID No. 125 [225]. Contribution by areas not included in an improvement district is discussed in the heading below.

**(4) Areas not included in an improvement district.** The District's regional cost allocation approach took into consideration that some areas (referred to collectively with the shorthand references "110" and "210" in keeping with the District's numbering system for designating improvement districts) funded a portion of the District's earliest regional system costs through payment of debt service on general obligation waterworks bonds of the overall District in the 1960s (e.g., original construction of the San Joaquin Reservoir and IRWD's capacity in the East Orange County Feeder No. 2 and other transmission facilities, Frances Mutual Water Company wells, the Aufdenkamp Transmission Main and the original sewage treatment and reclamation system components financed by ID. No. 1 (201). Based on their initial financial participation in the original waterworks bonds and sewer ID No. 1 bonds, these earlier-developing areas were not included in the improvement districts formed during the 1970s. Similarly, certain areas added to the District through annexation and consolidation have funded a proportionate share of existing regional facilities costs, sometimes referred to as "acquisition balances," through user rate components. The "110" and "210" areas as excluded from ID Nos. 125 and



225. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations."

The District has performed calculations to determine whether historic allocations of cost, to the areas included in the improvement districts and the excluded areas, require future cost participation by excluded areas in order to ensure that the improvement districts do not bear a disproportionate cost of the system. Included in this evaluation are costs of the service delivery systems as well as other regional costs such as administrative headquarters and telemetry. Based on this evaluation, the District has determined that funding of future regional facilities costs of the District, (i.e., costs other than those costs financed by previous bonds and outstanding bonds assumed as obligations of the improvement districts being consolidated) should include participation of the areas that comprise "110" and "210," in proportionate amounts that will be determined taking into account revenue contribution, and benefit received from future capital facilities.

**(5) Retention of certain improvement districts.** Individual cost allocation considerations dictate that certain improvement districts be retained as separate improvement districts at this time.

ID No. 154 is contains an area in which general planning information shows that some development could occur. However, the owner indicates no plans beyond current uses.

ID No. 240 discharges sewer only to OCSD's regional plant and is not tributary to the MWRP, LAWRP, or Chiquita plants. For that reason it is not within OCSD's Revenue Area 14. IRWD does provide sewage collection and recycled water service to ID No. 240, and collection system and recycled water system costs are proportionately allocated to ID No. 240.

ID No. 256 in large part remains on individual septic systems, and it is uncertain whether and when that community will desire to convert to a public sewer system. If and when this occurs, the District will evaluate the appropriate method for recovering the cost of the conversion from the benefitted area, such as retention of the separate improvement district and/or an underlying improvement district.

ID No. 252 is not tributary to IRWD plants but may benefit from future recycled water facilities. This requires retention of the improvement district so that applicable recycled water system costs can be separately allocated. The ID No. 252 formation conditions provided for this through the allocation of a proportionate share of ID No. 250 debt service costs. With the consolidation of ID No. 250 as part of ID No. 225, ID No. 225's debt service costs would be used for this allocation.

## 6.8 REDEVELOPMENT COST

In recent years, some areas of the District have begun to experience redevelopment activity. This has necessitated the consideration of the fair allocation of cost that should be borne by these areas, and how demands should be included in the demands of the improvement districts. The District is

applying methodology to ensure proportional cost contributions for regional system and for added local system needs generated by redevelopment.

## SECTION 7 IMPLEMENTATION OF PLAN OF WORKS

### 7.1 GENERAL

The Plan of Works has been prepared by IRWD pursuant to the provisions of California Water Code Section 36410 *et seq.*

It is by this means that IRWD implements the various portions of its Water Resources Master Plan. IRWD, from time to time as needed, will issue increments of the propose bonds and construct the described facilities in order to meet its responsibility to have facilities available to serve the needs of approved development.

As hereinafter discussed, this Plan of Works will be implemented on a phased basis. Accomplishment of this obligation by IRWD necessitates issuance [authorization] of bonds in the amount estimated in this Plan of Works.

It is acknowledged that, from time to time, the means of accomplishing the purposes of ID No. 185 may be altered and projects identified in this Plan of Works may be changed or replaced by other projects, by reason of changes in development phasing, changes in technology and refinements to facilities planning developed through IRWD's ongoing master planning and subarea master planning. Costs may include acquisition, construction, replacement, reconstruction and additions to facilities.

### 7.2 AUTHORIZATION AND ISSUANCE OF BONDS

It is proposed that elections will be held and conducted in the manner provided in Section 36420 of the California Water Code for the purpose of authorizing bonds in the estimated amount of the cost of accomplishing this Plan of Works. Authorized bonds may be sold and the proceeds used only as specified in the Plan of Works, subject to changes in the projects or substitutions of other projects to reflect changes in development phasing, changes in technology and refinements in master planning and subarea master planning.



**REVISED  
PLAN OF WORKS  
PROVIDING FOR DOMESTIC WATER SUPPLY,  
STORAGE, TRANSMISSION AND DISTRIBUTION FACILITIES FOR  
IRVINE RANCH WATER DISTRICT  
IMPROVEMENT DISTRICT NO. 153**

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SECTION 1 INTRODUCTION

1.1 OBJECTIVES

This Revised Plan of Works is a means by which the fiscal requirements of the Improvement District are identified, including bond authorization, in order to provide for the construction, planning and design of facilities necessary to provide service within the Improvement District. The obligation of the Irvine Ranch Water District (“IRWD” or the “District”) is to plan to meet the projected service needs of the specific property within the Improvement District.

For the overall District, the planning of the water supply, storage and distribution system has been accomplished by the Water Resources Master Plan (“WRMP”) and its predecessor planning documents. The WRMP describes the facilities and entitlements needed to provide for ultimate demands and reliability over the entire District, both for the existing population and future development. IRWD also prepares an Urban Water Management Plan (“UWMP”), a document required by statute and focused on specific elements. However, the WRMP is a comprehensive compilation of data and analyses that IRWD considers necessary for its planning needs, and as such, IRWD considers the WRMP its primary water planning document. The WRMP also includes recycled water supply, which is within the fiscal requirements of the sewer plans of works.] Subarea master plans (“SAMP”) are created to plan in more detail the local facilities needed for development planning areas that may overlie all or part of an improvement district. SAMPs are generally prepared as the property owner and the city planning agency begin the development process.

Plans of works are used to describe local facilities and proportional participation in regional facilities that the improvement districts will need, relying on the WRMP and SAMPs for the detailed engineering and planning analysis. The role of the plan of works is founded in statute (Water Code 35950 *et seq.*) and is to define a plan for the facilities needed to serve the improvement district and make an estimate of their cost as necessary to support the voter authorization and issuance of general obligation bonds of the District for the improvement district. The plan of works thus provides the linkage between the engineering plan and the corresponding financial requirements by setting forth the basis for a determination by the Board of Directors in a noticed hearing that the plan benefits all the territory within the improvement district including any territory that has been annexed to it.

Plans of Works incorporate generalized facilities descriptions and some flexibility in the selection of specific projects. This allows the District to accommodate changes in development phasing, changes in technology and facilities planning developed through IRWD’s ongoing master planning and subarea master planning, and corresponding changes in costs of acquisition, construction, replacement, reconstruction and additions to facilities. The Board of Directors may determine that it is necessary to change a previously adopted plan of works. This has occurred in some instances in conjunction with a revision in the cost estimate making it necessary to propose a supplemental authorization of bonds, and it has also occurred in conjunction with improvement district reorganization. This Plan of Works has



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been prepared in connection with the reorganization of Improvement District No. 153 to include a number of planned development areas within the improvement districts concurrently consolidated as Improvement District No. 125. See Section 1.3.

The facilities generally identified in this Plan of Works may also change without a modification of the Plan of Works, in order to substitute other facilities to accommodate land use planning or development phasing determinations as they evolve, or in accordance with facilities planning modifications and refinements identified through IRWD's ongoing master planning and subarea master planning. The general purpose of the facilities in the Plan of Works is to meet the domestic water requirements of the Improvement District, including basic system redundancy and reliability in accordance with the policies of the District. As the facilities are needed, IRWD will choose those projects which provide domestic water services most economically. Projects may include acquisition, construction, reconstruction and addition to facilities. The fiscal requirements identified in the Plan of Works include the development phase, during which the system will be expanded and a share of the existing regional system will be acquired as needed to serve the Improvement District, and will continue thereafter, representing the Improvement District's participation along with other improvement districts in the completion of the IRWD regional system.

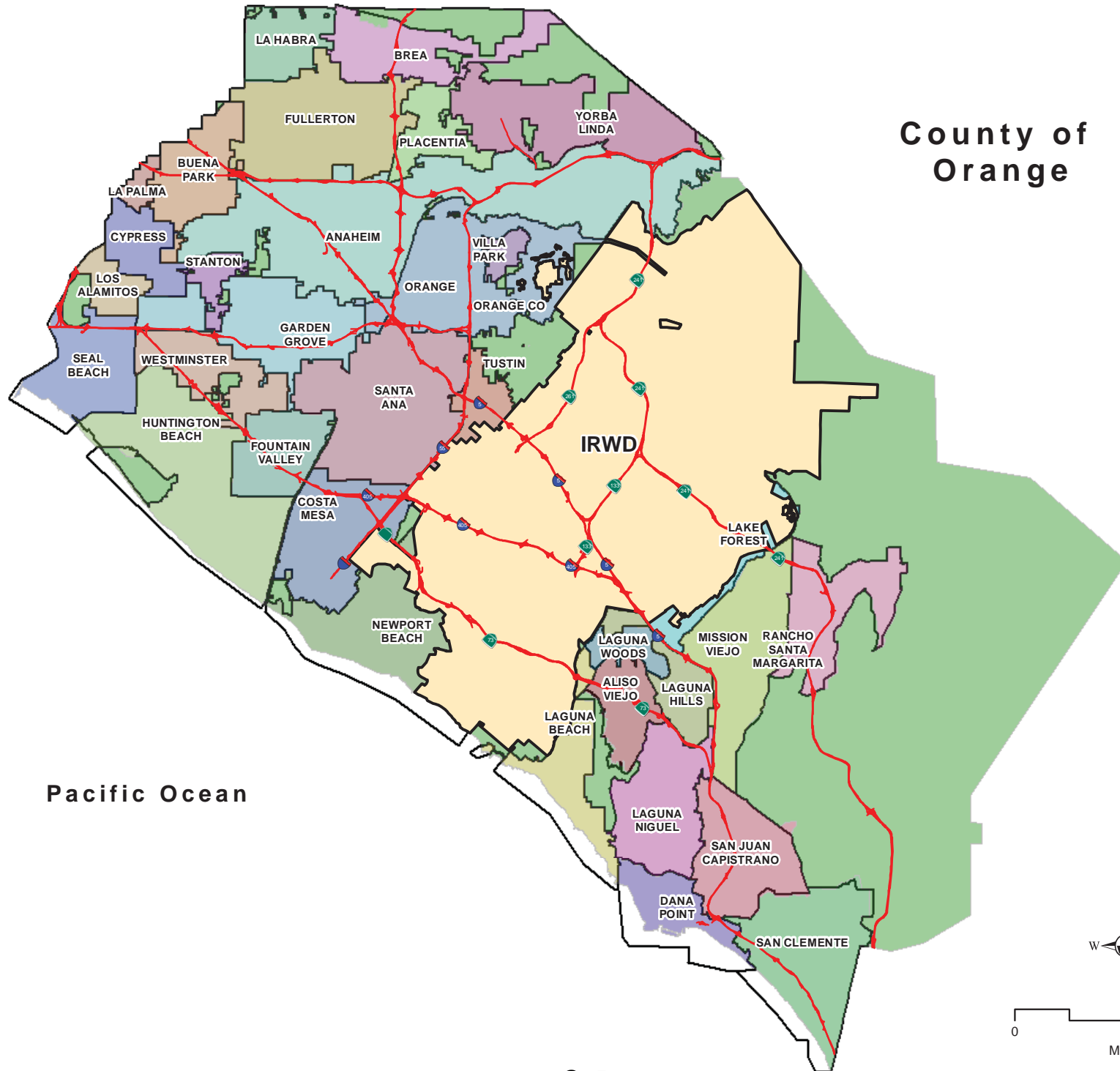
This Plan of Works has the following general objectives: (1) update the description of the water system capital facilities; (2) provide a revised plan of works to supersede and replace the existing plan of works of the improvement district being reorganized; and (3) evaluate the benefit of the revised plan of works to the territory of the reorganized improvement district.

The further objectives of this Plan of Works are to determine logical planning areas and the need for facilities. This includes (1) a proportionate share of regional domestic water supply, storage and transmission facilities; and (2) adequate local planning and system layouts based on the projected ultimate development within the improvement district.

### 1.2 DESCRIPTION OF THE IRVINE RANCH WATER DISTRICT

The District was established in January, 1961, as a California Water district under the provisions of Section 34000 *et seq.* of the California Water Code (the "Act"). Presently the District has four primary services – supplying potable water, collecting and treating sewer, producing and distributing recycled and other non-potable water and implementing urban runoff treatment programs. Historically, the District has provided agricultural water service as needed until residential or commercial development occurs, and provided potable and recycled water services and sewage collection and treatment service when development occurs. Recycled water is used for irrigation of agricultural areas, parks, parkways, greenbelt areas and school grounds, and is used for individual yard landscaping in certain areas, industrial processing, toilet and urinal flushing and other purposes permitted by regulations. IRWD has also implemented a plan for natural treatment system service to divert urban runoff of water used for irrigation and other outdoor uses and treat the runoff by natural processes in water quality wetlands and similar facilities. See **Figure I-1** for a location Map of IRWD.

# County of Orange



Pacific Ocean

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The District serves a 178-square-mile area extending from the Pacific Ocean and over a central flat, alluvial plain to the foothills, which includes all of the City of Irvine and portions of the cities of Tustin, Newport Beach, Costa Mesa, Orange and Lake Forest, as well as certain unincorporated areas of the County. The District serves a total estimated population of approximately 340,000 through approximately 108,000 water and approximately 103,500 sewer service connections.

### 1.3 THE IMPROVEMENT DISTRICTS

**Historical Background.** At the time of the District's initial formation, the District's objective was to secure a supplemental water supply for irrigation and domestic use from The Metropolitan Water District of Southern California ("MWD"). This was accomplished through the installation of regional water transmission pipelines in cooperation with other districts in and the construction of the San Joaquin Reservoir, financed by the sale in 1961 and 1963 of general obligation waterworks bonds of the overall District aggregating \$10,500,000.

After the initial authorization of waterworks bonds for the overall District, all water and sewer bonds were authorized within improvement districts formed by the District to encompass specific geographic areas. The first improvement district formation occurred in 1965, when sewage collection and treatment were added to the District's powers and Improvement District No. 1, a sewer improvement district, was formed to provide financing for the District's first collection, treatment and reclamation systems. Between 1965 and 2008, the District formed 18 water improvement districts and 16 sewer improvement districts covering specific areas within the District's boundaries, some of them overlapping.

The District formed the improvement districts<sup>1</sup> in order to allocate funding responsibility for capital facilities to the areas which would benefit from such capital facilities. Local facilities addressed particular needs that varied by geographic area, proximity to existing infrastructure, elevation and other factors. Improvement districts were also used to separate areas based on projected timing of development so that local capital facilities construction could be matched to development approval decisions as they occurred. In addition, improvement districts served as a mechanism to share the funding of the District's regional facilities to be used by improvement districts in common, such as major water importation facilities and water and sewer treatment plants. The plans of works derived information from District planning documents and from land development plans as the basis for determining, for water improvement districts, the water requirements and the size, location and phasing of water delivery facilities to be constructed from the existing feeders and supply sources, and, for sewer improvement districts, the sewage generation and recycled water requirements and the size, location and phasing of sewer collection and recycled water delivery facilities to be constructed from the

---

<sup>1</sup> Most of the improvement districts were formed by the District's Board of Directors, but Improvement district formation was in some cases accomplished by the District's predecessor district or the Orange County Local Agency Formation Commission, in the case of certain areas included in the District by annexation or consolidation with another district.



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existing trunk sewers and recycled water distribution system to serve the various planning areas and service elevations or zones.. As changes occurred in development planning, annexations and detachments were used to modify the boundaries of some of the improvement districts.

**Water Improvement Districts.** The initial financing of the District's water facilities was undertaken in the early 1960s with bonds of the District. During the 1970s, the District formulated a water facilities master plan and formed many of the water improvement districts that have existed until the current reorganization and consolidation. The first water improvement district to be formed was Improvement District ("ID") No. 104, formed in 1972, followed by the formation of ID Nos. 103 and 105 in 1974, and ID Nos. 102, 106 and 109 in 1976. When water improvement districts were formed, the District excluded lands (sometimes referred to collectively with the shorthand reference "110" in keeping with the District's numbering system for designating improvement districts) that were determined to have funded a portion of the District's earliest regional system costs through payment of debt service on general obligation waterworks bonds of the overall District in the 1960s.

ID No. 104 incorporated the coastal area of the District from the Pacific Ocean to the crest of the San Joaquin Hills. ID No. 103 covered the planned industrial and commercial developments, then known as the Irvine Center Planned Community or "Regional Triangle" and the Irvine Industrial Complex-East, in the vicinity of the intersection of the Santa Ana and San Diego Freeways and adjacent to the Marine Corps Air Station, El Toro. ID No. 105, containing about 22,000 acres in the northernmost portion of the District extending from the Santa Ana Freeway to the northerly, easterly and westerly boundaries of IRWD, was formed initially to build a pipeline to replace the Highline Canal System for the delivery of water from Irvine Lake for agricultural irrigation purposes; its first plan of works contemplated that these untreated water facilities would be augmented with later phases of works to deliver domestic water. ID No. 102 was formed to include the central part of Irvine, between the Santa Ana and San Diego Freeways. ID No. 106 encompassed the Turtle Rock, Quail Hill and Bonita Canyon areas of the San Joaquin Hills, extending north to the San Diego Freeway. ID No. 109 covered the portion of the San Joaquin Hills extending eastward from proposed Sand Canyon Avenue to the eastern boundary of the District.

As urban growth continued, further phases were added to the District's planned water system in the mid- to late 1970s, and it became necessary to increase the authorization of bonds to finance them. To accomplish that objective for some of the initial water improvement districts, the District revised the plans of works and elections were conducted to obtain supplemental bond authorizations (ID No. 103 in 1976, 1977 and 1978, ID No. 105 in 1976 and 1978, and ID No. 109 in 1978). In other improvement districts, the District formed overlapping improvement districts with new bond authorizations: ID Nos. 121, 141 and 142, and 161 were formed in 1978, overlapping portions of ID Nos. 102, 104, and 106, respectively.

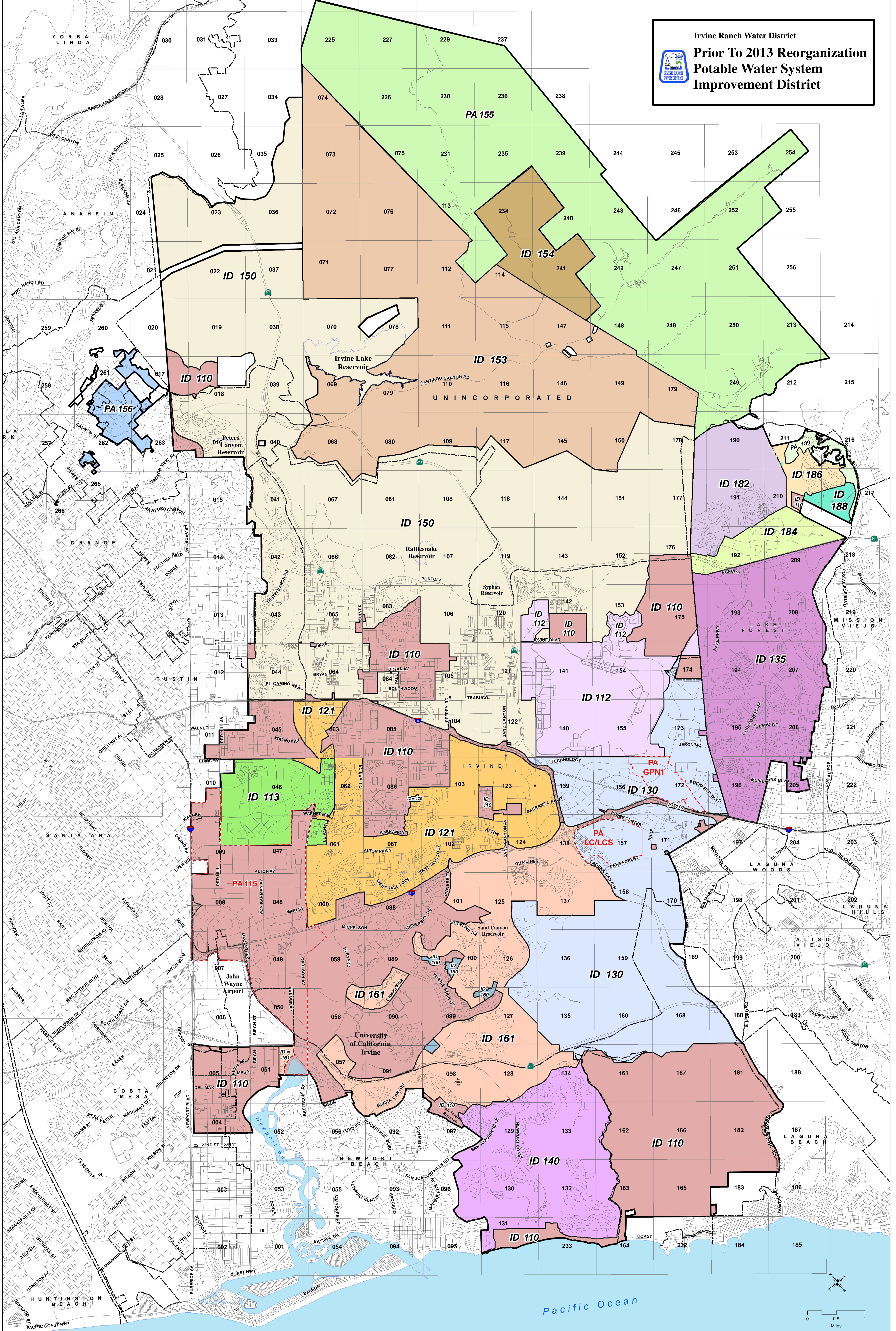
Beginning in the late 1980s, other water improvement districts were formed as areas were added to the District by annexation and consolidation and as former military bases were closed and underwent reuse planning. In 1988, ID Nos. 182 and 184 were formed over the Foothill Ranch (Whiting

## ATTORNEY CLIENT & WORK PRODUCT PRIVILEGES

Ranch) area located in the foothills and canyons north of El Toro in eastern Orange County, an area that was annexed to IRWD in 1982. ID No. 182 covered the northern, predominantly residential portion of this planning area and ID No. 184 covered the southern, predominantly commercial portion. Later in 1988, ID Nos. 186 and 188 were formed over the annexed Glenn Ranch area lying to the east of Foothill Ranch and including a portion of the community of Portola Hills. ID No. 186 covered the northern, predominantly residential portion of this planning area and ID No. 188 covered the southern, predominantly commercial portion.

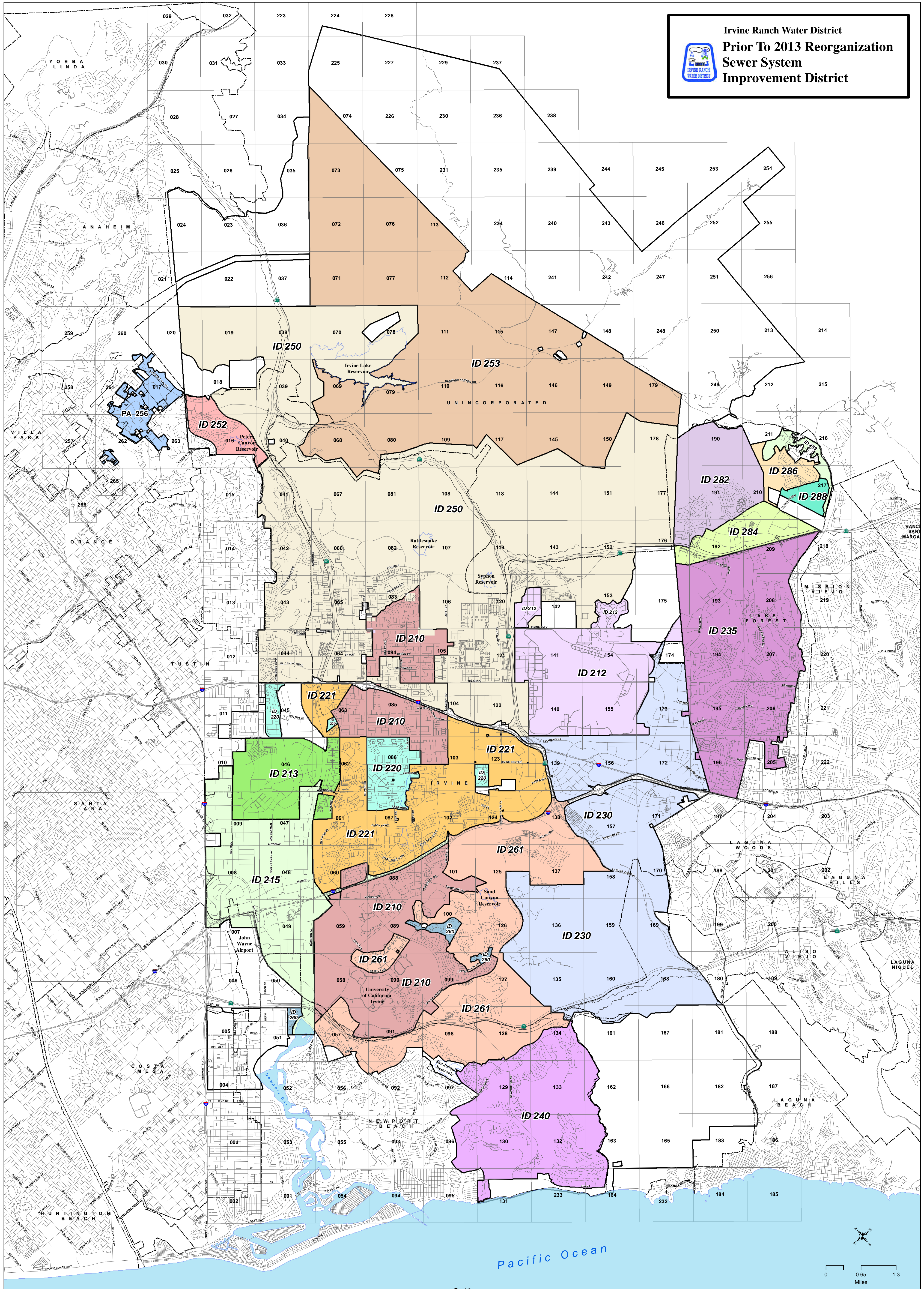


Irvine Ranch Water District  
**Prior To 2013 Reorganization  
 Potable Water System  
 Improvement District**





Irvine Ranch Water District  
 Prior To 2013 Reorganization  
 Sewer System  
 Improvement District





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ID No. 135, encompassing the territory of the former Los Alisos Water District (“LAWD”), was formed as part of the proceedings for LAWD’s consolidation with IRWD on December 31, 2000, to provide a vehicle for issuing and servicing LAWD’s remaining water bond authorization. ID No. 135 lies to the northeast of the intersection of the Santa Ana and San Diego Freeways, and covers a majority portion of the City of Lake Forest.

ID No. 113 was formed in 2004 over the property within the former Marine Corps Air Station Tustin, a facility established in 1942 to support U.S. Navy lighter-than-air aircraft (blimps) conducting anti-submarine patrol off the California coast during World War II and later used to support Marine Corps helicopter operations until its closure in 1999. The former helicopter base, now known as Tustin Legacy, is currently being redeveloped with residential, commercial, institutional and recreational uses.

The formation of ID Nos. 153 and 154 took place in conjunction with the July 1, 2006 consolidation of the former Santiago County Water District (SCWD) with IRWD, to serve as the successors to two improvement districts formed by SCWD in 1978, ID No. 1 (water and sewer) in the area extending northward from Loma Ridge to the Fremont Canyon area, and ID No. 2 (water) including portions of Black Star, Baker and Hall Canyons. As part of the district consolidation, the majority of the territory of SCWD’s ID No. 1 became ID No. 153 (with respect to ID No. 1’s water bond authorization), and all of the territory of SCWD’s water ID No. 2 became ID No. 154 of IRWD.

The most recent IRWD water improvement district formation took place in 2008, when the District formed ID No. 112 over the lands in the eastern portion of the District north of the Santa Ana Freeway, within the former Marine Corps Air Station El Toro, a base originally established in 1942 to support U.S. Marine Corps aviation activities during World War II, and encompassing the planning areas now known as Heritage Field and the Great Park.

**Sewer Improvement Districts.** The first sewer improvement district to be formed by the District was Improvement District No. 1, in 1965. ID No. 1 encompassed an area lying south of the San Diego Freeway and ranging from two to seven miles inland from the Pacific Ocean, including most of the University of California Irvine campus. ID No. 1 assumed the obligations of Orange County Sanitation District No. 14 for the cost of a nucleus collection system when District No. 14 was disbanded,<sup>2</sup> and ID No. 1’s planned works also included a treatment plant and IRWD’s initial reclamation and reclaimed water storage facilities. ID No. 1 is presently known as ID No. 1(201) or “210.” Like “110”, the “210” area was excluded from later improvement district formations based on initial contribution.

After ID No. 1, sewer improvement district formations generally paralleled the water improvement district formations discussed in the preceding section. In the case of most of the improvement districts formed before 1978, each sewer improvement district preceded its water

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<sup>2</sup> The disbanded Sanitation District was the original “District No. 14.” Another District No. 14 of the Orange County Sanitation Districts was formed in [1986], over much of IRWD’s territory (except for the coastal portion within Orange County Sanitation District No. 5), for the purpose of acquiring regional collection, treatment and disposal capacity in the OCSD facilities to augment IRWD’s Michelson Water Reclamation Plant. See Section 1.4.

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counterpart by a few years; after that, each water improvement district and its corresponding sewer improvement district were generally formed concurrently and were coterminous.

In 1971, sewer ID Nos. 2 (subsequently known as 202) and 3 (subsequently known as 203) were formed over areas generally corresponding to the areas that, a few years later, were included in water ID Nos. 102 and 103, described above. Their plans of works contemplated an expansion of the Michelson Water Reclamation Plant, dual collection and treatment systems for reclaimable domestic sewer and non-reclaimable industrial discharges, reclaimed water distribution facilities and wet weather treated sewer disposal. ID No. 204 was formed in 1972 at the same time as the corresponding water ID No. 104. ID No. 204's plan of works initially envisioned two systems delivering sewage from the coastal area, one discharging to a regional treatment and disposal system and the other to a local treatment plant to be built. Ultimately, the collection system was instead designed to deliver all of the sewage flow from ID No. 204 (and from the later-formed ID Nos. 241 and 242) to the interceptor and trunk sewers and regional treatment facilities financed by Orange County Sanitation District No. 5. ID No. 206 was formed in 1975, covering the area corresponding to ID No. 106 which was formed the following year.

As happened in the water system, the addition of further phases of facilities to the planned sewer system in the late 1970s made it necessary to increase the authorized bonds to finance them. In 1978, the District formed ID Nos. 221, 241, 242, 250, 261 and 290 (coterminous with the counterpart water ID Nos. 121, 141, 142, 105, 161 and 109, respectively).

Beginning in the 1980s, the addition of areas to the District by annexations and consolidations and the closure of former military bases generally led to the formations of sewer improvement districts at the same time as the corresponding water improvement district formations, described above.<sup>3</sup> ID Nos. 282, 284, 286 and 288 were formed in 1988 (coterminous with ID Nos. 182, 184, 186 and 188, respectively). ID No. 235, encompassing the territory of the former LAWD and coterminous with ID No. 135, was formed upon LAWD's consolidation with IRWD on December 31, 2000, to issue and service LAWD's remaining sewer bond authorization. Upon the July 1, 2006 consolidation of the former Santiago County Water District with IRWD, ID No. 253 (coterminous with ID No. 153) was formed as the successor to Santiago County Water District ID No. 1's 1978 sewer bond authorization). ID Nos. 213 (coterminous with ID No. 113) and 212 (coterminous with ID No. 112) were formed in 2004 and 2008, respectively. In 2008, ID No. 256 was formed through annexation proceedings that were conducted to include the former territory of Orange Park Acres Mutual Water Company in IRWD. ID No. 256 has no authorized bonds, but was formed to provide a potential vehicle for such authorization if and when the residents of the area, now served predominantly by septic tanks, determine to finance a public sewer collection system to allow a conversion to sewer service.

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<sup>3</sup> An improvement district unrelated to the addition of service area to the District, ID No. 252, was formed in 2005, encompassing a small portion of the area formerly within ID No. 250.



**Regional Allocation.** As the regional water system has been built, buy-ins and allocations among the improvement districts have been utilized to maintain proportionate sharing of regional system costs. Allocations among the improvement districts have similarly been utilized to maintain proportionate cost allocation of regional sewer system costs. Regional potable water and regional sewer allocations are based on demands. For the portion of the regional costs relating to the reclamation system, historically allocation was weighted, with two-thirds of the cost of the storage, transmission and disposal facilities making up the regional irrigation system allocated based on the improvement districts' prorated shares of the sewage generation and one-third of the cost prorated based on their share of irrigation water demands. That practice was subsequently modified, and the District instituted its current practice of establishing separate regional allocations for sewer facilities, based on sewage generation, and recycled water facilities, based on recycled water demand, for each sewer improvement district. Cost variations among tributary collection system areas have also been factored into the regional sewer allocation. The regional split for the area within ID No. 240 reflects that ID No. 240 has participated in the financing of the Orange County Sanitation District's treatment facilities and does not discharge sewer to the MWRP collection system.

Regional allocation includes facilities serving all improvement districts as well as sub-regional facilities serving two or more, but not all, improvement districts. Consistent with regional allocation, as certain areas were added to IRWD's service area through annexations, consolidations, and military base conversions, in some areas acquisition balances were established to recover regional system cost, and in others new improvement districts were formed to assure that those areas would contribute proportionately to regional facilities and pay for local facilities and expanded regional facilities to serve their demands. Regional allocation will continue to be used with the reorganized improvement districts to assure proportionate cost-sharing of the District's regional system.

Under the District's historic and continuing methodology for achieving equitable cost allocation, the improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. As a result an improvement district can reach full development, but its regional system funding participation will continue. A similar regional allocation would be applied to replacement and enhancement projects, to the extent funded by the improvement districts. This incremental funding approach also recognizes that at any point in time prior to full buildout, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service.

As discussed in more detail in Section 6, the District will also allocate future regional cost sharing to "110" and "210" areas excluded from earlier improvement district capital funding, based upon an analysis of historic cost contributions of these areas and benefit received from future capital facilities.

**Consolidation of Improvement Districts.** As development progresses to completion in improvement districts and the need for having separate improvement districts to match capital facilities

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construction timing and other specific local facilities needs of different geographic areas diminishes, consolidation of various improvement districts can produce efficiencies for the District, its customers and property owners. The California Water Code allows the Board of Directors, in a noticed hearing process, to reorganize its improvement district boundaries and to consolidate coterminous improvement districts. The statutory provisions for the consolidation of improvement districts specify that a consolidated improvement district may levy and collect the assessments and charges necessary to satisfy the obligations of its predecessor improvement districts, and that the authorized and unissued bonds of the predecessor improvement districts may be issued and sold as the bonds of the consolidated improvement district.

Ultimately, the District envisions a succession plan that would reduce the number of its improvement districts, ideally to one water improvement district and one sewer improvement district, through consolidations and reorganizations to be implemented as and when considerations for separation of the various improvement districts no longer remain. The current reorganizations and consolidations significantly advance this plan. The timing of the remainder of this plan will be dictated by various factors relating to the preservation of equitable cost sharing as development continues to buildout and as the regional system benefits for various geographic areas are merged.

**Previous Consolidations.** Under the statutory consolidation provisions, some of the original improvement districts described in the preceding sections have been consolidated. The consolidations that were implemented prior to the current consolidation included two groups of the original improvement districts. The first of these consolidations took place in the coastal area. In 1989, after completing annexations to and detachments from ID Nos. 104, 141 and 142 to exclude permanent open space areas and create coterminous boundaries for the improvement districts' remaining territories, they were consolidated, with the resulting consolidated improvement district designated as ID No. 140. Simultaneously, ID Nos. 204, 241 and 242 were consolidated as coterminous improvement districts, with the resulting consolidated improvement district designated ID No. 240. Following a similar process in 2008, ID Nos. 103 and 109 were consolidated and designated as ID No. 130 and ID Nos. 3(203) and 290 were consolidated and designated as ID No. 230.

**The Current Consolidations and Reorganizations.** With the 1989 and 2008 improvement district consolidations, the District began to implement a transition of its improvement district financing structure from a developing to a developed condition. The current consolidations continue that transition. Based on the District's investigation of the merits of implementing further reorganization and consolidation of its improvement districts, the current reorganization and consolidation have been formulated on a comprehensive, District-wide basis, to provide a sustainable platform for capital funding through the buildout of the District and the completion of the system. The current reorganization and consolidation preserve the District's long-term funding approach in which regional facilities and capacity are acquired incrementally by all improvement districts until the regional system as a whole is complete and regional cost allocations are used to maintain equitable cost-sharing. The interrelated consolidation actions, expected to be effective January 1, 2014, include the following key components:

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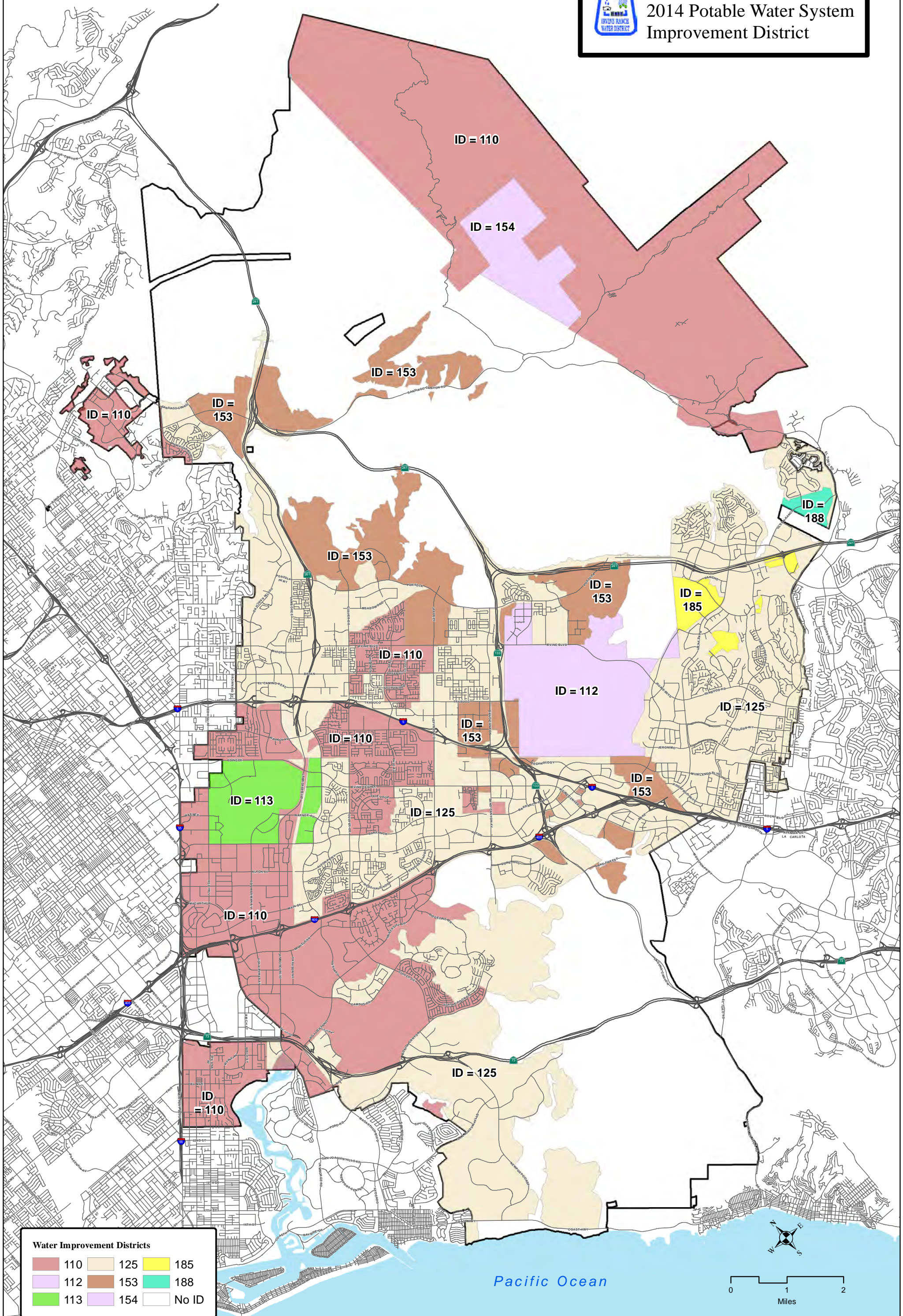
- Reorganization and consolidation of the substantially developed and certain partially developing improvement districts into a single water improvement district and a single sewer improvement district, ID Nos. 125 and 225;
- Reorganization of several remaining developing areas into one existing and one new water improvement district (ID Nos. 153 and 185) and one existing and one new sewer improvement district (ID Nos. 253 and 285). These developing areas are also retained within the improvement districts reorganized and consolidated as ID Nos. 125 and 225, with the effect that ID Nos. 125 and 225 will underlay these developing improvement districts and ensure cost participation of these developing improvement districts in local and sub-regional facilities already built by the former improvement districts being consolidated (see Chapter 6);
- Retention of existing ID Nos. 112, 113, 188, 212, 213 and 288 as separate developing improvement districts;
- Retention of existing ID Nos. 154, 252 and 256 pending future evaluation of applicable equity considerations;
- Establishment of a planning area over the area of former ID No. 135, consolidated within the developed water improvement district ID No. 125, until completion of financial programs currently in progress to place the former ID No. 135's user rates under the same structure as other developed areas;
- Retention of existing ID No. 240 as a separate improvement district, unless and until separate regional sewer cost allocations are no longer necessary;
- Implementation of separate charges or other mechanisms, as necessary, to recover a proportional allocation of cost for future regional facilities from the "110" and "210" areas that are not participating in proportional regional cost allocation by inclusion in an improvement district.

Throughout the construction of the District's capital facilities, the District has separated the financing of its water and sewer (including recycled water) systems. The District believes this historical separation continues to be justified, based on differences between the two systems in terms of the factors that govern the allocation of benefits and cost responsibilities among the areas served by each system. For this reason, the above described actions do not include any consolidations of water improvement districts with sewer improvement districts, and the District has no plans at this time to do so. The separation can be reexamined in the future.

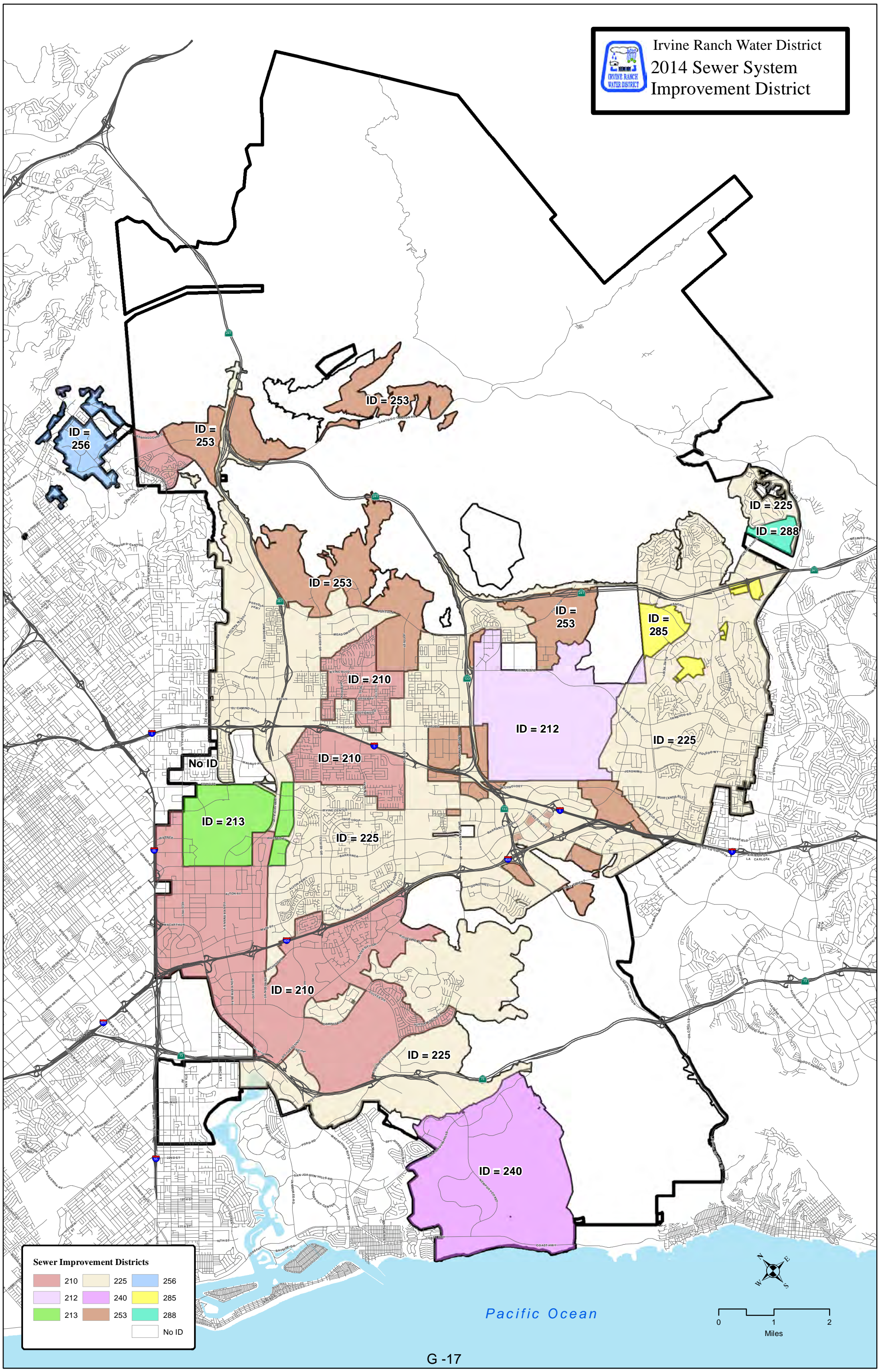




# Irvine Ranch Water District 2014 Potable Water System Improvement District

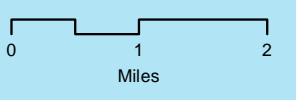






**Sewer Improvement Districts**

210	225	256
212	240	285
213	253	288
No ID		





#### 1.4 THE WATER, SEWER AND RECYCLED WATER SYSTEMS

**The Water System.** The initial domestic water system included the San Joaquin Reservoir<sup>4</sup> and IRWD's capacity in the East Orange County Feeder No. 2 and other transmission facilities, financed by the sale of general obligation waterworks bonds of the overall District in the 1960s. The District also acquired from the U.S. Government an 18-inch transmission main used to deliver a water supply to the Tustin and El Toro military bases from Metropolitan Water District's East Orange County Feeder and later from East Orange County Feeder No. 2. For the delivery of untreated water supplies, the District acquired capacity in the regional untreated delivery system of the Santiago Aqueduct Commission.

The District's Water Resources Master Plan ("WRMP"), initially formulated in 1972 and updated periodically, sought to provide for ultimate demands and reliability. With the formation of the first few improvement districts and the authorization and sale of improvement district bonds in the early 1970s, the system was expanded, adding local master planned facilities for each of the developing areas as development progressed and building the regional system in which the improvement districts participated in proportion to their demands. Through cooperative efforts with Municipal Water District of Orange County ("MWDOC"), neighboring water districts and cities, an area wide system was acquired, storage was constructed and transmission pipelines were acquired and installed to receive Colorado River imports via MWD facilities. This supplemental source of water was augmented by northern California supplies with commencement of deliveries through the State Water Project system in July, 1976.

In 1978, additional water capacity needed to serve the District was estimated at 140 cubic feet per second ("cfs") (ultimate peak month demand). A supplementary water source plan envisioned in the 1970s and embodied in the 1978 plans of works consisted of the purchase of a 60 cfs share of a proposed regional pipeline (then known as the "Diemer Intertie" and now known as the Allen McColloch Pipeline or "AMP") and an 80 cfs wellfield in the main Orange County groundwater basin. The AMP was constructed by MWDOC, with 79 cfs participation by IRWD, and IRWD constructed two transmission mains capable of supplying 45 cfs from AMP into the distribution system. These facilities, along with two wells in the Tustin area with a combined capacity of 4 cfs, and the Zone 1 Reservoir to provide internal operational storage and avoid the need to supply peak hour demands from feeder connections, comprised the first phase of the domestic water system. Construction of the 80 cfs wellfield, known as the "Dyer Road Wellfield," took place in the 1980s..

As the domestic water system was built, it was anticipated that commercial agriculture would be phased out by residential, industrial and commercial development, and it was assumed that the existing

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<sup>4</sup> The San Joaquin Reservoir was initially constructed as a domestic water facility. Due to water quality considerations, that use was eventually discontinued, and IRWD acquired the facility from its agency partners and converted it to a recycled water seasonal storage facility.



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irrigation system would provide agricultural water until no longer needed. The cost of the untreated water system and its supply, storage and transmission facilities, consisting of the Irvine Lake Pipeline and improvements to Irvine Lake, were apportioned primarily to ID No. 105. In the 1970s, the ID No. 105 plans of works noted that the Irvine Lake Pipeline supply would require treatment for use as a domestic water supply, and an untreated delivery system from Irvine Lake, through either the Santiago Aqueduct Commission facilities or a new Irvine Lake Pipeline, as well as a treatment plant identified in the 1972 WRMP, were included in the planned works for that improvement district.

In the early to mid 1980s, as the district's water supply needs were updated, other regional system improvements were planned and financed by the improvement districts, including the continued construction of the regional supply, transmission and storage facilities, administration and operations facilities and telemetry.

The AMP, Dyer Road Wellfield and major delivery facilities were completed as contemplated in the existing plans of works. With those core imported and groundwater supply and delivery facilities and the associated distribution system in place, the District's current WRMP targets a reliable water supply mix and includes the development of sufficient groundwater production capacity to pump up to the District's basin production percentage set by the Orange County Water District.

In accordance with current IRWD policy, basic operational reliability and redundancy for the water system is evaluated with reference to the capacity needed to sustain an outage of a major supply system component, assuming demand reduction obtainable through customer cooperation.

Wells in addition to those in the Dyer Road Wellfield have been constructed or improved in Orange Park Acres, Lake Forest and Irvine to provide additional groundwater supplies. The groundwater production and treatment components of the Irvine Desalter Project produce both domestic and recycled water supplies

In 2009-10, the District commenced the engineering design for a new water treatment plant, the Baker Water Treatment Plant (the "Baker WTP"). Construction of the Baker WTP is anticipated to be complete in July 2015. This project, to be constructed by the District in cooperation with neighboring water districts, will improve operational supply capacity and regional reliability through the treatment of local and imported raw water sources to drinking water standards. When constructed, the Baker WTP is expected to treat to drinking water standards approximately 28 million gallons per day ("mgd") of raw imported water purchased from MWD. During emergencies and planned raw imported water outages, water from Irvine Lake is expected to be supplied to the Baker WTP for treatment to drinking water standards. The Baker WTP will utilize microfiltration and ultraviolet disinfection as the primary treatment processes.

In addition to developing its water treatment, local groundwater and recycled water systems, the District is diversifying its water supply portfolio by developing water banking projects for dry year reliability. These projects include the Strand Ranch Integrated Banking Project and the Stockdale

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Integrated Banking Project, situated on groundwater recharge lands that overlie the regional Kern County groundwater basin. The District has also secured access to certain participation rights in the Kern Water Bank to store water. The purpose of developing banking facilities is to improve the District's water supply reliability by enabling the District to store lower cost water it can acquire during wet hydrologic periods for use during dry periods. The District has entered into arrangements to acquire water for banking, including unbalanced exchanges and other transactions. The banking facilities will enhance the District's ability to respond to drought conditions and potential water supply interruptions and will provide the District the ability to reduce the cost of water delivered under such conditions. The District has also entered into an agreement with MWD and MWDOC to provide a means to deliver banked water to the District's service area.

**The Sewer System.** The District's powers did not include sewage collection and treatment when the District was formed. When the District's principal act, the California Water District Law, was amended to permit California water districts to provide sewage services subject to voter approval, voters of the District approved the added scope of services at an election held in March, 1965.

The District began the construction of a sewer system with the bonds of ID No. 1 issued in 1966 and subsequent bonds issued on behalf of ID Nos. 2(202) and 3(203). In addition to the nucleus sewage collection system acquired from Orange County Sanitation District No. 14, the original planned works included a treatment plant, reclamation and reclaimed water storage facilities. Subsequent plans of works contemplated an expansion of the Michelson Water Reclamation Plant, dual collection and treatment systems for reclaimable domestic sewer and non-reclaimable industrial discharges, reclaimed water distribution facilities and wet-weather treated sewer disposal.

The Michelson Water Recycling Plant ("MWRP"), then known as the Michelson Water Reclamation Plant, has been expanded in phases. The most recent expansion, anticipated to be completed during fiscal year 2014, will bring its capacity from 18 to 28 mgd. The District's sewer system also includes facilities and contractual entitlements to serve the portions of its service area in the coastal, Lake Forest and Santa Margarita ("Chiquita") areas not tributary to MWRP, as well as regional treatment capacity in the facilities of Orange County Sanitation District for the sewage from the MWRP-tributary area that is in excess of its needs for production of recycled water.

The sewer system to serve the coastal area not tributary to MWRP was first envisioned as two systems, one discharging to a regional treatment and disposal system and the other to a local treatment plant to be built. Ultimately, the collection system for the coastal area was instead designed to deliver all of the sewage flow to the regional collection and treatment facilities of Orange County Sanitation District No. 5.

During fiscal year 1986, the District cooperated with Orange County Sanitation District ("OCSD") to form Sanitation District 14 (functionally replaced by "Revenue Area 14" of OCSD, upon the 1998 consolidation of the several sanitation districts comprising OCSD's predecessor, the County Sanitation Districts of Orange County), which overlays much of the District's territory other than the coastal area.

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Under an agreement entered into between the District and OCSD, the District acquired equity interests in OCSD's sewage processing facilities (the percentage of interest will vary over time pursuant to a formula set forth in the agreement between OCSD and the District). The agreement also provides for the purchase by the District of additional capacity in OCSD sewage processing facilities on an as-needed-basis determined from annual flows. These equity purchase costs are included in the costs regionally allocated to the improvement districts.

In 2000, as part of the consolidation of Los Alisos Water District with the District, the Los Alisos Water Reclamation Plant ("LAWRP") was added to the sewer system. Currently, approximately 85% of the District's sewer is treated by the MWRP and LAWRP operated by the District, and approximately 14% is treated by OCSD.

A future MWRP expansion up to 33 mgd has undergone environmental review and is planned by 2025, as needed to meet demand. Ultimately, the District plans to expand capacity for its treatment facilities to approximately 40.5 mgd in order to: (i) increase recycled water production and utilization; (ii) decrease exposure to external treatment costs and operational constraints; and (iii) decrease dependencies on imported water supplies.

The construction of IRWD's regional sewer system also includes the network of gravity sewers, force mains, sewer lift stations and siphons that convey sewer to each treatment facility, which was developed as the system was expanded.

The processes for treating sewage and producing recycled water generate solids residuals. After evaluating alternative approaches to handling its sewer solids, the District is proceeding with the construction of facilities for handling MWRP solids, currently conveyed to Fountain Valley for treatment by OCSD, as well as solids from the District's LAWRP. The solids handling capital project is underway and is anticipated to be completed in fiscal year 2017.

**The Recycled Water System.** In addition to the water reclamation facilities described under the preceding subheading, the recycled water system consists of a dual system for distribution of the recycled water, primarily for irrigation, and seasonal storage to allow production in the low-demand winter season for use in the high-demand summer season. These facilities presently include the District's Sand Canyon, Rattlesnake Canyon, and San Joaquin Reservoirs, which are recycled water reservoirs with capacities of 750 acre feet, 1,100 acre feet, and 2,500 acre feet respectively. In addition to the future expansion of reclamation capacity, based on demand as described above relative to the sewer system, the District plans to increase seasonal storage capacity. At this time, the expansion of Syphon Reservoir is being evaluated for that purpose. The cost of the Syphon expansion or a comparable seasonal storage project is included in the proposed sewer plans of works. As stated above, the recycled water system regional and local costs comprise a part of regional and local sewer costs under the plans of works.



**Enhancement and Replacement.** Apart from the ongoing system expansion and completion that will continue to buildout, the District has incorporated in its system planning efforts the updating of its infrastructure to meet the needs of existing and future customers. These system enhancement efforts will include capital projects that provide service cost savings and projects that provide reliability or redundancy beyond that necessary to satisfy the District's policy for basic reliability. Replacement and refurbishment improvements consist of repairs and restoration to existing water, recycled water and sewer system facilities. The District presently funds enhancement and replacement costs from reserves set aside for that purpose with contributions from user rates, general 1% tax levy revenues and other sources. The District may also evaluate the funding of enhancement and replacement costs through the improvement districts to the extent authorized general obligation bonds are available for such purposes and the enhancement and replacement costs are allocable among improvement districts and other funding sources in a fair and equitable manner.

## SECTION 2 IMPROVEMENT DISTRICT NO. 153

### 2.1 DESCRIPTION OF THE STUDY AREA

ID No. 153 as originally formed, represented the majority of the territory of ID No. 1 of the former Santiago County Water District, the area extending northward from Loma Ridge to the Fremont Canyon area. As a result of the current reorganization of ID No. 153, the land included in the improvement district consists of planned future development areas in portions of former ID No. 153 as well as planned future developments within other former improvement districts (principally former ID Nos. 105 and 130) that have been added to ID No. 153 by annexation. Areas of former ID No. 153 that contained permanent open space, including approximately 13,400 acres near the Lomas de Santiago ridgeline, have been excluded. The resulting Improvement District No. 153 is a developing improvement district that will function in tandem with existing ID Nos. 112 (former MCAS El Toro), 113 (former MCAS Tustin) and 188 (Portola Center) and new ID No. 185, where development is underway, to provide equitable regional capital cost sharing by the District's developing areas.

To simplify the text of this report, "north" refers to "Irvine north" running parallel to Sand Canyon Avenue. North arrows on exhibits show true north.

### 2.2 LAND USE AND DEVELOPMENT PHASING

**Land Use.** The District expects future development of the reorganized ID No. 153 to be predominantly residential with supporting commercial development, and expects development in ID No. 153 to continue through at least 2035.

**Figure II-1** shows the boundaries of reorganized ID No. 153, encompassing about 4,250 acres.

The reorganized ID No. 153 includes portions of the following planned development areas as depicted on **Figures II-1a through II-1e**:

- **Figure II-1a** depicts portions of Planning Areas 1 and 2 (north of Portola Parkway, between the Eastern Transportation Corridor and Jeffrey Road), Planning Areas 5B, and 9B (north of the Irvine Blvd to Portola Parkway, bisected by Jeffrey Road);
- **Figure II-1b** depicts portions of Planning Area 6 (southeast of the intersection of the Eastern Transportation Corridor and the Foothill Transportation Corridor), Planning Areas 30 (northeast of the intersection of I-5 and I-405), and Planning Area 40 (north of I-5 generally bounded by Trabuco Road, Future O Street, and Jeffrey Road) ;

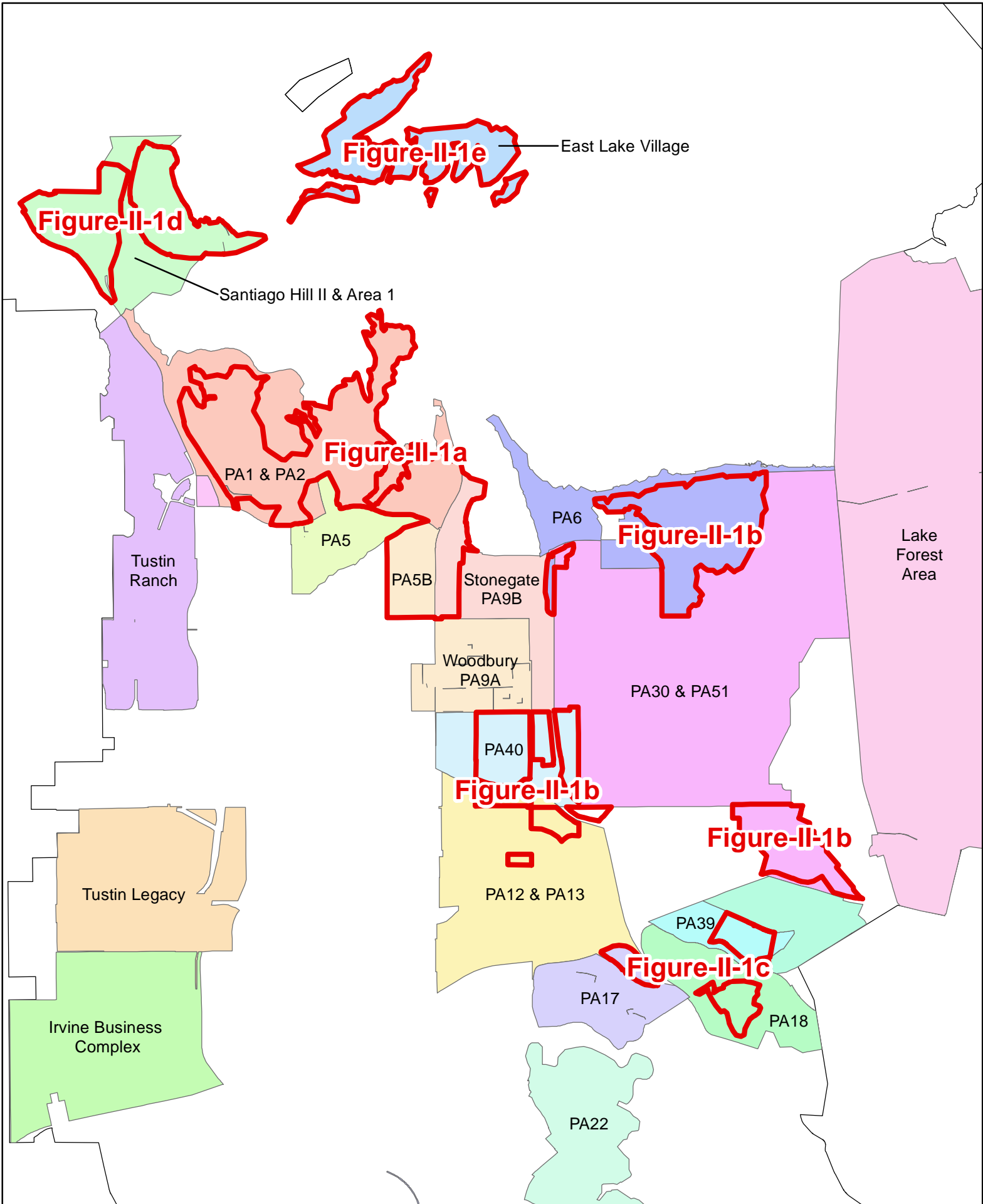
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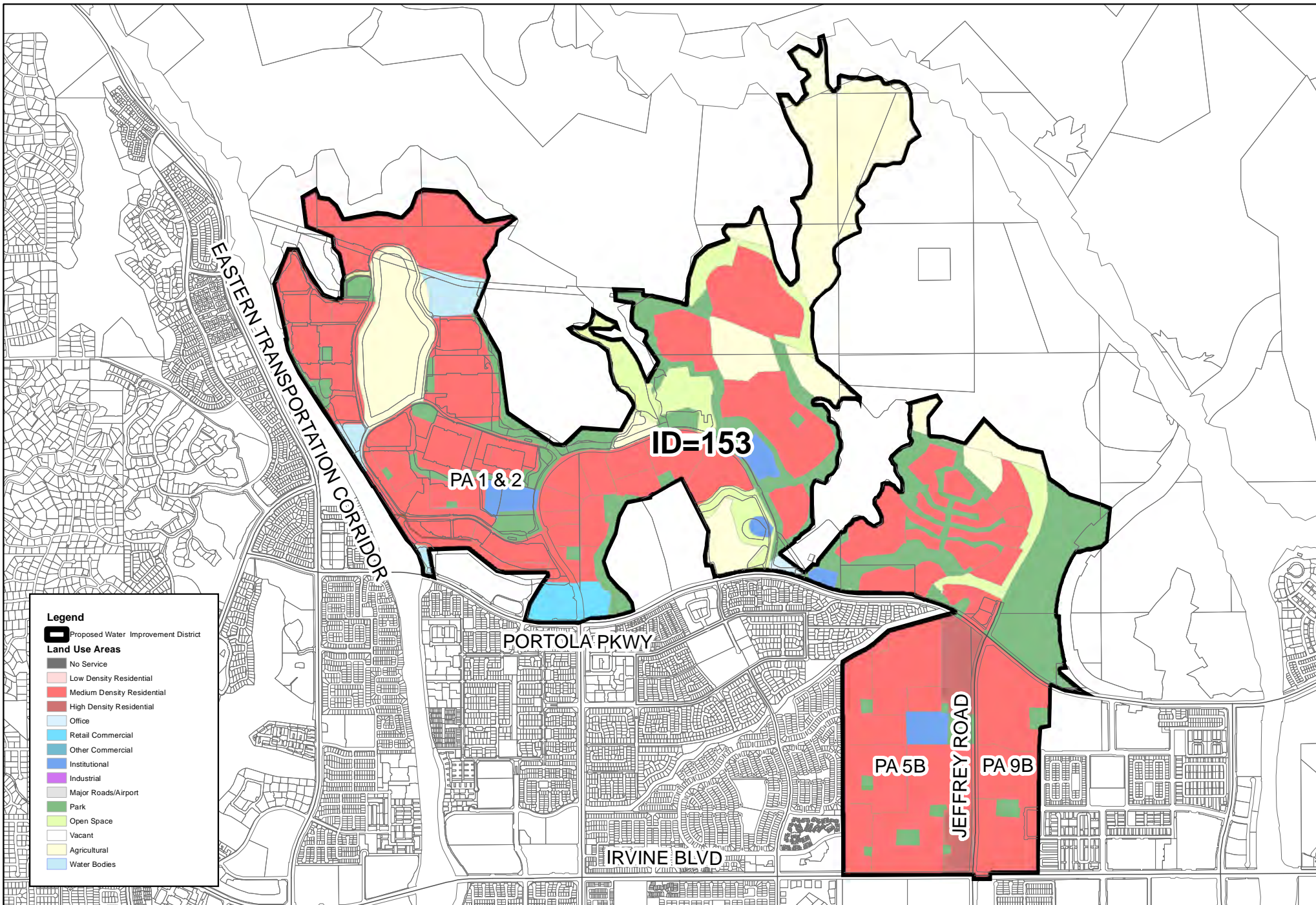
- **Figure II-1c** depicts portions of Planning Area 17 (southwest of the intersection of I-405 and SR-133), Planning Area 18 (south-east of the intersection SR-133 and I-405), Planning Area 39 (south of Irvine Center Drive, between I-405 and Bake Parkway);
- **Figure II-1d** depicts Santiago Hills II and East Orange Area 1 (east of Jamboree Road and north of the intersection of SR-241/Santiago Canyon Road and SR-261); supplemented by Santiago Hills Integration Study ;
- **Figure II-1e** depicts East Orange General Plan (“Lake Village” -- north of Santiago Canyon Road and southeast of Irvine Lake; also supplemented by Santiago Hills Integration Study);

**Development Phasing.** This Plan of Works follows and incorporates the phasing used in the subarea master plans applicable to the various planned development areas.

Phasing of development is subject to change. Depending upon real estate markets, city planning decisions and other factors, some phases or portions of phases could occur simultaneously rather than sequentially. The phasing of bond issues discussed in Section 5, have been selected to allow reasonable flexibility in phasing priorities.







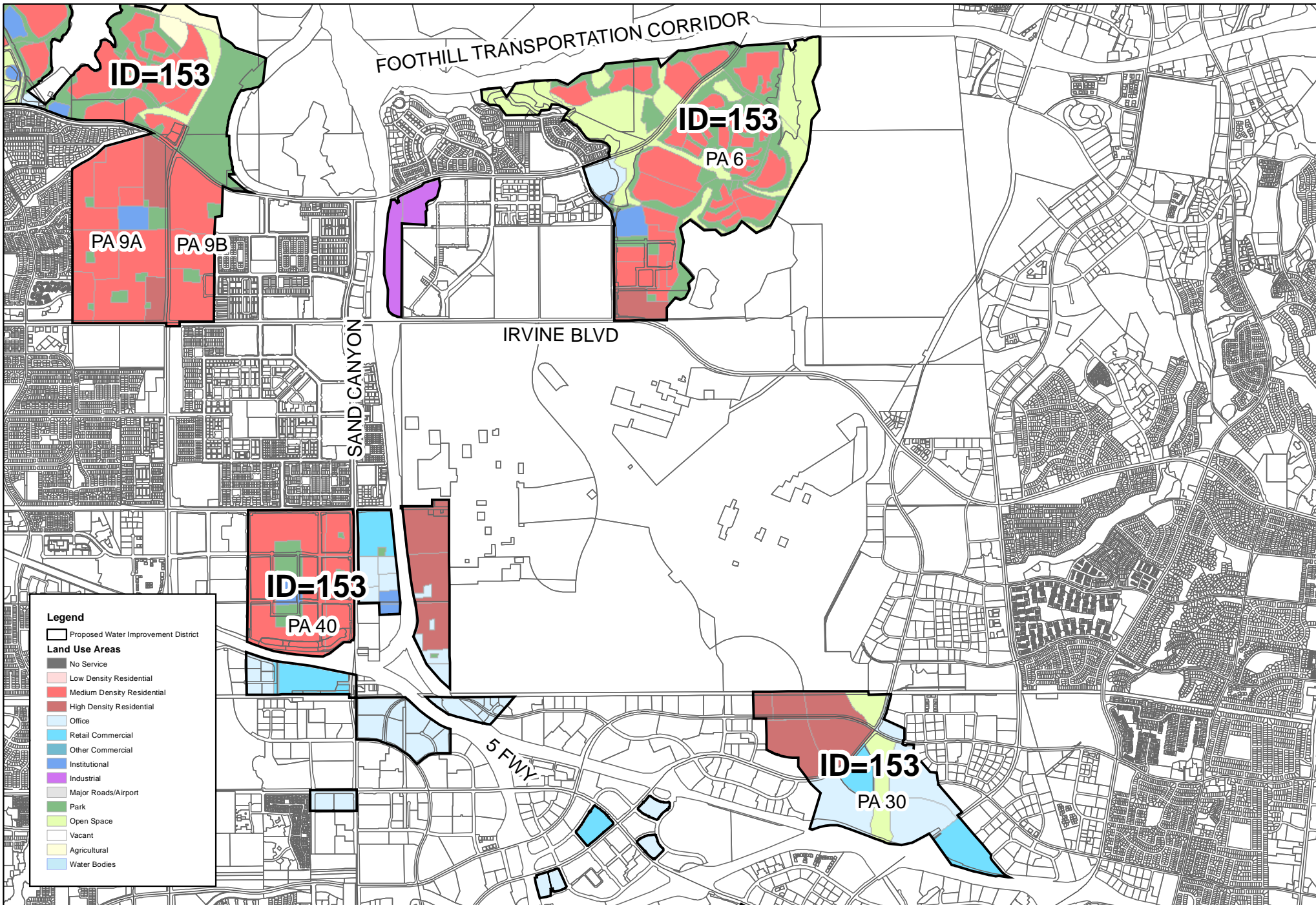
**IRVINE RANCH  
WATER DISTRICT**

**POTABLE IMPROVEMENT DISTRICT 153  
PLANNING AREAS 1, 2, 5B, AND 9B PROPOSED LAND USE**

G-26

**FIGURE-II-1a**



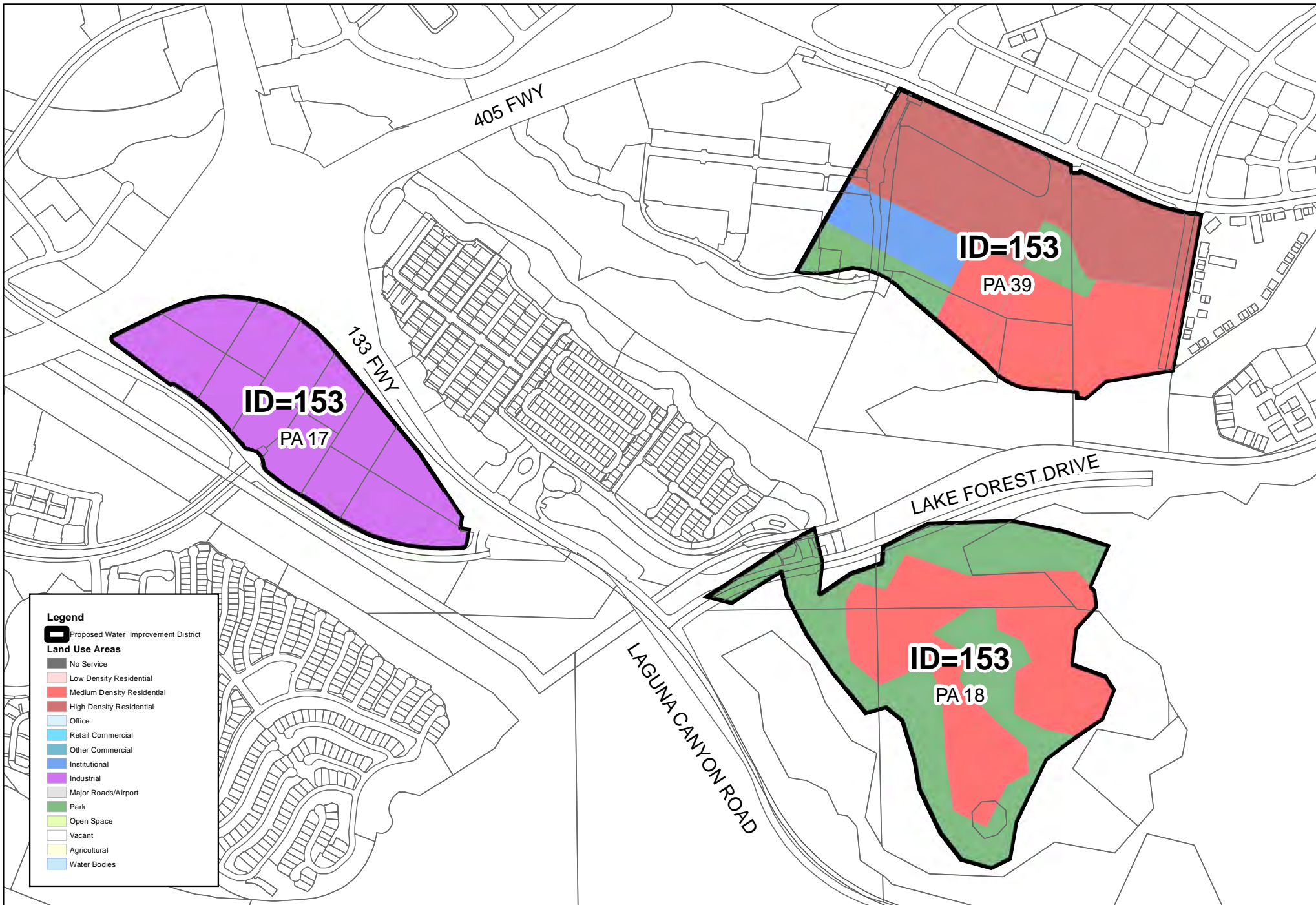


**IRVINE RANCH  
WATER DISTRICT**

**WATER IMPROVEMENT DISTRICT 153  
PA 6, PA 30, PA 40, PA 51 PROPOSED LAND USE**

**FIGURE-II-1b**

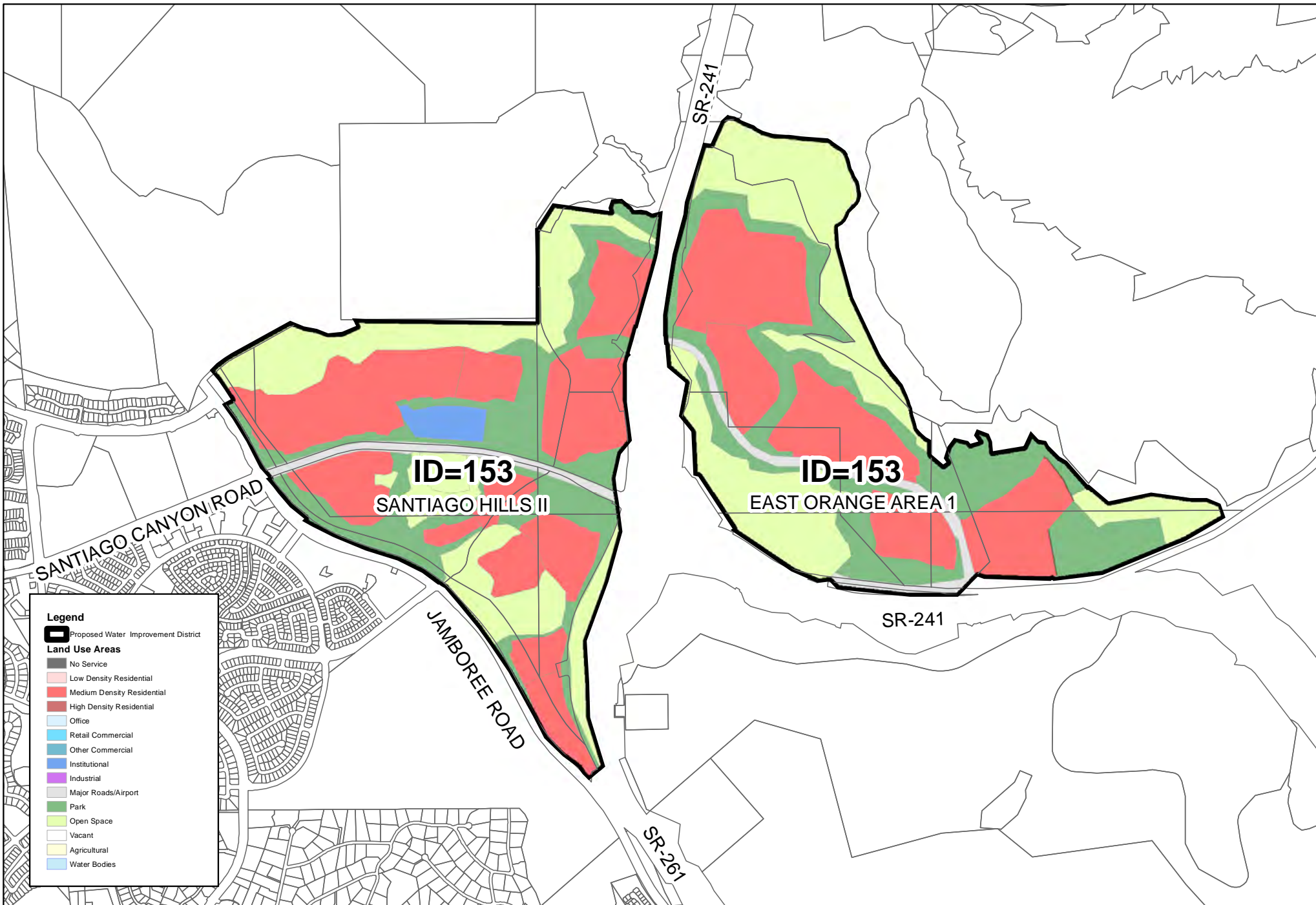




**IRVINE RANCH  
WATER DISTRICT**

**POTABLE IMPROVEMENT DISTRICT 153  
PLANNING AREA 17, 18 AND 39 PROPOSED LAND USE**

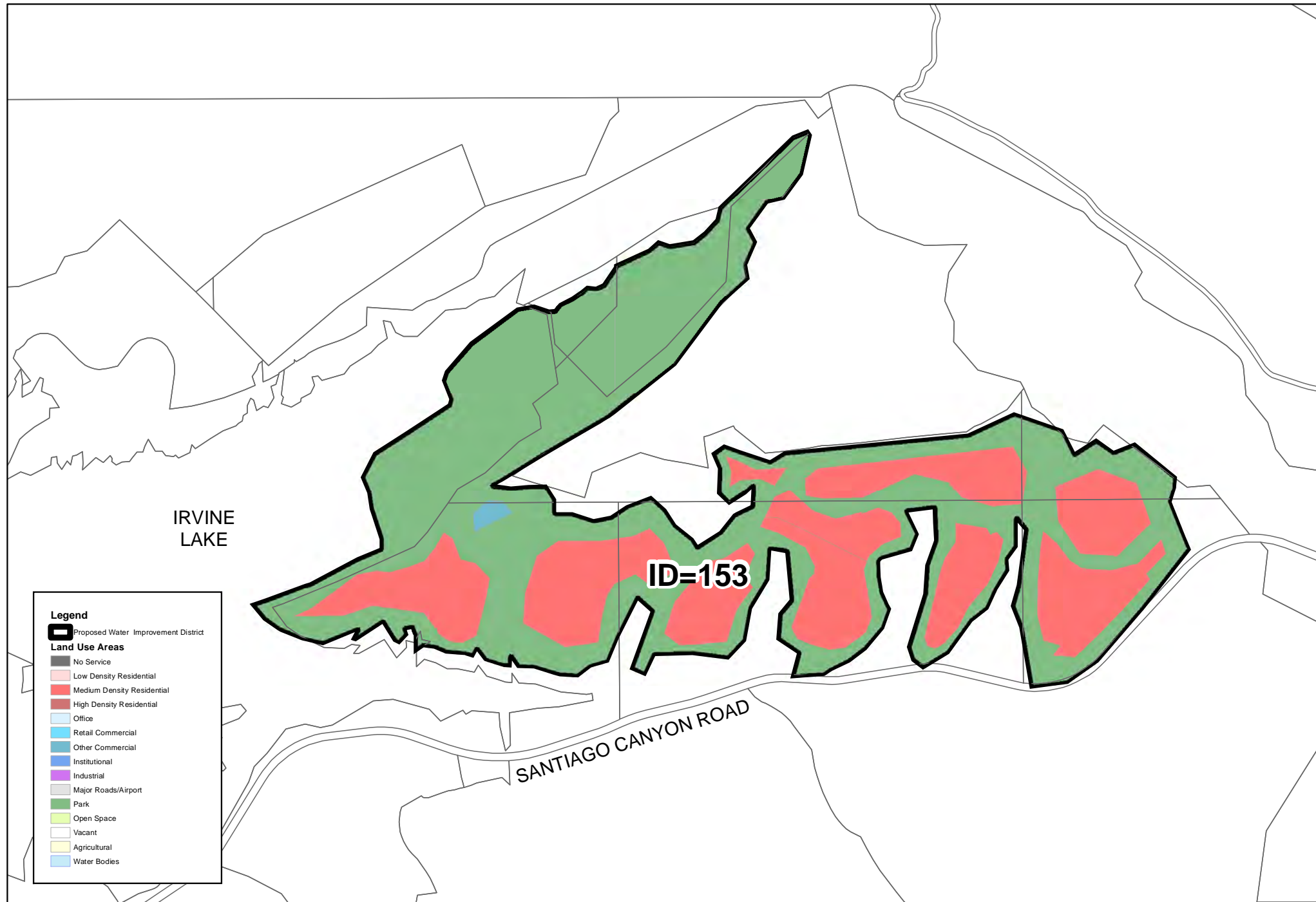
**FIGURE-II-1c**



**IRVINE RANCH  
WATER DISTRICT**

**POTABLE IMPROVEMENT DISTRICT 153  
SANTIAGO HILL II AND EAST ORANGE AREA 1 PROPOSED LAND USE**

**FIGURE-II-1d**



**IRVINE RANCH  
WATER DISTRICT**

**POTABLE IMPROVEMENT DISTRICT 153  
EAST LAKE VILLAGE AREA**

**FIGURE-II-1e**



### 2.3 DEMAND AND PEAKING FACTORS

**Water Use Factors.** **Table II-1** reflects most recently adopted duty factors from the IRWD Water Resources Master Plan (WRMP), summarizing the District's standard interior and exterior water use factors. The District employ local interior water use factors, shown in the table, as its sewer duty factors. Irrigation factors used to determine recycled water demands are also shown in the table. The factors in **Table II-1** were also used to develop **Table II-2**.

**Peaking Factors.** Potable water peaking factors, irrigation peaking factors, applied in calculation for sizing respective facilities, are set forth in the WRMP. Sewer peaking, applied in calculation for sizing sewer collection and treatment facilities, are set forth in the SCSMP.

**Table 3-1 Land Use and Water Use Factors (September 2012)**

Code	Land Use Description	Land Use Agency	Land Use Density		Local Demands			Irrigation Demands	
			Average	Units	Local - Interior	Local - Exterior	Total Local	% Irrigated Area	Irrigation Factor
<b><u>1100</u></b>	<b><u>Residential</u></b>				<b><u>Gal/DU/Day</u></b>			<b><u>Gal/Acre/Day</u></b>	
1111	Rural Density	Orange	0.3	du/acre	250	170	420	0%	1,000
1112	Rural Density	Irvine	0.3	du/acre	250	750	1,000	5%	2,800
1115	Rural Density	County	0.26	du/acre	300	350	650	5%	2,800
1121	Estate Density	Orange	1.2	du/acre	300	350	650	5%	2,800
1122	Estate Density	Irvine	0.5	du/acre	300	225	525	5%	2,800
1126	Estate Density	Lake Forest	0.5	du/acre	300	350	650	7%	3,000
1131	Low Density	Orange	4	du/acre	300	350	650	8%	2,500
1132	Low Density	Irvine	3	du/acre	225	180	405	16%	2,200
1133	Low Density	Newport Beach	1	du/acre	290	220	510	17%	2,800
1134	Low Density PC	Tustin	4.5	du/acre	450	1,550	2,000	17%	2,800
1135	Suburban Density	County	9.25	du/acre	165	95	260	15%	2,500
1136	Low Density	Lake Forest	3	du/acre	270	150	420	20%	2,800
1141	Low-Medium Density	Orange	10.5	du/acre	235	145	380	15%	2,500
1146	Low-Medium Density	Lake Forest	11	du/acre	205	150	355	10%	3,000
1153	Medium-Low Density	Newport Beach	2.75	du/acre	400	350	750	10%	2,800
1161	Medium Density	Orange	19.5	du/acre	200	150	350	15%	2,800
1162	Medium Density	Irvine	7.5	du/acre	200	100	300	15%	2,800
1163	Medium Density	Newport Beach	5	du/acre	225	205	430	20%	2,800
1164	Medium Density PC	Tustin	11.8	du/acre	155	95	250	15%	2,800
1166	Medium Density	Lake Forest	7.5	du/acre	140	60	200	15%	2,800
1172	Medium-High Density	Irvine	17.5	du/acre	130	30	160	22%	2,400
1175	Urban Density	County	29	du/acre	140	45	185	20%	2,800
1176	Medium-High Density	Lake Forest	17.5	du/acre	145	70	215	17%	2,500
1182	High Density	Irvine	32.5	du/acre	130	13	143	20%	2,800
1183	High Density	Newport Beach	12.25	du/acre	115	10	125	20%	3,200
1184	High Density PC	Tustin	17.4	du/acre	115	10	125	15%	2,800
1186	High Density	Lake Forest	32.5	du/acre	115	10	125	20%	2,800
1191	High Rise Density	Orange	35	du/acre	115	10	125	20%	2,800
1192	High Rise Density	Irvine	40	du/acre	115	10	125	20%	2,800
<b><u>1200</u></b>	<b><u>Commercial</u></b>				<b><u>Gal/KSF/Day</u></b>			<b><u>Gal/Acre/Day</u></b>	
1210	General Office		20	ksf/acre	62	10	72	20%	2,500
1221	Community Commercial		9	ksf/acre	142	33	175	20%	3,500
1222	Regional Commercial		10	ksf/acre	130	10	140	20%	3,500
1230	Commercial Recreation		8	ksf/acre	41	20	61	30%	3,000
1235	Hotel		45	rooms/acre	110	50	160	30%	2,800
1240	Institutional		8	ksf/acre	30	15	45	30%	2,750
1244	Hospital		9	ksf/acre	165	65	230	30%	2,850
1260	School		10	ksf/acre	20	8.0	28.0	50%	2,500
1261	UCI		10	ksf/acre	215	15	230	40%	3,800
1273	Military Air Field		0	ksf/acre	0	0	0	0%	0
1290	Hotel		45	rooms/acre	110	50	160	30%	2,800
1300	Industrial		9.091		600	25	625	20%	2,800
1310	Industrial - Light		18	ksf/acre	60	10	70	20%	2,800
1320	Industrial - Heavy		25	ksf/acre	2,000.0	18	2,018	20%	2,800
	<b><u>Open Space and Other</u></b>							<b><u>Gal/Acre/Day</u></b>	
1411	Airports		0	acre/acre	0	0	0	0%	0
1413	Freeways & Major Road		0	acre/acre	0	0	0	0%	0
1820	Community Park		1	acre/acre	0	0	0	86%	2,200
1830	Regional Park		1	acre/acre	0	0	0	75%	2,200
1840	Fuel Modification Zone		1	acre/acre	0	0	0	100%	1,000
1850	Wildlife Preserve		0	acre/acre	0	0	0	0%	0
1880	Open Space (Rec)		0	acre/acre	0	0	0	0%	0
1900	Vacant		1	acre/acre	0	0	0	0%	0
4100	Water		0		0	0	0	0%	0
<b><u>2000</u></b>	<b><u>Agriculture</u></b>			<b><u>acre/acre</u></b>				<b><u>Gal/Acre/Day</u></b>	
2100	Low-Irrigated AG Potable		1	acre/acre	0	0	0	80%	1,800
2110	Low-Irrigated AG Untreated		1	acre/acre	0	0	0	80%	1,800
2120	Low-Irrigated AG Recycled		1	acre/acre	0	0	0	80%	1,800
2200	High-Irrigated AG Potable		1	acre/acre	0	0	0	80%	3,100
2210	High-Irrigated AG Untreated		1	acre/acre	0	0	0	80%	3,100
2220	High-Irrigation AG Recycled		1	acre/acre	0	0	0	80%	3,100

**Table II-2 – Treated Water Demand:** Tabulates the average daily water demand at build-out (2035) within the reorganized ID No. 153 service area, using the District’s *demand forecasting tool*.

PA	Land Use Code	Description	2035 Potable Demands (AFY)
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**Planning Area EO-3A, 3B, 6A - Santiago Hills, East Lake Village**

EO-03A	1131	Low Density	409.55
	1141	Low-Medium Density	173.20
	1161	Medium Density	286.99
	1260	School	18.32
	1820	Community Park	23.87
	1830	Regional Park	201.26
EO-03B	1131	Low Density	204.13
	1141	Low-Medium Density	265.68
	1820	Community Park	49.46
	1830	Regional Park	198.63
EO-06A	1131	Low Density	655.49
	1141	Low-Medium Density	163.41
	1230	Commercial Recreation	32.40
	1290	Hotel	24.23
	1820	Community Park	11.66
	1830	Regional Park	949.37
Subtotal			3,667.65

**Planning Area 1 and 2 - Orchard Hills**

I-01,02	1132	Low Density	616.93
	1162	Medium Density	424.65
	1172	Medium-High Density	264.90
	1210	General Office	4.39
	1221	Community Commercial	41.57
	1240	Institutional	3.97
	1260	School	10.74
	1820	Community Park	12.21
	1830	Regional Park	38.78
Subtotal			1,418.13

**Planning Area 5B**

I-05B	1132	Low Density	140.00
	1162	Medium Density	299.84
	1172	Medium-High Density	70.46
	1182	High Density	85.00
	1260	School	7.59
	1820	Community Park	7.49
Subtotal			610.39



ATTORNEY CLIENT & WORK PRODUCT PRIVILEGES

PA	Land Use Code	Description	2035 Potable Demands (AFY)
<b><u>Planning Area 6 - Portola Springs</u></b>			
I-06	1132	Low Density	110.79
	1162	Medium Density	277.30
	1172	Medium-High Density	127.98
	1182	High Density	95.83
	1210	General Office	21.10
	1240	Institutional	1.09
	1260	School	7.43
	1310	Industrial - Light	76.68
	1820	Community Park	4.14
	1830	Regional Park	22.60
	1840	Fuel Modification Zone	8.86
		Subtotal	753.79
<b><u>Planning Area 9B - Stonegate</u></b>			
I-09B	1132	Low Density	75.60
	1162	Medium Density	133.39
		Subtotal	208.99
<b><u>Planning Area 17 and 18 - Quail Hill and Hidden Canyon</u></b>			
I-17	1310	Industrial - Light	102.35
I-18	1132	Low Density	136.99
	1820	Community Park	0.75
	1840	Fuel Modification Zone	14.07
		Subtotal	254.15
<b><u>Planning Area 30 - Great Park Neighborhoods</u></b>			
I-30	1182	High Density	716.90
	1210	General Office	144.04
	1221	Community Commercial	88.17
		Subtotal	949.11
<b><u>PA-31, 32, 33a, and 35 - Spectrum Area</u></b>			
I-31	1210	General Office	74.89
I-32	1210	General Office	32.42
I-33a	1192	High Rise Density	150.24
	1820	Community Park	2.08
I-35	1210	General Office	2.29
	1310	Industrial - Light	7.30
		Subtotal	269.21

ATTORNEY CLIENT & WORK PRODUCT PRIVILEGES

PA	Land Use Code	Description	2035 Potable Demands (AFY)
<b><u>Planning Area 39</u></b>			
I-39	1172	Medium-High Density	172.91
	1182	High Density	222.40
	1230	Commercial Recreation	4.73
	1260	School	7.18
	1820	Community Park	5.82
		Subtotal	413.05
<b><u>Planning Area 12 and 40 - Cypress Village</u></b>			
I-12	1210	General Office	35.67
	1221	Community Commercial	54.88
I-40	1162	Medium Density	188.16
	1172	Medium-High Density	215.60
	1182	High Density	232.06
	1210	General Office	45.29
	1221	Community Commercial	38.80
	1240	Institutional	3.79
	1260	School	4.21
		Subtotal	818.47

**Total ID 153 Water Demands**

**9,362.95**

SECTION 3 REGIONAL FACILITIES

3.1 DESCRIPTION

Through the current consolidation process, 11 of IRWD's 16 water improvement districts will be consolidated into a single improvement district, containing both lands where development is essentially completed, as well as certain remaining lands proposed for development that are also included in reorganized ID No. 153 and newly formed 185. Existing water ID Nos. 112, 113, 154 and 188 are not included in the reorganization or consolidation actions. Regional water project costs will continue to be allocated to each water improvement district based on that improvement district's pro-rata share of the ultimate IRWD treated water demand.

Under the District's methodology for achieving equitable cost allocation, the improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. This incremental funding approach also recognizes that at any point in time prior to full buildout, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service.

For purposes of maintaining equity in facilities cost allocation, IRWD employs multiple treated water regional splits. For example, one regional split may include all IDs; another may include some IDs and exclude one or more IDs (sometimes referred to as a "sub-regional project"). In the latter instance, that split is applied to the cost of all projects that provide no benefit to the excluded improvement district(s); an improvement district would be included only in the regional splits for the projects from which it does derive benefit.

In this Plan of Works, the appropriate regional split has been applied to existing and proposed treated water supply, storage and transmission facilities needed to provide an adequate and reliable water system meeting the ultimate needs of ID No. 153.

Periodically, IRWD revises its treated water improvement district regional allocation to reflect changes in demand factors, land use planning, phasing of planned development and other factors which may influence treated water demands, either within a specific improvement district or throughout IRWD. Revised regional splits are applied prospectively. The regional cost allocations known as regional splits are calculated based on IRWD's internal water demand forecasting tool.



### 3.2 COST ESTIMATES AND REGIONAL ALLOCATION

A description and cost estimate of the proposed regional domestic water facilities share allocated to ID No. 153 is shown in **Table III-1**.

As noted in the Introduction, the projects identified here may change to reflect changes in land use and development phasing. For purposes of determining the allowance for deferred costs, the project costs have been escalated at 10% per year.

## Table III-1 Regional Projects Proposed Facilities and Estimated Escalated Costs Improvement District 153

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
10204	LAKE FOREST WELL 8 DRILLING	Regional	11.1%	\$61,624	\$29,092	\$32,533	\$0	\$0
10205	LAKE FOREST WELL 8 WELLHEAD	Regional	11.1%	\$62,492	\$24,847	\$37,644	\$0	\$0
10294	LAKE FOREST WELL 6 DRILLING	Regional	11.1%	\$61,624	\$29,092	\$32,533	\$0	\$0
10295	LAKE FOREST WELL 6 WELLHEAD	Regional	11.1%	\$62,492	\$24,847	\$37,644	\$0	\$0
10391	DATS & WELL 77 LEASE PAYMENT 13/14	Regional	11.1%	\$52,027	\$52,027	\$0	\$0	\$0
10392	DATS & WELL 77 LEASE PAYMENT 14/15	Regional	11.1%	\$59,502	\$59,502	\$0	\$0	\$0
10393	DATS & WELL 77 LEASE PAYMENT 15/16	Regional	11.1%	\$68,435	\$4,741	\$63,694	\$0	\$0
10394	DATS & WELL 77 LEASE PAYMENT 16/17	Regional	11.1%	\$79,039	\$0	\$79,039	\$0	\$0
10395	DATS & WELL 77 LEASE PAYMENT 17/18	Regional	11.1%	\$90,887	\$0	\$90,887	\$0	\$0
10396	DATS & WELL 77 LEASE PAYMENT 18/19	Regional	11.1%	\$104,744	\$0	\$104,744	\$0	\$0
10397	DATS & WELL 77 LEASE PAYMENT 19/20	Regional	11.1%	\$120,709	\$0	\$120,043	\$666	\$0
10428	51 & 52 WELLHEADS, PIPELINE & TREATMENT	Regional	11.1%	\$4,485,643	\$0	\$4,485,643	\$0	\$0
11055	ENG PLANNING STUDY RESERVE 13/14	Regional	11.1%	\$24,237	\$24,237	\$0	\$0	\$0
11056	ENG PLANNING STUDY RESERVE 14/15	Regional	11.1%	\$26,661	\$26,661	\$0	\$0	\$0
11057	ENG PLANNING STUDY RESERVE 15/16	Regional	11.1%	\$29,334	\$0	\$29,334	\$0	\$0
11096	GIS SUPPORT APPLICATIONS 13/14	Regional	11.1%	\$7,350	\$7,350	\$0	\$0	\$0
11097	GIS SUPPORT APPLICATIONS 14/15	Regional	11.1%	\$8,085	\$8,085	\$0	\$0	\$0
11129	HYDRAULIC MODELING 13/14	Regional	11.1%	\$5,385	\$5,385	\$0	\$0	\$0
11131	HYDRAULIC MODELING 14/15	Regional	11.1%	\$5,923	\$5,923	\$0	\$0	\$0
11163	CROSS VALLEY CANAL CAPACITY PURCHASE	Regional	11.1%	\$10,562	\$10,562	\$0	\$0	\$0
11218	BAKER WTP	Regional	11.1%	\$9,960,439	\$6,358,868	\$3,601,571	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
11271	OCWD ANNEXATION FEE 14/15	Regional	11.1%	\$57,458	\$57,458	\$0	\$0	\$0
11275	OCWD ANNEXATION FEE 15/16	Regional	11.1%	\$65,112	\$0	\$65,112	\$0	\$0
11277	OCWD ANNEXATION FEE 16/17	Regional	11.1%	\$73,753	\$0	\$73,753	\$0	\$0
11278	OCWD ANNEXATION FEE 17/18	Regional	11.1%	\$83,579	\$0	\$83,579	\$0	\$0
11279	OCWD ANNEXATION FEE 18/19	Regional	11.1%	\$94,690	\$0	\$94,690	\$0	\$0
11280	OCWD ANNEXATION FEE 19/20	Regional	11.1%	\$110,529	\$0	\$109,863	\$666	\$0
11281	OCWD ANNEXATION FEE 20/21	Regional	11.1%	\$125,248	\$0	\$0	\$125,248	\$0
11282	OCWD ANNEXATION FEE 21/22	Regional	11.1%	\$141,911	\$0	\$0	\$141,911	\$0
11284	OCWD ANNEXATION FEE 22/23	Regional	11.1%	\$160,798	\$0	\$0	\$160,798	\$0
11285	OCWD ANNEXATION FEE 23/24	Regional	11.1%	\$182,217	\$0	\$0	\$182,217	\$0
11286	OCWD ANNEXATION FEE 24/25	Regional	11.1%	\$206,473	\$0	\$0	\$204,595	\$1,878
11289	STRAND RANCH FACILITIES AND MONITORING	Regional	11.1%	\$40,443	\$40,367	\$75	\$0	\$0
11325	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR	Regional	11.1%	\$17,705	\$17,705	\$0	\$0	\$0
11331	TIC WELLS 109/112/114	Regional	11.1%	\$2,923,859	\$0	\$0	\$2,923,859	\$0
11339	AUTOMATION SYSTEM IMPROVEMENTS DW	Regional	11.1%	\$29,455	\$18,667	\$10,788	\$0	\$0
11368	WATER BANKING EXPANSION	Regional	11.1%	\$357,619	\$226,641	\$130,978	\$0	\$0
11384	HYDRAULIC MODEL UPDATE / CALIBRATION -	Regional	11.1%	\$31,074	\$31,074	\$0	\$0	\$0
11455	IRWD PIPELINES RELOCATION FOR SC GRADE	Regional	11.1%	\$94,796	\$94,796	\$0	\$0	\$0
11473	WELL 106 REPLACEMENT DRILLING & SITE	Regional	11.1%	\$284,643	\$284,643	\$0	\$0	\$0
11560	LAKE FOREST DW OFFSITE IMPROVEMENTS	Regional	11.1%	\$149,811	\$81,284	\$68,527	\$0	\$0
11578	OPS CENTER IMPROVEMENTS PH2 (WAREHOUSE)	Regional	11.1%	\$189,740	\$0	\$189,740	\$0	\$0
11582	GEN SYS MODS 13/14	Regional	11.1%	\$16,569	\$16,569	\$0	\$0	\$0
11596	WATER BANKING AGREEMENTS	Regional	11.1%	\$14,667	\$14,667	\$0	\$0	\$0
11627	WELL 115 REPLACEMENT WELL/WELLHEAD &	Regional	6.5%	\$271,993	\$271,993	\$0	\$0	\$0
11631	GROUNDWATER DISPOSAL SYSTEM CONCEPT	Regional	11.1%	\$36,471	\$36,471	\$0	\$0	\$0
11637	JACKSON RANCH SOLAR PROJECT	Regional	11.1%	\$10,476	\$10,476	\$0	\$0	\$0



Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
11645	STOCKDALE WEST RANCH JOINT BANKING	Regional	11.1%	\$699,387	\$656,678	\$42,709	\$0	\$0
11648	GEN SYS MODS 14/15	Regional	11.1%	\$18,226	\$18,226	\$0	\$0	\$0
11655	SKYLIGHT PROTECTION	Regional	11.1%	\$4,274	\$4,274	\$0	\$0	\$0
11665	SJM BUILDING CAMPUS MOLD REMEDIATION	Regional	5.6%	\$2,570	\$2,570	\$0	\$0	\$0
11675	MANNING BPS PERMANENT GENERATOR	Regional	11.1%	\$27,302	\$27,302	\$0	\$0	\$0
11686	EOCWD - IRWD JOINT WELL PLANNING REPORT	Regional	11.1%	\$5,946	\$5,946	\$0	\$0	\$0
11687	RMS AT 5 DOMESTIC WATER RESERVOIRS	Regional	11.1%	\$345,020	\$260,113	\$84,907	\$0	\$0
11697	GEN SYS MODS 15/16	Regional	11.1%	\$20,054	\$0	\$20,054	\$0	\$0
11726	STRAND RANCH KERN RIVER EXPORTABILITY	Regional	11.1%	\$14,481	\$14,481	\$0	\$0	\$0
11738	WATER BANKING PLANNING	Regional	11.1%	\$33,675	\$33,675	\$0	\$0	\$0
11742	LTFP ID CONSOLIDATION	Regional	11.1%	\$9,519	\$9,519	\$0	\$0	\$0
12326	SCWD INTEGRATION STUDY REGIONAL PIPES	Regional	11.1%	\$2,892,367	\$0	\$2,892,367	\$0	\$0
12328	SCWD INTEGRATION STUDY REGIONAL PUMPS	Regional	11.1%	\$997,813	\$0	\$997,813	\$0	\$0
12329	SCWD INTEGRATION STUDY PIPES FOR 150 / 153	Regional	11.1%	\$3,170,558	\$0	\$3,170,558	\$0	\$0
15051	WELLS 51/52/53 TREATMENT ALTERNATIVES	Regional	11.1%	\$16,300	\$16,300	\$0	\$0	\$0
15052	JOINT WELL FIELD WITH ANAHEIM - WELLHEADS	Regional	11.1%	\$3,344,962	\$0	\$2,221,900	\$1,123,062	\$0
15423	TUSTIN LEGACY WELLS 1, 2, 3 & 4	Regional	11.1%	\$3,457,688	\$0	\$3,457,688	\$0	\$0
15428	WELL 53 SITE ACQUISITION & WELL DRILLING	Regional	11.1%	\$341,905	\$154,980	\$186,925	\$0	\$0
19420	OCWD ANNEXATION	Regional	11.1%	\$17,033	\$17,033	\$0	\$0	\$0
				<b>\$36,577,362</b>	<b>\$9,095,127</b>	<b>\$22,617,334</b>	<b>\$4,863,023</b>	<b>\$1,878</b>

## SECTION 4 LOCAL MASTER PLAN FACILITIES

### 4.1 DESCRIPTION

The facilities detailed in the following section represent local facilities serving one or more of the planned development areas within the improvement district, based on the respective subarea master plans, as well as sub-regional projects serving this improvement district and other improvement district(s). For the purpose of this POW, local facilities include both local and sub-regional projects.

### 4.2 COST ESTIMATES

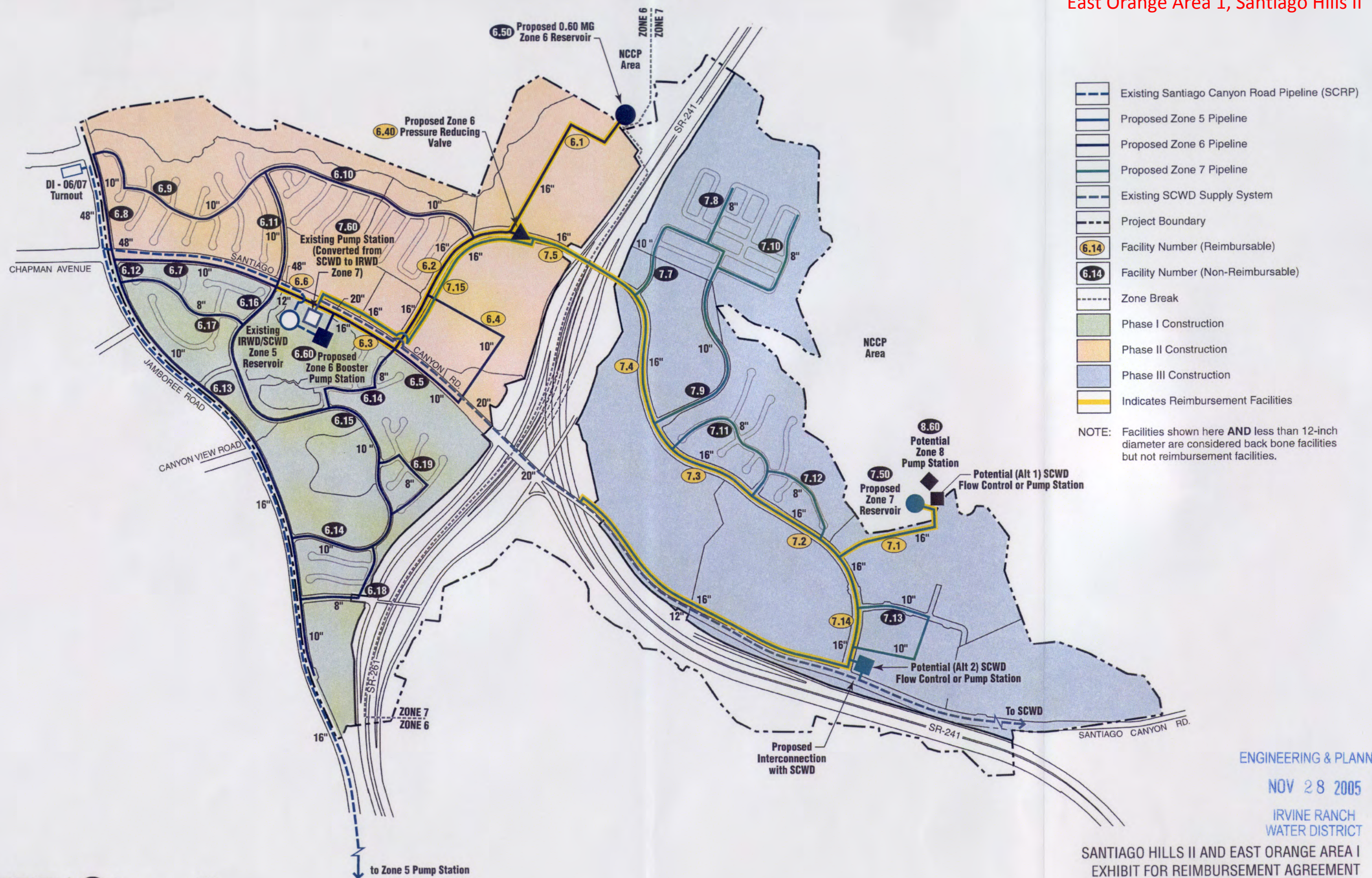
The proposed local master plan facilities for ID No. 153 are detailed in **Table IV-1** and shown on **Figure IV-1a** through **IV-1j**. These figures, taken from the sub-area master plans, show both facilities inside and outside the improvement district's boundary, and some facilities shown may have already been constructed. The amounts shown in Table IV-1 reflect the facilities or portions there-of allocable to the improvement district. As noted in the Introduction, the projects identified here may change to reflect changes in land use and development phasing.

For the purpose of determining the allowance for deferred costs, the project costs have been escalated at 10% per year.

**Table IV-1 Local Projects  
Proposed Facilities and Estimated Escalated Costs  
Improvement District 153**

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
10423	PA9 JEFFREY RD 12" ZONE 3 - IRVINE BLVD TO	Local	100.0%	\$1,098,460	\$1,098,460	\$0	\$0	\$0
10446	PA18 ZN 3-4 BPS	Local	100.0%	\$2,597,815	\$2,597,815	\$0	\$0	\$0
11138	SANTIAGO HILLS II DW FACILITIES	Local	100.0%	\$36,881,048	\$0	\$2,912,747	\$33,968,301	\$0
11405	OPA / REGIONAL GROUNDWATER PROJECT	Sub-Regional	75.0%	\$3,589,163	\$3,589,163	\$0	\$0	\$0
11408	OPA / REGIONAL TRANSMISSION MAIN	Sub-Regional	75.0%	\$150,068	\$150,068	\$0	\$0	\$0
11605	PA 40 PHASE 2 DW FACILITIES	Local	100.0%	\$59,950	\$59,950	\$0	\$0	\$0
11613	PA1 PHASE 2: 16" Z5 PIPE, 5-4 PRV'S	Local	100.0%	\$2,279,994	\$0	\$2,273,349	\$6,645	\$0
11633	PA 40 PHASE 3-5 DW FACILITIES	Local	100.0%	\$997,104	\$0	\$997,104	\$0	\$0
11641	PA 18 SOUTH DW FACILITIES	Local	100.0%	\$2,110,330	\$1,119,800	\$990,530	\$0	\$0
11739	PA 18S HIDDEN CANYON 12" ZONE 3 DW	Local	100.0%	\$180,928	\$180,928	\$0	\$0	\$0
				<b>\$49,944,860</b>	<b>\$8,796,183</b>	<b>\$7,173,731</b>	<b>\$33,974,946</b>	<b>\$0</b>





- Existing Santiago Canyon Road Pipeline (SCRP)
- Proposed Zone 5 Pipeline
- Proposed Zone 6 Pipeline
- Proposed Zone 7 Pipeline
- Existing SCWD Supply System
- Project Boundary
- Facility Number (Reimbursable)
- Facility Number (Non-Reimbursable)
- Zone Break
- Phase I Construction
- Phase II Construction
- Phase III Construction
- Indicates Reimbursement Facilities

NOTE: Facilities shown here **AND** less than 12-inch diameter are considered back bone facilities but not reimbursement facilities.

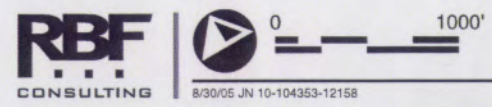
ENGINEERING & PLANNING

NOV 28 2005

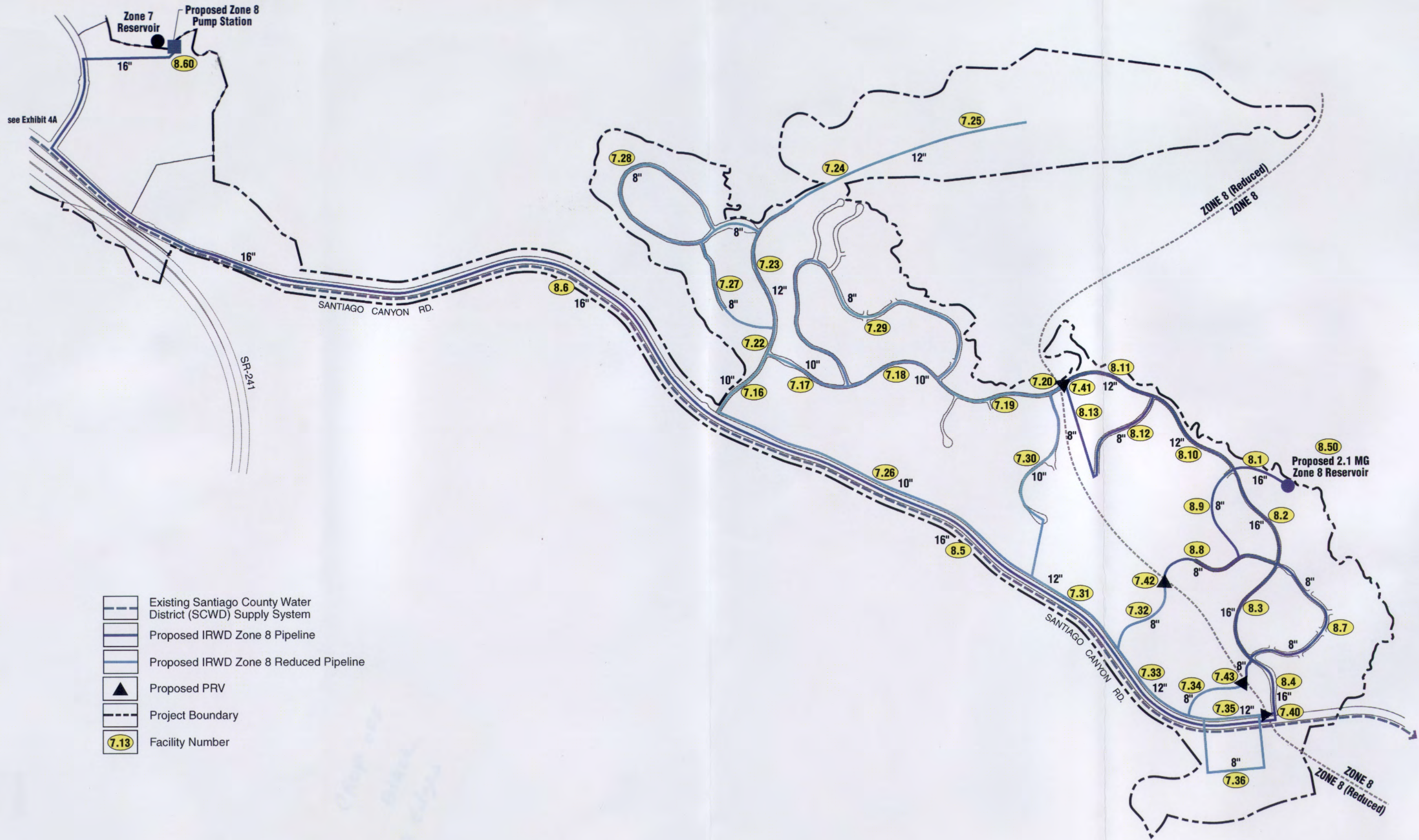
IRVINE RANCH  
WATER DISTRICT







SANTIAGO HILLS II AND EAST ORANGE AREA I  
EXHIBIT FOR REIMBURSEMENT AGREEMENT

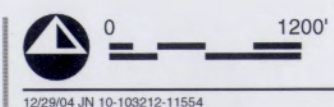
**Potable Water System**





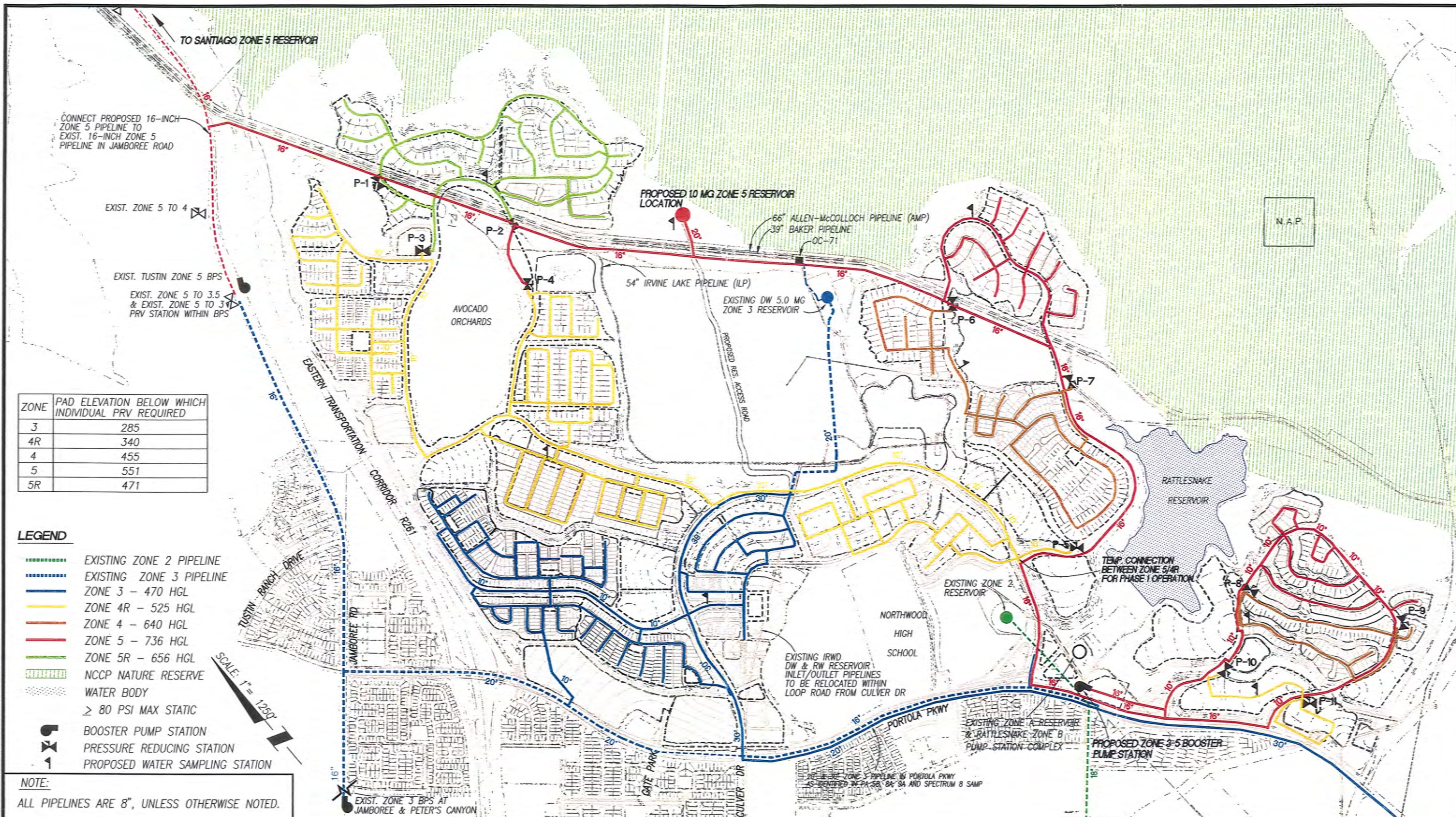


-  Existing Santiago County Water District (SCWD) Supply System
-  Proposed IRWD Zone 8 Pipeline
-  Proposed IRWD Zone 8 Reduced Pipeline
-  Proposed PRV
-  Project Boundary
-  Facility Number



EAST ORANGE LAKE VILLAGE SAMP  
**Proposed Potable Water  
 Distribution System**






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**Tetterer & Associates**  
A Division of The Keith Companies

19 TECHNOLOGY DRIVE  
IRVINE, CA 92618  
949.923.6277

PREPARED FOR:

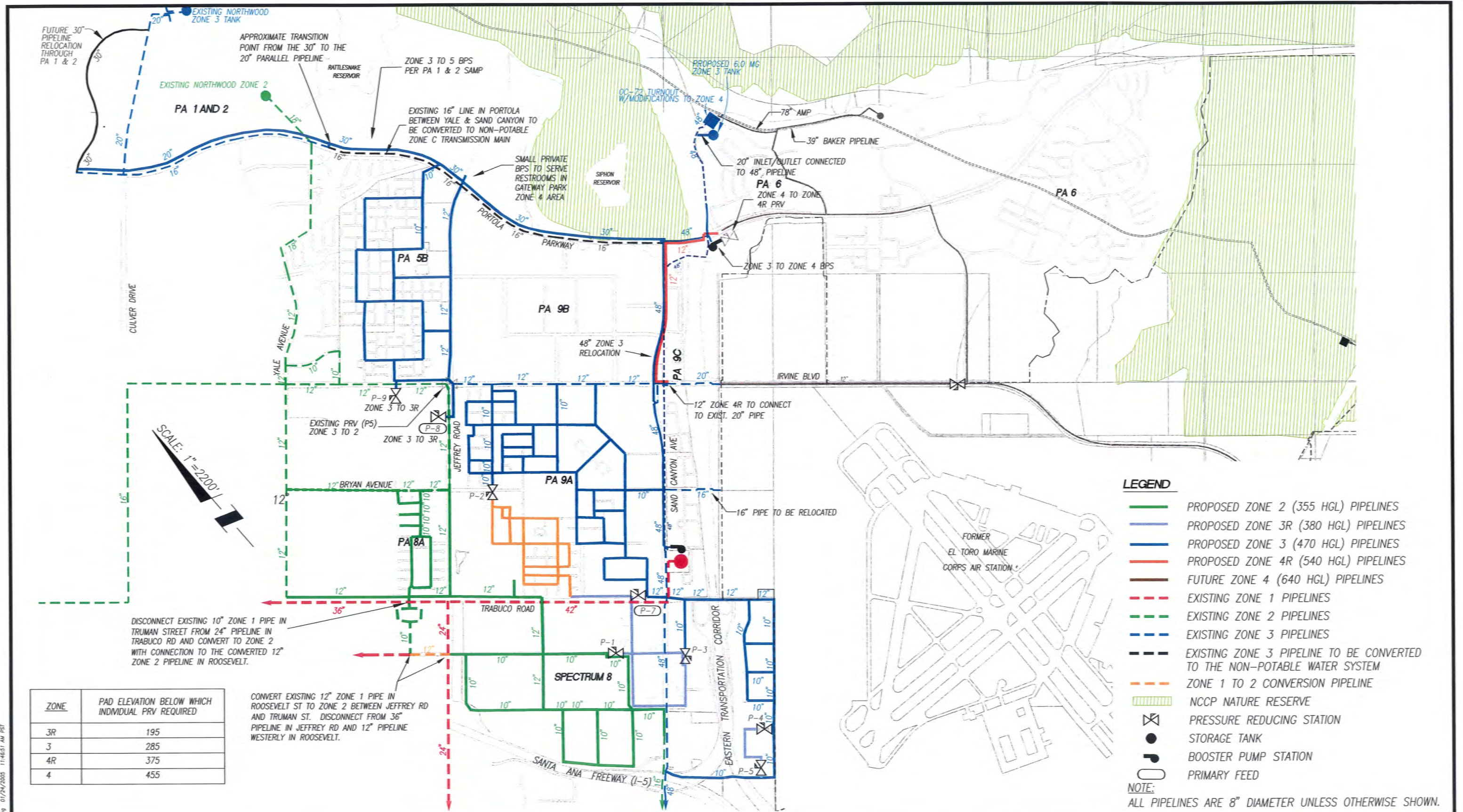
IRVINE RANCH  
WATER DISTRICT



## PLANNING AREAS 1 AND 2 SAMP DOMESTIC WATER SYSTEM FACILITIES

FIGURE 3-3





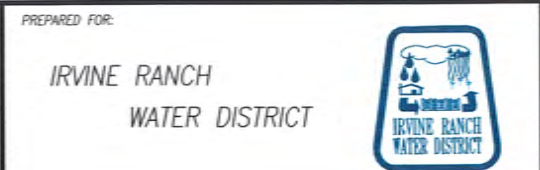
ZONE	PAD ELEVATION BELOW WHICH INDIVIDUAL PRV REQUIRED
3R	195
3	285
4R	375
4	455

CONNECT EXISTING 12" ZONE 1 PIPE IN ROOSEVELT ST TO ZONE 2 BETWEEN JEFFREY RD AND TRUMAN ST. DISCONNECT FROM 36" PIPELINE IN JEFFREY RD AND 12" PIPELINE WESTERLY IN ROOSEVELT.

DISCONNECT EXISTING 10" ZONE 1 PIPE IN TRUMAN STREET FROM 24" PIPELINE IN TRABUCO RD AND CONVERT TO ZONE 2 WITH CONNECTION TO THE CONVERTED 12" ZONE 2 PIPELINE IN ROOSEVELT.



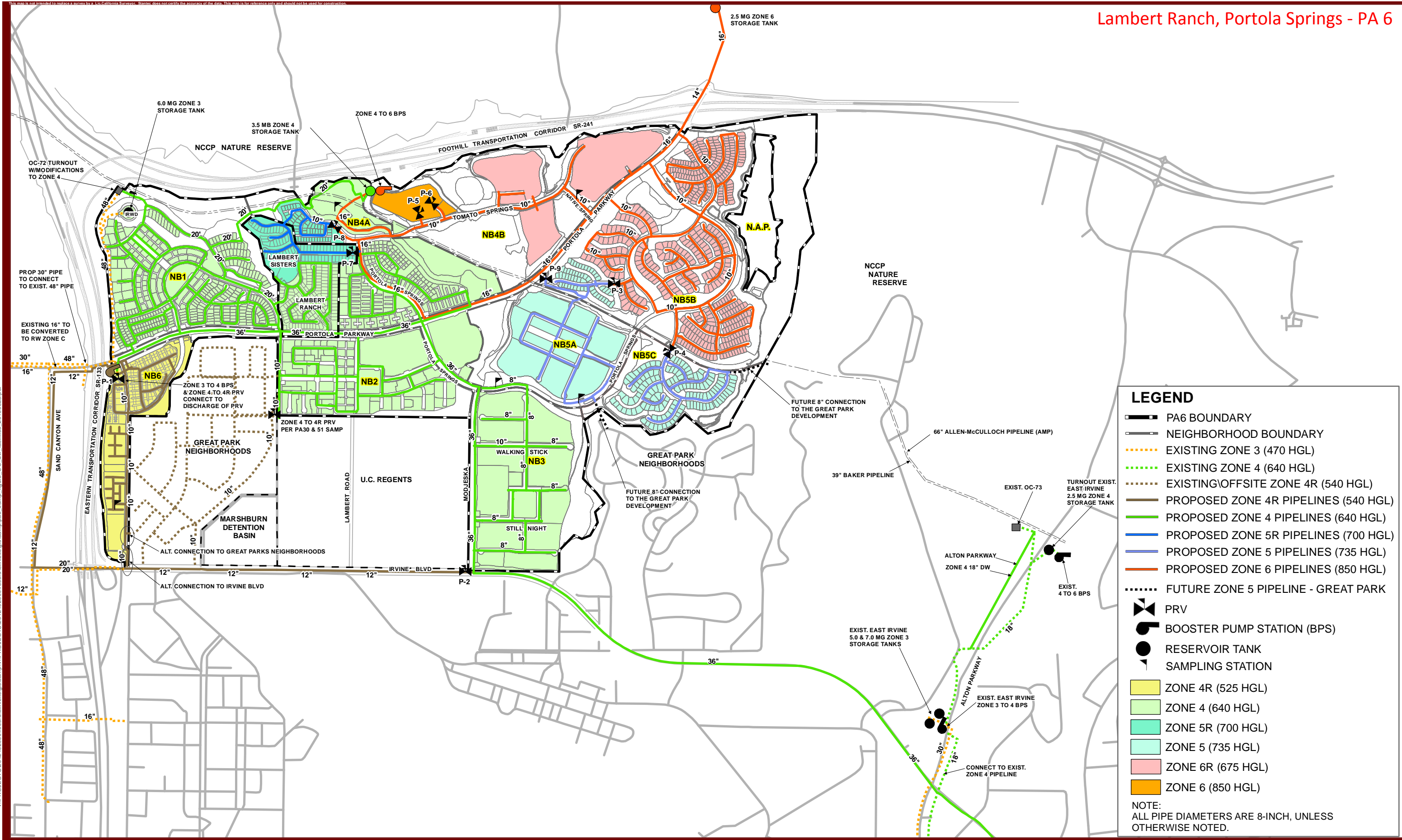
19 TECHNOLOGY DRIVE  
IRVINE, CA 92618  
949.923.6277



**PLANNING AREAS 5B, 8A, 9A, AND SPECTRUM 8 SAMP UPDATE  
DOMESTIC WATER SYSTEM FACILITIES**

**FIGURE 3-3**



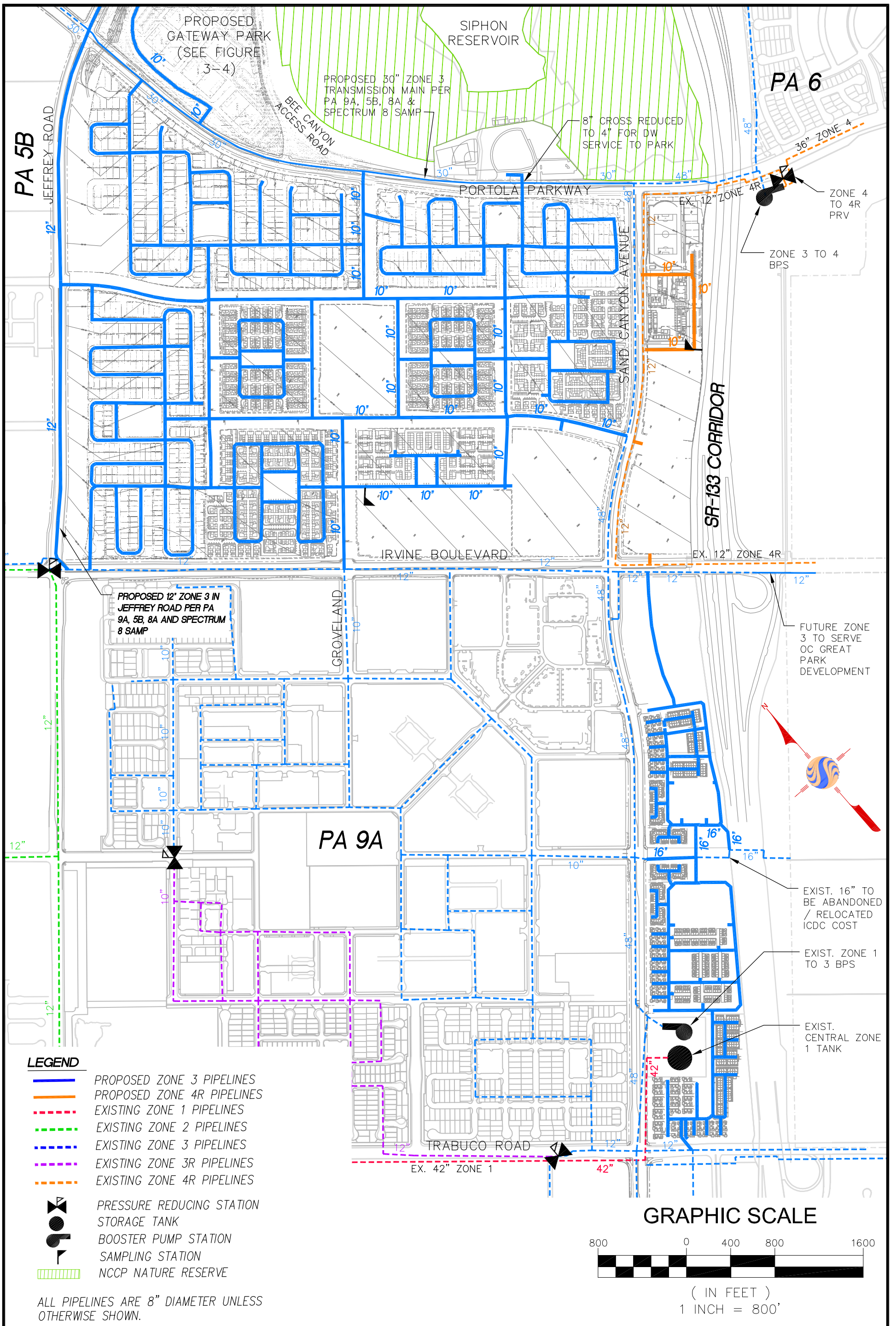


**LEGEND**

- PA6 BOUNDARY
- NEIGHBORHOOD BOUNDARY
- EXISTING ZONE 3 (470 HGL)
- EXISTING ZONE 4 (640 HGL)
- EXISTING/OFFSITE ZONE 4R (540 HGL)
- PROPOSED ZONE 4R PIPELINES (540 HGL)
- PROPOSED ZONE 4 PIPELINES (640 HGL)
- PROPOSED ZONE 5R PIPELINES (700 HGL)
- PROPOSED ZONE 5 PIPELINES (735 HGL)
- PROPOSED ZONE 6 PIPELINES (850 HGL)
- FUTURE ZONE 5 PIPELINE - GREAT PARK
- PRV
- BOOSTER PUMP STATION (BPS)
- RESERVOIR TANK
- SAMPLING STATION
- ZONE 4R (525 HGL)
- ZONE 4 (640 HGL)
- ZONE 5R (700 HGL)
- ZONE 5 (735 HGL)
- ZONE 6R (675 HGL)
- ZONE 6 (850 HGL)

NOTE:  
ALL PIPE DIAMETERS ARE 8-INCH, UNLESS OTHERWISE NOTED.



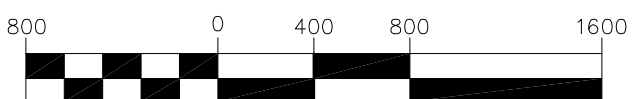


**LEGEND**

- PROPOSED ZONE 3 PIPELINES
- PROPOSED ZONE 4R PIPELINES
- - - EXISTING ZONE 1 PIPELINES
- - - EXISTING ZONE 2 PIPELINES
- - - EXISTING ZONE 3 PIPELINES
- - - EXISTING ZONE 3R PIPELINES
- - - EXISTING ZONE 4R PIPELINES
- PRESSURE REDUCING STATION
- STORAGE TANK
- BOOSTER PUMP STATION
- SAMPLING STATION
- NCCP NATURE RESERVE

ALL PIPELINES ARE 8" DIAMETER UNLESS OTHERWISE SHOWN.

**GRAPHIC SCALE**



( IN FEET )  
1 INCH = 800'

PREPARED BY:

**STANTEC CONSULTING INC.**  
19 TECHNOLOGY DRIVE  
IRVINE, CA 92618  
949.923.6000  
stantec.com

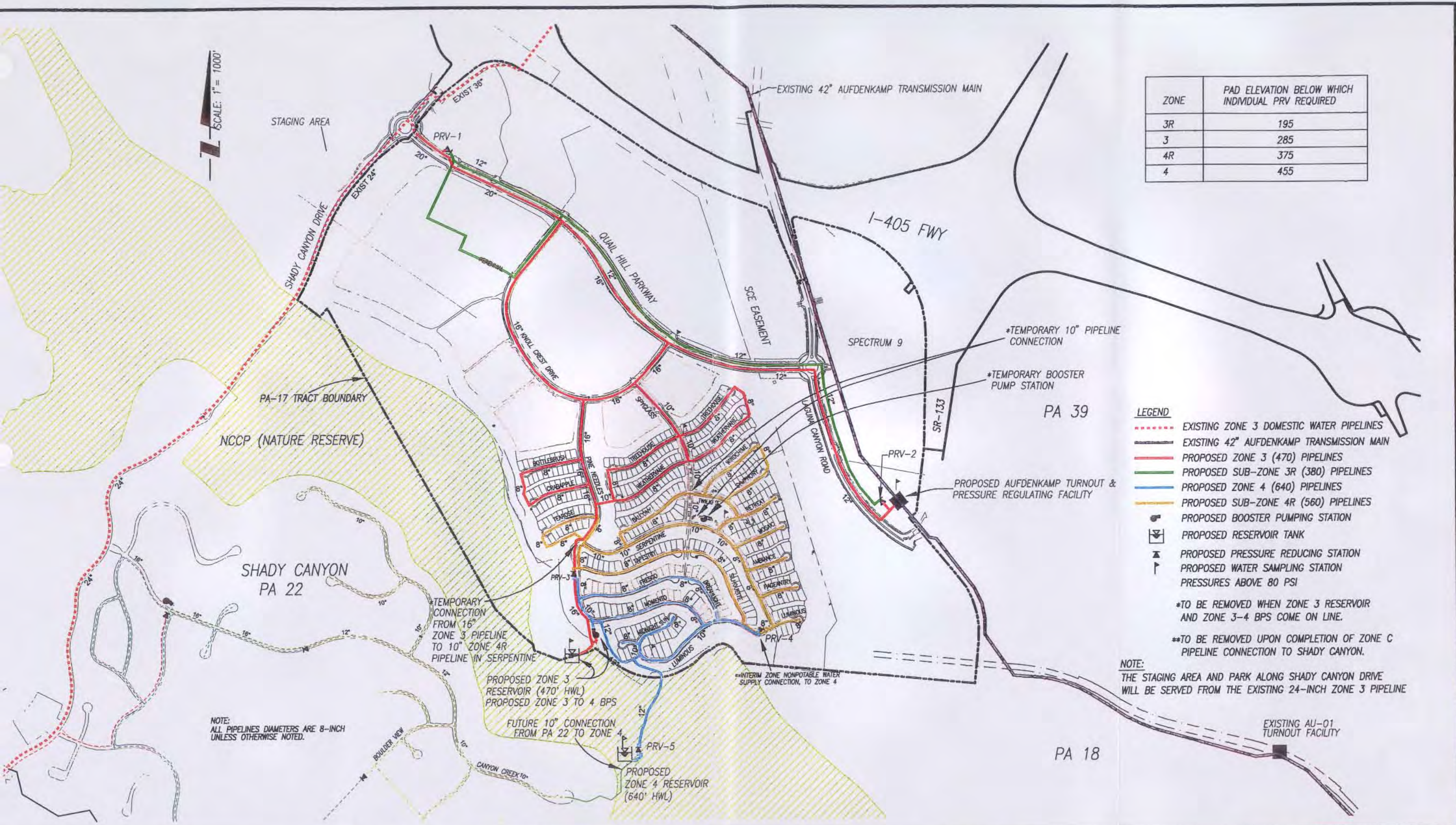
PREPARED FOR:

IRVINE RANCH WATER DISTRICT

**PLANNING AREA 9B, 9C SAMP UPDATES**  
**DOMESTIC WATER FACILITIES**

**FIGURE 3-3**





ZONE	PAD ELEVATION BELOW WHICH INDIVIDUAL PRV REQUIRED
3R	195
3	285
4R	375
4	455

- LEGEND**
- EXISTING ZONE 3 DOMESTIC WATER PIPELINES
  - EXISTING 42" AUFDENKAMP TRANSMISSION MAIN
  - PROPOSED ZONE 3 (470) PIPELINES
  - PROPOSED SUB-ZONE 3R (380) PIPELINES
  - PROPOSED ZONE 4 (640) PIPELINES
  - PROPOSED SUB-ZONE 4R (560) PIPELINES
  - ☐ PROPOSED BOOSTER PUMPING STATION
  - ☐ PROPOSED RESERVOIR TANK
  - ▲ PROPOSED PRESSURE REDUCING STATION
  - ▽ PROPOSED WATER SAMPLING STATION
  - ▲ PROPOSED PRESSURES ABOVE 80 PSI
- \*TO BE REMOVED WHEN ZONE 3 RESERVOIR AND ZONE 3-4 BPS COME ON LINE.
- \*\*TO BE REMOVED UPON COMPLETION OF ZONE C PIPELINE CONNECTION TO SHADY CANYON.


**NOTE:**  
 THE STAGING AREA AND PARK ALONG SHADY CANYON DRIVE WILL BE SERVED FROM THE EXISTING 24-INCH ZONE 3 PIPELINE

SCALE: 1" = 1000'

NOTE:  
 ALL PIPELINES DIAMETERS ARE 8-INCH UNLESS OTHERWISE NOTED.

TKC  
 5 Red Hill Avenue, Costa Mesa, CA 92626 (714) 540-0800

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 IRVINE RANCH WATER DISTRICT



# QUAIL HILL (PA 17) SAMP DOMESTIC WATER SYSTEM FACILITIES

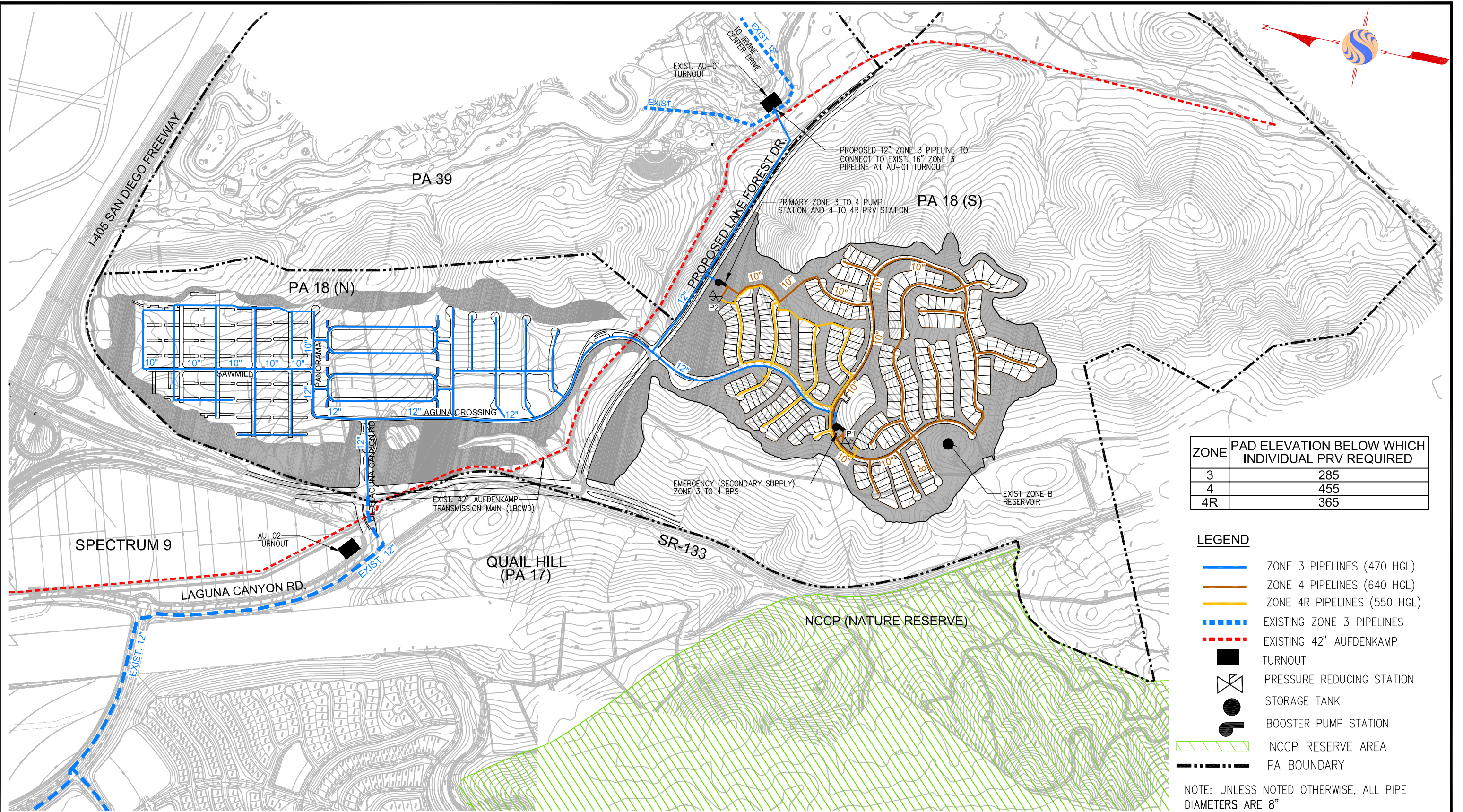
FIG 3-3

REVISED 02/20/2003

QUAIL HILL SAMP



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PREPARED BY:



PREPARED FOR:

IRVINE RANCH  
WATER DISTRICT

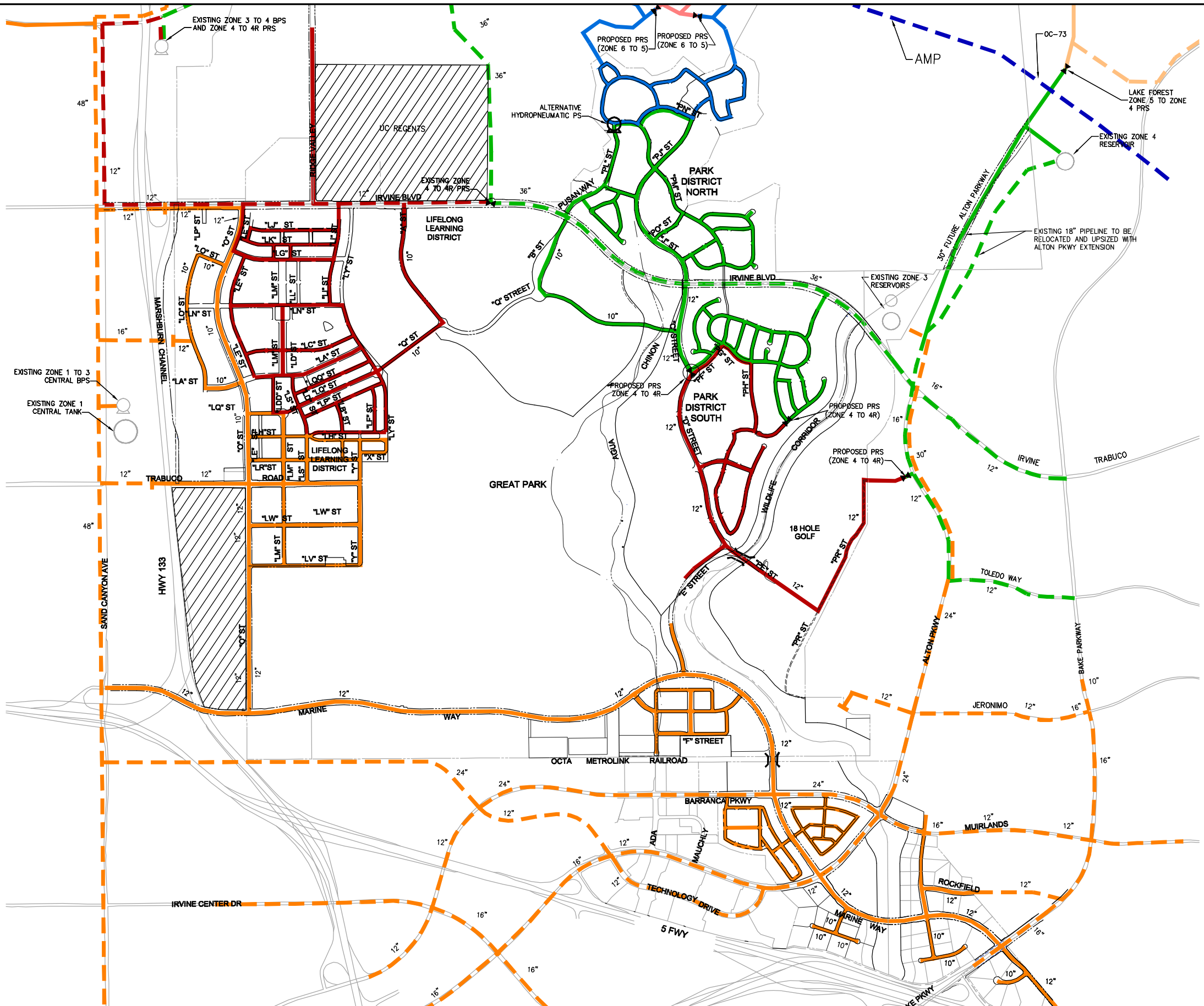


## PLANNING AREA 18 SAMP UPDATE

### PROPOSED DOMESTIC WATER FACILITIES

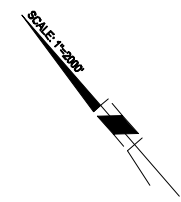
FIGURE  
**3-3**





- NOTES:**
1. THE DOMESTIC WATER FACILITIES WITHIN THE GREAT PARK ARE NOT SHOWN ON THIS FIGURE. AT THE TIME OF THE SAMP PREPARATION, THE REQUIRED DOMESTIC WATER DISTRIBUTION FACILITIES WERE NOT KNOWN. ONCE THE LAND USE PLAN IS FINALIZED, THE DOMESTIC WATER DISTRIBUTION SYSTEM WILL REQUIRE ANALYSIS AND APPROPRIATE LEVEL OF SAMP UPDATE OR ADDENDUM WILL BE REQUIRED. ADDITIONALLY, AT THE TIME, A DETERMINATION WILL BE MADE AS TO WHICH FACILITIES WILL BE PUBLIC AND WHICH WILL BE PRIVATE.
  2. AS PART OF THE AGREEMENT WITH THE DEPARTMENT OF DEFENSE, THE LEAD ENTITY CONSTRUCTING BURIED PIPELINES WITHIN THE FORMER MARINE CORPS AIR STATION, EL TORO MUST SUBMIT A PROJECT ENVIRONMENT REVIEW FORM (PERF) TO THE NAVY AND THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL PRIOR TO COMMENCEMENT OF EXCAVATION ACTIVITIES.
  3. ALL PIPELINES ARE 8" UNLESS SHOWN.
  4. ONE WATER QUALITY SAMPLING STATION SHALL BE INSTALLED PER PRESSURE ZONE. THE LOCATION OF THE STATION SHALL BE ESTABLISHED DURING THE DESIGN PROCESS.

LEGEND	
PROPOSED	EXISTING
ZONE 5 (735 HGL)	---
ZONE 4 (640 HGL)	---
ZONE 4R (540 HGL)	---
ZONE 3 (470 HGL)	---
SECONDARY PRESSURE REDUCING STATION	◀▶
PRIMARY PRESSURE REDUCING STATION W/ TELEMETRY	▶◀



PATH/FILENAME: M:\PROJECTS\TERRA TECH, INC\HERITAGE FIELDS & GREAT PARK SAMP\BACKGROUND INFORMATION\2.7.08 SAMP KICKOFF\DWG MET PLAN\M-EZ.DWG  
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 PLOT DATE: Friday, March 06, 2009 10:35:24 AM  
 ANS I D - 3-8-05



AECOM USA, INC.  
 1501 QUAIL STREET  
 NEWPORT BEACH, CA 92660  
 PHONE (949) 476-3300

G-51

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**IRVINE RANCH WATER DISTRICT**

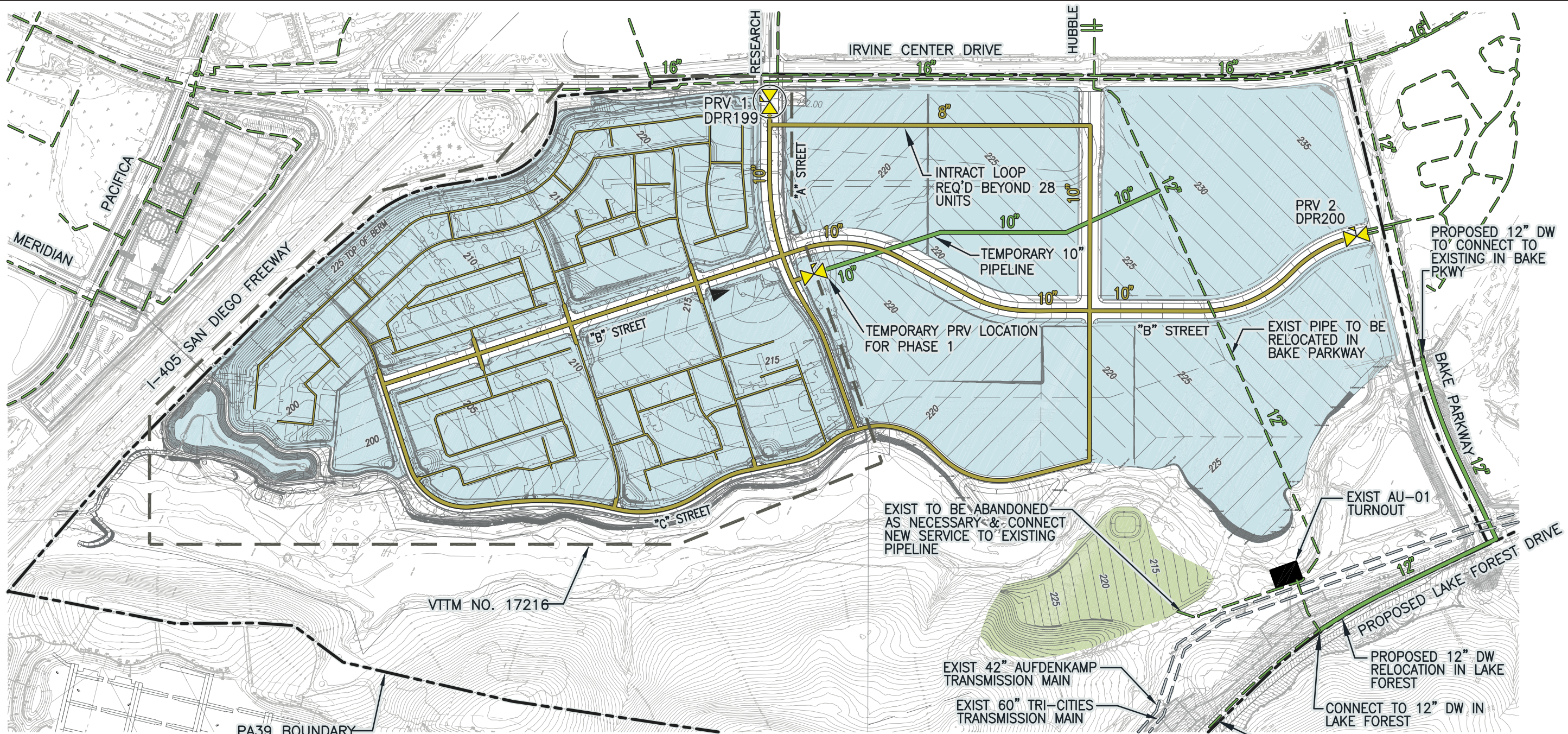


IRVINE RANCH WATER DISTRICT  
 GREAT PARK / GREAT PARK NEIGHBORHOODS  
 SUB-AREA MASTER PLAN  
**PROPOSED DOMESTIC WATER FACILITIES**

FIG. 3-3



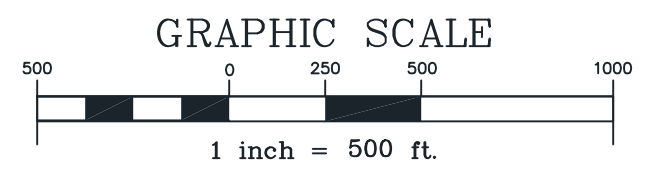
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**LEGEND**

- ZONE 3 (470 HGL)
- ZONE 3R (370 HGL)
- PROPOSED BACKBONE ZONE 3 PIPELINE
- PROPOSED BACKBONE ZONE 3R PIPELINE
- PROPOSED IN-TRACT ZONE 3R PIPELINE
- EXISTING ZONE 3 PIPELINE
- PRESSURE REDUCING VALVE
- PRV W/ TELEMETRY
- SAMPLING STATION

**NOTE:**  
ALL PIPES ARE 8-INCH UNLESS OTHERWISE NOTED.



19 Technology Drive, Irvine, CA 92618 Phone 949.923.6249 Fax 949.923.6188 www.stantec.com



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**IRVINE RANCH WATER DISTRICT**

# PLANNING AREA 39 SAMP

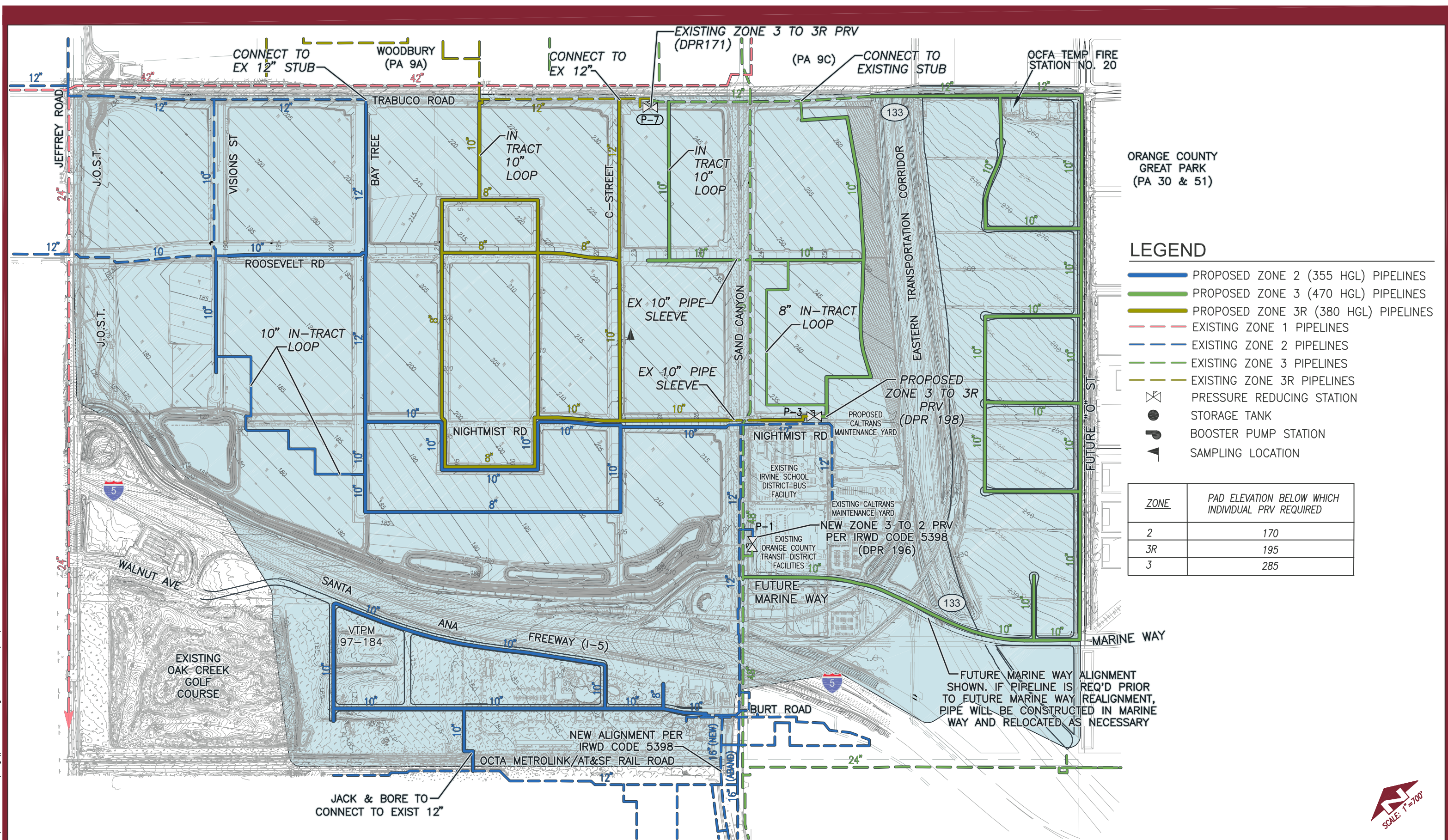
G -52

## PROPOSED DOMESTIC WATER FACILITIES

**FIGURE 3-2**



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ORANGE COUNTY  
GREAT PARK  
(PA 30 & 51)

**LEGEND**

- PROPOSED ZONE 2 (355 HGL) PIPELINES
- PROPOSED ZONE 3 (470 HGL) PIPELINES
- PROPOSED ZONE 3R (380 HGL) PIPELINES
- - - EXISTING ZONE 1 PIPELINES
- - - EXISTING ZONE 2 PIPELINES
- - - EXISTING ZONE 3 PIPELINES
- - - EXISTING ZONE 3R PIPELINES
- PRESSURE REDUCING STATION
- STORAGE TANK
- BOOSTER PUMP STATION
- SAMPLING LOCATION

ZONE	PAD ELEVATION BELOW WHICH INDIVIDUAL PRV REQUIRED
2	170
3R	195
3	285

FUTURE MARINE WAY ALIGNMENT SHOWN. IF PIPELINE IS REQ'D PRIOR TO FUTURE MARINE WAY REALIGNMENT, PIPE WILL BE CONSTRUCTED IN MARINE WAY AND RELOCATED AS NECESSARY



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WATER DISTRICT

**PLANNING AREA 40 SAMP**

**DOMESTIC WATER  
SYSTEM FACILITIES**



SECTION 5 FINANCIAL PHASING SUMMARY

This section summarizes the phasing of the financial requirements in ID No. 153. A schedule of financial phasing requirements based on projected phasing of facilities is shown in **Table V-1**. Also shown in the table is the general class of items that will be covered in these projected amounts.

Table V-1 includes a 10% contingency to allow for unexpected inflation as well as changes in land use and development density.

It should be noted that this table does not represent actual bond issues. As facilities are needed which warrant or require bond funding, actual bond issuance needs will be determined.

ID No. 153 has existing authorized bonds in the amount of \$237,300,000 none of which have been issued.



**Table V-1**  
**Bond Authorization Summary**  
**Improvement District 153**

	2013-2015	2016-2020	2021-2025	2026-2035	Total Escalated Amt
<b>Escalated Local Subtotal</b>	<b>\$5,056,953</b>	<b>\$7,173,731</b>	<b>\$33,974,946</b>	<b>\$0</b>	<b>\$46,205,630</b>
<b>Escalated Regional Subtotal</b>	<b>\$9,095,127</b>	<b>\$22,617,334</b>	<b>\$4,863,023</b>	<b>\$1,878</b>	<b>\$36,577,362</b>
<b>Escalated Sub-Regional Subtotal</b>	<b>\$3,739,230</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,739,230</b>
<b>Contingency (10%)</b>	<b>\$1,789,131</b>	<b>\$2,979,107</b>	<b>\$3,883,797</b>	<b>\$188</b>	<b>\$8,652,222</b>
<b>Bond Reserve (6%)</b>	<b>\$1,180,826</b>	<b>\$1,966,210</b>	<b>\$2,563,306</b>	<b>\$124</b>	<b>\$5,710,467</b>
<b>Funded Reserve (6%)</b>	<b>\$1,180,826</b>	<b>\$4,766,570</b>	<b>\$2,563,306</b>	<b>\$124</b>	<b>\$5,710,467</b>
<b>Bond Discount (2%)</b>	<b>\$631,604</b>	<b>\$3,574,928</b>	<b>\$854,435</b>	<b>\$41</b>	<b>\$1,903,489</b>
<b>Bond Issuance Costs (1%)</b>	<b>\$315,802</b>	<b>\$3,574,928</b>	<b>\$427,218</b>	<b>\$21</b>	<b>\$951,744</b>
<b>Bond Authorization Total</b>	<b>\$22,989,500</b>	<b>\$46,652,808</b>	<b>\$49,130,031</b>	<b>\$2,375</b>	<b>\$109,450,611</b>

SECTION 6 BENEFIT OF THE PLAN OF WORKS TO THE LANDS IN THE IMPROVEMENT DISTRICT

6.1 OVERVIEW

Under the California Water Code, the plan of works for an improvement district provides a plan and an estimate of the cost of the works that are needed to serve the improvement district and that will be financed through District-issued bonds, and reflects the determination by the District's Board of Directors that the territory within the improvement district will benefit from the works. To the extent practical, a plan of works will incorporate generalized facilities descriptions and flexibility in the selection of specific projects, so that a revised or supplemented plan will not be needed. If a revised or supplemented plan is adopted, it must benefit the territory within the improvement district. Similarly, when territory is annexed to or detached from an improvement district, including annexations and detachments implemented for the purpose of reorganizing improvement districts to be consolidated as coterminous improvement districts, there must be an accompanying evaluation of territory that will benefit by inclusion within the plan and therefore should be included, and territory that will not benefit and therefore should be excluded.

The benefits that lands receive from water works are derived from multiple considerations. Primary is the ability of lands to receive service currently or when needed in the future. Other examples of benefits are system or facilities reliability through supply diversification, redundant capacity, storage capability, system looping or other characteristics; regulatory compliance; environmental protection; and regional cost efficiencies in operation and maintenance. In the case of a consolidation of improvement districts, other benefits may include economies of scale, administrative simplification and enhancement of credit and reduced borrowing cost or debt service cost.

For purposes of evaluating benefit of improvement district consolidations, cost allocation is dictated in part by the requirements contained in the Water Code for structuring consolidations. In accordance with these requirements, the remaining authorized, unissued bonds of the consolidating improvement districts will become the authorized bonds that can be issued on behalf of the consolidated successor improvement district. Upon the consolidation, debt service for the outstanding bonds of the consolidating improvement districts will become obligations of the consolidated successor improvement district.

6.2 DESCRIPTION OF THE STUDY APPROACH

The reorganization of ID Nos. 153 and 253 is part of an overall restructuring of the District's improvement districts, which also includes the consolidation of ID Nos. 125 and 225 and the formation of ID Nos. 185 and 285. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations and reorganizations." In this regard, the District has undertaken a comprehensive evaluation and study of its long-term financial requirements, including:

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- a detailed planning, engineering and financial assessment of the total costs of existing and future facilities in the water and sewer systems;
- available bond authorization and other revenue sources to finance facilities to serve future development (“new capital”), augment system reliability and meet upgraded regulatory requirements for both existing and future demands (“enhancement”) and replace and refurbish the existing systems (“replacement”);
- debt service;
- simplification of the improvement district structure; and
- assurance of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

The existing improvement district structure has served the District for more than 40 years as the system was built and growth patterns necessitated a means of maintaining equity in the financing of facilities. Using the mechanisms of periodic formation of new improvement districts and authorization of bonds as well as regional cost allocations and system buy-ins, the District has been able to maintain fair and equitable cost sharing while accommodating both intense growth within its boundaries and several acquisitions of adjacent service areas. Construction and expansion of the systems were the key features of this financial structure. Although growth will continue for several more years, going forward the completion of the regional systems and provision for system reliability and replacement will become the predominant driver of the financial requirements. The District’s comprehensive evaluation of its financial requirements indicates that a simplification of the improvement district structure and related actions will provide a sustainable methodology for equitable cost allocation in the future.

As described in Section 1.3, a succession plan for the improvement district structure would reduce the number of improvement districts, ideally to one water improvement district and one sewer improvement district, through consolidations and reorganizations to be implemented as and when considerations for separation of the various improvement districts no longer remain. The District’s financial review identified steps that were currently feasible in achieving that objective as well as the parts of the current structure which need to be maintained at this time until factors relating to the preservation of equitable cost sharing merit the evaluation of further consolidation steps.

General obligation bonds have been the District’s principal tool for financing facilities. Under this form of financing, the obligation for repayment of bonds issued on behalf of an improvement district is secured by the power of the District to levy and collect *ad valorem* assessments without limitation as to rate or amount on land only (enforceable by customary rights to foreclose and sell property for delinquent assessments) or, in lieu of assessments, in the District’s discretion, charges for water or sewer service, as applicable, all within the subject improvement district. The District also uses connection charge revenues to pay a portion of the debt service costs. For new capital cost within developing improvement districts, the District plans to continue its historical practice of targeting a 50-



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50 allocation as a fair means of sharing improvement district debt service costs between the aggregate contributions of connection charge revenues and property tax revenues. The evaluation of financial requirements and modifications of the District's improvement district structure therefore involve an examination of outstanding and future bond debt service, bonding authority, allocation of costs, and resultant contributions of connection charges and *ad valorem* property taxes over time.

### 6.3 LONG-TERM FINANCIAL REQUIREMENTS MODELING

As introduced in the preceding section, the foundation of the evaluation of the benefit of the Plan of Works to the lands in the Improvement District is the District's comprehensive review of its long-term financial requirements. To assist the District in this evaluation, the District employed modeling of a baseline condition defined by the improvement district structure as it existed prior to the current reorganization and consolidation steps. The baseline modeling facilitated various aspects of the long-term financial requirements evaluation:

- refinement of capital cost allocations according to the functional benefits (e.g., development expansion, reliability, regulatory compliance, environmental protection, system refurbishment) of the facilities to various areas and user categories;
- use of existing bond proceeds and available bond authorization and other revenue sources for the financing of future facilities within the new capital expansion, enhancement and replacement project classifications;
- use of the District's allocation of the general 1% *ad valorem* property tax levy;
- benefit of the simplification of the improvement district structure and the aggregated regional and local systems;
- identification of areas where the structure must be retained or modified to equitably address special considerations; and
- measurement of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

Modeling of modified aspects of the baseline enabled the District to test the effectiveness of modifications to various capital –project related fiscal and financing practices in developing a new improvement district and cost allocation structure to effectively maintain equity as the development phase within the District progresses toward buildout. Details of the modeling process described in this section, including review and analysis of interim results and identification of refined and additional modeling efforts, are compiled in a Technical Appendix that serves as a reference document for this Plan of Works.

### 6.4 REGIONAL SYSTEM BENEFIT

The Plan of Works for ID No. 153's predecessor, ID No. 1 of Santiago County Water District (SCWD), contemplated that its ultimate population of about 38,000 would be furnished with a domestic

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water supply through participation in the Allen-McColloch Pipeline (AMP). A portion of the AMP capacity would be purchased, and it was also proposed that SCWD's existing untreated capacity, delivered to a filtration plant jointly owned by SCWD, IRWD and East Orange County Water District, be exchanged for AMP capacity. As the consolidated successor district, IRWD has incorporated the SCWD imported water capacity and delivery system into its regional system. The 1978 plans of works for the improvement districts from which most of the lands annexed into the reorganized ID No. 153 originated, primarily ID Nos. 130 and 150, similarly contemplated a water supply obtained through the District's acquisition of capacity in the AMP in combination with participation in the construction of the District's own well field in the main Orange County groundwater basin. The lands reorganized as ID No. 153 are therefore on equivalent footing in terms of the regional supply system from which they will be served. This includes jointly constructed delivery and storage capacity to serve the territory of existing ID No. 153 as well as development in former ID No. 150. The original plan of works for SCWD's ID No. 1 further contemplated two pressure zone systems, one for the area north of Irvine Lake and one for the area south of Irvine Lake. All of the current planned development included in the reorganized ID No. 153 is located in the south area pressure zone.

The majority of the imported water feeder system and IRWD's delivery system components and the groundwater production and delivery facilities are in place. Based on its ultimate demands, ID No. 153 will need to contribute its proportional share of the cost of completing the regional system, including any expansion such as the acquisition of additional Allen-McColloch Pipeline capacity and groundwater production capacity, and including new components necessary to provide basic reliability. The areas reorganized within ID No. 153 were formerly within ID Nos. 130, 150, 153 and other improvement districts. At this stage of completion of IRWD's regional system, former distinctions among the improvement districts from which the areas reorganized as ID No. 153 originated are no longer material in regard to service from the regional system. Historically, these distinctions included the extent and duration of individual improvement districts' reliance on the untreated system to serve agricultural water, proximity to different completed and yet-to-be-completed segments of the treated water feeders, interceptor and trunk sewers and treatment facilities, uncertainties in the progression (location and pace) of development, and planning determinations that were yet to be made by the District in the elements of the major facilities components and supply sources, such as pipeline and well field capacity. All of these factors have either disappeared or diminished in importance, and the regional benefits among the areas reorganized within ID No. 153 are now essentially uniform.

As one example of the gradual diminishing of the earlier distinctions among the individual improvement districts' plans for supply and delivery alternatives, the 1974 plans of works initially contemplated separate treatment plants connected to the untreated delivery system for each of ID Nos. 103 and 105. In 1977, the initial plan for local (or regional) treatment of raw water in ID No. 103 (shared with ID No. 109), was shifted to a backup alternative, in favor of ID No. 103's pro rata participation in the District's capacity to be obtained in the proposed regional treated water system now known as the Allen McColloch Pipeline (AMP) to serve its supplemental water needs. By 1978, this was again modified to include participation by ID No. 103 in the District's acquisition of capacity in the AMP in combination with participation in the construction of the District's own well field in the main Orange County

groundwater basin as a more economical and preferred domestic supply alternative source. The local treatment plants as originally contemplated were not built, but the District is presently participating in the construction of the Baker Plant as a regional treatment plant that will benefit the entire service area.

This progression continued, with the distinctions becoming fewer as the planning of the regional system evolved and the system was constructed. With only approximately 10-12 percent of the equivalent dwelling units (EDUs) remaining to be built in ID Nos. 153 and 185, these distinctions are no longer prominent. The regional delivery system and its integrated supply sources provide uniform benefit to all of the component areas of ID No. 153 by satisfying basic supply and peaking needs and providing protection against emergency outages. Connection fees, adjusted by planning areas if and to the extent necessary to differentiate the fee amounts to adjust for varying local and sub-regional project benefits, and ad valorem taxation will adequately allocate the cost share of ID No. 153 among its various planned development areas in proportion to their benefit.

The areas within the reorganized ID No. 153 have shared imported water and groundwater facilities through the regional split. Notwithstanding that some of ID No. 153's territory is not within the boundary of the Orange County Water District and that under OCWD practices, the demand of this area does not increase the quantity of groundwater produced by IRWD without a BEA impact, groundwater is considered to reduce IRWD's dependence on imported supply and thus all areas participate proportionally in the regional supply source mix. All areas of ID No. 153 receive the base allocation melded water rate which provides the benefit of reduced cost through the supply mix.

As described in Section 3, the District uses a demand forecasting tool to allocate regional system costs among improvement districts. This ensures that ID No. 153 as a whole will be allocated a share of the regional system costs in proportion to the benefit it will receive from the system. See **Table III-1**.

#### 6.5 REGIONAL COST ALLOCATION – INCLUSION IN IMPROVEMENT DISTRICT NO. 125

In parallel with the reorganization of ID No. 153 itself, ID No. 153's territory will be retained as part of the reorganization of several improvement districts to form a consolidated improvement district designated ID No. 125. All of the developing areas reorganized into ID Nos. 153 are retained or reorganized within the boundaries of the underlying improvement district, ID No. 125. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations." This assures that the developing areas will share in the cost of existing local and sub-regional facilities from which they benefit, such as storage reservoirs, previously built with the proceeds of bonds of one of the improvement districts consolidated in the underlying improvement district.

Like ID No. 153, ID No. 125 will continue to share proportionally in the cost of completing the regional system, including any expansion such as the acquisition of additional Allen-McColloch Pipeline capacity and groundwater production capacity. This occurs because under the District's incremental approach, although the regional system provides service prior to its completion, it remains incomplete, and future regional projects will add components necessary to provide basic reliability, benefitting the



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developed areas as well as future development. To prevent overpayment by the areas included within both improvement districts' regional allocations, the regional allocation for ID No. 125 will exclude demands of 153, and the 50/50 allocation of debt service responsibilities between connection fees and property taxes will be applied on an aggregated basis for the area within 153, between the overlying and underlying improvement districts.

### 6.6 LOCAL FACILITIES COST ALLOCATION

Historically, planned developments within a geographic area have been grouped together in an improvement district notwithstanding the fact that each development may be served by distinct local facilities, as the cost of these are generally uniform over the improvement district. This is also considered to be the case for the various geographic areas comprising ID No. 153. To the extent necessary to achieve fair and equitable allocation of local facilities costs, planning areas can be used to recognize any unequal costs of sub-regional and local facilities benefiting only one, or some but not all, of the planned developments in the territory of the consolidated ID No. 153.

As with regional system benefits discussed above, connection fees, adjusted by planning areas if and to the extent necessary to reflect unique local facilities costs not fairly allocable to the entire improvement district, and *ad valorem* taxation will adequately allocate the cost share of the ID among its various planned development areas in proportion to their benefit. The segregation between the ID Nos. 153, 185, 188, existing ID Nos. 112 and 113, and the consolidated developed ID No. 125 is considered adequate to ensure that capital cost allocation recognizes the area-specific local facilities costs yet to be incurred in the planned development areas.

### 6.7 IMPROVEMENT DISTRICT NO. 153 BENEFIT

The District has reviewed and analyzed benefit to the lands from the reorganized ID No. 153 in several ways: (1) similarities or differences in future service needs among the areas identified for inclusion by annexation to, or by retention in, the reorganized as ID No. 153; (2) the benefit or lack of benefit to the areas identified for exclusion from the reorganized as ID No. 153; and (3) regional cost allocation among ID No. 153 and other areas receiving benefit from the regional facilities. Also evaluated were (4) areas not included in any improvement district and (5) certain areas retained as separate improvement districts.

**(1) Included areas.** The areas reorganized as ID No. 153 comprise several non-contiguous planned development areas that were previously in different improvement districts. Therefore, it is appropriate to assess whether any one or more of these areas possess essential distinctions, in terms of benefit from the planned local facilities or regional facilities (including source of water supply that would warrant exclusion from the ID No. 153 territory. The areas included in the reorganized ID No. 153 are described in Section 2. With respect to regional facilities, all areas will be benefitted by the integrated groundwater and imported water supplies. Based on the available planning information for the expected development of each planned area, all of which are predominantly residential with other use,

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it is concluded that the areas are similarly benefited by the Plan of Works and that the *ad valorem* assessments for debt service and connection fees for the classifications applicable to the anticipated uses will fairly allocate cost within the ID based on demands. Connection fees, which can be adjusted through planning areas if and to the extent necessary to reflect unique local or sub-regional facilities costs not fairly allocable to the entire improvement district, and *ad valorem* taxation will adequately allocate the cost share of the improvement district among its various planned development areas in proportion to their benefit. Simultaneous inclusion of the ID No. 153 lands within the underlying improvement district, ID No. 125, assures that the developing areas will share in the cost of existing local and sub-regional facilities from which they benefit, such as storage reservoirs, previously built with the proceeds of bonds of one or more of the improvement districts consolidated in the underlying improvement district. The exclusion of ID No. 153 demands from the ID No. 125 regional split, and allocation of debt service responsibilities between connection fees and property taxes on an aggregated 50/50 basis between the overlying and underlying improvement districts will prevent overpayment as a result of inclusion within both improvement districts' regional allocations.

**(2) Excluded areas.** The District also analyzed whether any areas proposed to be excluded from the reorganized ID No. 153 would receive benefit from ID No. 153 planned works, and should not be excluded. The areas excluded consist of substantially developed areas of ID Nos. 105, 130 and other improvement districts which will, instead, be included in the reorganized ID No. 125, open space, and areas contained within another developing improvement district. Also excluded are the areas not included in any improvement district and certain areas retained as separate improvement districts, discussed under separate headings below.

The excluded developed areas will contribute their regional cost share for the completion of the regional system and for the previously constructed local facilities through ID No. 125. The developed areas will continue to be benefitted by the regional facilities financed and to be financed by ID No. 153. However, it is concluded that exclusion of the developed areas is justified in terms of benefit, because, through the reorganized ID No. 125, their allocation of the cost of the regional system benefits will continue to be proportional.

The 13,400 acres reserved as permanent open space near the Lomas de Santiago ridgeline, which is not proposed to remain within any improvement district, and other smaller permanent open space areas will not receive benefit from the planned works and are excluded from ID No. 153, 125 and other improvement districts. This is warranted by the fact that the area will have no demand served by the system.

Finally, areas contained within developing ID Nos. 112, 113, 153, 185, and 188 are logically maintained as separate improvement districts based on their separate local facilities costs and stages of development. To the extent there are sub-regional facilities from which any of these improvement districts benefit in common, they will share the cost of those facilities with the other participating improvement districts through a proportionate allocation based on benefit received. Exclusion of the [other] separate developing improvement districts from ID No. 153 will facilitate the allocation of local

facilities costs. Having these remain separate improvement districts does not negatively impact the regional cost allocation or bond authorization, nor would combining them produce any advantage.

**(3) Regional cost allocation.** Also considered was whether the reorganization achieves equity in relation to the other cost allocations within the regional split. Under the District's historic and continuing methodology for achieving equitable cost allocation, all improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. This incremental funding approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service. Adjustment of this methodology will be applied as discussed in Section 6.5 to recognize inclusion of some areas in both ID No. 153 or other overlying improvement districts and underlying ID No. 125. Contribution by areas not included in an improvement district is discussed in the heading below.

**(4) Areas not included in an improvement district.** The District's regional cost allocation approach took into consideration that some areas (referred to collectively with the shorthand references "110" and "210" in keeping with the District's numbering system for designating improvement districts) funded a portion of the District's earliest regional system costs through payment of debt service on general obligation waterworks bonds of the overall District in the 1960s (e.g., original construction of the San Joaquin Reservoir and IRWD's capacity in the East Orange County Feeder No. 2 and other transmission facilities, Frances Mutual Water Company wells, the Aufdenkamp Transmission Main and the original sewage treatment and reclamation system components financed by ID. No. 1 (201). Based on their initial financial participation in the original waterworks bonds and sewer ID No. 1 bonds, these earlier-developing areas were not included in the improvement districts formed during the 1970s. Similarly, certain areas added to the District through annexation and consolidation have funded a proportionate share of existing regional facilities costs, sometimes referred to as "acquisition balances," through user rate components. The "110" and "210" areas as excluded from ID Nos. 125 and 225. See Section 1.3,"THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations."

The District has performed calculations to determine whether historic allocations of cost, to the areas included in the improvement districts and the excluded areas, require future cost participation by excluded areas in order to ensure that the improvement districts do not bear a disproportionate cost of the system. Included in this evaluation are costs of the service delivery systems as well as other regional costs such as administrative headquarters and telemetry. Based on this evaluation, the District has determined that funding of future regional facilities costs of the District, (i.e., costs other than those costs financed by previous bonds and outstanding bonds assumed as obligations of the improvement districts being consolidated) should include participation of the areas that comprise "110" and "210," in proportionate amounts that will be determined taking into account revenue contribution, and benefit received from future capital facilities.



**(5) Retention of certain improvement districts.** Individual cost allocation considerations dictate that certain improvement districts be retained as separate improvement districts at this time.

ID No. 154 contains an area in which general planning information shows that some development could occur. However, the owner indicates no plans beyond current uses.

ID No. 240 discharges sewer only to OCSD's regional plant and is not tributary to the MWRP, LAWRP, or Chiquita plants. For that reason it is not within OCSD's Revenue Area 14. IRWD does provide sewage collection and recycled water service to ID No. 240, and collection system and recycled water system costs are proportionately allocated to ID No. 240.

ID No. 256 in large part remains on individual septic systems, and it is uncertain whether and when that community will desire to convert to a public sewer system. If and when this occurs, the District will evaluate the appropriate method for recovering the cost of the conversion from the benefitted area, such as retention of the separate improvement district and/or an underlying improvement district.

ID No. 252 is not tributary to IRWD plants but may benefit from future recycled water facilities. This requires retention of the improvement district so that applicable recycled water system costs can be separately allocated. The ID No. 252 formation conditions provided for this through the allocation of a proportionate share of ID No. 250 debt service costs. With the consolidation of ID No. 250 as part of ID No. 225, ID No. 225's debt service costs would be used for this allocation.

## 6.8 REDEVELOPMENT COST

In recent years, some areas of the District have begun to experience redevelopment activity. This has necessitated the consideration of the fair allocation of cost that should be borne by these areas, and how demands should be included in the demands of the improvement districts. The District is applying methodology to ensure proportional cost contributions for regional system and for added local system needs generated by redevelopment.

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### SECTION 7 IMPLEMENTATION OF PLAN OF WORKS

#### 7.1 GENERAL

The Plan of Works has been prepared by IRWD pursuant to the provisions of California Water Code Section 36410 *et seq.*

It is by this means that IRWD implements the various portions of its Water Resources Master Plan. IRWD, from time to time as needed, will issue increments of the propose bonds and construct the described facilities in order to meet its responsibility to have facilities available to serve the needs of approved development.

As hereinafter discussed, this Plan of Works will be implemented on a phased basis. Accomplishment of this obligation by IRWD necessitates issuance of bonds in the amount estimated in this Plan of Works.

It is acknowledged that, from time to time, the means of accomplishing the purposes of ID No. 153 may be altered and projects identified in this Plan of Works may be changed or replaced by other projects, by reason of changes in development phasing, changes in technology and refinements to facilities planning developed through IRWD's ongoing master planning and subarea master planning. Costs may include acquisition, construction, replacement, reconstruction and additions to facilities.

#### 7.2 AUTHORIZATION AND ISSUANCE OF BONDS

The authorized and unissued bonds of the reorganized ID No. 153 are estimated to be sufficient to accomplish this Plan of Works. Authorized bonds may be sold and the proceeds used only as specified in the Plan of Works, subject to changes in the projects or substitutions of other projects to reflect changes in development phasing, changes in technology and refinements in master planning and subarea master planning.

**REVISED  
PLAN OF WORKS  
PROVIDING FOR DOMESTIC WATER SUPPLY, STORAGE, TRANSMISSION  
AND DISTRIBUTION FACILITIES FOR  
IRVINE RANCH WATER DISTRICT  
IMPROVEMENT DISTRICT NO. 125**

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## SECTION 1 INTRODUCTION

### 1.1 OBJECTIVES

This Revised Plan of Works is a means by which the fiscal requirements of the Improvement District are identified, including bond authorization, in order to provide for the construction, planning and design of facilities necessary to provide service within the Improvement District. The obligation of the Irvine Ranch Water District (“IRWD” or the “District”) is to plan to meet the projected service needs of the specific property within the Improvement District.

For the overall District, the planning of the water supply, storage and distribution system has been accomplished by the Water Resources Master Plan (“WRMP”) and its predecessor planning documents. The WRMP describes the facilities and entitlements needed to provide for ultimate demands and reliability over the entire District, both for the existing population and future development. IRWD also prepares an Urban Water Management Plan (“UWMP”), a document required by statute and focused on specific elements. However, the WRMP is a comprehensive compilation of data and analyses that IRWD considers necessary for its planning needs, and as such, IRWD considers the WRMP its primary water planning document. The WRMP also includes recycled water supply, which is within the fiscal requirements of the sewer plans of works. Subarea master plans (“SAMP”) are created to plan in more detail the local facilities needed for development planning areas that may overlie all or part of an improvement district. SAMPs are generally prepared as the property owner and the city planning agency begin the development process.

Plans of works are used to describe local facilities and proportional participation in regional facilities that the improvement districts will need, relying on the WRMP and SAMPs for the detailed engineering and planning analysis. The role of the plan of works is founded in statute (Water Code 35950 *et seq.*) and is to define a plan for the facilities needed to serve the improvement district and make an estimate of their cost as necessary to support the voter authorization and issuance of general obligation bonds of the District for the improvement district. The plan of works thus provides the linkage between the engineering plan and the corresponding financial requirements by setting forth the basis for a determination by the Board of Directors in a noticed hearing that the plan benefits all the territory within the improvement district including any territory that has been annexed to it.

Plans of Works incorporate generalized facilities descriptions and some flexibility in the selection of specific projects. This allows the District to accommodate changes in development phasing, changes in technology and facilities planning developed through IRWD’s ongoing master planning and subarea master planning, and corresponding changes in costs of acquisition, construction, replacement, reconstruction and additions to facilities. The Board of Directors may determine that it is necessary to change a previously adopted plan of works. This has occurred in some instances in conjunction with a revision in the cost estimate making it necessary to propose a supplemental authorization of bonds, and

it has also occurred in conjunction with improvement district reorganization. This Plan of Works has been prepared in connection with the reorganization of Improvement District No. 153 to include a number of planned development areas within the improvement districts concurrently consolidated as Improvement District No. 125. See Section 1.3.

The facilities generally identified in this Plan of Works may also change without a modification of the Plan of Works, in order to substitute other facilities to accommodate land use planning or development phasing determinations as they evolve, or in accordance with facilities planning modifications and refinements identified through IRWD's ongoing master planning and subarea master planning. The general purpose of the facilities in the Plan of Works is to meet the domestic water requirements of the Improvement District, including basic system redundancy and reliability in accordance with the policies of the District. As the facilities are needed, IRWD will choose those projects which provide domestic water services most economically. Projects may include acquisition, construction, reconstruction and addition to facilities. The fiscal requirements identified in the Plan of Works include the development phase, during which the system will be expanded and a share of the existing regional system will be acquired as needed to serve the Improvement District, and will continue thereafter, representing the Improvement District's participation along with other improvement districts in the completion of the IRWD regional system.

This Plan of Works has the following general objectives: (1) update the description of the water system capital facilities; (2) provide a consolidated and revised plan of works to supersede and replace the individual plans of works of the improvement districts being reorganized and consolidated; (3) evaluate the benefit of the revised and consolidated plan of works to the territory of the consolidated ID. See Section 1.3.

The further objectives of this Plan of Works are to determine logical planning areas and the need for facilities. This includes (1) a proportionate share of regional domestic water supply, storage and transmission facilities; and (2) adequate local planning and system layouts based on the projected ultimate development within the improvement district. The Improvement District represents the consolidation of former improvement districts that, prior to their consolidation, authorized and incurred bonded indebtedness to finance their respective local facilities. Substantially all of the remaining local facilities will be financed by the developing improvement districts (ID Nos. 112, 113, 153, 185, 188, 212, 213, 253, 285 and 288), and therefore the Improvement District No. 125's remaining fiscal requirements as described in this Plan of Works exclude local facilities and represent only the Improvement District's participation along with other improvement districts in the construction of the IRWD regional system. See Section 4.

## 1.2 DESCRIPTION OF THE IRVINE RANCH WATER DISTRICT

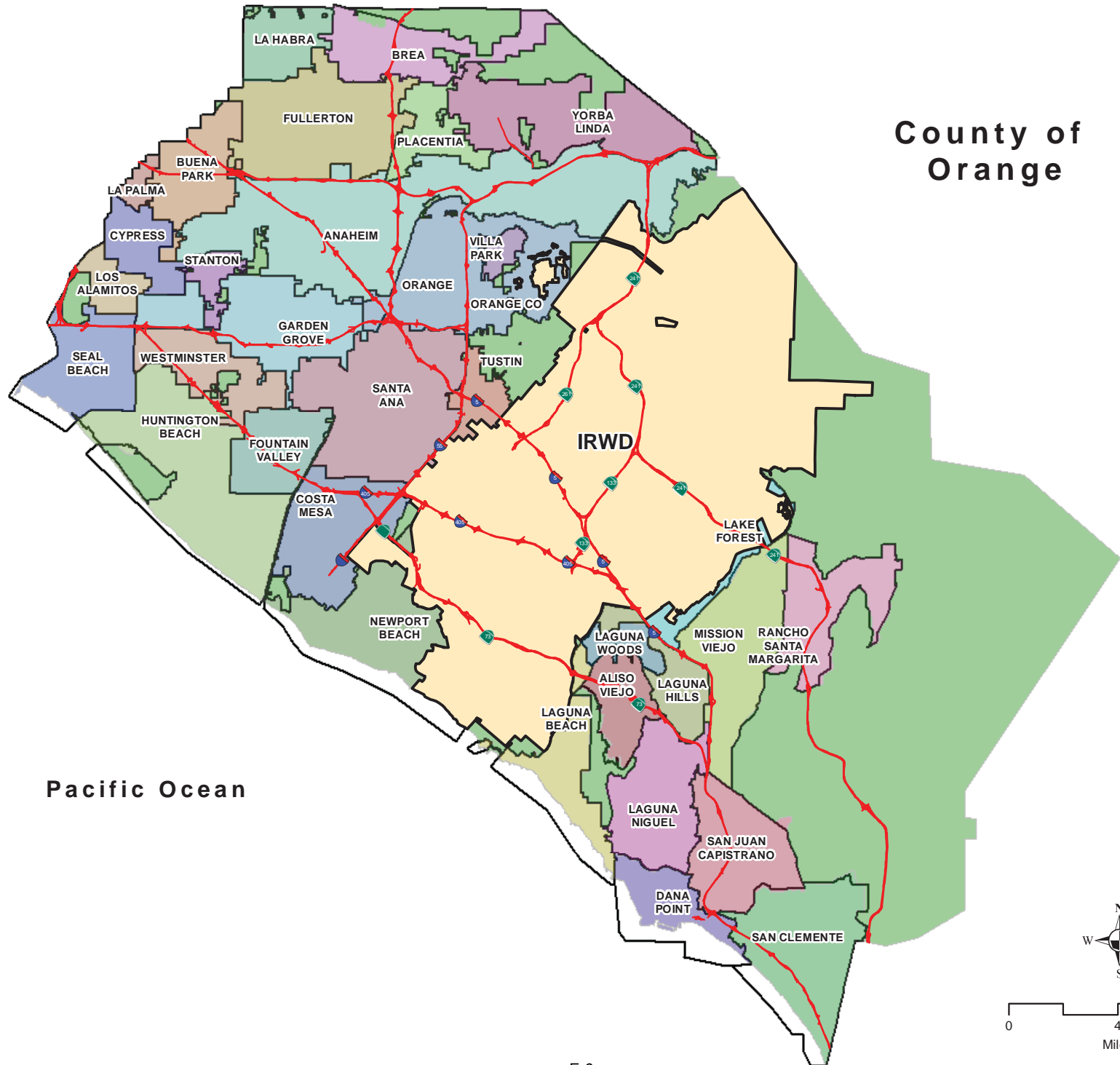
The District was established in January, 1961, as a California Water district under the provisions of Section 34000 *et seq.* of the California Water Code (the "Act"). Presently the District has four primary



services – supplying potable water, collecting and treating sewer, producing and distributing recycled and other non-potable water and implementing urban runoff treatment programs. Historically, the District has provided agricultural water service as needed until residential or commercial development occurs, and provided potable and recycled water services and sewage collection and treatment service when development occurs. Recycled water is used for irrigation of agricultural areas, parks, parkways, greenbelt areas and school grounds, and is used for individual yard landscaping in certain areas, industrial processing, toilet and urinal flushing and other purposes permitted by regulations. IRWD has also implemented a plan for natural treatment system service to divert urban runoff of water used for irrigation and other outdoor uses and treat the runoff by natural processes in water quality wetlands and similar facilities. See **Figure I-1** for a location Map of IRWD.

The District serves a 178-square-mile area extending from the Pacific Ocean and over a central flat, alluvial plain to the foothills, which includes all of the City of Irvine and portions of the cities of Tustin, Newport Beach, Costa Mesa, Orange and Lake Forest, as well as certain unincorporated areas of the County. The District serves a total estimated population of approximately 340,000 through approximately 105,000 water and approximately 100,400 sewer service connections.

# County of Orange



### 1.3 THE IMPROVEMENT DISTRICTS

**Historical Background.** At the time of the District's initial formation, the District's objective was to secure a supplemental water supply for irrigation and domestic use from The Metropolitan Water District of Southern California ("MWD"). This was accomplished through the installation of regional water transmission pipelines in cooperation with other districts in and the construction of the San Joaquin Reservoir, financed by the sale in 1961 and 1963 of general obligation waterworks bonds of the overall District aggregating \$10,500,000.

After the initial authorization of waterworks bonds for the overall District, all water and sewer bonds were authorized within improvement districts formed by the District to encompass specific geographic areas. The first improvement district formation occurred in 1965, when sewage collection and treatment were added to the District's powers and Improvement District No. 1, a sewer improvement district, was formed to provide financing for the District's first collection, treatment and reclamation systems. Between 1965 and 2008, the District formed 18 water improvement districts and 16 sewer improvement districts covering specific areas within the District's boundaries, some of them overlapping.

The District formed the improvement districts<sup>1</sup> in order to allocate funding responsibility for capital facilities to the areas which would benefit from such capital facilities. Local facilities addressed particular needs that varied by geographic area, proximity to existing infrastructure, elevation and other factors. Improvement districts were also used to separate areas based on projected timing of development so that local capital facilities construction could be matched to development approval decisions as they occurred. In addition, improvement districts served as a mechanism to share the funding of the District's regional facilities to be used by improvement districts in common, such as major water importation facilities and water and sewer treatment plants. The plans of works derived information from District planning documents and from land development plans as the basis for determining, for water improvement districts, the water requirements and the size, location and phasing of water delivery facilities to be constructed from the existing feeders and supply sources, and, for sewer improvement districts, the sewage generation and recycled water requirements and the size, location and phasing of sewer collection and recycled water delivery facilities to be constructed from the existing trunk sewers and recycled water distribution system to serve the various planning areas and service elevations or zones. As changes occurred in development planning, annexations and detachments were used to modify the boundaries of some of the improvement districts.

<sup>1</sup> Most of the improvement districts were formed by the District's Board of Directors, but Improvement district formation was in some cases accomplished by the District's predecessor district or the Orange County Local Agency Formation Commission, in the case of certain areas included in the District by annexation or consolidation with another district.



**Water Improvement Districts.** The initial financing of the District's water facilities was undertaken in the early 1960s with bonds of the District. During the 1970s, the District formulated a water facilities master plan and formed many of the water improvement districts that have existed until the current reorganization and consolidation. The first water improvement district to be formed was Improvement District ("ID") No. 104, formed in 1972, followed by the formation of ID Nos. 103 and 105 in 1974, and ID Nos. 102, 106 and 109 in 1976. When water improvement districts were formed, the District excluded lands (sometimes referred to collectively with the shorthand reference "110" in keeping with the District's numbering system for designating improvement districts) that were determined to have funded a portion of the District's earliest regional system costs through payment of debt service on general obligation waterworks bonds of the overall District in the 1960s.

ID No. 104 incorporated the coastal area of the District from the Pacific Ocean to the crest of the San Joaquin Hills. ID No. 103 covered the planned industrial and commercial developments, then known as the Irvine Center Planned Community or "Regional Triangle" and the Irvine Industrial Complex-East, in the vicinity of the intersection of the Santa Ana and San Diego Freeways and adjacent to the Marine Corps Air Station, El Toro. ID No. 105, containing about 22,000 acres in the northernmost portion of the District extending from the Santa Ana Freeway to the northerly, easterly and westerly boundaries of IRWD, was formed initially to build a pipeline to replace the Highline Canal System for the delivery of water from Irvine Lake for agricultural irrigation purposes; its first plan of works contemplated that these untreated water facilities would be augmented with later phases of works to deliver domestic water. ID No. 102 was formed to include the central part of Irvine, between the Santa Ana and San Diego Freeways. ID No. 106 encompassed the Turtle Rock, Quail Hill and Bonita Canyon areas of the San Joaquin Hills, extending north to the San Diego Freeway. ID No. 109 covered the portion of the San Joaquin Hills extending eastward from proposed Sand Canyon Avenue to the eastern boundary of the District.

As urban growth continued, further phases were added to the District's planned water system in the mid- to late 1970s, and it became necessary to increase the authorization of bonds to finance them. To accomplish that objective for some of the initial water improvement districts, the District revised the plans of works and elections were conducted to obtain supplemental bond authorizations (ID No. 103 in 1976, 1977 and 1978, ID No. 105 in 1976 and 1978, and ID No. 109 in 1978). In other improvement districts, the District formed overlapping improvement districts with new bond authorizations: ID Nos. 121, 141 and 142, and 161 were formed in 1978, overlapping portions of ID Nos. 102, 104, and 106, respectively.

Beginning in the late 1980s, other water improvement districts were formed as areas were added to the District by annexation and consolidation and as former military bases were closed and underwent reuse planning. In 1988, ID Nos. 182 and 184 were formed over the Foothill Ranch (Whiting Ranch) area located in the foothills and canyons north of El Toro in eastern Orange County, an area that was annexed to IRWD in 1982. ID No. 182 covered the northern, predominantly residential portion of this planning area and ID No. 184 covered the southern, predominantly commercial portion. Later in 1988, ID Nos. 186 and 188 were formed over the annexed Glenn Ranch area lying to the east of Foothill

Ranch and including a portion of the community of Portola Hills. ID No. 186 covered the northern, predominantly residential portion of this planning area and ID No. 188 covered the southern, predominantly commercial portion.

ID No. 135, encompassing the territory of the former Los Alisos Water District (“LAWD”), was formed as part of the proceedings for LAWD’s consolidation with IRWD on December 31, 2000, to provide a vehicle for issuing and servicing LAWD’s remaining water bond authorization. ID No. 135 lies to the northeast of the intersection of the Santa Ana and San Diego Freeways, and covers a majority portion of the City of Lake Forest.

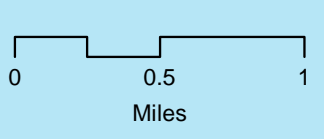
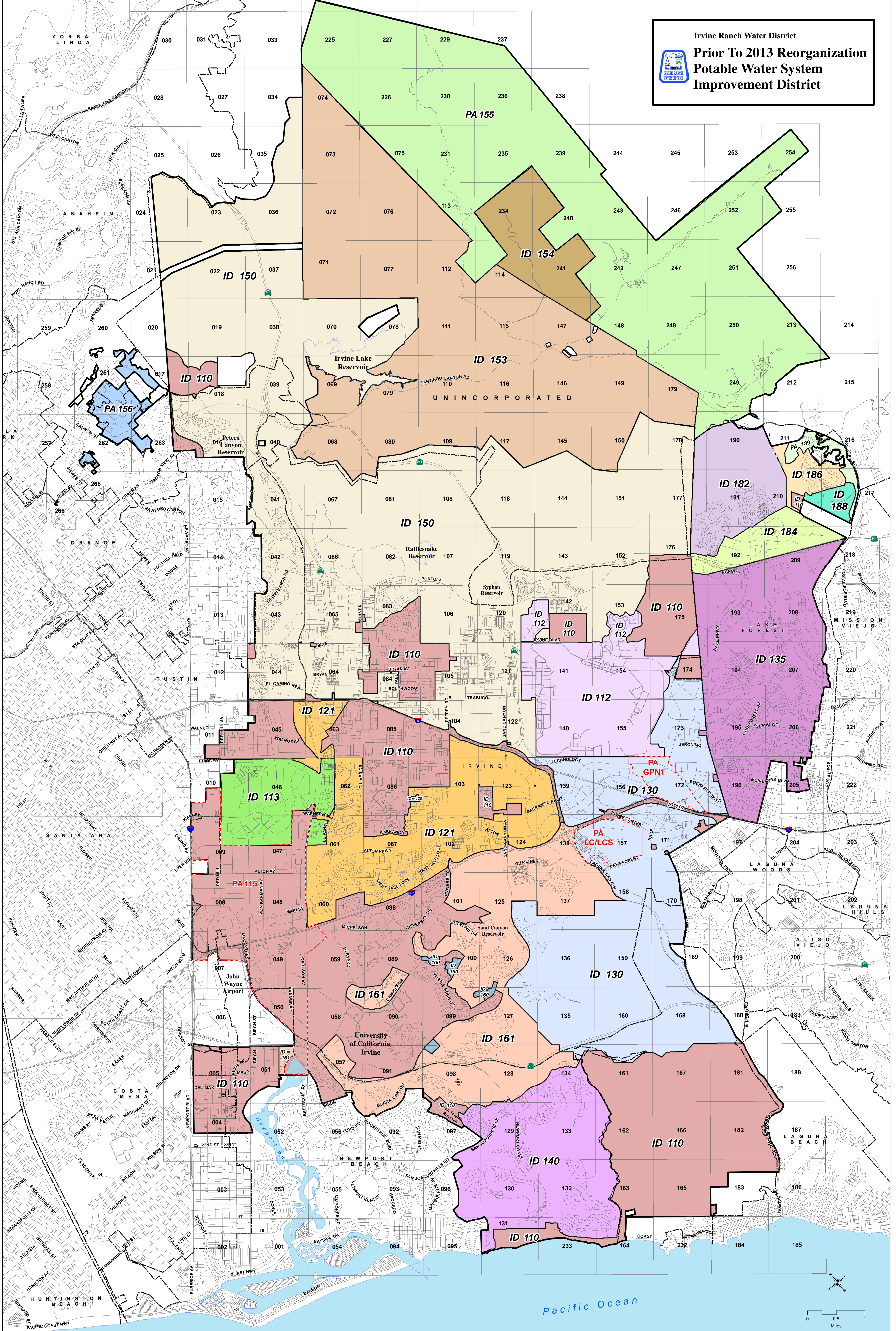
ID No. 113 was formed in 2004 over the property within the former Marine Corps Air Station Tustin, a facility established in 1942 to support U.S. Navy lighter-than-air aircraft (blimps) conducting anti-submarine patrol off the California coast during World War II and later used to support Marine Corps helicopter operations until its closure in 1999. The former helicopter base, now known as Tustin Legacy, is currently being redeveloped with residential, commercial, institutional and recreational uses.

The formation of ID Nos. 153 and 154 took place in conjunction with the July 1, 2006 consolidation of the former Santiago County Water District (SCWD) with IRWD, to serve as the successors to two improvement districts formed by SCWD in 1978, ID No. 1 (water and sewer) in the area extending northward from Loma Ridge to the Fremont Canyon area, and ID No. 2 (water) including portions of Black Star, Baker and Hall Canyons. As part of the district consolidation, the majority of the territory of SCWD’s ID No. 1 became ID No. 153 (with respect to ID No. 1’s water bond authorization), and all of the territory of SCWD’s water ID No. 2 became ID No. 154 of IRWD.

The most recent IRWD water improvement district formation took place in 2008, when the District formed ID No. 112 over the lands in the eastern portion of the District north of the Santa Ana Freeway, within the former Marine Corps Air Station El Toro, a base originally established in 1942 to support U.S. Marine Corps aviation activities during World War II, and encompassing the planning areas now known as Heritage Field and the Great Park.

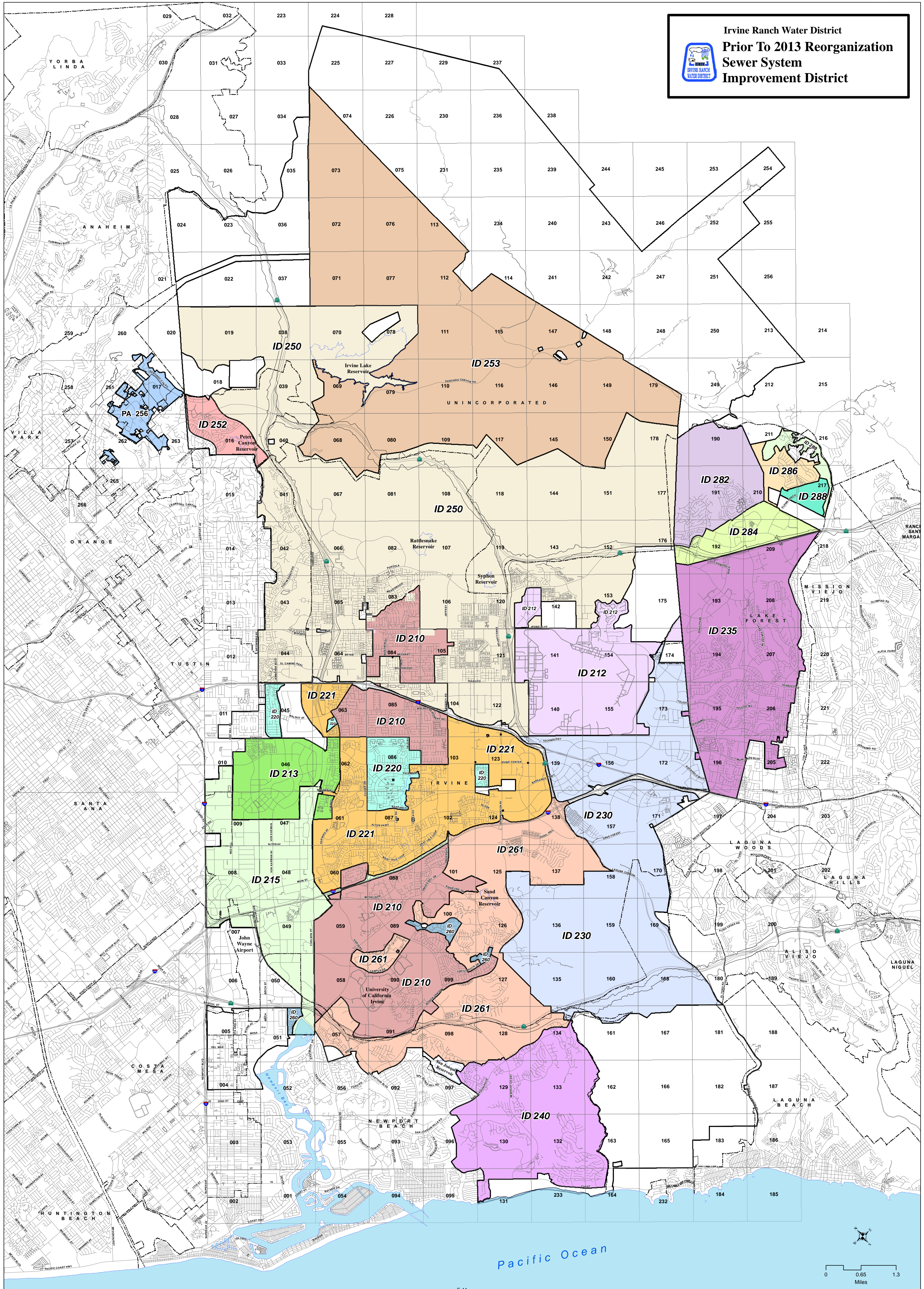


Irvine Ranch Water District  
**Prior To 2013 Reorganization  
 Potable Water System  
 Improvement District**





Irvine Ranch Water District  
 Prior To 2013 Reorganization  
 Sewer System  
 Improvement District





**Sewer Improvement Districts.** The first sewer improvement district to be formed by the District was Improvement District No. 1, in 1965. ID No. 1 encompassed an area lying south of the San Diego Freeway and ranging from two to seven miles inland from the Pacific Ocean, including most of the University of California Irvine campus. ID No. 1 assumed the obligations of Orange County Sanitation District No. 14 for the cost of a nucleus collection system when District No. 14 was disbanded,<sup>2</sup> and ID No. 1's planned works also included a treatment plant and IRWD's initial reclamation and reclaimed water storage facilities. ID No. 1 is presently known as ID No. 1(201) or "210." Like "110", the "210" area was excluded from later improvement district formations based on initial contribution.

After ID No. 1, sewer improvement district formations generally paralleled the water improvement district formations discussed in the preceding section. In the case of most of the improvement districts formed before 1978, each sewer improvement district preceded its water counterpart by a few years; after that, each water improvement district and its corresponding sewer improvement district were generally formed concurrently and were coterminous.

In 1971, sewer ID Nos. 2 (subsequently known as 202) and 3 (subsequently known as 203) were formed over areas generally corresponding to the areas that, a few years later, were included in water ID Nos. 102 and 103, described above. Their plans of works contemplated an expansion of the Michelson Water Reclamation Plant, dual collection and treatment systems for reclaimable domestic sewer and non-reclaimable industrial discharges, reclaimed water distribution facilities and wet weather treated sewer disposal. ID No. 204 was formed in 1972 at the same time as the corresponding water ID No. 104. ID No. 204's plan of works initially envisioned two systems delivering sewage from the coastal area, one discharging to a regional treatment and disposal system and the other to a local treatment plant to be built. Ultimately, the collection system was instead designed to deliver all of the sewage flow from ID No. 204 (and from the later-formed ID Nos. 241 and 242) to the interceptor and trunk sewers and regional treatment facilities financed by Orange County Sanitation District No. 5. ID No. 206 was formed in 1975, covering the area corresponding to ID No. 106 which was formed the following year.

As happened in the water system, the addition of further phases of facilities to the planned sewer system in the late 1970s made it necessary to increase the authorized bonds to finance them. In 1978, the District formed ID Nos. 221, 241, 242, 250, 261 and 290 (coterminous with the counterpart water ID Nos. 121, 141, 142, 105, 161 and 109, respectively).

Beginning in the 1980s, the addition of areas to the District by annexations and consolidations and the closure of former military bases generally led to the formations of sewer improvement districts

<sup>2</sup> The disbanded Sanitation District was the original "District No. 14." Another District No. 14 of the Orange County Sanitation Districts was formed in 1986, over much of IRWD's territory (except for the coastal portion within Orange County Sanitation District No. 5), for the purpose of acquiring regional collection, treatment and disposal capacity in the OCSD facilities to augment IRWD's Michelson Water Reclamation Plant. See Section 1.4.

at the same time as the corresponding water improvement district formations, described above.<sup>3</sup> ID Nos. 282, 284, 286 and 288 were formed in 1988 (coterminous with ID Nos. 182, 184, 186 and 188, respectively). ID No. 235, encompassing the territory of the former LAWD and coterminous with ID No. 135, was formed upon LAWD's consolidation with IRWD on December 31, 2000, to issue and service LAWD's remaining sewer bond authorization. Upon the July 1, 2006 consolidation of the former Santiago County Water District with IRWD, ID No. 253 (coterminous with ID No. 153) was formed as the successor to Santiago County Water District ID No. 1's 1978 sewer bond authorization). ID Nos. 213 (coterminous with ID No. 113) and 212 (coterminous with ID No. 112) were formed in 2004 and 2008, respectively. In 2008, ID No. 256 was formed through annexation proceedings that were conducted to include the former territory of Orange Park Acres Mutual Water Company in IRWD. ID No. 256 has no authorized bonds, but was formed to provide a potential vehicle for such authorization if and when the residents of the area, now served predominantly by septic tanks, determine to finance a public sewer collection system to allow a conversion to sewer service.

**Regional Allocation.** As the regional water system has been built, buy-ins and allocations among the improvement districts have been utilized to maintain proportionate sharing of regional system costs. Allocations among the improvement districts have similarly been utilized to maintain proportionate cost allocation of regional sewer system costs. Regional potable water and regional sewer allocations are based on demands. For the portion of the regional costs relating to the reclamation system, historically allocation was weighted, with two-thirds of the cost of the storage, transmission and disposal facilities making up the regional irrigation system allocated based on the improvement districts' prorated shares of the sewage generation and one-third of the cost prorated based on their share of irrigation water demands. That practice was subsequently discontinued, and the District instituted its current practice of establishing separate regional allocations for sewer facilities, based on sewage generation, and recycled water facilities, based on recycled water demand, for each sewer improvement district. Cost variations among tributary collection system areas have also been factored into the regional sewer allocation. The regional split for the area within ID No. 240 reflects that ID No. 240 has participated in the financing of the Orange County Sanitation District's treatment facilities and does not discharge sewer to the MWRP collection system.

Regional allocation includes facilities serving all improvement districts as well as sub-regional facilities serving two or more, but not all, improvement districts. Consistent with regional allocation, as certain areas were added to IRWD's service area through annexations, consolidations, and military base conversions, in some areas acquisition balances were established to recover regional system cost, and in others new improvement districts were formed to assure that those areas would contribute proportionately to regional facilities and pay for local facilities and expanded regional facilities to serve their demands. Regional allocation will continue to be used with the reorganized improvement districts to assure proportionate cost-sharing of the District's regional system.

<sup>3</sup> An improvement district unrelated to the addition of service area to the District, ID No. 252, was formed in 2005, encompassing a small portion of the area formerly within ID No. 250.



Under the District's historic and continuing methodology for achieving equitable cost allocation, the improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. As a result an improvement district can reach full development, but its regional system funding participation will continue. A similar regional allocation would be applied to replacement and enhancement projects, to the extent funded by the improvement districts. This incremental funding approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service.

As discussed in more detail in Section 6, the District will also allocate future regional cost sharing to "110" and "210" areas excluded from earlier improvement district capital funding, based upon an analysis of historic cost contributions of these areas and benefit received from future capital facilities.

**Consolidation of Improvement Districts.** As development progresses to completion in improvement districts and the need for having separate improvement districts to match capital facilities construction timing and other specific local facilities needs of different geographic areas diminishes, consolidation of various improvement districts can produce efficiencies for the District, its customers and property owners. The California Water Code allows the Board of Directors, in a noticed hearing process, to reorganize its improvement district boundaries and to consolidate coterminous improvement districts. The statutory provisions for the consolidation of improvement districts specify that a consolidated improvement district may levy and collect the assessments and charges necessary to satisfy the obligations of its predecessor improvement districts, and that the authorized and unissued bonds of the predecessor improvement districts may be issued and sold as the bonds of the consolidated improvement district.

Ultimately, the District envisions a succession plan that would reduce the number of its improvement districts, ideally to one water improvement district and one sewer improvement district, through consolidations and reorganizations to be implemented as and when considerations for separation of the various improvement districts no longer remain. The current reorganizations and consolidations significantly advance this plan. The timing of the remainder of this plan will be dictated by various factors relating to the preservation of equitable cost sharing as development continues to build-out and as the regional system benefits for various geographic areas are merged.

**Previous Consolidations.** Under the statutory consolidation provisions, some of the original improvement districts described in the preceding sections have been consolidated. The consolidations that were implemented prior to the current consolidation included two groups of the original improvement districts. The first of these consolidations took place in the coastal area. In 1989, after completing annexations to and detachments from ID Nos. 104, 141 and 142 to exclude permanent open space areas and create coterminous boundaries for the improvement districts' remaining territories, they were consolidated, with the resulting consolidated improvement district designated as ID No. 140.

Simultaneously, ID Nos. 204, 241 and 242 were consolidated as coterminous improvement districts, with the resulting consolidated improvement district designated ID No. 240. Following a similar process in 2008, ID Nos. 103 and 109 were consolidated and designated as ID No. 130 and ID Nos. 3(203) and 290 were consolidated and designated as ID No. 230.

**The Current Consolidations and Reorganizations.** With the 1989 and 2008 improvement district consolidations, the District began to implement a transition of its improvement district financing structure from a developing to a developed condition. The current consolidations continue that transition. Based on the District's investigation of the merits of implementing further reorganization and consolidation of its improvement districts, the current reorganization and consolidation have been formulated on a comprehensive, District-wide basis, to provide a sustainable platform for capital funding through the build-out of the District and the completion of the system. The current reorganization and consolidation preserve the District's long-term funding approach in which regional facilities and capacity are acquired incrementally by all improvement districts until the regional system as a whole is complete and regional cost allocations are used to maintain equitable cost-sharing. The interrelated consolidation actions, expected to be effective January 1, 2014, include the following key components:

- Reorganization and consolidation of the substantially developed and certain partially developing improvement districts into a single water improvement district and a single sewer improvement district, ID Nos. 125 and 225;
- Reorganization of several remaining developing areas into one existing and one new water improvement district (ID Nos. 153 and 185) and one existing and one new sewer improvement district (ID Nos. 253 and 285). These developing areas are also retained within the improvement districts reorganized and consolidated as ID Nos. 125 and 225, with the effect that ID Nos. 125 and 225 will underlay these developing improvement districts and ensure cost participation of these developing improvement districts in local and sub-regional facilities already built by the former improvement districts being consolidated (see Chapter 6);
- Retention of existing ID Nos. 112, 113, 188, 212, 213 and 288 as separate developing improvement districts;
- Retention of existing ID Nos. 154, 252 and 256 pending future evaluation of applicable equity considerations;
- Establishment of a planning area over the area of former ID No. 135, consolidated within the developed water improvement district ID No. 125, until completion of financial programs currently in progress to place the former ID No. 135's user rates under the same structure as other developed areas;
- Retention of existing ID No. 240 as a separate improvement district, unless and until separate regional sewer cost allocations are no longer necessary;
- Implementation of separate charges or other mechanisms, as necessary, to recover a proportional allocation of cost for future regional facilities from the "110" and "210"

areas that are not participating in proportional regional cost allocation by inclusion in an improvement district.

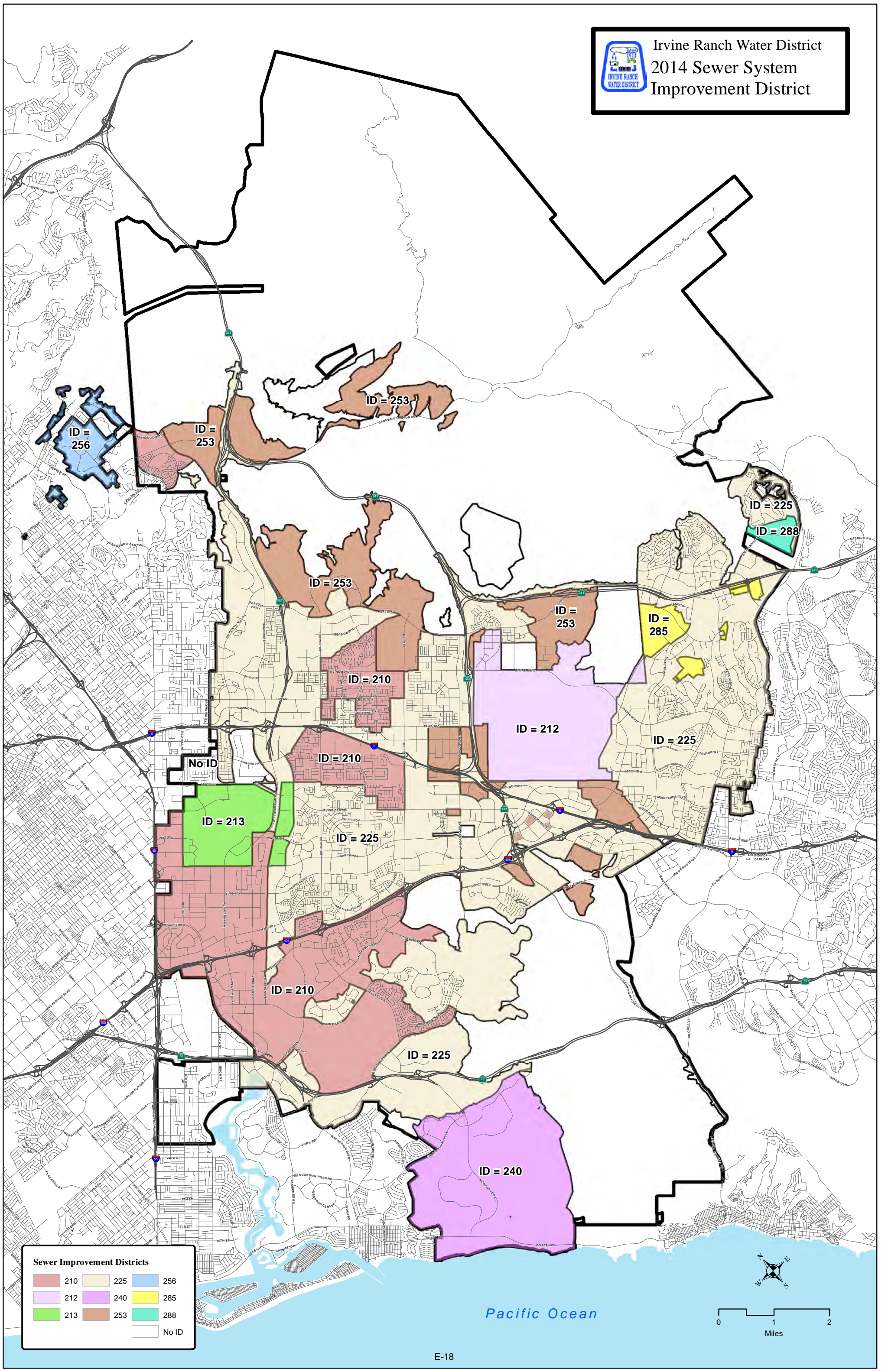
Throughout the construction of the District's capital facilities, the District has separated the financing of its water and sewer (including recycled water) systems. The District believes this historical separation continues to be justified, based on differences between the two systems in terms of the factors that govern the allocation of benefits and cost responsibilities among the areas served by each system. For this reason, the above described actions do not include any consolidations of water improvement districts with sewer improvement districts, and the District has no plans at this time to do so. The separation can be reexamined in the future.

This Plan of Works will supersede the individual plan of works previously adopted for the consolidated improvement districts by IRWD (or its predecessors Los Alisos Water District, with respect to ID Nos. 135 and 235). The previous plans of works were adopted at the time of ID formation (or at the time of initial and supplemental bond authorizations, in the case of ID Nos. 135 and 235). In some cases, plans of works were later revised in connection with additional bond authorizations and improvement district consolidations.



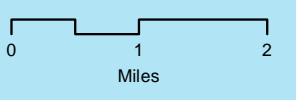






**Sewer Improvement Districts**

210	225	256
212	240	285
213	253	288
No ID		





## 1.4 THE WATER, SEWER AND RECYCLED WATER SYSTEMS

**The Water System.** The initial domestic water system included the San Joaquin Reservoir<sup>4</sup> and IRWD's capacity in the East Orange County Feeder No. 2 and other transmission facilities, financed by the sale of general obligation waterworks bonds of the overall District in the 1960s. The District also acquired from the U.S. Government an 18-inch transmission main used to deliver a water supply to the Tustin and El Toro military bases from Metropolitan Water District's East Orange County Feeder and later from East Orange County Feeder No. 2. For the delivery of untreated water supplies, the District acquired capacity in the regional untreated delivery system of the Santiago Aqueduct Commission.

The District's Water Resources Master Plan ("WRMP"), initially formulated in 1972 and updated periodically, sought to provide for ultimate demands and reliability. With the formation of the first few improvement districts and the authorization and sale of improvement district bonds in the early 1970s, the system was expanded, adding local master planned facilities for each of the developing areas as development progressed and building the regional system in which the improvement districts participated in proportion to their demands. Through cooperative efforts with Municipal Water District of Orange County ("MWDOC"), neighboring water districts and cities, an area wide system was acquired, storage was constructed and transmission pipelines were acquired and installed to receive Colorado River imports via MWD facilities. This supplemental source of water was augmented by northern California supplies with commencement of deliveries through the State Water Project system in July, 1976.

In 1978, additional water capacity needed to serve the District was estimated at 140 cubic feet per second ("cfs") (ultimate peak month demand). A supplementary water source plan envisioned in the 1970s and embodied in the 1978 plans of works consisted of the purchase of a 60 cfs share of a proposed regional pipeline (then known as the "Diemer Intertie" and now known as the Allen McColloch Pipeline or "AMP") and an 80 cfs wellfield in the main Orange County groundwater basin. The AMP was constructed by MWDOC, with 79 cfs participation by IRWD, and IRWD constructed two transmission mains capable of supplying 45 cfs from AMP into the distribution system. These facilities, along with two wells in the Tustin area with a combined capacity of 4 cfs, and the Zone 1 Reservoir to provide internal operational storage and avoid the need to supply peak hour demands from feeder connections, comprised the first phase of the domestic water system. Construction of the 80 cfs wellfield, known as the "Dyer Road Wellfield," took place in the 1980s.

As the domestic water system was built, it was anticipated that commercial agriculture would be phased out by residential, industrial and commercial development, and it was assumed that the existing irrigation system would provide agricultural water until no longer needed. The cost of the untreated

<sup>4</sup> The San Joaquin Reservoir was initially constructed as a domestic water facility. Due to water quality considerations, that use was eventually discontinued, and IRWD acquired the facility from its agency partners and converted it to a recycled water seasonal storage facility.



water system and its supply, storage and transmission facilities, consisting of the Irvine Lake Pipeline and improvements to Irvine Lake, were apportioned primarily to ID No. 105. In the 1970s, the ID No. 105 plans of works noted that the Irvine Lake Pipeline supply would require treatment for use as a domestic water supply, and an untreated delivery system from Irvine Lake, through either the Santiago Aqueduct Commission facilities or a new Irvine Lake Pipeline, as well as a treatment plant identified in the 1972 WRMP, were included in the planned works for that improvement district.

In the early to mid 1980s, as the district's water supply needs were updated, other regional system improvements were planned and financed by the improvement districts, including the continued construction of the regional supply, transmission and storage facilities, administration and operations facilities and telemetry.

The AMP, Dyer Road Wellfield and major delivery facilities were completed as contemplated in the existing plans of works. With those core imported and groundwater supply and delivery facilities and the associated distribution system in place, the District's current WRMP targets a reliable water supply mix and includes the development of sufficient groundwater production capacity to pump up to the District's basin production percentage set by the Orange County Water District.

In accordance with current IRWD policy, basic operational reliability and redundancy for the water system is evaluated with reference to the capacity needed to sustain an outage of a major supply system component, assuming demand reduction obtainable through customer cooperation.

Wells in addition to those in the Dyer Road Wellfield have been constructed or improved in Orange Park Acres, Lake Forest and Irvine to provide additional groundwater supplies. The groundwater production and treatment components of the Irvine Desalter Project produce both domestic and recycled water supplies

In 2009-10, the District commenced the engineering design for a new water treatment plant, the Baker Water Treatment Plant (the "Baker WTP"). Construction of the Baker WTP is anticipated to be complete in July 2015. This project, to be constructed by the District in cooperation with neighboring water districts, will improve operational supply capacity and regional reliability through the treatment of local and imported raw water sources to drinking water standards. When constructed, the Baker WTP is expected to treat to drinking water standards approximately 28 million gallons per day ("mgd") of raw imported water purchased from MWD. During emergencies and planned raw imported water outages, water from Irvine Lake is expected to be supplied to the Baker WTP for treatment to drinking water standards. The Baker WTP will utilize microfiltration and ultraviolet disinfection as the primary treatment processes.

In addition to developing its water treatment, local groundwater and recycled water systems, the District is diversifying its water supply portfolio by developing water banking projects for dry year reliability. These projects include the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project, situated on groundwater recharge lands that overlie the regional Kern

County groundwater basin. The District has also secured access to certain participation rights in the Kern Water Bank to store water. The purpose of developing banking facilities is to improve the District's water supply reliability by enabling the District to store lower cost water it can acquire during wet hydrologic periods for use during dry periods. The District has entered into arrangements to acquire water for banking, including unbalanced exchanges and other transactions. The banking facilities will enhance the District's ability to respond to drought conditions and potential water supply interruptions and will provide the District the ability to reduce the cost of water delivered under such conditions. The District has also entered into an agreement with MWD and MWDOC to provide a means to deliver banked water to the District's service area.

**The Sewer System.** The District's powers did not include sewage collection and treatment when the District was formed. When the District's principal act, the California Water District Law, was amended to permit California water districts to provide sewage services subject to voter approval, voters of the District approved the added scope of services at an election held in March, 1965.

The District began the construction of a sewer system with the bonds of ID No. 1 issued in 1966 and subsequent bonds issued on behalf of ID Nos. 2(202) and 3(203). In addition to the nucleus sewage collection system acquired from Orange County Sanitation District No. 14, the original planned works included a treatment plant, reclamation and reclaimed water storage facilities. Subsequent plans of works contemplated an expansion of the Michelson Water Reclamation Plant, dual collection and treatment systems for reclaimable domestic sewer and non-reclaimable industrial discharges, reclaimed water distribution facilities and wet-weather treated sewer disposal.

The Michelson Water Recycling Plant ("MWRP"), then known as the Michelson Water Reclamation Plant, has been expanded in phases. The most recent expansion, anticipated to be completed during fiscal year 2014, will bring its capacity from 18 to 28 mgd. The District's sewer system also includes facilities and contractual entitlements to serve the portions of its service area in the coastal, Lake Forest and Santa Margarita ("Chiquita") areas not tributary to MWRP, as well as regional treatment capacity in the facilities of Orange County Sanitation District for the sewage from the MWRP-tributary area that is in excess of its needs for production of recycled water.

The sewer system to serve the coastal area not tributary to MWRP was first envisioned as two systems, one discharging to a regional treatment and disposal system and the other to a local treatment plant to be built. Ultimately, the collection system for the coastal area was instead designed to deliver all of the sewage flow to the regional collection and treatment facilities of Orange County Sanitation District No. 5.

During fiscal year 1986, the District cooperated with Orange County Sanitation District ("OCSD") to form Sanitation District 14 (functionally replaced by "Revenue Area 14" of OCSD, upon the 1998 consolidation of the several sanitation districts comprising OCSD's predecessor, the County Sanitation Districts of Orange County), which overlays much of the District's territory other than the coastal area. Under an agreement entered into between the District and OCSD, the District acquired equity interests

in OCSD's sewage processing facilities (the percentage of interest will vary over time pursuant to a formula set forth in the agreement between OCSD and the District). The agreement also provides for the purchase by the District of additional capacity in OCSD sewage processing facilities on an as-needed-basis determined from annual flows. These equity purchase costs are included in the costs regionally allocated to the improvement districts.

In 2000, as part of the consolidation of Los Alisos Water District with the District, the Los Alisos Water Reclamation Plant ("LAWRP") was added to the sewer system. Currently, approximately 85% of the District's sewer is treated by the MWRP and LAWRP operated by the District, and approximately 14% is treated by OCSD.

A future MWRP expansion up to 33 mgd has undergone environmental review and is planned by 2025, as needed to meet demand. Ultimately, the District plans to expand capacity for its treatment facilities to approximately 40.5 mgd in order to: (i) increase recycled water production and utilization; (ii) decrease exposure to external treatment costs and operational constraints; and (iii) decrease dependencies on imported water supplies.

The construction of IRWD's regional sewer system also includes the network of gravity sewers, force mains, sewer lift stations and siphons that convey sewer to each treatment facility, which was developed as the system was expanded.

The processes for treating sewage and producing recycled water generate solids residuals. After evaluating alternative approaches to handling its sewer solids, the District is proceeding with the construction of facilities for handling MWRP solids, currently conveyed to Fountain Valley for treatment by OCSD, as well as solids from the District's LAWRP. The solids handling capital project is underway and is anticipated to be completed in fiscal year 2017.

**The Recycled Water System.** In addition to the water reclamation facilities described under the preceding subheading, the recycled water system consists of a dual system for distribution of the recycled water, primarily for irrigation, and seasonal storage to allow production in the low-demand winter season for use in the high-demand summer season. These facilities presently include the District's Sand Canyon, Rattlesnake Canyon, and San Joaquin Reservoirs, which are recycled water reservoirs with capacities of 750 acre feet, 1,100 acre feet, and 2,500 acre feet respectively. In addition to the future expansion of reclamation capacity, based on demand as described above relative to the sewer system, the District plans to increase seasonal storage capacity. At this time, the expansion of Syphon Reservoir is being evaluated for that purpose. The cost of the Syphon expansion or a comparable seasonal storage project is included in the proposed sewer plans of works. As stated above, the recycled water system regional and local costs comprise a part of regional and local sewer costs under the plans of works.

**Enhancement and Replacement.** Apart from the ongoing system expansion and completion that will continue to build-out, the District has incorporated in its system planning efforts the updating



of its infrastructure to meet the needs of existing and future customers. These system enhancement efforts will include capital projects that provide service cost savings and projects that provide reliability or redundancy beyond that necessary to satisfy the District's policy for basic reliability. Replacement and refurbishment improvements consist of repairs and restoration to existing water, recycled water and sewer system facilities. The District presently funds enhancement and replacement costs from reserves set aside for that purpose with contributions from user rates, general 1% tax levy revenues and other sources. The District may also evaluate the funding of enhancement and replacement costs through the improvement districts to the extent authorized general obligation bonds are available for such purposes and the enhancement and replacement costs are allocable among improvement districts and other funding sources in a fair and equitable manner.

## SECTION 2 IMPROVEMENT DISTRICT NO. 125

### 2.1 DESCRIPTION OF THE STUDY AREA

As a result of the current reorganization of ID No. 125, the land included in the improvement district consists of predominately existing development areas in portions of former ID Nos. 1 (120), 121, 130, 135, 140, 106 (160), 161, 182, 184, and 186 as well as existing developments within other former improvement districts (principally former ID Nos. 130 and 150) that have been added to ID No. 125 by annexation. Areas of former ID that contained permanent open space have been excluded. The resulting Improvement District No. 125 is a developed improvement district that will function in tandem with existing ID No. 110 to provide equitable regional capital cost sharing by the District's developed areas.

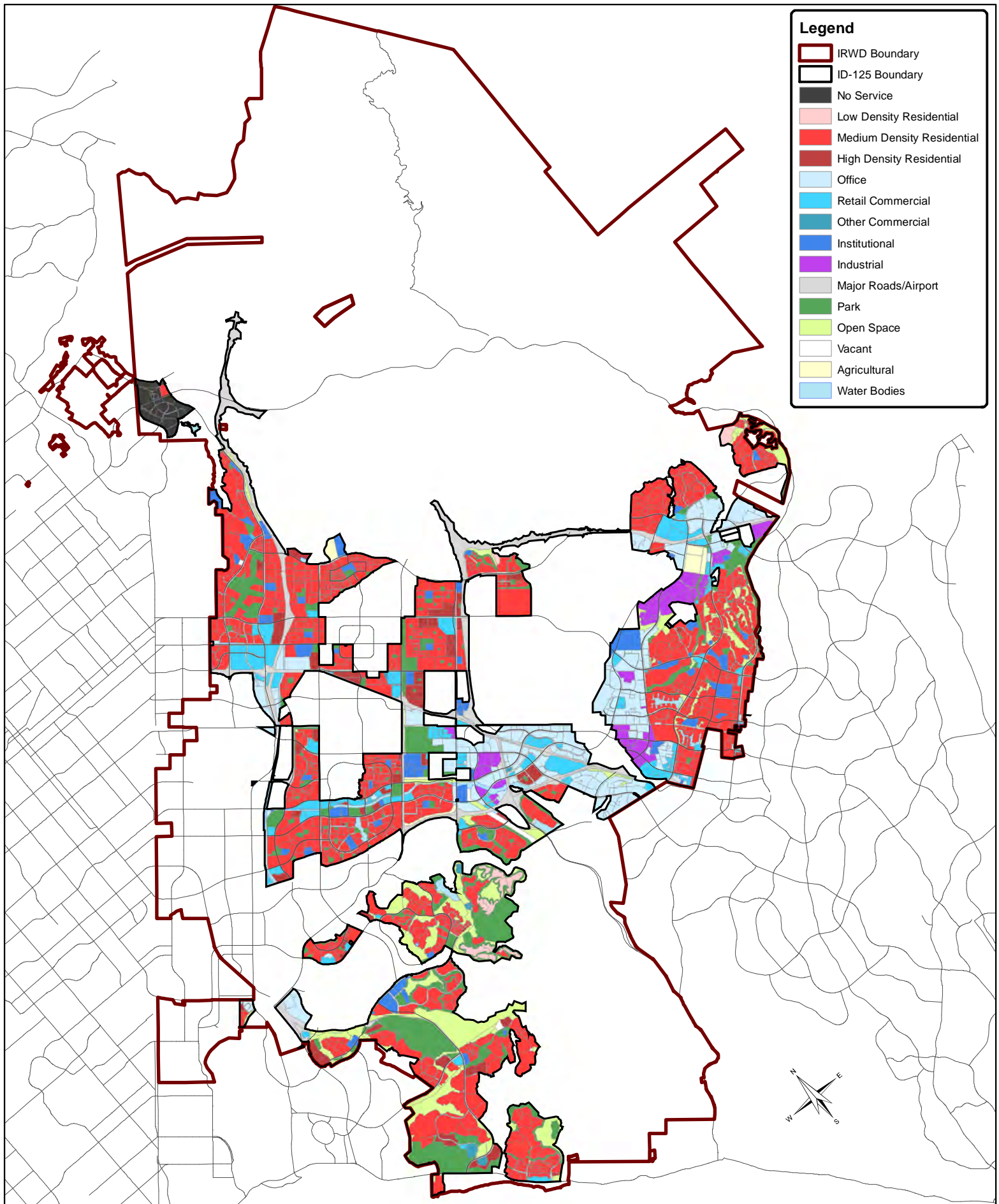
To simplify the text of this report, "north" refers to "Irvine north" running parallel to Sand Canyon Avenue. North arrows on exhibits show true north.

### 2.2 LAND USE AND DEVELOPMENT PHASING

**Land Use.** Though development in ID No. 125 is substantially complete, The District expects some continued "infill" development to continue to occur over the next 15 years. The development of the ID No. 125 to be predominantly combination of residential with supporting local commercial, regional commercial and office, and some industrial development. **Figure II-1** shows the boundaries of ID No. 125, encompassing about 35,438 acres.

**Development Phasing.** This Plan of Works follows and incorporates the phasing used in the subarea master plans applicable to the various planned development areas.

Phasing of development is subject to change. Depending upon real estate markets, city planning decisions and other factors, some phases or portions of phases could occur simultaneously rather than sequentially. The phasing of bond issues discussed in Section 5, have been selected to allow reasonable flexibility in phasing priorities.





### 2.3 DEMAND AND PEAKING FACTORS

**Water Use Factors.** **Table II-1** reflects most recently adopted duty factors from the IRWD Water Resources Master Plan (WRMP), summarizing the District's standard interior and exterior water use factors. The District employ local interior water use factors, shown in the table, as its sewer duty factors. Irrigation factors used to determine recycled water demands are also shown in the table. The factors in **Table II-1** were also used to develop **Table II-2**.

**Peaking Factors.** Potable water peaking factors, irrigation peaking factors, applied in calculation for sizing respective facilities, are set forth in the WRMP. Sewer peaking, applied in calculation for sizing sewer collection and treatment facilities, are set forth in the SCSMP.

**Table 3-1 Land Use and Water Use Factors (September 2012)**

Code	Land Use Description	Land Use Agency	Land Use Density		Local Demands			Irrigation Demands	
			Average	Units	Local - Interior	Local - Exterior	Total Local	% Irrigated Area	Irrigation Factor
<b><u>1100</u></b>	<b><u>Residential</u></b>				<b><u>Gal/DU/Day</u></b>			<b><u>Gal/Acre/Day</u></b>	
1111	Rural Density	Orange	0.3	du/acre	250	170	420	0%	1,000
1112	Rural Density	Irvine	0.3	du/acre	250	750	1,000	5%	2,800
1115	Rural Density	County	0.26	du/acre	300	350	650	5%	2,800
1121	Estate Density	Orange	1.2	du/acre	300	350	650	5%	2,800
1122	Estate Density	Irvine	0.5	du/acre	300	225	525	5%	2,800
1126	Estate Density	Lake Forest	0.5	du/acre	300	350	650	7%	3,000
1131	Low Density	Orange	4	du/acre	300	350	650	8%	2,500
1132	Low Density	Irvine	3	du/acre	225	180	405	16%	2,200
1133	Low Density	Newport Beach	1	du/acre	290	220	510	17%	2,800
1134	Low Density PC	Tustin	4.5	du/acre	450	1,550	2,000	17%	2,800
1135	Suburban Density	County	9.25	du/acre	165	95	260	15%	2,500
1136	Low Density	Lake Forest	3	du/acre	270	150	420	20%	2,800
1141	Low-Medium Density	Orange	10.5	du/acre	235	145	380	15%	2,500
1146	Low-Medium Density	Lake Forest	11	du/acre	205	150	355	10%	3,000
1153	Medium-Low Density	Newport Beach	2.75	du/acre	400	350	750	10%	2,800
1161	Medium Density	Orange	19.5	du/acre	200	150	350	15%	2,800
1162	Medium Density	Irvine	7.5	du/acre	200	100	300	15%	2,800
1163	Medium Density	Newport Beach	5	du/acre	225	205	430	20%	2,800
1164	Medium Density PC	Tustin	11.8	du/acre	155	95	250	15%	2,800
1166	Medium Density	Lake Forest	7.5	du/acre	140	60	200	15%	2,800
1172	Medium-High Density	Irvine	17.5	du/acre	130	30	160	22%	2,400
1175	Urban Density	County	29	du/acre	140	45	185	20%	2,800
1176	Medium-High Density	Lake Forest	17.5	du/acre	145	70	215	17%	2,500
1182	High Density	Irvine	32.5	du/acre	130	13	143	20%	2,800
1183	High Density	Newport Beach	12.25	du/acre	115	10	125	20%	3,200
1184	High Density PC	Tustin	17.4	du/acre	115	10	125	15%	2,800
1186	High Density	Lake Forest	32.5	du/acre	115	10	125	20%	2,800
1191	High Rise Density	Orange	35	du/acre	115	10	125	20%	2,800
1192	High Rise Density	Irvine	40	du/acre	115	10	125	20%	2,800
<b><u>1200</u></b>	<b><u>Commercial</u></b>				<b><u>Gal/KSF/Day</u></b>			<b><u>Gal/Acre/Day</u></b>	
1210	General Office		20	ksf/acre	62	10	72	20%	2,500
1221	Community Commercial		9	ksf/acre	142	33	175	20%	3,500
1222	Regional Commercial		10	ksf/acre	130	10	140	20%	3,500
1230	Commercial Recreation		8	ksf/acre	41	20	61	30%	3,000
1235	Hotel		45	rooms/acre	110	50	160	30%	2,800
1240	Institutional		8	ksf/acre	30	15	45	30%	2,750
1244	Hospital		9	ksf/acre	165	65	230	30%	2,850
1260	School		10	ksf/acre	20	8.0	28.0	50%	2,500
1261	UCI		10	ksf/acre	215	15	230	40%	3,800
1273	Military Air Field		0	ksf/acre	0	0	0	0%	0
1290	Hotel		45	rooms/acre	110	50	160	30%	2,800
1300	Industrial		9.091		600	25	625	20%	2,800
1310	Industrial - Light		18	ksf/acre	60	10	70	20%	2,800
1320	Industrial - Heavy		25	ksf/acre	2,000.0	18	2,018	20%	2,800
	<b><u>Open Space and Other</u></b>							<b><u>Gal/Acre/Day</u></b>	
1411	Airports		0	acre/acre	0	0	0	0%	0
1413	Freeways & Major Road		0	acre/acre	0	0	0	0%	0
1820	Community Park		1	acre/acre	0	0	0	86%	2,200
1830	Regional Park		1	acre/acre	0	0	0	75%	2,200
1840	Fuel Modification Zone		1	acre/acre	0	0	0	100%	1,000
1850	Wildlife Preserve		0	acre/acre	0	0	0	0%	0
1880	Open Space (Rec)		0	acre/acre	0	0	0	0%	0
1900	Vacant		1	acre/acre	0	0	0	0%	0
4100	Water		0		0	0	0	0%	0
<b><u>2000</u></b>	<b><u>Agriculture</u></b>			<b><u>acre/acre</u></b>				<b><u>Gal/Acre/Day</u></b>	
2100	Low-Irrigated AG Potable		1	acre/acre	0	0	0	80%	1,800
2110	Low-Irrigated AG Untreated		1	acre/acre	0	0	0	80%	1,800
2120	Low-Irrigated AG Recycled		1	acre/acre	0	0	0	80%	1,800
2200	High-Irrigated AG Potable		1	acre/acre	0	0	0	80%	3,100
2210	High-Irrigated AG Untreated		1	acre/acre	0	0	0	80%	3,100
2220	High-Irrigation AG Recycled		1	acre/acre	0	0	0	80%	3,100

**Table II-2 - Treated Water Demand:** Tabulates the average daily water demand at build-out (2035) within the reorganized ID No. 153 service area, using the District’s *demand forecasting tool*.

Land Use Code	Description	Land Use Agency	2035 Potable Water Demands (AFY)
<b><u>Residential</u></b>			
1112	Rural Density	Irvine	1
1115	Rural Density	County	22
1122	Estate Density	Irvine	107
1132	Low Density	Irvine	2,916
1133	Low Density	Newport Beach	994
1134	Low Density PC	Tustin	142
1135	Suburban Density	County	1,317
1136	Low Density	Lake Forest	4,123
1141	Low-Medium Density	Orange	30
1146	Low-Medium Density	Lake Forest	30
1153	Medium-Low Density	Newport Beach	35
1162	Medium Density	Irvine	6,502
1163	Medium Density	Newport Beach	1,233
1164	Medium Density PC	Tustin	2,271
1166	Medium Density	Lake Forest	1,284
1172	Medium-High Density	Irvine	4,618
1175	Urban Density	County	391
1176	Medium-High Density	Lake Forest	539
1182	High Density	Irvine	2,118
1183	High Density	Newport Beach	399
1184	High Density PC	Tustin	43
1186	High Density	Lake Forest	91
1192	High Rise Density	Irvine	157
<b><u>Commercial</u></b>			
1210	General Office		3,721
1221	Community Commercial		2,240
1222	Regional Commercial		526
1230	Commercial Recreation		18
1240	Institutional		481
1244	Hospital		92
1260	School		279
1290	Hotel		122



Land Use Code	Description	Land Use Agency	2035 Potable Water Demands (AFY)
<b><u>Other</u></b>			
1310	Industrial - Light		1,411
1820	Community Park		504
1830	Regional Park		543
1840	Fuel Modification Zone		43

**Total**

**39,343 AFY**

## SECTION 3 REGIONAL FACILITIES

### 3.1 DESCRIPTION

Through the current consolidation process, 11 of IRWD's 16 water improvement districts will be consolidated into a single improvement district, containing both lands where development is essentially completed, as well as certain remaining lands proposed for development that are also included in reorganized ID No. 153 and newly formed 185. Existing water ID Nos. 112, 113, 154 and 188 are not included in the reorganization or consolidation actions. Regional water project costs will continue to be allocated to each water improvement district based on that improvement district's pro-rata share of the ultimate IRWD treated water demand.

Under the District's methodology for achieving equitable cost allocation, the improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive service through the regional systems prior to their completion. This incremental funding approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service.

For purposes of maintaining equity in facilities cost allocation, IRWD employs multiple treated water regional splits. For example, one regional split may include all IDs; another may include some IDs and exclude one or more IDs (sometimes referred to as a "sub-regional project"). In the latter instance, that split is applied to the cost of all projects that provide no benefit to the excluded improvement district(s); an improvement district would be included only in the regional splits for the projects from which it does derive benefit.

In this Plan of Works, the appropriate regional split has been applied to existing and proposed treated water supply, storage and transmission facilities needed to provide an adequate and reliable water system meeting the ultimate needs of ID No. 125.

Periodically, IRWD revises its treated water improvement district regional allocation to reflect changes in demand factors, land use planning, phasing of planned development and other factors which may influence treated water demands, either within a specific improvement district or throughout IRWD. Revised regional splits are applied prospectively. The regional cost allocations known as regional splits are calculated based on IRWD's internal water demand forecasting tool.

### 3.2 COST ESTIMATES AND REGIONAL ALLOCATION

A description and cost estimate of the proposed regional domestic water facilities share allocated to ID No. 125 is shown in **Table III-1**.

As noted in the Introduction, the projects identified here may change to reflect changes in land use and development phasing. For purposes of determining the allowance for deferred costs, the project costs have been escalated at 10% per year.



## Table III-1 Regional Projects Proposed Facilities and Estimated Escalated Costs Improvement District 125

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
10204	LAKE FOREST WELL 8 DRILLING	Regional	47.5%	\$263,707	\$124,491	\$139,216	\$0	\$0
10205	LAKE FOREST WELL 8 WELLHEAD	Regional	47.5%	\$267,420	\$106,329	\$161,091	\$0	\$0
10294	LAKE FOREST WELL 6 DRILLING	Regional	47.5%	\$263,707	\$124,491	\$139,216	\$0	\$0
10295	LAKE FOREST WELL 6 WELLHEAD	Regional	47.5%	\$267,420	\$106,329	\$161,091	\$0	\$0
10391	DATS & WELL 77 LEASE PAYMENT 13/14	Regional	47.5%	\$222,637	\$222,637	\$0	\$0	\$0
10392	DATS & WELL 77 LEASE PAYMENT 14/15	Regional	47.5%	\$254,625	\$254,625	\$0	\$0	\$0
10393	DATS & WELL 77 LEASE PAYMENT 15/16	Regional	47.5%	\$292,854	\$20,289	\$272,565	\$0	\$0
10394	DATS & WELL 77 LEASE PAYMENT 16/17	Regional	47.5%	\$338,229	\$0	\$338,229	\$0	\$0
10395	DATS & WELL 77 LEASE PAYMENT 17/18	Regional	47.5%	\$388,931	\$0	\$388,931	\$0	\$0
10396	DATS & WELL 77 LEASE PAYMENT 18/19	Regional	47.5%	\$448,227	\$0	\$448,227	\$0	\$0
10397	DATS & WELL 77 LEASE PAYMENT 19/20	Regional	47.5%	\$516,548	\$0	\$513,697	\$2,851	\$0
10428	51 & 52 WELLHEADS, PIPELINE & TREATMENT	Regional	47.5%	\$19,195,320	\$0	\$19,195,320	\$0	\$0
11055	ENG PLANNING STUDY RESERVE 13/14	Regional	47.5%	\$103,716	\$103,716	\$0	\$0	\$0
11056	ENG PLANNING STUDY RESERVE 14/15	Regional	47.5%	\$114,088	\$114,088	\$0	\$0	\$0
11057	ENG PLANNING STUDY RESERVE 15/16	Regional	47.5%	\$125,528	\$0	\$125,528	\$0	\$0
11096	GIS SUPPORT APPLICATIONS 13/14	Regional	47.5%	\$31,455	\$31,455	\$0	\$0	\$0
11097	GIS SUPPORT APPLICATIONS 14/15	Regional	47.5%	\$34,600	\$34,600	\$0	\$0	\$0
11129	HYDRAULIC MODELING 13/14	Regional	47.5%	\$23,042	\$23,042	\$0	\$0	\$0
11131	HYDRAULIC MODELING 14/15	Regional	47.5%	\$25,346	\$25,346	\$0	\$0	\$0
11163	CROSS VALLEY CANAL CAPACITY PURCHASE	Regional	47.5%	\$45,196	\$45,196	\$0	\$0	\$0
11218	BAKER WTP	Regional	47.5%	\$42,623,500	\$27,211,372	\$15,412,128	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
11271	OCWD ANNEXATION FEE 14/15	Regional	47.5%	\$245,878	\$245,878	\$0	\$0	\$0
11275	OCWD ANNEXATION FEE 15/16	Regional	47.5%	\$278,634	\$0	\$278,634	\$0	\$0
11277	OCWD ANNEXATION FEE 16/17	Regional	47.5%	\$315,608	\$0	\$315,608	\$0	\$0
11278	OCWD ANNEXATION FEE 17/18	Regional	47.5%	\$357,657	\$0	\$357,657	\$0	\$0
11279	OCWD ANNEXATION FEE 18/19	Regional	47.5%	\$405,203	\$0	\$405,203	\$0	\$0
11280	OCWD ANNEXATION FEE 19/20	Regional	47.5%	\$472,984	\$0	\$470,133	\$2,851	\$0
11281	OCWD ANNEXATION FEE 20/21	Regional	47.5%	\$535,973	\$0	\$0	\$535,973	\$0
11282	OCWD ANNEXATION FEE 21/22	Regional	47.5%	\$607,278	\$0	\$0	\$607,278	\$0
11284	OCWD ANNEXATION FEE 22/23	Regional	47.5%	\$688,100	\$0	\$0	\$688,100	\$0
11285	OCWD ANNEXATION FEE 23/24	Regional	47.5%	\$779,759	\$0	\$0	\$779,759	\$0
11286	OCWD ANNEXATION FEE 24/25	Regional	47.5%	\$883,555	\$0	\$0	\$875,520	\$8,035
11289	STRAND RANCH FACILITIES AND MONITORING	Regional	47.5%	\$173,066	\$172,744	\$322	\$0	\$0
11325	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR	Regional	47.5%	\$75,763	\$75,763	\$0	\$0	\$0
11331	TIC WELLS 109/112/114	Regional	47.5%	\$12,512,007	\$0	\$0	\$12,512,007	\$0
11339	AUTOMATION SYSTEM IMPROVEMENTS DW	Regional	47.5%	\$126,045	\$79,880	\$46,165	\$0	\$0
11368	WATER BANKING EXPANSION	Regional	47.5%	\$1,530,352	\$969,859	\$560,493	\$0	\$0
11384	HYDRAULIC MODEL UPDATE / CALIBRATION -	Regional	47.5%	\$132,976	\$132,976	\$0	\$0	\$0
11405	OPA / REGIONAL GROUNDWATER PROJECT	Regional	47.5%	\$2,273,136	\$2,273,136	\$0	\$0	\$0
11408	OPA / REGIONAL TRANSMISSION MAIN	Regional	47.5%	\$95,043	\$95,043	\$0	\$0	\$0
11455	IRWD PIPELINES RELOCATION FOR SC GRADE	Regional	47.5%	\$405,659	\$405,659	\$0	\$0	\$0
11473	WELL 106 REPLACEMENT DRILLING & SITE	Regional	47.5%	\$1,218,068	\$1,218,068	\$0	\$0	\$0
11560	LAKE FOREST DW OFFSITE IMPROVEMENTS	Regional	47.5%	\$641,084	\$347,839	\$293,245	\$0	\$0
11578	OPS CENTER IMPROVEMENTS PH2 (WAREHOUSE)	Regional	47.5%	\$811,951	\$0	\$811,951	\$0	\$0
11582	GEN SYS MODS 13/14	Regional	47.5%	\$70,903	\$70,903	\$0	\$0	\$0
11596	WATER BANKING AGREEMENTS	Regional	47.5%	\$62,763	\$62,763	\$0	\$0	\$0
11627	WELL 115 REPLACEMENT WELL/WELLHEAD &	Regional	28.0%	\$1,163,935	\$1,163,935	\$0	\$0	\$0

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
11631	GROUNDWATER DISPOSAL SYSTEM CONCEPT	Regional	47.5%	\$156,071	\$156,071	\$0	\$0	\$0
11637	JACKSON RANCH SOLAR PROJECT	Regional	47.5%	\$44,831	\$44,831	\$0	\$0	\$0
11645	STOCKDALE WEST RANCH JOINT BANKING	Regional	47.5%	\$2,992,873	\$2,810,110	\$182,764	\$0	\$0
11648	GEN SYS MODS 14/15	Regional	47.5%	\$77,994	\$77,994	\$0	\$0	\$0
11655	SKYLIGHT PROTECTION	Regional	47.5%	\$18,288	\$18,288	\$0	\$0	\$0
11665	SJM BUILDING CAMPUS MOLD REMEDIATION	Regional	23.8%	\$10,999	\$10,999	\$0	\$0	\$0
11675	MANNING BPS PERMANENT GENERATOR	Regional	47.5%	\$116,831	\$116,831	\$0	\$0	\$0
11686	EOCWD - IRWD JOINT WELL PLANNING REPORT	Regional	47.5%	\$25,446	\$25,446	\$0	\$0	\$0
11687	RMS AT 5 DOMESTIC WATER RESERVOIRS	Regional	47.5%	\$1,476,437	\$1,113,097	\$363,340	\$0	\$0
11697	GEN SYS MODS 15/16	Regional	47.5%	\$85,818	\$0	\$85,818	\$0	\$0
11726	STRAND RANCH KERN RIVER EXPORTABILITY	Regional	47.5%	\$61,969	\$61,969	\$0	\$0	\$0
11738	WATER BANKING PLANNING	Regional	47.5%	\$144,106	\$144,106	\$0	\$0	\$0
11742	LTFP ID CONSOLIDATION	Regional	47.5%	\$40,734	\$40,734	\$0	\$0	\$0
12326	SCWD INTEGRATION STUDY REGIONAL PIPES	Regional	47.5%	\$12,377,248	\$0	\$12,377,248	\$0	\$0
12328	SCWD INTEGRATION STUDY REGIONAL PUMPS	Regional	47.5%	\$4,269,921	\$0	\$4,269,921	\$0	\$0
12329	SCWD INTEGRATION STUDY PIPES FOR 150 / 153	Regional	47.5%	\$13,567,703	\$0	\$13,567,703	\$0	\$0
15051	WELLS 51/52/53 TREATMENT ALTERNATIVES	Regional	47.5%	\$69,754	\$69,754	\$0	\$0	\$0
15052	JOINT WELL FIELD WITH ANAHEIM - WELLHEADS	Regional	47.5%	\$14,314,026	\$0	\$9,508,130	\$4,805,896	\$0
15423	TUSTIN LEGACY WELLS 1, 2, 3 & 4	Regional	47.5%	\$14,796,412	\$0	\$14,796,412	\$0	\$0
15428	WELL 53 SITE ACQUISITION & WELL DRILLING	Regional	47.5%	\$1,463,108	\$663,204	\$799,904	\$0	\$0
19420	OCWD ANNEXATION	Regional	47.5%	\$72,889	\$72,889	\$0	\$0	\$0
				<b>\$158,892,927</b>	<b>\$41,288,769</b>	<b>\$96,785,890</b>	<b>\$20,810,233</b>	<b>\$8,035</b>



## SECTION 4 LOCAL MASTER PLAN FACILITIES

### 4.1 DESCRIPTION

The facilities detailed in the following section represent local facilities serving one or more of the planned development areas within the improvement district, based on the respective subarea master plans, as well as sub-regional projects serving this improvement district and other improvement district(s) For the purpose of the POW, local facilities include both local and sub-regional projects.

### 4.2 COST ESTIMATES

The proposed local master plan facilities for ID No. 125 are detailed in **Table IV-1**. The amounts shown in Table IV-1 reflect the facilities or portions there-of allocable to the improvement district. As noted in the Introduction, the projects identified here may change to reflect changes in land use and development phasing.

For the purpose of determining the allowance for deferred costs, the project costs have been escalated at 10% per year.

**Table IV-1 Local Projects  
Proposed Facilities and Estimated Escalated Costs  
Improvement District 125**

Project No.	Project Title	Proj.Type (Reg / Local)	% Share	Total Escalated Amt	2013-2015	2016-2020	2021-2025	2026-2035
10917	NEWPORT COAST CATHODIC PROTECTION	Local	100.0%	\$247,390	\$247,390	\$0	\$0	\$0
				<b>\$247,390</b>	<b>\$247,390</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

## SECTION 5 FINANCIAL PHASING SUMMARY

This section summarizes the phasing of the financial requirements in ID No. 125. A schedule of financial phasing requirements based on projected phasing of facilities is shown in **Table V-1**. Also shown in the table is the general class of items that will be covered in these projected amounts.

Table V-1 includes a 10% contingency to allow for unexpected inflation as well as changes in land use and development density.

It should be noted that this table does not represent actual bond issues. As facilities are needed which warrant or require bond funding, actual bond issuance needs will be determined.

ID No. 125 will, as the successor consolidated improvement district, have authorized and unissued bonds in the amount of \$322,034,240, representing the combined authorized and unissued bonds of the consolidating improvement districts.



**Table V-1**  
**Bond Authorization Summary**  
**Improvement District 125**

	2013-2015	2016-2020	2021-2025	2026-2035	Total Escalated Amt
<b>Escalated Local Subtotal</b>	<b>\$247,390</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$247,390</b>
<b>Escalated Regional Subtotal</b>	<b>\$41,288,769</b>	<b>\$96,785,890</b>	<b>\$20,810,233</b>	<b>\$8,035</b>	<b>\$158,892,927</b>
Contingency (10%)	\$4,153,616	\$9,678,589	\$2,081,023	\$804	\$15,914,032
Bond Reserve (6%)	\$2,741,386	\$6,387,869	\$1,373,475	\$530	\$10,503,261
Funded Reserve (6%)	\$2,741,386	\$15,485,742	\$1,373,475	\$530	\$10,503,261
Bond Discount (2%)	\$2,018,790	\$11,614,307	\$457,825	\$177	\$3,501,087
Bond Issuance Costs (1%)	\$1,009,395	\$11,614,307	\$228,913	\$88	\$1,750,543
<b>Bond Authorization Total</b>	<b>\$54,200,733</b>	<b>\$151,566,703</b>	<b>\$26,324,945</b>	<b>\$10,164</b>	<b>\$201,312,501</b>

## SECTION 6 BENEFIT OF THE PLAN OF WORKS TO THE LANDS IN THE IMPROVEMENT DISTRICT

### 6.1 OVERVIEW

Under the California Water Code, the plan of works for an improvement district provides a plan and an estimate of the cost of the works that are needed to serve the improvement district and that will be financed through District-issued bonds, and reflects the determination by the District's Board of Directors that the territory within the improvement district will benefit from the works. To the extent practical, a plan of works will incorporate generalized facilities descriptions and flexibility in the selection of specific projects, so that a revised or supplemented plan will not be needed. If a revised or supplemented plan is adopted, it must benefit the territory within the improvement district. Similarly, when territory is annexed to or detached from an improvement district, including annexations and detachments implemented for the purpose of reorganizing improvement districts to be consolidated as coterminous improvement districts, there must be an accompanying evaluation of territory that will benefit by inclusion within the plan and therefore should be included, and territory that will not benefit and therefore should be excluded.

The benefits that lands receive from water works are derived from multiple considerations. Primary is the ability of lands to receive service currently or when needed in the future. Other examples of benefits are system or facilities reliability through supply diversification, redundant capacity, storage capability, system looping or other characteristics; regulatory compliance; environmental protection; and regional cost efficiencies in operation and maintenance. In the case of a consolidation of improvement districts, other benefits may include economies of scale, administrative simplification and enhancement of credit and reduced borrowing cost or debt service cost.

For purposes of evaluating benefit of improvement district consolidations, cost allocation is dictated in part by the requirements contained in the Water Code for structuring consolidations. In accordance with these requirements, the remaining authorized, unissued bonds of the consolidating improvement districts will become the authorized bonds that can be issued on behalf of the consolidated successor improvement district. Upon the consolidation, debt service for the outstanding bonds of the consolidating improvement districts will become obligations of the consolidated successor improvement district.

### 6.2 DESCRIPTION OF THE STUDY APPROACH

The consolidation of ID Nos. 125 and 225 is part of an overall restructuring of the District's improvement districts, which also includes the reorganization of ID Nos. 153 and 253 and the formation of ID Nos. 185 and 285. See Section 1.3, "THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations." In this regard, the District has undertaken a comprehensive evaluation and study of its long-term financial requirements, including:

- a detailed planning, engineering and financial assessment of the total costs of existing and future facilities in the water and sewer systems;

- available bond authorization and other revenue sources to finance facilities to serve future development (“new capital”), augment system reliability and meet upgraded regulatory requirements for both existing and future demands (“enhancement”) and replace and refurbish the existing systems (“replacement”);
- debt service;
- simplification of the improvement district structure; and
- assurance of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

The existing improvement district structure has served the District for more than 40 years as the system was built and growth patterns necessitated a means of maintaining equity in the financing of facilities. Using the mechanisms of periodic formation of new improvement districts and authorization of bonds as well as regional cost allocations and system buy-ins, the District has been able to maintain fair and equitable cost sharing while accommodating both intense growth within its boundaries and several acquisitions of adjacent service areas. Construction and expansion of the systems were the key features of this financial structure. Although growth will continue for several more years, going forward the completion of the regional systems and provision for system reliability and replacement will become the predominant driver of the financial requirements. The District’s comprehensive evaluation of its financial requirements indicates that a simplification of the improvement district structure and related actions will provide a sustainable methodology for equitable cost allocation in the future.

As described in Section 1.3, a succession plan for the improvement district structure would reduce the number of improvement districts, ideally to one water improvement district and one sewer improvement district, through consolidations and reorganizations to be implemented as and when considerations for separation of the various improvement districts no longer remain. The District’s financial review identified steps that were currently feasible in achieving that objective as well as the parts of the current structure which need to be maintained at this time until factors relating to the preservation of equitable cost sharing merit the evaluation of further consolidation steps.

General obligation bonds have been the District’s principal tool for financing facilities. Under this form of financing, the obligation for repayment of bonds issued on behalf of an improvement district is secured by the power of the District to levy and collect *ad valorem* assessments without limitation as to rate or amount on land only (enforceable by customary rights to foreclose and sell property for delinquent assessments) or, in lieu of assessments, in the District’s discretion, charges for water or sewer service, as applicable, all within the subject improvement district. The District also uses connection charge revenues to pay a portion of the debt service costs. For new capital cost within developing improvement districts, the District plans to continue its historical practice of targeting a 50-50 allocation as a fair means of sharing improvement district debt service costs between the aggregate contributions of connection charge revenues and property tax revenues. The evaluation of financial requirements and modifications of the District’s improvement district structure therefore involve an



examination of outstanding and future bond debt service, bonding authority, allocation of costs, and resultant contributions of connection charges and *ad valorem* property taxes over time.

### 6.3 LONG-TERM FINANCIAL REQUIREMENTS MODELING

As introduced in the preceding section, the foundation of the evaluation of the benefit of the Plan of Works to the lands in the Improvement District is the District's comprehensive review of its long-term financial requirements. To assist the District in this evaluation, the District employed modeling of a baseline condition defined by the improvement district structure as it existed prior to the current reorganization and consolidation steps. The baseline modeling facilitated various aspects of the long-term financial requirements evaluation:

- refinement of capital cost allocations according to the functional benefits (e.g., development expansion, reliability, regulatory compliance, environmental protection, system refurbishment) of the facilities to various areas and user categories;
- use of existing bond proceeds and available bond authorization and other revenue sources for the financing of future facilities within the new capital expansion, enhancement and replacement project classifications;
- use of the District's allocation of the general 1% *ad valorem* property tax levy;
- benefit of the simplification of the improvement district structure and the aggregated regional and local systems;
- identification of areas where the structure must be retained or modified to equitably address special considerations; and
- measurement of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system.

Modeling of modified aspects of the baseline enabled the District to test the effectiveness of modifications to various capital –project related fiscal and financing practices in developing a new improvement district and cost allocation structure to effectively maintain equity as the development phase within the District progresses toward build-out. Details of the modeling process described in this section, including review and analysis of interim results and identification of refined and additional modeling efforts, are compiled in a Technical Appendix that serves as a reference document for this Plan of Works.

### 6.4 REGIONAL SYSTEM BENEFIT

The Plans of Works for the improvement districts consolidated as ID No. 125 were adopted or amended in 1978, except for ID No. 135, described in further detail below. In combination with local facilities specific to the individual improvement district, the 1978 Plans of Works provided for financing of shares in a common regional system that included acquisition of capacity in the AMP and participation in the construction of the District's own well field in the main Orange County groundwater

basin. Like IRWD, LAWD issued bonds in the early 1960s to construct a plan of works for the acquisition and distribution of a supplemental imported Colorado River water supply, in cooperation with neighboring districts. LAWD's share of the construction of the Santiago Aqueduct, extending 14 miles from Metropolitan Water District's Santiago Lateral, was financed by the sale in 1961 of general obligation waterworks bonds aggregating \$1,410,000. Following the acquisition of sewerage powers in 1963, LAWD obtained its initial authorization of sewer bonds in the amount of \$6,140,000 in 1964, to complete a plan of works, the first phase of which consisted of trunk and sub-trunk sewers serving the two major drainage basins of LAWD and delivering the sewer to a proposed treatment and water reclamation plant. Population growth generated the need for additional storage reservoirs and a filtration plant in the water system, and a treatment plant expansion, additional trunk and interceptor sewers and participation in a regional plant with ultimate ocean outfall facilities. As a result, in 1968, LAWD's 1961 water bond and 1964 sewer bond authorizations were supplemented by additional authorizations of \$17,600,000 and \$9,584,000, respectively. Subsequently, LAWD acquired capacity in the AMP as well as some groundwater production facilities, and abandoned its filtration plant. When LAWD consolidated with IRWD in 2000, ID No. 135, as LAWD's successor, had constructed regional water importation facilities comparable to IRWD's, but had not constructed comparable groundwater production capacity. IRWD's melded water rate structure is not applied in ID No. 135. Following the consolidation of ID No. 135 within ID No. 125, a planning area will be retained over the former ID No. 135 to facilitate the continuation of the separate water rate structure until satisfaction of equity considerations make the separate structure no longer necessary. Among the factors to be evaluated in placing the former ID No. 135 area in a parity rate structure will be the value derived from assets of the former LAWD and the contribution of ad valorem assessments from the area to ID No. 125 debt service.

The majority of the imported water feeder system and IRWD's delivery system components and the groundwater production and delivery facilities are in place. Based on its ultimate demands, ID No. 125 will need to contribute its proportional share of the cost of completing the regional system, including any expansion such as the acquisition of additional Allen-McColloch Pipeline capacity and groundwater production capacity, and including new components necessary to provide basic reliability. The areas reorganized within ID No. 125 were formerly within ID Nos. 130, 150, 153 and other improvement districts. The areas consolidated within ID No. 125 were formerly within several separate improvement districts. At this stage of completion of IRWD's regional system, former distinctions among the improvement districts from which the areas consolidated as ID No. 125 are no longer material in regard to service from the regional system. Historically, these distinctions included the extent and duration of individual improvement districts' reliance on the untreated system to serve agricultural water, proximity to different completed and yet-to-be-completed segments of the treated water feeders, interceptor and trunk sewers and treatment facilities, uncertainties in the progression (location and pace) of development, and planning determinations that were yet to be made by the District in the elements of the major facilities components and supply sources, such as pipeline and well field capacity. All of these factors have either disappeared or diminished in importance, and the regional benefits among the areas reorganized within ID No. 125 are now essentially uniform.

As one example of the gradual diminishing of the earlier distinctions among the individual improvement districts' plans for supply and delivery alternatives, the 1974 plans of works initially contemplated separate treatment plants connected to the untreated delivery system for each of ID Nos. 103 and 105. In 1977, the initial plan for local (or regional) treatment of raw water in ID No. 103 (shared with ID No. 109), was shifted to a backup alternative, in favor of ID No. 103's pro rata participation in the District's capacity to be obtained in the proposed regional treated water system now known as the Allen McCulloch Pipeline (AMP) to serve its supplemental water needs. By 1978, this was again modified to include participation by ID No. 103 in the District's acquisition of capacity in the AMP in combination with participation in the construction of the District's own well field in the main Orange County groundwater basin as a more economical and preferred domestic supply alternative source. The local treatment plants as originally contemplated were not built, but the District is presently participating in the construction of the Baker Plant as a regional treatment plant that will benefit the entire service area.

This progression continued, with the distinctions becoming fewer as the planning of the regional system evolved and the system was constructed. With only approximately 10-12 percent of the equivalent dwelling units (EDUs) remaining to be built in ID Nos. 153 and 185, these distinctions are no longer prominent. The regional delivery system and its integrated supply sources provide uniform benefit to all of the component areas of ID No. 125 by satisfying basic supply and peaking needs and providing protection against emergency outages. Connection fees, adjusted by planning areas if and to the extent necessary to differentiate the fee amounts to adjust for varying local and sub-regional project benefits, and ad valorem taxation will adequately allocate the cost share of ID No. 153 among its various planned development areas in proportion to their benefit.

The areas within the reorganized ID No. 125 have shared imported water and groundwater facilities through the regional split. Notwithstanding that some of ID No. 153's territory is not within the boundary of the Orange County Water District and that under OCWD practices, the demand of this area does not increase the quantity of groundwater produced by IRWD without a BEA impact, groundwater is considered to reduce IRWD's dependence on imported supply and thus all areas participate proportionally in the regional supply source mix. All areas of ID No. 125 (except for former ID No. 135 as noted above) receive the base allocation melded water rate which provides the benefit of reduced cost through the supply mix.

As described in Section 3, the District uses a demand forecasting tool to allocate regional system costs among improvement districts. This ensures that ID No. 125 as a whole will be allocated a share of the regional system costs in proportion to the benefit it will receive from the system. See **Table III-1**.

#### 6.5 REGIONAL COST ALLOCATION – INCLUSION IN IMPROVEMENT DISTRICT NO. 125

Like ID No. 153, ID No. 125 will continue to share proportionally in the cost of completing the regional system, including any expansion such as the acquisition of additional Allen-McColloch Pipeline capacity and groundwater production capacity. This occurs because under the District's incremental approach, although the regional system provides service prior to its completion, it remains incomplete,



and future regional projects will add components necessary to provide basic reliability, benefitting the developed areas as well as future development. To prevent overpayment by the areas included within both improvement districts' regional allocations, the regional allocation for ID No. 125 will exclude demands of 153, and the 50/50 allocation of debt service responsibilities between connection fees and property taxes will be applied on an aggregated basis for the area within 153, between the overlying and underlying improvement districts.

## 6.6 LOCAL FACILITIES COST ALLOCATION

Historically, planned developments within a geographic area have been grouped together in an improvement district notwithstanding the fact that each development may be served by distinct local facilities, as the cost of these are generally uniform over the improvement district. This is also considered to be the case for the various geographic areas comprising ID No. 153. To the extent necessary to achieve fair and equitable allocation of local facilities costs, planning areas can be used to recognize any unequal costs of sub-regional and local facilities benefiting only one, or some but not all, of the planned developments in the territory of the consolidated ID No. 153.

As with regional system benefits discussed above, connection fees, adjusted by planning areas if and to the extent necessary to reflect unique local facilities costs not fairly allocable to the entire improvement district, and *ad valorem* taxation will adequately allocate the cost share of the ID among its various planned development areas in proportion to their benefit. The segregation between the ID Nos. 153, 185, 188, existing ID Nos. 112 and 113, and the consolidated developed ID No. 125 is considered adequate to ensure that capital cost allocation recognizes the area-specific local facilities costs yet to be incurred in the planned development areas.

Each developed area has already completed and paid for its local capital facilities (distribution facilities other than the regional feeders and major transmission mains, operational storage tanks, pump stations) which fairly allocated differences based on pressure zone and geographic distances from feeder turnouts, etc. The combined distribution system is of equal benefit to each customer. Local systems for the developing improvement districts will be borne by them exclusively, and the consolidated developing improvement district will not bear any of the cost of their local systems. Moreover, local facilities construction for each development area generally has preceded development, and differing connection fees have offset some or all of any disparities among local facilities cost among consolidating improvement districts.

## 6.7 IMPROVEMENT DISTRICT NO. 125 BENEFIT

The District has reviewed and analyzed benefit to the lands from the reorganized ID No. 125 in several ways: (1) similarities or differences in future service needs among the areas identified for inclusion by annexation to, or by retention in, the reorganized as ID No. 125; (2) the benefit or lack of benefit to the areas identified for exclusion from the reorganized as ID No. 125; and (3) regional cost allocation among ID No. 125 and other areas receiving benefit from the regional facilities. Also evaluated

were (4) areas not included in any improvement district and (5) certain areas retained as separate improvement districts.

**(1) Included areas.** The areas reorganized as ID No. 153 comprise several non-contiguous planned development areas that were previously in different improvement districts. Therefore, it is appropriate to assess whether any one or more of these areas possess essential distinctions, in terms of benefit from the planned local facilities or regional facilities (including source of water supply that would warrant exclusion from the ID No. 153 territory. The areas included in the reorganized ID No. 153 are described in Section 2. With respect to regional facilities, all areas will be benefitted by the integrated groundwater and imported water supplies. Based on the available planning information for the expected development of each planned area, all of which are predominantly residential with other use, it is concluded that the areas are similarly benefitted by the Plan of Works and that the *ad valorem* assessments for debt service and connection fees for the classifications applicable to the anticipated uses will fairly allocate cost within the ID based on demands. Connection fees, which can be adjusted through planning areas if and to the extent necessary to reflect unique local or sub-regional facilities costs not fairly allocable to the entire improvement district, and *ad valorem* taxation will adequately allocate the cost share of the improvement district among its various planned development areas in proportion to their benefit. Simultaneous inclusion of the ID No. 153 lands within the underlying improvement district, ID No. 125, assures that the developing areas will share in the cost of existing local and sub-regional facilities from which they benefit, such as storage reservoirs, previously built with the proceeds of bonds of one or more of the improvement districts consolidated in the underlying improvement district. The exclusion of ID No. 153 demands from the ID No. 125 regional split, and allocation of debt service responsibilities between connection fees and property taxes on an aggregated 50/50 basis between the overlying and underlying improvement districts will prevent overpayment as a result of inclusion within both improvement districts' regional allocations.

The regional water system supply and distribution components are considered to benefit all of the areas of former improvement districts reorganized as ID No. 125 in proportion to demand. To satisfy the remaining financing obligations of ID No. 125 to complete the regional supply system, there is no need for retaining separate allocations of regional cost sharing, as all of the improvement districts are substantially developed and are allocated proportionate shares based on demand. The supply, storage and non-local distribution system is essentially complete. The remaining regional cost obligations will consist primarily of reliability and system enhancement and replacement projects. Apart from demand, no basis exists for allocating differing proportional cost responsibilities for these projects among the consolidating improvement districts.

**(2) Excluded areas.** The District also analyzed whether any areas proposed to be excluded from the reorganized ID No. 153 would receive benefit from ID No. 153 planned works, and should not be excluded. The areas excluded consist of substantially developed areas of ID Nos. 105, 130 and other improvement districts which will, instead, be included in the reorganized ID No. 125, open space, and areas contained within another developing improvement district. Also excluded are the areas not

included in any improvement district and certain areas retained as separate improvement districts, discussed under separate headings below.

The excluded developed areas will contribute their regional cost share for the completion of the regional system and for the previously constructed local facilities through ID No. 125. The developed areas will continue to be benefitted by the regional facilities financed and to be financed by ID No. 153. However, it is concluded that exclusion of the developed areas is justified in terms of benefit, because, through the reorganized ID No. 125, their allocation of the cost of the regional system benefits will continue to be proportional.

The District also analyzed whether any areas proposed to be excluded from the reorganized ID No. 125 would receive benefit from ID No. 125 planned works, and should not be excluded. The areas excluded consist of open space areas, areas contained in developing ID Nos. 112, 113 and 188. Also excluded are the areas not included in any improvement district and certain areas retained as separate improvement districts, discussed under separate headings below.

The excluded developing areas in ID Nos. 112, 113 and 188 will contribute their regional cost share for the completion of the regional system and the full cost of their separate local facilities. Their allocation of the cost of the regional system benefits will continue to be proportional. The allocation of local facilities costs not benefitting ID No. 125 warrants the exclusion of these improvement districts from the consolidated ID No. 125.

The 13,400 acres reserved as permanent open space near the Lomas de Santiago ridgeline, which is not proposed to remain within any improvement district, and other smaller permanent open space areas will not receive benefit from the planned works and are excluded from ID No. 153, 125 and other improvement districts. This is warranted by the fact that the area will have no demand served by the system.

Finally, areas contained within developing ID Nos. 112, 113, 153, 185, and 188 are logically maintained as separate improvement districts based on their separate local facilities costs and stages of development. To the extent there are sub-regional facilities from which any of these improvement districts benefit in common, they will share the cost of those facilities with the other participating improvement districts through a proportionate allocation based on benefit received. Exclusion of the other separate developing improvement districts from ID No. 125 will facilitate the allocation of local facilities costs. Having these remain separate improvement districts does not negatively impact the regional cost allocation or bond authorization, nor would combining them produce any advantage.

**(3) Regional cost allocation.** Also considered was whether the reorganization achieves equity in relation to the other cost allocations within the regional split. Under the District's historic and continuing methodology for achieving equitable cost allocation, all improvement districts will continue to be allocated proportional shares of regional system project costs until the regional systems are complete; individual improvement districts are not relieved of that obligation although they may receive



service through the regional systems prior to their completion. This incremental funding approach also recognizes that at any point in time prior to full build-out, a portion of the cost of the development of the regional systems has been borne by ad valorem assessments on lands not yet fully developed and receiving service. Adjustment of this methodology will be applied as discussed in Section 6.5 to recognize inclusion of some areas in both ID No. 153 or other overlying improvement districts and underlying ID No. 125. Contribution by areas not included in an improvement district is discussed in the heading below.

**(4) Areas not included in an improvement district.** The District's regional cost allocation approach took into consideration that some areas (referred to collectively with the shorthand references "110" and "210" in keeping with the District's numbering system for designating improvement districts) funded a portion of the District's earliest regional system costs through payment of debt service on general obligation waterworks bonds of the overall District in the 1960s (e.g., original construction of the San Joaquin Reservoir and IRWD's capacity in the East Orange County Feeder No. 2 and other transmission facilities, Frances Mutual Water Company wells, the Aufdenkamp Transmission Main and the original sewage treatment and reclamation system components financed by ID. No. 1 (201). Based on their initial financial participation in the original waterworks bonds and sewer ID No. 1 bonds, these earlier-developing areas were not included in the improvement districts formed during the 1970s. Similarly, certain areas added to the District through annexation and consolidation have funded a proportionate share of existing regional facilities costs, sometimes referred to as "acquisition balances," through user rate components. The "110" and "210" areas as excluded from ID Nos. 125 and 225. See Section 1.3,"THE IMPROVEMENT DISTRICTS – The Current Consolidations and Reorganizations."

The District has performed calculations to determine whether historic allocations of cost, to the areas included in the improvement districts and the excluded areas, require future cost participation by excluded areas in order to ensure that the improvement districts do not bear a disproportionate cost of the system. Included in this evaluation are costs of the service delivery systems as well as other regional costs such as administrative headquarters and telemetry. Based on this evaluation, the District has determined that funding of future regional facilities costs of the District, (i.e., costs other than those costs financed by previous bonds and outstanding bonds assumed as obligations of the improvement districts being consolidated) should include participation of the areas that comprise "110" and "210," in proportionate amounts that will be determined taking into account revenue contribution, and benefit received from future capital facilities.

**(5) Retention of certain improvement districts.** Individual cost allocation considerations dictate that certain improvement districts be retained as separate improvement districts at this time.

ID No. 154 is contains an area in which general planning information shows that some development could occur. However, the owner indicates no plans beyond current uses.

ID No. 240 discharges sewer only to OCSD's regional plant and is not tributary to the MWRP, LAWRP, or Chiquita plants. For that reason it is not within OCSD's Revenue Area 14. IRWD does provide sewage collection and recycled water service to ID No. 240, and collection system and recycled water system costs are proportionately allocated to ID No. 240.

ID No. 256 in large part remains on individual septic systems, and it is uncertain whether and when that community will desire to convert to a public sewer system. If and when this occurs, the District will evaluate the appropriate method for recovering the cost of the conversion from the benefitted area, such as retention of the separate improvement district and/or an underlying improvement district.

ID No. 252 is not tributary to IRWD plants but may benefit from future recycled water facilities. This requires retention of the improvement district so that applicable recycled water system costs can be separately allocated. The ID No. 252 formation conditions provided for this through the allocation of a proportionate share of ID No. 250 debt service costs. With the consolidation of ID No. 250 as part of ID No. 225, ID No. 225's debt service costs would be used for this allocation.

## 6.8 REDEVELOPMENT COST

In recent years, some areas of the District have begun to experience redevelopment activity. This has necessitated the consideration of the fair allocation of cost that should be borne by these areas, and how demands should be included in the demands of the improvement districts. The District is applying methodology to ensure proportional cost contributions for regional system and for added local system needs generated by redevelopment.

## SECTION 7 IMPLEMENTATION OF PLAN OF WORKS

### 7.1 GENERAL

The Plan of Works has been prepared by IRWD pursuant to the provisions of California Water Code Section 36410 *et seq.*

It is by this means that IRWD implements the various portions of its Water Resources Master Plan. IRWD, from time to time as needed, will issue increments of the propose bonds and construct the described facilities in order to meet its responsibility to have facilities available to serve the needs of approved development.

As hereinafter discussed, this Plan of Works will be implemented on a phased basis. Accomplishment of this obligation by IRWD necessitates issuance of bonds in the amount estimated in this Plan of Works.

It is acknowledged that, from time to time, the means of accomplishing the purposes of ID No. 125 may be altered and projects identified in this Plan of Works may be changed or replaced by other projects, by reason of changes in technology and refinements to facilities planning developed through IRWD's ongoing master planning and subarea master planning. Costs may include acquisition, construction, replacement, reconstruction and additions to facilities.

### 7.2 AUTHORIZATION AND ISSUANCE OF BONDS

The authorized and unissued bonds of the reorganized ID No. 125 are estimated to be sufficient to accomplish this Plan of Works. Authorized bonds may be sold and the proceeds used only as specified in the Plan of Works, subject to changes in the projects or substitutions of other projects to reflect changes in technology and refinements in master planning and subarea master planning.



November 11, 2013  
Prepared and  
Submitted by: L. Bonkowski  
Approved by: P. Cook */s/ P. Cook*

CONSENT CALENDAR

MINUTES OF REGULAR BOARD MEETING

SUMMARY:

Provided are the minutes of the October 28, 2013 Regular Board Meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE OCTOBER 28, 2013 REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – Minutes – October 28, 2013

## EXHIBIT "A"

### MINUTES OF REGULAR MEETING – OCTOBER 28, 2013

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 Reinhart on October 28, 2013 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

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

Directors Absent: None

Also Present: General Manager Cook, Executive Director of Finance Clary, Executive Director of Engineering Burton, Executive Director of Water Policy Heiertz, Director of Water Resources Weghorst, Legal Counsel Hoskinson, Secretary Bonkowski, Director of Risk Management and Treasury Jacobson, Director of Public Affairs Beeman, Assistant Director of Recycling Operations Lee, Ms. Christine Compton, Mr. Eric Akiyoshi, Mr. Mike Hoolihan, Ms. Amy McNulty, Mr. Jim Reed, and other members of the public and staff.

WRITTEN COMMUNICATION: None.

### ORAL COMMUNICATION

Mrs. Joan Irvine Smith's assistant addressed the Board of Directors with respect to the Dyer Road wellfield. She said it was her understanding that currently wells 1, 4, 5, 6, 7, C-8, C-9, 10, 12, 13, 14, 15, 17 and 18 will operate in accordance with the District's annual pumping plan. Wells 2, 3, 11 and 16 will be off. This was confirmed by Mr. Cook, General Manager of the District.

On October 2, 2013, the OCWD Board adopted a resolution approving and authorizing execution of an Annexation Agreement with IRWD, the City of Anaheim, YLWD; certified the final program/project EIR for the OCWD annexation request for IRWD, the City of Anaheim, YLWD; authorized filing of a CEQA Notice of Determination; and authorized transmittal of a resolution to LAFCO and directed staff to prepare the necessary documents and application to LAFCO to annex the requested areas into the District. This was confirmed by Mr. Cook.

On October 14, 2013, the IRWD Board adopted the "Final Program/Project Environmental Impact Report OCWD request by the City of Anaheim, IRWD, and Yorba Linda Water District" as a responsible agency under CEQA and directed staff to file a Notice of Determination, and authorized execution of the "Annexation Agreement between OCWD and IRWD regarding annexation to OCWD". This was confirmed by Mr. Cook.

With respect to the Groundwater Emergency Service Plan, IRWD has an agreement in place with various south Orange County water agencies, MWDOC and OCWD, to produce additional groundwater for use within IRWD and transfer imported water from IRWD to south Orange County in case of emergencies. IRWD has approved the operating agreement with certain south Orange County water agencies to fund the interconnection facilities needed to affect the emergency transfer of water. MWDOC and OCWD have also both approved the operating agreement. This was confirmed by Mr. Cook.

ITEMS RECEIVED TOO LATE TO BE AGENDIZED - None.

PUBLIC HEARING

DECLARING INTENTION TO DETACH SPECIFIED TERRITORY FROM AND/OR TO ANNEX SPECIFIED TERRITORY TO EACH OF IMPROVEMENT DISTRICT NOS. 102, 105, 106, 121, 130, 135, 140, 161, 182, 184, 186, 2(202, 206, 221, 230, 235, 250, 261, 282, 284 AND 286

General Manager Cook reported that tonight there are a number of resolutions in both Items 3 and 12 pertaining to proposed changes in the boundaries of numerous Improvement Districts within the Irvine Ranch Water District (IRWD), and that this item is one of the first steps in a process that will result in a streamlining of the number of Improvement Districts within IRWD. Mr. Cook said that the purpose of this Public hearing is to allow members of the public and the Board to consider any matters concerning the annexations of the specified territories. He said that the District Secretary has noticed the hearing pursuant to the requirements of Section 6066 of the California Government Code. He further said that before beginning the Public Hearing, Executive Director of Finance Clary would like to present some changes in how staff is presenting the resolutions tonight.

Executive Director of Finance Clary reported that a supplemental resolution (proposed Resolution No. 2013-42) had been placed before each Board member which will be the resolution recommended for adoption under this Public Hearing ordering the detachment of specified territories from, and/or to annex specified territories to Improvement District Nos. 102, 105, 106, 121, 135, 140, 161, 182, 184, 186, 2(202, 206, 221, 230, 235, 250, 261, 282, 284 and 286. Ms. Clary said that the proposed Resolution No. 2013-38 declaring its intention to order the consolidation of coterminous Improvement Districts and adoption of Plan of Works for consolidated Improvement Districts Nos. 125 and 225, currently placed under this Public Hearing (Item No. 3), should be moved and adopted under Action Calendar No. 12 on the agenda. There being no objections from the Board for these administrative adjustments, the resolution changes were made accordingly.

Using a PowerPoint presentation, Ms. Clary provided an overview of scheduling the long-term capital funding plan noting the upcoming hearing on November 11, 2013 to annex specified territory to IDs 153 and 253, the formation of ID 185 and 285 along with the adoption of Plan of Works respectively, and ordering the consolidation of coterminous IDs (21 IDs) and adoption of Plans of Works for consolidated ID Nos. 125 and 225.

President Reinhart declared this to be the time and place for a hearing on the detachment and /or annexation of specified territories to, and/or from Water IDs 102, 105, 106, 121, 130, 135, 140, 161, 182, 184, and 186 to form coterminous water IDs, and Sewer IDs 2(202), 206, 221, 230, 235, 250, 261, 282, 284, and 286 to form coterminous sewer IDs.

President Reinhart declared the hearing open and asked the Secretary how the hearing was noticed.



Secretary Bonkowski said that the Notice of the time and place of this hearing was published in the Orange County Register on October 14, 2013 and October 21, 2013. A notice was also posted in the District office on October 8, 2013, and on October 14, 2013, notices were posted in three public places within the territories proposed to be annexed or detached.

On **MOTION** by Swan, seconded and unanimously carried, **THE AFFIDAVIT OF POSTING AND THE PROOF OF PUBLICATION PRESENTED BY THE SECRETARY WAS RECEIVED AND FILED.**

President Reinhart requested Legal Counsel to describe the nature of the proceedings.

Legal Counsel Hoskinson said that tonight's public hearing is held to provide all persons interested an opportunity to be heard, to present objections or protests, including any written comments submitted, concerning the District's intention to annex and/or detach specified territories to form 21 coterminous Improvement Districts.

President Reinhart inquired of the Secretary whether there have been any written communications. Secretary Bonkowski said that there were none.

President Reinhart inquired whether there is anyone present who wishes to address the Board concerning the proposed annexations to and detachments from the listed improvement districts. There was no one who wished to be heard.

President Reinhart inquired whether there are any comments or questions from members of the Board of Directors. There were none.

On **MOTION** by Swan, seconded and unanimously carried, **THE HEARING WAS CLOSED AND THE FOLLOWING RESOLUTION WAS ADOPTED BY TITLE:**

**RESOLUTION NO. 2013-42**

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
IRVINE RANCH WATER DISTRICT ORDERING THE  
DETACHMENT OF SPECIFIED TERRITORIES FROM, AND/OR  
ANNEXATION OF SPECIFIED TERRITORIES TO EACH OF  
IMPROVEMENT DISTRICT NOS. 102, 105, 106, 121, 130,  
135,140, 161, 182, 184, 186, 2(202), 206, 221, 230, 235, 250,  
261, 282, 284, AND 286.**

## CONSENT CALENDAR

Director Swan asked that Item No. 9 be moved to the Action Calendar for discussion. There being no objection, this item was moved accordingly. On MOTION by Swan, seconded and unanimously carried, CONSENT CALENDAR ITEMS 4 THROUGH 8 WERE APPROVED AS FOLLOWS:

### 4. MINUTES OF REGULAR AND ADJOURNED REGULAR BOARD MEETING

Recommendation: That the minutes of the October 14, 2013 Regular Board meeting and the October 18, 2013 Adjourned Regular Board meeting be approved as presented.

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

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

### 6. SEPTEMBER 2013 TREASURY REPORTS

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report, the Monthly Interest Rate Swap Summary for September 2013, and disclosure report of reimbursements to board members and staff; approve the September 2013 summary of payroll ACH payments in the total amount of \$1,442,307 and approve the September 2013 accounts payable disbursement summary of warrants 342226 through 342864, workers' compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$14,008,726.

### 7. PLANNING AREA 9B (STONEGATE) JEFFREY ROAD PIPELINES CONTRACT CHANGE ORDER

Recommendation: That the Board authorize a budget increase for project 30422 (1024) in the amount of \$233,100, from \$2,729,100 to \$2,962,200, and for project 30389 (4176) in the amount of \$335,500, from \$777,700 to \$1,113,200; authorize a budget reduction for project 10423 (1519) in the amount of \$568,600, from \$1,755,600 to \$1,187,000; approve Expenditure Authorizations for projects 10423 (1519), 30422 (1024), and 30389 (4176) in the amounts of \$201,400, \$233,100, and \$335,500, respectively; and approve a Contract Change Order in the amount of \$166,328 to the Reimbursement Agreement with the Irvine Community Development Company for Planning Area 9B Jeffrey Road pipelines, projects 10423 (1519), 30422 (1024), and 30389 (4176).

### 8. STRAND RANCH WELL SREX-4 REPLACEMENT OVERSIGHT

Recommendation: That the Board approve a Compromise and Release Agreement for the replacement of SREX-4; approve an Expenditure Authorization for Project 11289 (2812) in the amount of \$95,900; and authorize the General Manager to enter into a Professional Services Agreement with Wildermuth Environmental, Inc. for hydrogeologic and engineering oversight of the replacement of SREX-4 in the amount of \$77,110.

## ACTION CALENDAR

### DEEP AQUIFER TREATMENT SYSTEM AND WELL 77 LEASE PAYMENT - EXPENDITURE AUTHORIZATION

Following a response by staff relative to Director Swan's inquiry on the lease payments to the City of Santa Ana and the Irvine Unified School District, on MOTION by Swan, seconded and unanimously carried, THE BOARD APPROVED AN EXPENDITURE AUTHORIZATION FOR PROJECT 10391 (1214) IN THE AMOUNT OF \$424,900 TO FUND THE DEEP AQUIFER TREATMENT SYSTEM (DATS) AND THE WELL 77 LEASE PAYMENTS.

### VARIANCE FOR THE MULTI-FAMILY DWELLING AND COMMERCIAL PLUMBING FIXTURE RETROFIT PROGRAM

General Manager Cook reported that in July 2012, IRWD entered into an agreement with Bottom Line Utility Solutions to provide installation services for the Multi-Family Dwelling and Commercial Plumbing Fixture Retrofit Program. In May 2013, Variance No. 1 was approved extending the agreement term through June 2014. He said that an additional variance is required for additional funding for plumbing fixture retrofitting and modification of its bond requirement.

Acting Assistant Director of Conservation Amy McNulty reported that this program has been successful, and that recently staff has developed a reasonable bonding requirement for this type of retrofit project which is based on the daily average toilet install quantities and associated cost. She said that using the installation rates from the program's performance last year, staff determined a daily exposure cost of not more than \$15,000. A bond in this amount can be held for the duration of the program, rolling over day to day, and not require phasing which creates a hindrance to the program flow.

Director Withers reported that this item was reviewed and approved by the Engineering and Operations Committee meeting on October 15, 2013. On MOTION by Withers, seconded and unanimously carried, THE BOARD APPROVED VARIANCE NO. 2 WITH BOTTOM LINE UTILITY SOLUTIONS MODIFYING BOND REQUIREMENTS AND INCREASING THE CONTRACT AMOUNT BY \$378,555 TO THE AGREEMENT FOR NON-CONSULTANT SERVICES FOR THE MULTI-FAMILY DWELLING AND COMMERCIAL PLUMBING FIXTURE RETROFIT PROGRAM.

### TUSTIN LEGACY REIMBURSEMENT AGREEMENT AND BARRANCA PARKWAY PIPELINES CONSTRUCTION CONTRACT

General Manager Cook reported that the City of Tustin (City) is continuing with the development of Tustin Legacy including Barranca Parkway street improvements between Armstrong Avenue and Tustin Ranch Road. As part of the development projects, the City will design and construct IRWD's domestic water, sewer, and recycled water capital facilities under a Reimbursement Agreement.

Director of Engineering and Planning Burton reported on the successful first phase of the project with the City including the change order for dewatering. Mr. Burton said that the City is now proposing to construct the Barranca Parkway Street Improvements between Armstrong Avenue



and Tustin Ranch Road as a change order to Noble's existing contract. Noble provided a cost proposal to construct IRWD's facilities including domestic water, sewer, and recycled water facilities. The sewer facilities will replace an existing temporary trunk sewer so it will be constructed at the City's cost. He said that Noble's price for IRWD's portion of the work including domestic water and recycled water facilities is \$635,616.06. Staff has reviewed the proposed unit prices and has determined that they are fair and consistent with other recently bid construction projects.

Director Withers reported that this item was reviewed and approved by the Engineering and Operations Committee on October 15, 2013. On MOTION by Withers, seconded and unanimously carried, THE BOARD AUTHORIZED A BUDGET INCREASE FOR THE TUSTIN LEGACY BARRANCA PIPELINES, PROJECT 11714 (4366) IN THE AMOUNT OF \$180,400, FROM \$162,800 TO \$343,200, AND FOR PROJECT 31714 (4368) IN THE AMOUNT OF \$529,100, FROM \$160,600 TO \$689,700; APPROVED EXPENDITURE AUTHORIZATIONS FOR PROJECTS 11714 (4366) AND 31714 (4368) IN THE AMOUNTS OF \$343,200 AND \$689,700; AND AUTHORIZED THE GENERAL MANAGER TO EXECUTE A REIMBURSEMENT AGREEMENT WITH THE CITY OF TUSTIN FOR THE DESIGN AND CONSTRUCTION OF IRWD CAPITAL FACILITIES IN THE TUSTIN LEGACY DEVELOPMENT.

DECLARING INTENTION TO CONSOLIDATE COTERMINOUS IMPROVEMENT DISTRICT (ID) 125/225, ANNEX AND DETACH PARCELS TO REORGANIZE ID 153/253, FORM ID 185/285 AND TO ADOPT PLANS OF WORKS FOR CONSOLIDATED, REORGANIZED AND NEWLY FORMING IDS

Using a PowerPoint presentation, Executive Director of Finance Clary reviewed the schedule for the Long-Term Capital Funding Plan and tonight's recommendations: declaring the intent to consolidate the coterminous IDs into the developed ID 125/225; declaring the intent to annex and detach parcels in order to form the developing ID 153/253; declaring the intent to form IDs 185/285 which is made up of a portion of the Opportunity Study Area currently included in IDs 135/235; and declaring the intent to adopt Plans of Works (POW) for the new formations 125/225, 153/253, and 185/285. Ms. Clary said that the Secretary will advertised as required for the November 11, 2013 Public Hearing.

On MOTION by LaMar, seconded and unanimously carried, THE FOLLOWING RESOLUTIONS WERE ADOPTED BY TITLE:

RESOLUTION NO. 2013- 38

RESOLUTION OF THE BOARD OF DIRECTORS OF THE IRVINE RANCH WATER DISTRICT DECLARING ITS INTENTION TO ORDER THE CONSOLIDATION OF COTERMINOUS IMPROVEMENT DISTRICTS AND ADOPT PLANS OF WORKS FOR CONSOLIDATED IMPROVEMENT DISTRICT NOS. 125 AND 225

RESOLUTION NO. 2013- 39

RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
IRVINE RANCH WATER DISTRICT DECLARING ITS  
INTENTION TO DETACH SPECIFIED TERRITORY FROM,  
AND TO ANNEX SPECIFIED TERRITORY TO  
IMPROVEMENT DISTRICT NOS. 153 AND 253  
AND ADOPT AMENDED PLANS OF WORKS  
FOR SAID IMPROVEMENT DISTRICTS

RESOLUTION NO. 2013-40

RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
IRVINE RANCH WATER DISTRICT DECLARING ITS  
INTENTION TO FORM IMPROVEMENT DISTRICT NO. 185  
AND TO ADOPT A PLAN OF WORKS THEREFOR

RESOLUTION NO. 2013-41

RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
IRVINE RANCH WATER DISTRICT DECLARING ITS  
INTENTION TO FORM IMPROVEMENT DISTRICT NO. 285  
AND TO ADOPT A PLAN OF WORKS THEREFOR

OTHER BUSINESS

GENERAL MANAGER'S REPORT

General Manager Cook introduced Mr. Randy Lee, Assistant Director of Recycling Operations, who will oversee the MWRP, LAWRP, biosolids marketing and compliance, and collection and treatment systems. Mr. Lee commented that he was looking forward to working for the District.

Mr. Cook reported that Mr. Mark Gingras was retiring from the District, and that he has accepted a position with the City of San Clemente to manage its treatment facility.

DIRECTORS' COMMENTS

Director Matheis reported on her attendance at MWDOC's Water Policy Forum with Mr. Rob Hunter discussing infrastructure, and a Water Education Foundation Seminar relative to sustaining the Water Education Foundation and private/public partnerships.

Director Withers reported on his attendance at a meeting with Mayor Murray from the City of Tustin, Southern California Water Committee's annual meeting, and MWD's 50<sup>th</sup> anniversary of its Diemer Water Treatment Plant. In response to his noting a telephone conversation with the City of Santa Ana's Manager's office relative to high water usage at its Centennial Heritage Museum site, General Manager Cook said that he will ask staff to contact the City to provide advice on

conservation measures. Director Withers further reported on his plans to attend this Thursday's ISDOC quarterly meeting.

Director Swan commented on Ms. Rita Sudman's resignation from the Water Education Foundation. He noted his participation on a telephone conference call relative to ACWA's Region X, a MWDOC/OCWD Committee meeting, a MWDOC water policy meeting, Sea and Sage's annual breakfast, and an ACWA Region II and IV meeting in Sacramento.

Director LaMar reported on his attendance at a MWDOC Planning Public Affairs meeting, an ACWA Region X meeting, a Southern California Water Committee meeting, and MWD's 50<sup>th</sup> anniversary of the Diemer Water Treatment Plant.

Director Reinhart reported on his attendance at a MWDOC Board meeting, an ACWA Region X program, a MWDOC water policy meeting, and a Southern California Water Committee meeting.

### CLOSED SESSION

President Reinhart said that the following Closed Sessions would be held:

- (1) CONFERENCE WITH LABOR NEGOTIATORS  
Agency Designated Representatives: Paul Cook and Jenny Roney  
Employee Organization: Irvine Ranch Water District Employees Association
- (2) CONFERENCE WITH LEGAL COUNSEL relative to existing litigation -  
Government Code Section 54956.9(a) – Williams vs. IRWD and MWDC  
(Revised Confidentiality and Common Interest Agreement; Second Amended  
Tolling Agreement (Water Agencies)).
- (3) CONFERENCE WITH LEGAL COUNSEL relative to anticipated litigation–  
Government Code Section 54956.9(d)(2) – significant exposure to litigation  
(one potential case).
- (4) CONFERENCE WITH LEGAL COUNSEL relative to anticipated litigation–  
Government Code Section 54956.9(d)(4) – initiation of litigation (one potential  
case) (potential settlement construction contractor).

### OPEN SESSION

The meeting was reconvened with LaMar, Reinhart, Matheis, Withers and Swan present. President Reinhart said that no action was reported from the Closed Session.

### ADJOURNMENT

There being no further business, President Reinhart adjourned the meeting.

APPROVED and SIGNED this 11<sup>th</sup> day of November, 2013.

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President, IRVINE RANCH WATER DISTRICT



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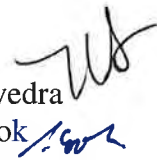
Secretary IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

---

Legal Counsel - Bowie, Arneson, Wiles & Giannone

November 11, 2013  
Prepared and  
Submitted by: N. Savedra  
Approved by: P. Cook



CONSENT CALENDAR

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

SUMMARY:

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

Events/Meetings

Steven LaMar

11/04/13 State Water Resource Control Board Tour w/Member Dorene D'Adamo  
11/14/13 Association of California Cities-OC Legislative Session Recap  
11/15/13 NWRI The Clarke Conference and Awards Ceremony

Mary Aileen Matheis

11/14/13 Association of California Cities-OC Legislative Session Recap  
11/15/13 NWRI The Clarke Conference and Awards Ceremony

Douglas Reinhart

10/11/13 EOCWD/IRWD Meeting regarding coordination issues  
10/30/13 Meeting w/SOCWA interim General Manager re: coordination issues  
11/07/13 MWDOC Elected Officials Meeting  
11/14/13 Monthly meeting with General Manager Paul Cook regarding District activities

Peer Swan

11/12/13 Boardmember Presentation at the Society of Marketing Professionals  
11/15/13 NWRI The Clarke Conference and Awards Ceremony

John Withers

11/15/13 NWRI The Clarke Conference and Awards Ceremony

RECOMMENDATION:

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

LIST OF EXHIBITS:

None

DS  
November 11, 2013

Prepared by: R. Thatcher/M. Hoolihan

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

Approved by: Paul Cook *Paul Cook*

## CONSENT CALENDAR

### QUITCLAIM OF REAL PROPERTY CITY OF TUSTIN WATER PIPELINE EASEMENT PER PARCEL MAP NO. 91-265 TUSTIN METROLINK STATION

#### SUMMARY:

Staff recommends that the Board adopt a resolution approving the execution of a quitclaim deed to the City of Tustin (City) quitclaiming a portion of an existing water pipeline easement abandoned as part of a parking structure construction project at the Tustin Metrolink Station.

#### BACKGROUND:

In 2010, the City constructed improvements for the Tustin Metrolink Station. As part of these improvements, a new parking structure was constructed which required the relocation of existing water pipelines and the installation of new pipelines. The City granted IRWD a new easement for those facilities. They have requested that IRWD quitclaim the portion of the water pipeline easement dedicated to IRWD per Parcel Map No. 91-265 filed in Book 276, Pages 34 through 44 of Parcel Maps, Records of Orange County, CA, lying over the abandoned pipelines. Staff has reviewed the request and recommends that the Board approve the quitclaim. The Resolution authorizing the quitclaim is attached as Exhibit "A", the Easement Quitclaim Deed is attached as Exhibit "B", and a map showing the location of the quitclaim area is attached as Exhibit "C".

#### FISCAL IMPACT:

None.

#### ENVIRONMENTAL COMPLIANCE:

This project is not subject to the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15061 (b) (3), in that CEQA applies only to projects that may result in a direct physical change in the environment or reasonably foreseeable indirect physical change in the environment.

#### COMMITTEE REVIEW:

Quitclaims are not routinely taken to Committee prior to submittal for Board approval.



Consent Calendar: Quitclaim of Real Property City of Tustin Water Pipeline Easement Per  
Parcel Map No. 91-265 Tustin Metrolink Station  
November 11, 2013  
Page 2

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2013 - \_\_\_\_\_

RESOLUTION OF THE BOARD OF DIRECTORS OF  
IRVINE RANCH WATER DISTRICT  
APPROVING EXECUTION OF THE QUITCLAIM DEED TO  
THE CITY OF TUSTIN

LIST OF EXHIBITS:

Exhibit "A" – Resolution  
Exhibit "B" – Easement Quitclaim Deed  
Exhibit "C" – Location Map

# EXHIBIT "A"

RESOLUTION NO. 2013 - \_\_\_\_\_

RESOLUTION OF THE BOARD OF DIRECTORS OF  
IRVINE RANCH WATER DISTRICT  
APPROVING EXECUTION OF THE QUITCLAIM DEED TO  
THE CITY OF TUSTIN

WHEREAS, City of Tustin (City) has requested that the Irvine Ranch Water District (IRWD) Board approve the quitclaim of a portion of the water pipeline easement dedicated to IRWD per Parcel No. No. 91-265 filed in Book 276, pages 34 though 44 of Parcel Maps, Records of Orange County; and

WHEREAS, the purpose of the quitclaim is to clear title; and

WHEREAS, the pipeline that was located within said easement has been relocated and/or abandoned as part of the construction of a parking structure for the Tustin Metrolink Station; and

WHEREAS, a new pipeline has been installed and a new easement in a different location was granted to IRWD by City; and

WHEREAS, staff has reviewed and confirmed that said easement herein referred can be quitclaimed; and

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

NOW, THEREFORE, BE IT RESOLVED, the Quitclaim Deed attached hereto as Exhibit "B" to the City of Tustin, a municipal corporation, herein described and hereby is approved and execution by the District's officers is authorized.

ADOPTED, SIGNED and APPROVED this 11th day of November, 2013.

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

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

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

By \_\_\_\_\_

# EXHIBIT "B"

**RECORDING REQUESTED BY AND  
WHEN RECORDED RETURN TO:**

City of Tustin  
300 Centennial Way  
Tustin, CA 92780  
Attn: City Clerk

ASSESSOR PARCEL NO(S):

434-201-27

(Space Above This Line For Recorder's Use)

IRWD Doc. No. E \_\_\_\_\_  
Resolution No. \_\_\_\_\_

DOCUMENTARY TRANSFER TAX \$ consideration less than \$100  
\_\_\_\_\_ Computed on the consideration or value of property conveyed; OR  
\_\_\_\_\_ Computed on the consideration or value less liens or encumbrances  
Remaining at time of sale.

\_\_\_\_\_  
Signature or Declarant or Agent determining tax – Firm Name

## EASEMENT QUITCLAIM DEED

**FOR VALUABLE CONSIDERATION**, receipt of which is hereby acknowledged, IRVINE RANCH WATER DISTRICT, a California Water District organized under and existing pursuant to Section 34000 *et seq.* of the California Water Code, does hereby REMISE, RELEASE, AND FOREVER QUITCLAIM to the CITY OF TUSTIN, a municipal corporation, or the current owner of record,

all RIGHT, TITLE and INTEREST in the real property located in the City of Tustin, County of Orange, State of California, , as more particularly described on Exhibit "A" and depicted on Exhibit "B", attached hereto and by this reference mad a part hereof.

The rights hereby quitclaimed are not necessary or useful in the performance of the duties of said Irvine Ranch Water District.

Dated: \_\_\_\_\_, 2013

IRVINE RANCH WATER DISTRICT,  
a California Water District

By: \_\_\_\_\_  
Name: Douglas J. Reinhart  
Title: President

By: \_\_\_\_\_  
Name: Leslie Bonkowski  
Title: District Secretary



STATE OF CALIFORNIA    )  
  )  
COUNTY OF ORANGE    )

On \_\_\_\_\_, 2013, before me, \_\_\_\_\_, a Notary Public in and for said State, personally appeared Douglas J. Reinhart and Leslie Bonkowski, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature \_\_\_\_\_ (SEAL)  
Notary Public in and for said State

**EXHIBIT "A"**  
**LEGAL DESCRIPTION**  
**IRVINE RANCH WATER DISTRICT**  
**WATERLINE EASEMENT TO BE QUITCLAIMED**

THAT PORTION OF THOSE CERTAIN WATERLINE EASEMENTS DEDICATED TO IRVINE RANCH WATER DISTRICT LYING WITHIN PARCEL "A" AS SHOWN ON PARCEL MAP NO. 91-265, IN THE CITY OF TUSTIN, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS SHOWN ON THE MAP FILED IN BOOK 276, PAGES 34 THROUGH 44, INCLUSIVE, OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, LYING NORTHEASTERLY OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT THE MOST NORTHERLY CORNER OF SAID PARCEL "A"; THENCE SOUTH 40°39'24" WEST 194.83 FEET ALONG THE MOST NORTHWESTERLY BOUNDARY LINE OF SAID PARCEL MAP TO THE **TRUE POINT OF BEGINNING**; THENCE LEAVING SAID NORTHWESTERLY LINE, ALONG A LINE THAT IS PARALLEL WITH AND DISTANT 194.83 FEET SOUTHWESTERLY FROM THE MOST NORTHEASTERLY LINE OF SAID PARCEL "A", SOUTH 49°20'36" EAST 241.70 FEET TO A POINT ON THE MOST SOUTHEASTERLY BOUNDARY LINE OF SAID PARCEL "A", SAID POINT BEING SOUTH 44°59'38" WEST 195.39 FEET FROM THE MOST EASTERLY CORNER OF SAID PARCEL "A".

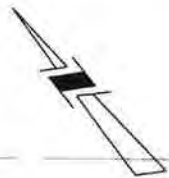
SUBJECT TO COVENANTS, RIGHTS, RIGHT-OF-WAYS AND EASEMENTS OF RECORD, IF ANY.

SEE EXHIBIT "B" ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF.

  
KENNETH E. TAIT, R.C.E. 14900  
REGISTRATION EXPIRES 3/31/2011

4-12-10  
DATE





NOT TO SCALE

LOT 189, BLOCK 62  
IRVINE'S SUBDIVISION  
M.R.M. 1/88

MOST N'LY  
COR. PAR.  
"A"

50'

NE'LY LINE OF  
PARCEL "A" PER  
P.M. 276/34-44

PARCEL "A"

MOST E'LY  
COR. PAR. "A"

SE'LY LINE OF  
PARCEL "A" PER  
P.M. 276/34-44

PARCEL 8

WATERLINE EASEMENTS  
GRANTED TO IRVINE RANCH  
WATER DISTRICT AS SHOWN  
ON P.M. 276/34-44 TO BE  
QUITCLAIMED

P.M. NO. 91-265

P.M.B. 276/34-44

PARCEL "A"

10'  
6'  
S40°39'24"W  
194.83'

194.83'

S44°59'38"W 195.39'

PARCEL "A"

PARCEL 7

S49°20'36"E 241.70'

TPOB

N'WLY LINE OF  
P.M. 276/34-44

15'

10'

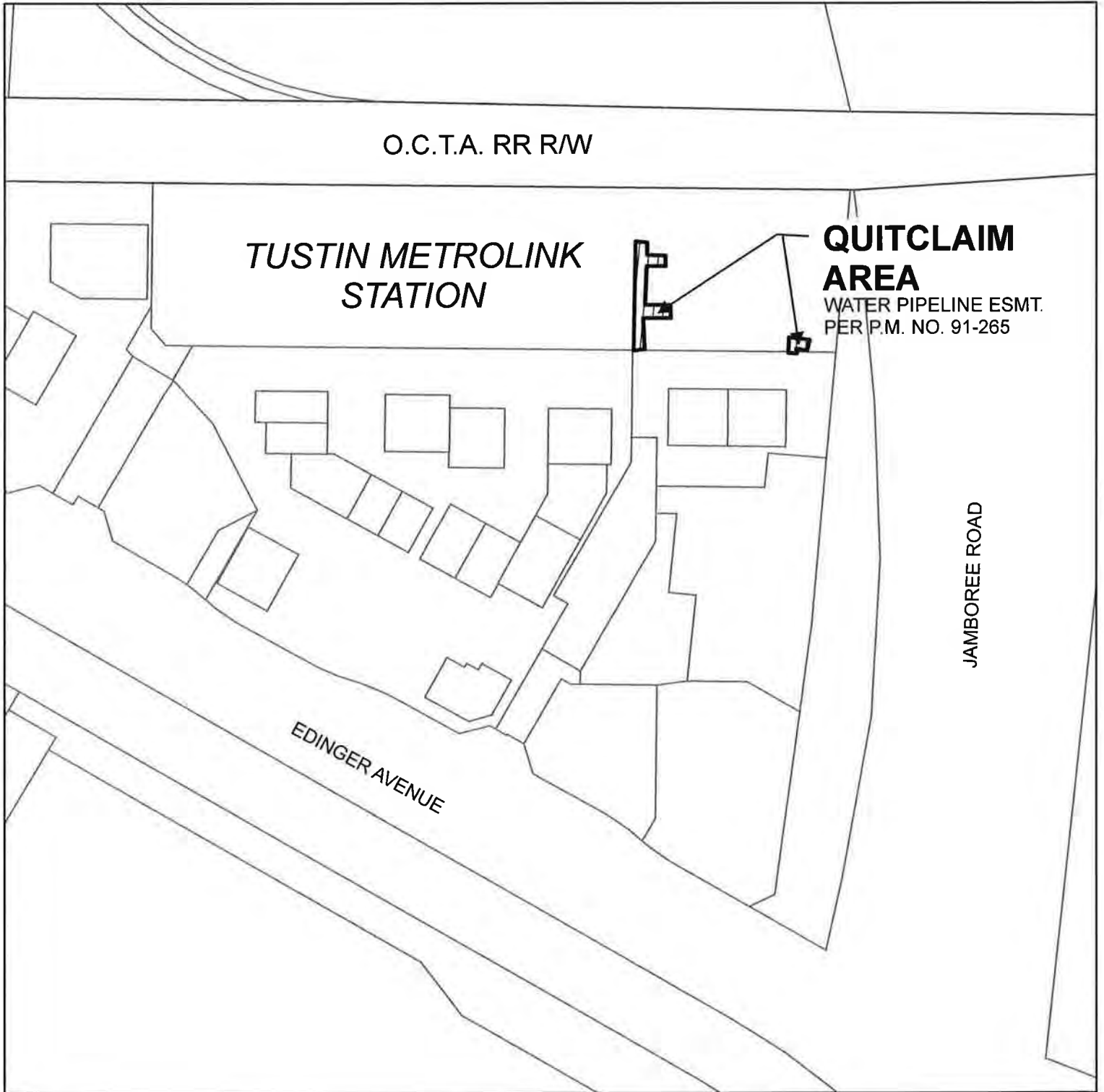
1 OF 1

EXHIBIT "B"

IRVINE RANCH AND WATER DISTRICT  
QUITCLAIM EASEMENT



# EXHIBIT "C" LOCATION MAP



**QUITCLAIM OF WATER PIPELINE EASEMENT  
TO CITY OF TUSTIN**



AS  
November 11, 2013  
Prepared by: R. Thatcher/M. Hoolihan  
Submitted by: K. Burton (K.B.)  
Approved by: Paul Cook / Cook .

## CONSENT CALENDAR

QUITCLAIM OF REAL PROPERTY  
FOOTHILL 10/PAD 2, LLC AND CPUS FOOTHILL PLAZA, LP  
PORTION OF SEWER PIPELINE EASEMENT PER  
INST. NO. 19960563167, O.R.  
GLENN RANCH ROAD SEWER – FOOTHILL PLAZA

### SUMMARY:

Staff recommends that the Board adopt a resolution approving the execution of quitclaim deeds to the Foothill 10/Pad 2, LLC and CPUS Foothill Plaza, LP quitclaiming a portion of an existing sewer pipeline easement within Foothill Plaza abandoned as part of the Glenn Ranch Road Sewer Project.

### BACKGROUND:

In Spring 2013, IRWD began the Glenn Ranch Road Sewer project. As part of the project, a section of existing sewer pipeline located within Foothill Plaza needed to be replaced and relocated. A new easement was granted over the new section of pipeline. As part of the project, the portion of the existing sewer pipeline easement per Inst. No. 19960563167 of Official Records located over the section of abandoned pipeline needs to be quitclaimed to clear title. The easement is located over two separate ownerships: Foothill 10/Pad 2, LLC and CPUS Foothill Plaza, L.P. The Resolution authorizing the quitclaim is attached as Exhibit "A", the Easement Quitclaim Deed for each ownership is attached as Exhibits "B-1" and "B-2", and a map showing the location of the quitclaim area is attached as Exhibit "C".

### FISCAL IMPACT:

None.

### ENVIRONMENTAL COMPLIANCE:

This project is not subject to the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15061 (b) (3), in that CEQA applies only to projects that may result in a direct physical change in the environment or reasonably foreseeable indirect physical change in the environment.

### COMMITTEE REVIEW:

Quitclaims are not routinely taken to Committee prior to submittal for Board approval.

Consent Calendar: Quitclaim of Real Property Foothill 10/Pad 2, LLC and CPUS Foothill Plaza, LP Portion Of Sewer Pipeline Easement Per Inst. No. 19960563167, O.R. Glenn Ranch Road Sewer – Foothill Plaza  
November 11, 2013  
Page 2

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2013 – \_\_\_\_\_

RESOLUTION OF THE BOARD OF DIRECTORS OF  
IRVINE RANCH WATER DISTRICT  
APPROVING EXECUTION OF THE QUITCLAIM DEEDS TO  
FOOTHILL 10/PAD 2, LLC AND CPUS FOOTHILL PLAZA, LP

LIST OF EXHIBITS:

Exhibit “A” – Resolution  
Exhibits “B-1” and “B-2” – Quitclaim Deeds  
Exhibit “C” – Easement Map



# EXHIBIT "A"

RESOLUTION NO. 2013 -

RESOLUTION OF THE BOARD OF DIRECTORS OF  
IRVINE RANCH WATER DISTRICT  
APPROVING EXECUTION OF THE QUITCLAIM DEEDS TO  
FOOTHILL 10/PAD 2, LLC and CPUS FOOTHILL PLAZA, LP

WHEREAS, Irvine Ranch Water District ("IRWD") constructed a gravity flow sewer pipeline project in Glenn Ranch Road; and

WHEREAS, a portion of an existing sewer pipeline lying within Foothill Plaza was abandoned as part of the project; and

WHEREAS, IRWD, as part of the project, will quitclaim a portion of the existing sewer pipeline easement per Instrument No. 19960563167 of Official Records where the pipeline was abandoned to the property owners Foothill 10/Pad 2, LLC and CPUS Foothill Plaza LP; and

WHEREAS, the purpose of the quitclaim is to clear title; and

WHEREAS, a new easement was granted over the new section of pipeline within Foothill Plaza; and

WHEREAS, staff has reviewed and confirmed that the easements herein referred are no longer needed and can be quitclaimed; and

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

NOW, THEREFORE, BE IT RESOLVED, the Quitclaim Deeds attached hereto as Exhibits "B-1" to Foothill 10/Pad 2, LLC, a California limited liability company and Exhibit "B-2" to CPUS Foothill Plaza, L.P., a Delaware limited liability company, herein described and hereby is approved and execution by the District's officers is authorized.

ADOPTED, SIGNED and APPROVED this 11th day of November 2013.

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

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

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

By \_\_\_\_\_

# EXHIBIT "B"

**RECORDING REQUESTED BY AND  
WHEN RECORDED RETURN TO:**

Ray Thatcher, District R/W Agent  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
P.O. Box 57000  
Irvine CA, 92619-7000

ASSESSOR PARCEL NO.(S):  
612-181-12

(Space Above This Line For Recorder's Use)

IRWD Doc. No. E \_\_\_\_\_  
IRWD Res. No. \_\_\_\_\_

This document is recorded at the request of and for the benefit of Irvine Ranch Water District and is therefore exempt from the payment of the recording fee pursuant to Government Code Section 6103 and from the payment of the documentary transfer tax pursuant to Revenue and Taxation Code Section 11922.

## EASEMENT QUITCLAIM DEED

**FOR VALUABLE CONSIDERATION**, receipt of which is hereby acknowledged, IRVINE RANCH WATER DISTRICT, a California Water District organized under and existing pursuant to Section 34000 *et seq.* of the California Water Code, does hereby REMISE, RELEASE, AND FOREVER QUITCLAIM to FOOTHILL 10/PAD 2, LLC, a California limited liability company, or the current owner of record,

all RIGHT, TITLE and INTEREST in the real property located in the City of Lake Forest, County of Orange, State of California, , as more particularly described on Exhibit "A" and depicted on Exhibit "B", attached hereto and by this reference mad a part hereof.

The rights hereby quitclaimed are to clear title for the benefit of Irvine Ranch Water District.

Dated: \_\_\_\_\_, 2013

IRVINE RANCH WATER DISTRICT,  
a California Water District

By: \_\_\_\_\_  
Name: Douglas J. Reinhart  
Title: President

By: \_\_\_\_\_  
Name: Leslie Bonkowski  
Title: District Secretary

MAIL TAX STATEMENTS TO THE ABOVE ADDRESS

STATE OF CALIFORNIA    )  
  )  
COUNTY OF ORANGE    )

On \_\_\_\_\_, 2013, before me, \_\_\_\_\_, a Notary Public in and for said State, personally appeared Douglas J. Reinhart and Leslie Bonkowski, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature \_\_\_\_\_ (SEAL)  
  Notary Public in and for said State



**EXHIBIT "A"**

**QUITCLAIM OF PORTION OF  
SEWER PIPELINE EASEMENT PER  
INST. NO. 19960563167, O.R.  
(APN 612-181-12)**

**LEGAL DESCRIPTION**

That certain parcel of land situated in the City of Lake Forest, County of Orange, State of California being that portion of that certain Grant of Easement for sewer pipeline purposes to Irvine Ranch Water District recorded November 6, 1996 as Instrument No. 19960563167 lying within a portion of Parcel 1 of Lot Line Adjustment No. LL 2001-04 as described and depicted on that certain document recorded June 19, 2001 as Instrument No. 20010403219, both of Official Records in the Office of the County Recorder of said County being more particularly described as follows:

**BEGINNING** at a point on the northeasterly line of said Parcel 1, said point being also the northeasterly terminus of that certain course in the southeasterly line of said easement described as having a bearing and distance of South 54°10'07" West 194.25 feet; thence along said last described course South 54°10'07" West 194.25 feet to an angle point in said easement; thence along the southwesterly line of said easement North 39°50'00" West 19.25 feet to the northwesterly line said Parcel 1; thence along said northwesterly line North 54°45'00" East 20.06 feet; thence North 39°50'00" West 2.36 feet to the intersection with a line parallel with and 20.00 feet northwesterly of said hereinbefore course described as having a bearing and distance of South 54°10'07" West 194.25 feet; thence along said parallel line, being also the northwesterly line of said easement North 54°10'07" East 174.25 feet to the northeasterly line of said Parcel 3; thence along said northeasterly line South 39°49'53" East 20.00 feet to the **POINT OF BEGINNING**.

**CONTAINING:** 2227 square feet, more or less.

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

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

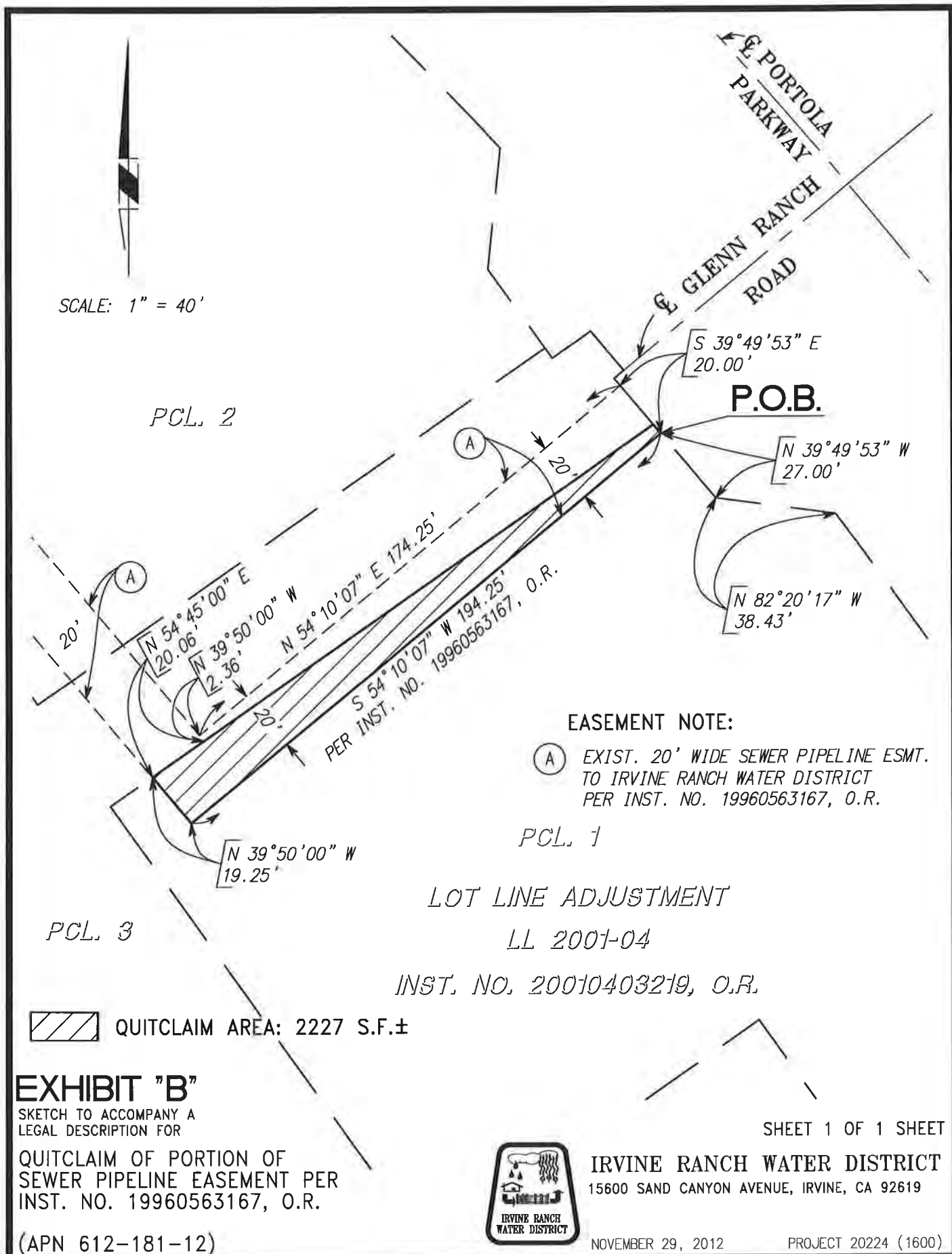
Prepared by me or under my direction:

**Dated:** November 29, 2012

\_\_\_\_\_  
Gregory P. Heiertz, R.C.E. 33084  
License expires June 30, 2014



SCALE: 1" = 40'



PCL 2

P.O.B.

EASEMENT NOTE:

- (A) EXIST. 20' WIDE SEWER PIPELINE ESMT. TO IRVINE RANCH WATER DISTRICT PER INST. NO. 19960563167, O.R.

PCL 1

LOT LINE ADJUSTMENT

LL 2001-04

INST. NO. 20010403219, O.R.

PCL 3

 QUITCLAIM AREA: 2227 S.F.±

SHEET 1 OF 1 SHEET

**EXHIBIT "B"**

SKETCH TO ACCOMPANY A LEGAL DESCRIPTION FOR

QUITCLAIM OF PORTION OF SEWER PIPELINE EASEMENT PER INST. NO. 19960563167, O.R.

(APN 612-181-12)



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

NOVEMBER 29, 2012

PROJECT 20224 (1600)

EXBPLAT-QCESMT-FOOTHILL 10.DWG

**RECORDING REQUESTED BY AND  
WHEN RECORDED RETURN TO:**

Ray Thatcher, District R/W Agent  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
P.O. Box 57000  
Irvine CA, 92619-7000

ASSESSOR PARCEL NO.(S):  
612-181-10

(Space Above This Line For Recorder's Use)

IRWD Doc. No. E \_\_\_\_\_  
IRWD Res. No. \_\_\_\_\_

This document is recorded at the request of and for the benefit of Irvine Ranch Water District and is therefore exempt from the payment of the recording fee pursuant to Government Code Section 6103 and from the payment of the documentary transfer tax pursuant to Revenue and Taxation Code Section 11922.

**EASEMENT QUITCLAIM DEED**

**FOR VALUABLE CONSIDERATION**, receipt of which is hereby acknowledged, IRVINE RANCH WATER DISTRICT, a California Water District organized under and existing pursuant to Section 34000 *et seq.* of the California Water Code, does hereby REMISE, RELEASE, AND FOREVER QUITCLAIM to CPUS FOOTHILL PLAZA, LP, a Delaware limited liability company, or the current owner of record,

all RIGHT, TITLE and INTEREST in the real property located in the City of Lake Forest, County of Orange, State of California, , as more particularly described on Exhibit "A" and depicted on Exhibit "B", attached hereto and by this reference mad a part hereof.

The rights hereby quitclaimed are to clear title for the benefit of Irvine Ranch Water District.

Dated: \_\_\_\_\_, 2013

IRVINE RANCH WATER DISTRICT,  
a California Water District

By: \_\_\_\_\_  
Name: Douglas J. Reinhart  
Title: President

By: \_\_\_\_\_  
Name: Leslie Bonkowski  
Title: District Secretary

MAIL TAX STATEMENTS TO THE ABOVE ADDRESS



STATE OF CALIFORNIA    )  
  )  
COUNTY OF ORANGE    )

On \_\_\_\_\_, 2013, before me, \_\_\_\_\_, a Notary Public in and for said State, personally appeared Douglas J. Reinhart and Leslie Bonkowski, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature \_\_\_\_\_  
Notary Public in and for said State

(SEAL)

**EXHIBIT "A"**

**QUITCLAIM OF PORTION OF  
SEWER PIPELINE EASEMENT PER  
INST. NO. 19960563167, O.R.  
(APN 612-181-10)**

**LEGAL DESCRIPTION**

That certain parcel of land situated in the City of Lake Forest, County of Orange, State of California being that portion of that certain Grant of Easement for sewer pipeline purposes to Irvine Ranch Water District recorded November 6, 1996 as Instrument No. 19960563167 lying within a portion of Parcel 3 of Lot Line Adjustment No. LL 2001-04 as described and depicted on that certain document recorded June 19, 2001 as Instrument No. 20010403219, both of Official Records in the Office of the County Recorder of said County being more particularly described as follows:

**BEGINNING** at a point on the northeasterly line of Parcel 1 of said lot line adjustment, said point being also the northeasterly terminus of that certain course in the southeasterly line of said easement described as having a bearing and distance of South 54°10'07" West 194.25 feet; thence along said last described course South 54°10'07" West 194.25 feet to an angle point in said easement; thence along the southwesterly line of said easement North 39°50'00" West 19.25 feet to the northwesterly line said Parcel 1; thence along said northwesterly line North 54°45'00" East 20.06 feet; thence North 39°50'00" West 2.36 feet to the intersection with a line parallel with and 20.00 feet northwesterly of said hereinbefore course described as having a bearing and distance of South 54°10'07" West 194.25 feet; thence along said parallel line, being also the northwesterly line of said easement North 54°10'07" East 174.25 feet to the northeasterly line of said Parcel 3; thence along said northeasterly line South 39°49'53" East 20.00 feet to the **POINT OF BEGINNING**.

**CONTAINING:** 1627 square feet, more or less.

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

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

Prepared by me or under my direction:

**Dated:** November 29, 2012

\_\_\_\_\_  
Gregory P. Heiertz, R.C.E. 33084  
License expires June 30, 2014



SCALE: 1" = 40'

PCL. 2

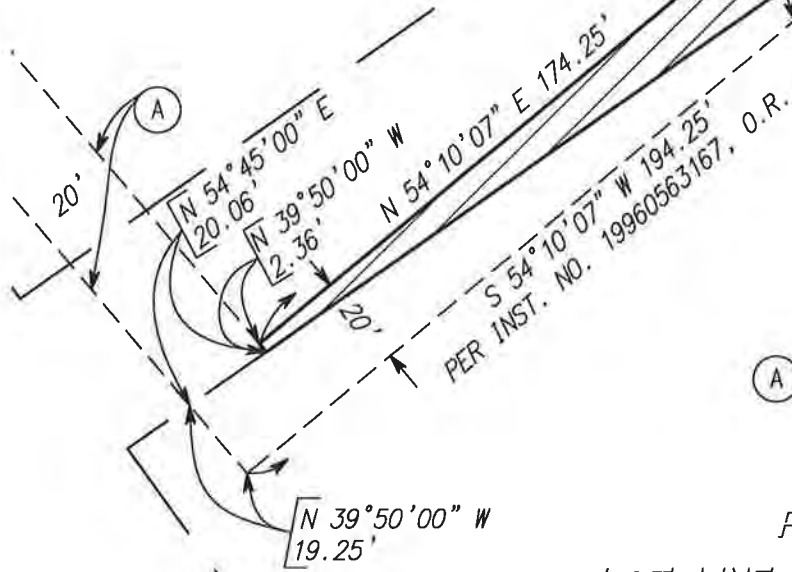
← E. PORTOLA PARKWAY  
← E. GLENN RANCH ROAD

S 39°49'53" E  
20.00'

**P.O.B.**

N 39°49'53" W  
27.00'

N 82°20'17" W  
38.43'



**EASEMENT NOTE:**

- (A) EXIST. 20' WIDE SEWER PIPELINE ESMT. TO IRVINE RANCH WATER DISTRICT PER INST. NO. 19960563167, O.R.

PCL. 1

**LOT LINE ADJUSTMENT**

LL 2001-04

INST. NO. 20010403219, O.R.

PCL. 3

 QUITCLAIM AREA: 1627 S.F.±

**EXHIBIT "B"**

SKETCH TO ACCOMPANY A LEGAL DESCRIPTION FOR

QUITCLAIM OF PORTION OF SEWER PIPELINE EASEMENT PER INST. NO. 19960563167, O.R.

(APN 612-181-10)

SHEET 1 OF 1 SHEET



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

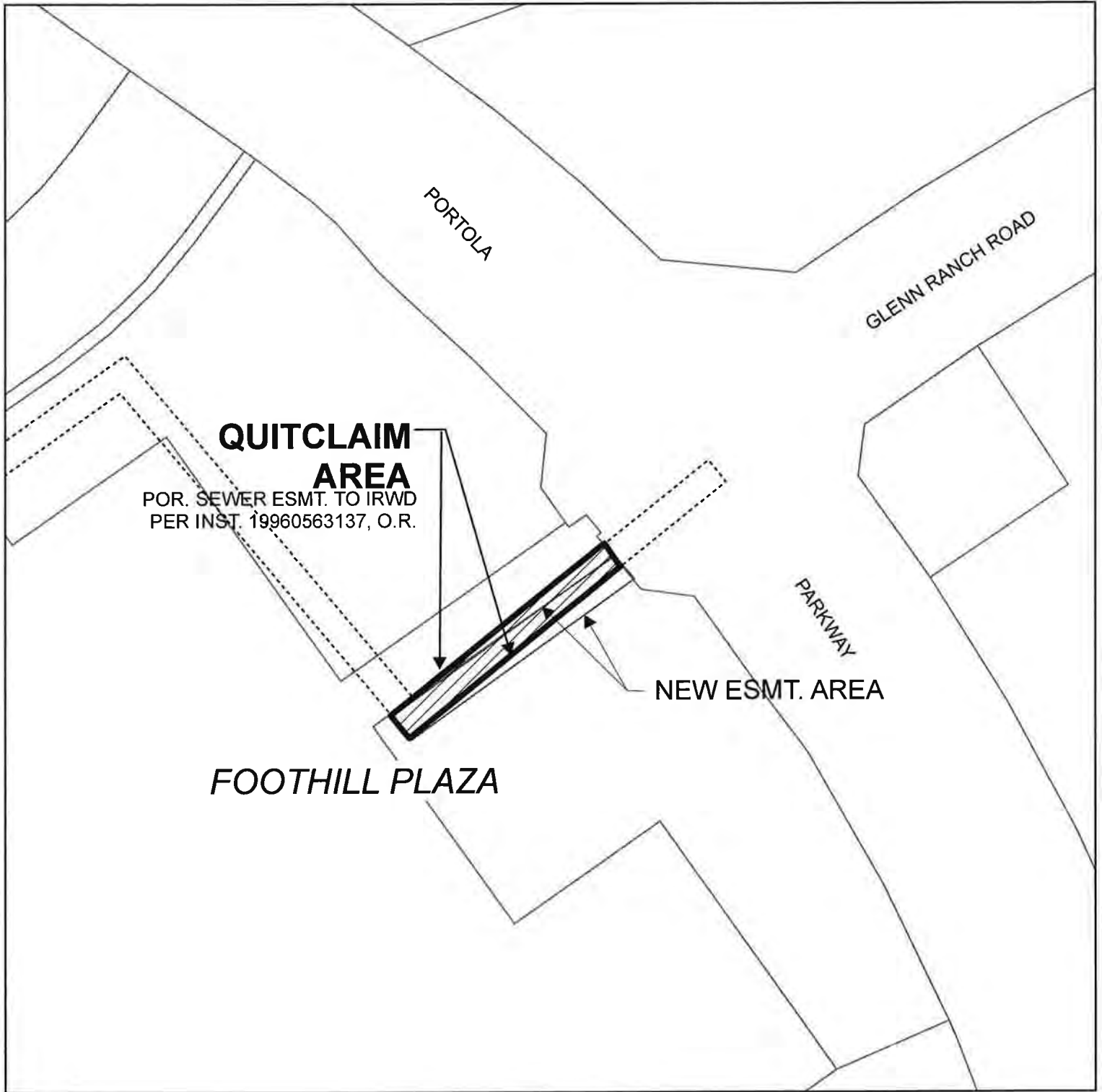
NOVEMBER 29, 2012

PROJECT 20224 (1600)

EXBPLAT-QCESMT-FPOC.DWG



# EXHIBIT "C" LOCATION MAP



**QUITCLAIM OF POR. OF SEWER EASEMENT  
TO FOOTHILL 10/PAD 2, LLC AND CPUS FOOTHILL PLAZA, LP**



08  
November 11, 2013

Prepared by: R. Thatcher/M. Hoolihan

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

Approved by: Paul Cook *P. Cook*

## CONSENT CALENDAR

QUITCLAIM OF REAL PROPERTY  
IRVINE COMMUNITY DEVELOPMENT COMPANY LLC  
WATER AND SEWER PIPELINE AND ACCESS EASEMENT  
PER TRACT NO. 17004  
ORCHARD HILLS

### SUMMARY:

Staff recommends that the Board adopt a resolution approving the execution of a quitclaim deed to the Irvine Community Development Company LLC (ICDC) quitclaiming an existing easement for water, sewer, and access purposes dedicated to IRWD over Lot 3 of Tract No. 17004 in Orchard Hills, which is being re-subdivided into Tract No. 16702.

### BACKGROUND:

ICDC subdivided the west half of the Orchard Hills development in 2007 into builder lots with the recordation of Tract No. 17004. Easements to IRWD were dedicated on that map. ICDC is now re-subdividing some of those lots into residential lots. With the re-subdivision, some of the previously dedicated and granted IRWD easements are no longer needed. ICDC has requested that IRWD quitclaim the previously dedicated easement for water, sewer, and access purposes within Lot 3 of Tract 17004 which lies within proposed Tract No. 16702. A new easement for water, sewer and access purposes will be dedicated to IRWD on the new tract map. Staff has reviewed the request and recommends that the Board approve the quitclaim. The Resolution authorizing the quitclaim is attached as Exhibit "A", the Easement Quitclaim Deed is attached as Exhibit "B", and a map showing the location of the quitclaim areas is attached as Exhibit "C".

### FISCAL IMPACT:

None.

### ENVIRONMENTAL COMPLIANCE:

This project is not subject to the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15061 (b) (3), in that CEQA applies only to projects that may result in a direct physical change in the environment or reasonably foreseeable indirect physical change in the environment.

### COMMITTEE REVIEW:

Quitclaims are not routinely taken to Committee prior to submittal for Board approval.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2013 - \_\_\_\_\_

RESOLUTION OF THE BOARD OF DIRECTORS OF  
IRVINE RANCH WATER DISTRICT  
APPROVING EXECUTION OF THE QUITCLAIM DEED TO  
IRVINE COMMUNITY DEVELOPMENT COMPANY LLC

LIST OF EXHIBITS:

- Exhibit "A" – Resolution
- Exhibit "B" – Easement Quitclaim Deed
- Exhibit "C" – Location Map



# EXHIBIT "A"

RESOLUTION NO. 2013 -

RESOLUTION OF THE BOARD OF DIRECTORS OF  
IRVINE RANCH WATER DISTRICT  
APPROVING EXECUTION OF THE QUITCLAIM DEED TO  
IRVINE COMMUNITY DEVELOPMENT COMPANY LLC

WHEREAS, Irvine Community Development Company LLC ("ICDC") has requested that the Irvine Ranch Water District ("IRWD") Board approve the quitclaim of the existing easement for sewer, water and access purposes lying within Lot 3 of Tract No. 17004 filed in Book 891, Pages 1 through 53 of Miscellaneous Maps, Records of Orange County, California; and

WHEREAS, the purpose of the quitclaim is because ICDC is re-subdividing the above-mentioned area containing the easements into Tract No. 16702; and

WHEREAS, ICDC will be dedicating new easements for sewer, water and access purposes to IRWD on the new Tract Map; and

WHEREAS, staff has reviewed and confirmed that the easements herein referred are no longer needed and can be quitclaimed; and

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

NOW, THEREFORE, BE IT RESOLVED, the Quitclaim Deed attached hereto as Exhibit "B" to Irvine Community Development Company LLC, a Delaware limited liability company, herein described and hereby is approved and execution by the District's officers is authorized.

ADOPTED, SIGNED and APPROVED this 11th day of November 2013.

---

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

---

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

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

By \_\_\_\_\_

# EXHIBIT "B"

**RECORDING REQUESTED BY AND  
WHEN RECORDED RETURN TO:**

Irvine Community Development Company  
550 Newport Center Drive  
Newport Beach, CA 92660  
Attn: General Counsel's Office

ASSESSOR PARCEL NO(S).:

527-041-06

(Space Above This Line For Recorder's Use)

IRWD Doc. No. E \_\_\_\_\_  
IRWD Res. No. \_\_\_\_\_

DOCUMENTARY TRANSFER TAX \$ consideration less than \$100  
\_\_\_\_\_ Computed on the consideration or value of property conveyed; OR  
\_\_\_\_\_ Computed on the consideration or value less liens or encumbrances  
remaining at time of sale.

\_\_\_\_\_  
Signature or Declarant or Agent determining tax – Firm Name

## EASEMENT QUITCLAIM DEED

**FOR VALUABLE CONSIDERATION**, receipt of which is hereby acknowledged, IRVINE RANCH WATER DISTRICT, a California Water District organized under and existing pursuant to Section 34000 *et seq.* of the California Water Code, does hereby REMISE, RELEASE, AND FOREVER QUITCLAIM to IRVINE COMMUNITY DEVELOPMENT COMPANY LLC, a Delaware limited liability company, or the current owner of record,

all RIGHT, TITLE and INTEREST in the real property located in the City of Irvine, County of Orange, State of California, as more particularly described on Exhibit "A", attached hereto and made a part hereof.

The rights hereby quitclaimed are not necessary or useful in the performance of the duties of said Irvine Ranch Water District.

Dated: \_\_\_\_\_, 2013

IRVINE RANCH WATER DISTRICT,  
a California Water District

By: \_\_\_\_\_  
Name: Douglas J. Reinhart  
Title: President

By: \_\_\_\_\_  
Name: Leslie Bonkowski  
Title: District Secretary

MAIL TAX STATEMENTS TO THE ABOVE ADDRESS

STATE OF CALIFORNIA )  
COUNTY OF ORANGE )

On \_\_\_\_\_, 2013, before me, \_\_\_\_\_, a Notary Public in and for said State, personally appeared Douglas J. Reinhart and Leslie Bonkowski, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature \_\_\_\_\_ (SEAL)  
Notary Public in and for said State



**EXHIBIT "A"**

**QUITCLAIM OF EASEMENTS FOR  
SEWER, WATER AND ACCESS PURPOSES  
WITHIN ORCHARD HILLS DEVELOPMENT**

**LEGAL DESCRIPTION**

That certain easement for sewer, water and access purposes dedicated thereon and lying within Lot 3 of Tract No. 17004, in the City of Irvine, County of Orange, State of California, as shown on the map thereof filed in Book 891, Pages 1 through 53 of Miscellaneous Maps, in the Office of the County Recorder of said County.

Prepared by me or under my direction:

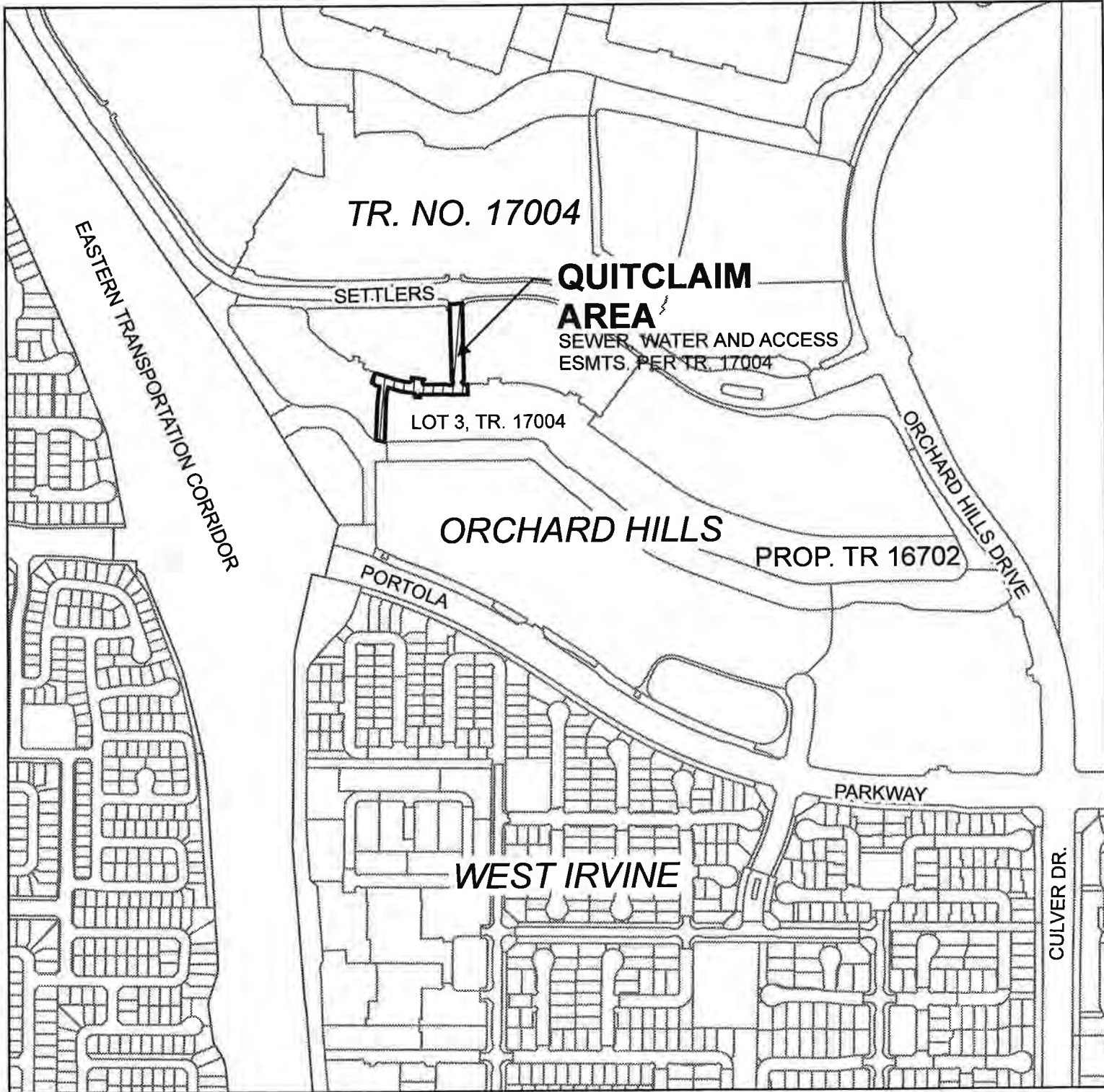
**Dated:** November 1, 2013, 2013



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Gregory P. Heiertz, R.C.E. 33084  
License expires June 30, 2014

# EXHIBIT "C" LOCATION MAP



**QUITCLAIM OF SEWER, WATER AND ACCESS EASEMENTS  
TO IRVINE COMMUNITY DEVELOPMENT COMPANY LLC**



AS  
November 11, 2013  
Prepared by: T. Bonkowski/M. Cortez  
Submitted by: K. Burton  
Approved by: Paul Cook

CONSENT CALENDAR

ORANGE PARK ACRES RESERVOIR DEMOLITION  
FINAL ACCEPTANCE

SUMMARY:

The Orange Park Acres (OPA) Reservoir Demolition Project is complete. The contractor, Schuler Engineering Corporation (Schuler), has completed the required work and all punch list items. The project has received final inspection and acceptance of construction is recommended.

BACKGROUND:

After completion of the OPA Transmission Main Project in October 2012, the domestic water reservoir on Calle Grande was taken off-line since it was not required operationally for the domestic water system for the area. OPA is supplied with domestic water from the District's Zone 5 Santiago Reservoir and a local groundwater well.

Schuler was awarded the construction contract on June 24, 2013 to demolish, remove and backfill the partially buried 134-foot diameter, 1-million gallon reinforced concrete domestic water reservoir on Calle Grande, including salvage of all ancillary equipment, piping, fencing and site grading. The area has been backfilled and graded to facilitate future sale of the property. East Orange County Water District facilities on the reservoir site were protected during the reservoir demolition. Construction is complete and the project is ready for final acceptance by the Board.

Project Title:	Orange Park Acres Reservoir Demolition
Project No.:	11416 (1337)
Design Engineer:	Stantec Consulting, Inc.
Construction Management by:	IRWD Staff
Contractor:	Schuler Engineering Corporation
Original Contract Cost:	\$255,121.00
Final Contract Cost:	\$283,540.39
Original Contract Days:	120
Final Contract Days:	130
Final Change Order Approved On:	October 23, 2013



FISCAL IMPACTS:

Project 11416 (1337) is included in the FY 2013-14 Capital Budget. The existing budget and Expenditure Authorization are sufficient to fund the final payment for the project.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA). In conformance with the California Code of Regulations, Title 14, Chapter 3, Section 15004, a Mitigated Negative Declaration was adopted on August 9, 2010.

COMMITTEE STATUS:

This item was not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD ACCEPT CONSTRUCTION OF THE ORANGE PARK ACRES RESERVOIR DEMOLITION, PROJECT 11416 (1337); AUTHORIZE THE GENERAL MANAGER TO FILE A NOTICE OF COMPLETION; AND AUTHORIZE THE PAYMENT OF THE RETENTION 35 DAYS AFTER THE DATE OF RECORDING THE NOTICE OF COMPLETION.

LIST OF EXHIBITS:

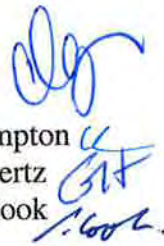
None.

November 11, 2013

Prepared by: C. Compton

Submitted by: G. Heiertz

Approved by: Paul Cook



## CONSENT CALENDAR

### 2013 STATE LEGISLATIVE UPDATE

#### SUMMARY:

This report provides an update on the final actions on legislation of interest to IRWD during the 2013 State legislative session and IRWD State legislative priorities. An updated copy of the 2013 State Legislative Matrix is attached as Exhibit "A".

#### BACKGROUND:

October 13, 2013, was the last day for Governor Brown to sign or veto legislation sent to his desk during the 2013 legislative year. The Governor signed 805 bills and vetoed 96. A total of 1151 bills remained two-year bills at the close of the 2013 legislative year. The 2014 legislative session will convene on January 6, 2014. Legislators will have until the end of January to act upon two-year bills from the 2013 legislative year.

#### State Budget Update:

##### *September State Revenue Numbers Released:*

Given the political implications that State revenues and the State's fiscal outlook can have on local government, staff continues to monitor the State's revenue and budget situation. On October 10, 2013, State Controller John Chiang released his monthly report on the State's finances. He announced that the State took in \$8.5 billion in revenue during the month of September. This amount was substantially higher than budgeted, and moved the State's total revenues \$427 million, or 5.3%, higher than total revenues anticipated in the 2013-14 Budget Act during the first quarter. According to Controller Chiang's report,

"Personal income taxes, which are California's dominant revenue source, lurched past monthly projections by 9.5%. Estimated taxes were much larger than anticipated as higher-income households recognized capital gains and other income increases. The surge in stock prices during the first nine months of 2013, with the S&P 500 Composite Stock Price Index up 18%, has been a primary factor driving the favorable performance of personal income taxes."

The State ended the first quarter with an outstanding loan balance of \$14.7 billion. While the State received better fiscal news this month, the Controller's report cautioned that:

"Revenue collections could be challenged in the coming months by any negative developments related to jobs, interest rates, stock prices, and home values. Spending will be impacted by demands for education, health care, social services, and other line items. Decisions or a stalemate in Washington related to defense outlays, research funds, Medicare, and other federal programs could ripple back to California in major ways."

Report on Final Actions on 2013 Legislation of Interest to IRWD:

*AB 803 (Gomez) – Water Recycling Act of 2013:*

AB 803 (Gomez, D-Los Angeles), the Water Recycling Act of 2013, was signed by the Governor on October 8, 2013. The bill aligns the Health and Safety Code and the Water Code requirements for reporting recycled water spills; authorizes compliance with effluent limitations and any other permit or waste discharge requirements for the release or discharge of recycled water determined to be suitable for direct potable reuse or surface water augmentation into a conveyance facility to be determined at the point where the recycled water enters the conveyance facility but prior to commingling with any raw water; and provides that hose bibs are approved for use at cemeteries supplied with disinfected tertiary treated recycled water. IRWD actively supported this bill throughout the 2013 legislative year.

*AB 1200 (Levine) – Recycled water: agricultural irrigation impoundments:*

AB 1200 (Levine, D-San Rafael), which would have created a pilot project for the purpose of investigating the potential water quality impacts associated with maximizing the use of recycled water in agricultural irrigation impoundments in the San Francisco Bay Regional Water Quality Board, was vetoed by the Governor. IRWD took a “SUPPORT” position on this bill.

*SB 322 (Hueso) – Water Recycling:*

SB 322 (Hueso, D-San Diego), which requires the Department of Public Health (DPH) to administer an expert panel to evaluate Direct Potable Reuse (DPR) no later than February 15, 2014, and evaluate the feasibility of developing uniform water recycling criteria for DPR, was signed by the Governor. IRWD took a “SUPPORT” position on this bill.

*“Clean Water for Californians” Legislative Package:*

On February 20, 2013, Assemblymember Luis Alejo (D-Salinas), along with several of his legislative colleagues, introduced the “Clean Water for Californians” Legislative Package – a legislative package of nine bills intended to address drinking water issues in California. The purpose of the package was to provide relief for communities that rely on contaminated groundwater sources for drinking water. An update on the final action taken on the bills included in the “Clean Water for Californians” legislative package is provided below.

- *AB 1 (Alejo):* AB 1 appropriates \$2 million to the State Water Resources Control Board (SWRCB) to address the safe drinking water and wastewater needs of disadvantaged communities in the Salinas Valley. AB 1 became a two-year bill.
- *AB 21 (Alejo/Pérez):* AB 21 creates the Safe Drinking Water Small Community Emergency Grant Fund to address contaminated water in small communities. It would authorize the California Department of Public Health (DPH) to assess an annual charge in connection with loans (in lieu of interest) for drinking water projects funded by the Safe Drinking Water State Revolving Loan Fund. AB 21 was signed by the Governor on October 8, 2013.



- *AB 30 (Perea)*: AB 30 eliminates the 2014 sunset provision on the existing authority that the SWRCB has to charge a fee in lieu of interest on State Water Pollution Control Revolving Fund loans. AB 30 was signed by the Governor on October 8, 2013.
- *AB 115 (Perea)*: Originally, AB 115 would have permitted multiple water systems to apply for state funds as a single applicant. It was amended to allow a legal entity to apply for state funds on behalf of one or more public water systems serving disadvantaged or severely disadvantaged communities. AB 115 was signed by the Governor on October 8, 2013.
- *AB 118 (Alejo ESTM Committee)*: AB 118 would have authorized DPH to adopt interim regulations for implementing provisions related to the State Drinking Water State Revolving Fund. It was amended to provide that a small community water system or nontransient noncommunity water system that is owned by a public agency or a private not-for-profit water company and is serving a severely disadvantaged community is deemed to have no ability to repay a State Revolving Fund loan, and the funds those agency receive from the fund are deemed a grant instead of a loan. AB 118 was signed by the Governor on October 8, 2013.
- *AB 119 (Alejo/ESTM Committee)*: This bill revises the criteria and procedure for certification of water treatment devices for which a health or safety claim, as defined, is made. It would require each manufacturer that offers for sale in California one of those water treatment devices to submit specified information including the manufacturer's contact information, product identification information, the specific contaminant claimed to be removed or reduced by the device, and a product information worksheet, as described, to DPH for purposes of inclusion on the department's website. AB 119 was signed by the Governor on September 28, 2013.
- *AB 145 (Perea/Rendon)*: AB 145 would move the responsibility for the state's drinking water program from DPH to the SWRCB. AB 145 became a two-year bill; however, the Administration is moving forward with independently reorganizing the program to the SWRCB.
- *AB 240 (Rendon)*: AB 240 requires the board of a mutual water company that operates a public water system to adopt, in an open meeting, an annual budget on or before the start of each fiscal year, to contract with a certified public accountant or public accountant to conduct an annual review of the financial records and reports of the mutual water company, and make specified documents available to an eligible person upon payment of fees covering the direct costs of duplication. AB 240 was signed by the Governor on October 8, 2013.
- *SB 117 (Rubio)*: As introduced, SB 117 proposed to move responsibility for the State's Drinking Water Program from DPH to the SWRCB. With Senator Rubio's resignation from the State Senate, the bill was taken over by Senator Ben Hueso. It was amended to deal with integrative cancer treatment, and did not move forward this year.

Updates on Other Legislation of Interest to IRWD:

*Relocation of Responsibility for the State's Drinking Water Program:*

Following the Legislature's failure to move AB 145 (Perea, D-Fresno/Rendon, D-Lakewood) forward this year, the Brown Administration announced that it would reorganize the Drinking Water Program from DPH to the SWRCB administratively. In order to accomplish this, the Administration formed a new Drinking Water Reorganization Task Force. The task force, which is jointly convened by the California Environmental Protection Agency and the California Health and Human Services Agency, is designed to inform the transition plan that the Administration will prepare for the transfer of the program. The task force first met on October 2, 2013, and will continue meeting biweekly until the end of the year. Each of those meetings is expected to focus on one of the following topics:

- Maintaining the public health focus of the DWP.
- Maintaining the regulatory program of the DWP; changes that may be needed to the regulatory functions and authorities of the drinking water program; and procedures for enacting drinking water maximum contaminant levels (MCLs).
- Maintaining and improving the local primacy agency program; facilitating the safe and efficient use of recycled water as an evolving source to meet California's water needs.
- Emergency response, including coordination with the DPH's Emergency Preparedness Office; the need for memoranda of understanding and interagency agreements between CDPH and the State Water Board.
- Maximizing the efficiency and effectiveness of the new structure (combining drinking water, groundwater, and water quality programs in a single agency) to benefit water quality, public health and environmental health; funding: financial assistance for drinking water projects; also program resources.
- The need for and composition of a stakeholder advisory group to advise the State Water Board on the DWP; identifying additional legislative action needed to carry out the duties of the DWP and/or enhance the capabilities of the program; review and updating of regulations and review of resources needed to maintain regulations consistent with advances in science and technology.

A list of the Drinking Water Reorganization Task Force members and agency attendees is attached as Exhibit "B". Staff will provide an oral update on any new developments, as appropriate.

*2014 Water Bond:*

The Association of California Water Agencies (ACWA) recently released a comparison of the water bond reformulation proposals put forward by ACWA, AB 1331 (Rendon, D-Lakewood), and SB 42 (Wolk, D-Walnut Creek). Staff has included a copy of the comparison as Exhibit "C".

While there are differences between the three proposals, there are two differences which staff would like to highlight. The first is the amount of money designated for Delta Ecosystem Restoration and Watersheds, and the second is the amount of money designated for storage. IRWD's adopted policy position with regards to the water bond's funding for Delta ecosystem restoration and water storage is:

"A reformulated bond must continue to support the co-equal goals of water supply reliability and ecosystem restoration. The bond should:

- Maintain funding for the Delta ecosystem restoration.
- Appropriate adequate funds for statewide storage and drought relief projects both north and south of the Delta.
- Fund local resource development to reduce dependence on the Delta. Funding for regional projects should be distributed through Integrated Regional Water Management Planning programs while funding decisions on projects of statewide significance should be made at the state level.
- Support water supply reliability enhancement through the funding of water recycling, conservation, and groundwater protection and quality improvement projects. These projects should increase local supply reliability and reduce reliance on the Delta."

The current 2014 bond and ACWA's bond proposal designate \$3.05 billion for Delta Ecosystem Restoration and Watersheds. Of the \$3.05 billion, \$2.250 billion is designated for work that would improve Delta sustainability. AB 1331 designates \$2.5 billion for Delta Ecosystem Restoration and Watersheds of which \$1 billion is designated for Delta sustainability. SB 42 designates \$1.7 billion for Delta Ecosystem Restoration and Watersheds of which \$600 million is designated for Delta sustainability.

With regard to money designated for statewide storage, ACWA's proposal and the current bond allocate \$3 billion for water storage and delivery projects, and include a continuous appropriation. AB 1331 designates \$1.5 billion less than the current bond, and allocates \$1.5 billion for storage along with a continuous appropriation. SB 42 designates \$2.4 billion less than the current bond and allocates \$1 billion for storage. It does not include a continuous appropriation for storage and delivery projects.

Staff will provide an oral update on any new developments with regards to the 2014 water bond, as appropriate.



FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on November 5, 2013.

RECOMMENDATION:

RECEIVE AND FILE.

LIST OF EXHIBITS:

- Exhibit "A" – 2013 IRWD Legislative Matrix
- Exhibit "B" – Drinking Water Reorganization Task Force Roster
- Exhibit "C" – ACWA Comparison of ACWA's Water Bond Proposal, AB 1331, and SB 42

**EXHIBIT "A"**  
**IRWD 2013 LEGISLATIVE MATRIX**  
**Updated October 16, 2013**

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
<u>AB 1</u> Alejo (D)	Water Quality: Integrated Plan: Salinas Valley		Appropriates funds for use by the Greater Monterey County Regional Water Management Group, referred to as the management group, to develop the integrated plan to address the drinking water and wastewater needs of disadvantaged communities in the Salinas Valley whose waters have been affected by waste discharges.	05/24/2013 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.	
<u>AB 11</u> Logue (R)	Reserve Peace Officers: Emergency Rescue Personnel		Requires specified employers to permit an employee who performs emergency duty as a volunteer firefighter, reserve peace officer, or as emergency rescue personnel to take a leave of absence for the purpose of engaging in fire, law enforcement, or emergency rescue training.	08/19/2013 - Signed by GOVERNOR.;08/19/2013 - Chaptered by Secretary of State. Chapter No. 120	
<u>AB 21</u> Alejo (D)	Safe Drinking Water Small Community Grant Fund		Authorizes the assessment of a specified annual charge in lieu of interest on loans for water projects made pursuant to the Safe Drinking Water State Revolving Fund, and the deposit of that money into the Safe Drinking Water State Small Community Emergency Grant Fund and provides a monetary limit to the fund. Authorizes the expending of the money in the fund for grants for specified water projects that serve disadvantaged and severely disadvantaged communities. Limits the amount in the fund.	10/08/2013 - Signed by GOVERNOR.;10/08/2013 - Chaptered by Secretary of State. Chapter No. 628	
<u>AB 25</u> Campos (D)	Employment: Social Media		Applies existing law that prohibits a private employer from requiring or requesting an employee or applicant for employment to disclose a username or password for the purpose of accessing personal social media, to access personal social media in the presence of the employer, or to divulge any personal social media to public employers. Provides that these provisions apply to public employers generally, including charter cities and counties.	09/13/2013 - In SENATE. Held at desk.	
<u>AB 30</u> Perea (D)	Water Quality		Amends the Porter-Cologne Water Quality Control Act to authorize the Water Resources Control Board to assess an annual charge in connection with any financial assistance under the Water Pollution Control Revolving Fund without a change unless the board makes a prescribed determination, at which time the board would replace the charge with an identical interest rate. Relates to deposits into the State Water Pollution Control Revolving Fund Small Community Grant Fund and expansion of grants from the fund.	10/08/2013 - Signed by GOVERNOR.;10/08/2013 - Chaptered by Secretary of State. Chapter No. 629	

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
<u>AB 37</u> Perea (D)	Unemployment Insurance: Reporting: Status of Funds		Requires the Employment Development Department, when the Unemployment Fund indicates a negative balance, to include a status report on the Fund the estimated cost impact on employers from the changes in a specified federal tax credit and the estimated amount the state is expected to pay in interest on any outstanding loan to the federal government.	08/14/2013 - Re-referred to SENATE Committee on LABOR AND INDUSTRIAL RELATIONS.	
<u>AB 52</u> Gatto (D)	Native Americans: California Environmental Quality Act		Requires a lead agency to make best efforts to avoid, preserve, and protect specified Native American resources with a project that may have a significant effect on the environment, and to take specified mitigation measures if the project will have a substantial adverse change. Prohibits certain damage unless certain conditions are met. Requires consultation with tribes affiliated with the area prior to determining a negative declaration. Requires the revision of related guidelines.	09/10/2013 - In SENATE. Joint Rule 61(a)12 suspended.;09/10/2013 - In SENATE. Joint Rule 62(a) suspended.	
<u>AB 69</u> Perea (D)	Groundwater: Drinking Water: Nitrate at Risk Fund		Establishes the Nitrate at Risk Fund to be administered by the State Department of Public Health for loans, principal forgiveness loans, or grants to certain water systems operating in a high-nitrate at-risk area for specified purposes. Requires fertilizer sellers to pay a materials charge for deposit in the Fund.	08/12/2013 - From SENATE Committee on AGRICULTURE with author's amendments.;08/12/2013 - In SENATE. Read second time and amended. Re-referred to Committee on AGRICULTURE.	
<u>AB 72</u> Holden (D)	Municipal Water District: Board of Directors		Requires the directors of a municipal water district, except directors elected at a district formation election, to take office on the first Friday in December succeeding their election.	06/17/2013 - Signed by GOVERNOR.;06/17/2013 - Chaptered by Secretary of State. Chapter No. 8	
<u>AB 115</u> Perea (D)	Safe Drinking Water State Revolving Fund		Relates to the state Safe Drinking Water Act. Authorizes a legal entity to apply for grant funding on behalf of one or more public water systems serving disadvantaged or severely disadvantaged communities if specified requirements are met, including having a	10/08/2013 - Signed by GOVERNOR.;10/08/2013 - Chaptered by Secretary of State.	



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Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			signed agreement with each public water system for which it is applying for funding. Provides for transferring the statutory and regulatory authority for the California Safe Drinking Water Act from the Department of Public Health.	Chapter No. 630	
<b>AB 118</b> Env Safety & Toxic Material Cmt	Safe Drinking Water State Revolving Fund		Limits loans and grants from the Safe Drinking Water State Revolving Fund for planning and preliminary engineering studies, project design, and construction costs to those incurred by community and not-for-profit public water systems. Specifies that certain water systems have no ability to repay a loan. Authorizes a loan applicant to receive up to the full cost of a project in the form of a loan, subject to specified conditions.	10/08/2013 - Signed by GOVERNOR.;10/08/20 13 - Chaptered by Secretary of State. Chapter No. 631	
<b>AB 122</b> Rendon (D)	Energy Assessment: Nonresidential Buildings: Financing		Enacts the Nonresidential Building Energy Retrofit Financing Act. Requires the Energy Resources Conservation and Development Commission to establish a program to develop a request for proposal for a third-party administrator and to develop and operate the program to provide financial assistance, through authorizing the issuance of, revenue bonds, to owners of eligible nonresidential buildings for implementing energy property improvement. Requires a public report on program efficacy.	05/24/2013 - In ASSEMBLY Committee on APPROPRIATIONS: Not heard.	
<b>AB 142</b> Water, Parks and Wildlife Cmt	Water Resources: Infrastructure		Requires the Department of Water Resources to initiate and complete a comprehensive study of state and local water supply infrastructure needs and to provide a report to the Legislature that summarizes those findings.	05/06/2013 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.	
<b>AB 145</b> Perea (D)	State Water Resources Control Board: Drinking Water		Transfers to the State Water Resources Control Board the various duties and responsibilities imposed on the State Department of Public Health by the State Safe Drinking Water Act and the Safe Drinking Water State Revolving Fund Law of 1997. Requires the State Environmental Protection Agency to prepare a project initiation document for the transfer of the state drinking water program from the State Department of Public Health to a Division of Drinking Water Quality.	08/30/2013 - In SENATE Committee on APPROPRIATIONS: Held in committee.	

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
<u><b>AB 153</b></u> Bonilla (D)	Global Warming Solutions Act of 2006: Offsets		Amends the Global Warming Solutions Act of 2006. Requires the State Air Resources Board to adopt a specified process for the review and consideration of new offset protocols for reducing greenhouse gases and, commencing in 2014 and continuing thereafter, use that process to review and consider new offset protocols. Requires the board to adopt guidelines and incentives that prioritize the approval of specified offset protocols. Requires the board to submit a specified annual report to the Legislature.	05/24/2013 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.	
<u><b>AB 183</b></u> Dickinson (D)	Delta Protection Commission: Executive Director		Amends the Johnson-Baker-Andal-Boatwright Delta Protection Act of 1992. Requires the Executive Director of the Delta Commission to determine a discretionary project located in the primary zone to be consistent with the resource management plan provided that the project satisfies specified criteria. Authorizes appeals to specified decisions.	02/15/2013 - To ASSEMBLY Committees on WATER, PARKS AND WILDLIFE and NATURAL RESOURCES.	
<u><b>AB 194</b></u> Campos (D)	Open Meetings: Protections for Public Criticism		Makes it a misdemeanor for a member of a legislative body, while acting as a chairperson of a legislative body of a local agency, to prohibit public criticism protected under the Ralph M. Brown Act. Authorizes a district attorney to commence an action for the purpose of obtaining a judicial determination that an action taken by a legislative body of a local agency in violation of the protection for public criticism is null and void.	02/07/2013 - To ASSEMBLY Committee on LOCAL GOVERNMENT.	
<u><b>AB 218</b></u> Dickinson (D)	Employment Applications: Criminal History		Prohibits a state or local agency from asking an applicant for employment to disclose information regarding a criminal conviction until the agency has determined the applicant meets the minimum employment qualifications for the position. Includes specified findings and declarations of the Legislature in support of this policy.	10/10/2013 - Signed by GOVERNOR.;10/10/2013 - Chaptered by Secretary of State. Chapter No. 699	
<u><b>AB 229</b></u> Perez J (D)	Infrastructure and Revitalization Financing Districts		Authorizes the creation by a city, county, city and county, and joint powers authority, of an infrastructure and revitalization financing district and the issuance of debt with voter approval. Authorizes the creation of a district and the issuance of debt. Authorizes a district to finance projects in redevelopment project areas and former redevelopment project areas and former military bases.	09/11/2013 - In ASSEMBLY. From Unfinished Business. To Inactive File.	

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
<u>AB 243</u> Dickinson (D)	Local Government: Infrastructure Financing Districts		Authorizes the creation of an infrastructure and revitalization financing district and the issuance of debt with voter approval. Authorizes a district to finance projects in redevelopment project areas and former redevelopment project areas and former military bases if special conditions are met. Authorizes a district to fund various projects, including watershed land used for the collection and treatment of water for urban uses, flood management, open space, habitat restoration and development purposes.	09/11/2013 - In ASSEMBLY. To Inactive File.	
<u>AB 294</u> Holden (D)	Local-State Joint Investment Partnership Program		Establishes a pilot program whereby certain local government entities, upon the approval and oversight of the Infrastructure and Economic Development Bank, are authorized to reallocate their annual payments of property tax revenue directed to the Educational Revenue Augmentation Fund to instead finance certain kinds of public works that further state policy. Requires each entity operating a project under the program and the bank to submit reports on program results.	05/24/2013 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.	
<u>AB 295</u> Water, Parks and Wildlife Cmt	Water: Water Supply: Infrastructure		Requires the State Water Resources Control Board and the Drinking Water and Environmental Management Division of the State Department of Public Health to initiate and complete a comprehensive study relating to the need for state funding for water projects and to provide a report to the Legislature summarizing those findings.	05/06/2013 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.	
<u>AB 371</u> Salas (D)	Sewage Sludge: Kern County		Authorizes the Kern County Board of Supervisors, upon a majority vote, to regulate or prohibit by ordinance, in a manner more stringent than state or federal law and in a nondiscriminatory manner, the land application of sewage sludge in unincorporated areas in the jurisdiction of the county. Relates to applications for waste discharge.	05/16/2013 - In ASSEMBLY. To Inactive File.	
<u>AB 378</u> Hueso (D)	Resources: Delta Research		Requires a person conducting Delta research whose research is funded, in whole or in part, by the state, to take specified actions with regard to the sharing of the primary data, samples, physical collections, and other supporting materials created or gathered in the course of that research. Authorizes the Delta Independent Science	03/07/2013 - To ASSEMBLY Committees on ACCOUNTABILITY AND	



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Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			Board to adopt guidelines to provide adjustments to, and, where essential, exceptions from, these requirements.	ADMINISTRATIVE REVIEW and WATER, PARKS AND WILDLIFE.	
<b>AB 380</b> Dickinson (D)	California Environmental Quality Act: Notice		Amends the California Environmental Quality Act. Requires that notices regarding environmental impact reports filed by lead agencies need to be filed with the Office of Planning and Research and the county clerk and posted by the clerk for public review. Provides notice requirements for projects that are determined to be exempted from the Act.	06/13/2013 - To SENATE Committee on ENVIRONMENTAL QUALITY.	
<b>AB 410</b> Jones-Sawyer (D)	Public Employee Health Benefits: Enrollment		Permits an annuitant who reinstates from retirement under the Public Employees' Retirement System for employment by the state or a contracting agency and who subsequently retires again on or after a specified date to enroll in a health benefit plan under the Public Employees' Medical and Hospital Care Act for which they are eligible as an annuitant of the employer from which they retired, upon specified conditions. Requires the person's retirement to occur within a specified time period after separation.	10/04/2013 - Signed by GOVERNOR.;10/04/2013 - Chaptered by Secretary of State. Chapter No. 525	
<b>AB 416</b> Gordon (D)	Local Emission Reduction Program		Creates the Local Emission Reduction Program and requires money to be available from the general fund for providing grants and other financial assistance to develop and implement greenhouse gas emissions reduction projects in the state, giving consideration to the ability of a project to create local job training and job creation benefits and achieve greenhouse gas emissions reduction. Provides the public entities that will be required to administer the program.	05/24/2013 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.	
<b>AB 426</b> Salas (D)	Water Transfers: Water Rights Decrees		Amends existing law that provides that any water right determined under a court decree issued after a specified date, is transferable. Eliminates the requirement that a court decree be issued after a specified date.	10/08/2013 - Signed by GOVERNOR.;10/08/2013 - Chaptered by Secretary of State. Chapter No. 634	
<b>AB 436</b> Jones-Sawyer (D)	Inverse Condemnation: Comparative Fault		Applies the doctrine of comparative fault to inverse condemnation actions. Requires a court or arbitrator to reduce the compensation paid to a plaintiff in an inverse condemnation proceeding in direct	07/02/2013 - In SENATE Committee on JUDICIARY: Not	

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			proportion to his or her percentage of fault, if any, in the damaging of property that constitutes a taking. Provides the circumstances under which the plaintiff shall not recover his or her postoffer costs and shall pay the defendant's postoffer costs, including expert witness costs.	heard.	
<b>AB 507</b> Garcia (D)	Public Employees Retirement: Retirement Death Benefit		Requires that the amount paid pursuant to the Public Employees Retirement Law Post Retirement Death Benefit be a specified amount for a death occurring during a specified period. Increases that amount each year as specified at which point the amount would be a specified amount and would be adjusted annually thereafter.	05/24/2013 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.	
<b>AB 515</b> Dickinson (D)	California Environmental Quality Act: Judicial Review		Establishes a CEQA Compliance Division of the Superior Court in a county in which the Attorney General maintains an office. Provides the division with original jurisdiction over actions of proceedings brought pursuant to the CEQA and matters related to land use and environmental laws. Provides decisions of the division may be reviewed by way of a petition for an extraordinary writ. Provides the contents of a writ if a public agency is found to be in error and what action the agency must take to comply.	04/23/2013 - In ASSEMBLY Committee on JUDICIARY: Not heard.	
<b>AB 536</b> Wagner (R)	Contractors: Payments		Amends existing law that allows specified persons to withhold from a contractor or subcontractor no more than a specified percentage of any disputed amount if there is a good faith dispute over the amount due on a contract payment. Excludes specified amounts from being considered disputed amounts, provides that disputed amounts shall not include any action related liquidated damages assessed by the owner against the prime contractor, and any amount regarding a mechanic's lien to stop payment notice.	04/16/2013 - In ASSEMBLY Committee on BUSINESS, PROFESSIONS & CONSUMER PROTECTION: Not heard.	
<b>AB 543</b> Campos (D)	California Environmental Quality Act: Translation	Oppose	Requires a lead agency to translate certain notices required by the California Environmental Quality Act and a summary of any negative declaration, mitigated negative declaration, or environmental impact report when a group of non-English-speaking people comprises at minimum percentage of the population within the lead agency's jurisdiction and the proposed project is to be located at or near an area where the group of non-English-speaking	06/13/2013 - Re-referred to SENATE Committee on ENVIRONMENTAL QUALITY.	

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			people comprises that same percentage of residents of the area.		
<b>AB 551</b> Ting (D)	Local Government: Urban Agriculture Incentive Zones		Enacts the Urban Agriculture Incentive Zones Act. Authorizes, under specified conditions, a city, county, or city and county and a landowner to enter into a contract to enforceably restrict the use of vacant, unimproved or otherwise blighted lands for small-scale production of agricultural crops and animal husbandry. Requires the county assessor to consider, when valuing real property for property taxation purposes, property that is enforceably restricted by a contract entered into pursuant to the Act.	09/28/2013 - Chaptered by Secretary of State. Chapter No. 406	
<b>AB 607</b> Perea (D)	Worker's Compensation: Dependent Children		Amends existing law that establishes a workers' compensation system. Eliminates the requirement that, in order to conclusively presume that children under 18, or certain adult children, are wholly dependent for support on the deceased employee-parent, there not be a surviving totally dependent parent.	10/13/2013 - Chaptered by Secretary of State. Chapter No. 786	
<b>AB 613</b> Hueso (D)	Water Reclamation		Makes technical, nonsubstantive changes to a provision of the Water Recycling Law that provides that a person recycling water or using recycled water in violation of specific provisions is guilty of a misdemeanor.	02/20/2013 - INTRODUCED.	
<b>AB 621</b> Wagner (R)	Local Government: Bonds		Relates to local government bonds and investment firms. Prohibits a local agency from entering into a financial advisory, legal advisory, underwriting, or similar relationship with an individual or firm that provides or will provide bond campaign services to the bond campaign. Defines certain terms for those purposes.	07/03/2013 - In SENATE Committee on GOVERNANCE AND FINANCE: Heard, remains in Committee.	
<b>AB 662</b> Atkins (D)	Local Government: Redevelopment: Successor Agencies		Deletes a prohibition on the inclusion of redevelopment project areas in infrastructure financing districts. Authorizes the district to finance a project that is located in, or overlaps with, a redevelopment project area or former project area. Relates to procedures governing the contracting requirements and the commitment of new tax funds for new redevelopment agencies. Relates to the disposition of excess tax funds to local agencies and school entities. Relates to administrative costs.	10/13/2013 - Vetoed by GOVERNOR.	
<b>AB 683</b>	Local Government: Fines and		Authorizes a city, county, city and county, or special district to, after	10/05/2013 - Vetoed by	



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Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
Mullin (D)	Penalties: Assessments		notice and public hearing, specially assess any fines or penalties not paid after demand by the city, county, city and county or district against real property owned by the person owing those fines or penalties, where the fines or penalties are related to ordinance violation on the real property upon which the fines or penalties would be specially assessed, and the ordinance violations constitute a threat to public health and safety.	GOVERNOR.	
<b>AB 687</b> Hernandez R (D)	Electricity		Requires the Public Utilities Commission, when authorizing additional direct transactions for retail nonresidential end-use customers, to provide the highest priority to acquire electric services from other providers to entities treating and remediating groundwater that is identified as contaminated on a site listed as a Superfund site in a disadvantaged or severely disadvantaged community or a public drinking water system of such communities. Requires the treatment and remediation using certain moneys.	08/30/2013 - In SENATE Committee on APPROPRIATIONS: Held in committee.	
<b>AB 690</b> Campos (D)	Jobs and Education Financing Districts		Revises and recasts the provisions governing infrastructure financing districts. Provides for the creation of jobs and education financing districts without voter approval. Makes various conforming changes. Authorizes a public financing authority to enter into joint powers agreements with affected taxing entities with regard to nontaxing authority or powers only. Authorizes a district to implement hazardous cleanup under the Polanco Redevelopment Act.	09/11/2013 - From ASSEMBLY Committee on LOCAL GOVERNMENT with author's amendments.;09/11/2013 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LOCAL GOVERNMENT.	
<b>AB 743</b> Logue (R)	Local Government Reorganization		Amends Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. Provides that the authority to initiate, conduct and complete specified changes in organization or reorganizations does not apply to any territory that became surrounded or substantially surrounded by a city to which the annexation is proposed, except for islands that were created as a result of boundary adjustments	08/26/2013 - Signed by GOVERNOR.;08/26/2013 - Chaptered by Secretary of State. Chapter No. 138	

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			between two counties.		
<b>AB 756</b> Melendez (R)	Environmental Quality Act: Court Review: Public Works		Applies the provisions of the California Environmental Quality Act and the Jobs and Economic Improvement Through Environmental Leadership Act of 2011 to a public works project, defined to mean an infrastructure project carried out by the city, county, special district, or state government or contracted out to a private entity by the special district or local or state government.	04/11/2013 - From ASSEMBLY Committee on JUDICIARY with author's amendments.;04/11/2013 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on JUDICIARY.	
<b>AB 766</b> Gaines B (R)	Attorney General: Investigations		Prohibits the Attorney General from offering a promise of use or transactional immunity during the course of an investigation into the misuse of public funds, unless specified findings are made. Requires the Attorney General to submit a written copy of the findings to a presiding judge.	04/16/2013 - In ASSEMBLY Committee on PUBLIC SAFETY: Not heard.	
<b>AB 792</b> Mullin (D)	Utility User Tax: Exemption: Distributed Generation	Support	Exempts from any utility user tax imposed by a local jurisdiction, the consumption of electricity generated by a clean energy resource for the use of a single customer or customer's tenants.	10/04/2013 - Signed by GOVERNOR.;10/04/2013 - Chaptered by Secretary of State. Chapter No. 534	
<b>AB 794</b> Gorell (R)	Environmental Quality: Use of Landfill & Organic Waste		Exempts from the requirements of the California Environmental Quality Act a project that takes landfill materials or organic waste and converts then into renewable green energy if the lead agency finds that the project will result in a net reduction in greenhouse gas emissions or support sustainable agriculture. Exempts from the requirements of the act a project that uses biological processes to convert organic waste streams into nonchemical soil fertility products.	03/04/2013 - To ASSEMBLY Committee on NATURAL RESOURCES.	
<b>AB 801</b> Brown (D)	Junk Dealers and Recyclers: Nonferrous Materials		Requires junk dealers and recyclers to obtain specified information before providing payment for nonferrous materials marked with an indicia of ownership. Requires that this information be retained as	03/04/2013 - To ASSEMBLY Committee on	

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			part of the written record of purchases.	BUSINESS, PROFESSIONS & CONSUMER PROTECTION.	
<b>AB 803</b> Gomez (D)	Water Recycling Act of 2013	Support	Creates the Water Recycling Act of 2013. Authorizes compliance with effluent limitations and any other permit or waste discharge requirements for the release or discharge of advanced treated purified water that meets certain conditions. Requires certain notification prior to any discharge being allowed. Requires a cemetery supplied with disinfected tertiary recycled treated water that installs a hose bib in a public access area to post visible signage and labeling indicating that the water is nonpotable.	10/08/2013 - Signed by GOVERNOR.;10/08/2013 - Chaptered by Secretary of State. Chapter No. 635	
<b>AB 811</b> Lowenthal B (D)	Excavations: Regional Notification Center System		Amends existing law that requires any person planning to conduct an excavation to contact a regional notification center prior to excavation. Requires statewide information provided by operators and excavators regarding facility events to be compiled and made available in an annual report by regional notification centers and posted on the Internet Web sites of those regional notification centers.	09/06/2013 - Signed by GOVERNOR.;09/06/2013 - Chaptered by Secretary of State. Chapter No. 250	
<b>AB 823</b> Eggman (D)	Environment: State Farmland Protection Act	Oppose	Enacts the Farmland Protection Act. Requires that a lead agency reviewing a development project require that all feasible mitigation of the identified significant environmental impacts associated with the conversion of agricultural lands be completed by the project applicant and to consider the permanent protection or replacement of such land as feasible mitigation for identified significant effects on the land caused by the project.	04/29/2013 - From ASSEMBLY Committee on NATURAL RESOURCES: Do pass to Committee on AGRICULTURE.	
<b>AB 841</b> Torres (D)	Junk Dealers and Recyclers: Nonferrous Materials		Amends existing law that prohibits a junk dealer or a recycler from providing payment for nonferrous material unless the payment is made by cash or check, and the check is mailed or the cash or check is provided no later than three days after the date of the sale, and other requirements are met. Allows the payment for nonferrous materials only by check mailed to the seller's address.	10/03/2013 - Vetoed by GOVERNOR.	
<b>AB 850</b>	Public Capital Facilities:		Authorizes specified joint powers authorities, upon application of a	10/08/2013 - Signed by	



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Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
Nazarian (D)	Water Quality		local agency that owns and operates a publicly owned utility, to issue rate reduction bonds for a utility project. Provides the bonds are secured by utility project property. Authorizes a utility project charge to finance such bonds. Requires a bond review for issue qualification. Requires application fees for bond review cost reimbursement. Requires the Pollution Control Financing Authority to establish procedures for expedited review.	GOVERNOR.;10/08/2013 - Chaptered by Secretary of State. Chapter No. 636	
<u>AB 892</u> Daly (D)	Parcel Taxes		Requires the State Board of Equalization to annually report specified information relating to the imposition of locally assessed parcel taxes including the type and rate of a parcel tax and the number of parcels subject to or exempt from the parcel tax.	05/24/2013 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.	
<u>AB 953</u> Ammiano (D)	California Environmental Quality Act		Amends the California Environmental Quality Act, which defines environment and significant effect on the environment for certain purposes. Revises those definitions. Requires a lead agency to include in an environmental assessment report, a detailed statement on any effects that may result in the locating a proposed project near natural hazards or adverse environmental conditions.	05/31/2013 - In ASSEMBLY. To Inactive File.	
<u>AB 993</u> Linder (R)	Contractors: Arbitration		Amends the Contractors' State License Law. Provides a party that submits a dispute with contractor to arbitration waives any right to recover attorney's fees or to challenge the arbitrator's award attorney's fees in a related civil action. Relates to the setting of the time, date, and location for a arbitration related hearing. Requires good cause to exclude any person from a hearing. Revises requirements regarding the recording of the hearing. Authorizes the reopening of a hearing prior to any award.	06/17/2013 - From SENATE Committee on BUSINESS, PROFESSIONS & ECON. DEVELOPMENT: Do pass to Committee on JUDICIARY.	
<u>AB 1035</u> Muratsuchi (D)	Local Agencies: Financial Reports		Raises the amount forfeited for failure to submit financial reports to all local agencies. Doubles fines if the agency fails to submit the report to the Controller for 2 consecutive years. Triples the fines if the agency fails to submit the report to the Controller for 3 or more consecutive years. Requires the Controller to conduct an independent audit report of an agency that issues conduit revenue bonds. Specifies the agency that has a forfeiture or payment still	06/11/2013 - In SENATE Committee on GOVERNANCE AND FINANCE: Not heard.	

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			must file the report.		
<b>AB 1043</b> Chau (D)	Drinking Water, Quality, Flood, River Protection		Amends the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006. Eliminates the requirement to develop and adopt regulations and requires a grantee of certain initiative bond act funds to take specific actions to recover the costs of cleanup and to utilize those funds for certain groundwater contamination cleanup projects.	06/25/2013 - In SENATE Committee on NATURAL RESOURCES AND WATER: Not heard.	
<b>AB 1080</b> Alejo (D)	Community Revitalization & Investment Authorities		Authorizes certain public entities of a community revitalization and investment area to form a community revitalization plan within a community revitalization and investment authority to carry out the Community Redevelopment Law in a specified manner. Requires the authority to adopt a community revitalization plan for a community revitalization and investment area and authorizes the authority to include in that plan a provision for the receipt of tax increment funds.	08/30/2013 - In SENATE Committee on APPROPRIATIONS: Held in committee.	
<b>AB 1090</b> Fong (D)	Public Officers: Conflicts of Interest: Contracts		Provides that a person who violates the prohibition against being financially interested in a contract, or who causes another person to violate the prohibition, is subject to administrative and civil fines. Establishes certain interests that are not subject. Authorizes the Fair Political Practices Commission to enforce these violations by bringing an administrative or civil action against a person who is subject to the prohibition, upon specified authorization. Relates to requests for advice.	10/08/2013 - Signed by GOVERNOR.;10/08/2013 - Chaptered by Secretary of State. Chapter No. 650	
<b>AB 1131</b> Skinner (D)	Firearms		Extends the prohibitory period for possession of a firearm or deadly weapon for a person who communicates to a licensed psychotherapist a serious threat of physical violence against a reasonably identifiable victim or victims. Allows a person to petition the court to allow them to possess a firearm under specified provisions of existing law. Relates to procedures for the return of a confiscated firearm for individual detained for examination and mentally ill individuals. Relates to required reporting.	10/11/2013 - Signed by GOVERNOR.;10/11/2013 - Chaptered by Secretary of State. Chapter No. 747	
<b>AB 1140</b> Daly (D)	Public Works: Prevailing Wages		States that if the Director of Industrial Relations determines, within a semiannual period, that there is a change in any prevailing rate of per	10/13/2013 - Vetoed by GOVERNOR.	

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			diem wages in a locality, that determination applies to any public works. Authorizes any contractor, awarding body, or representative affected by a change in rates to file with the director a verified petition to review the determination of that rate. Requires the initiation of an investigation or hearing to make a final determination.		
<u>AB 1149</u> Campos (D)	Identity Theft: Local Agencies		Relates to disclosure of any breach of an agency security to any resident whose unencrypted personal information was acquired by an unauthorized person. Expands disclosure requirements to apply to a breach of computerized data that is owned or licensed by a local agency.	09/27/2013 - Signed by GOVERNOR.:09/27/2013 - Chaptered by Secretary of State. Chapter No. 395	
<u>AB 1181</u> Gray (D)	Public Employee Organizations: Members: Paid Leave		Requires the local public agency to give reasonable time off, without loss of compensation or other benefits, to employee representatives when they are testifying or appearing as the designated representative of the employee organization in proceedings before the Public Employment Relations Board concerning a charge filed by the organization against the public agency or by an agency against the organization, or when they are testifying or representing the organization in personnel or merit matters.	09/09/2013 - Chaptered by Secretary of State. Chapter No. 305	
<u>AB 1200</u> Levine (D)	Recycled Water: Agricultural Irrigation Impoundments	Support	Permits the San Francisco Bay Regional Water Quality Board to authorize a voluntary pilot project for the purposes of investigating potential water quality impacts associated with maximizing the supplementation of agricultural irrigation impoundments with disinfected tertiary treated recycled water, if the board finds the project satisfies specified criteria. Requires the project to include a stakeholder advisory group. Authorizes a formula development for future waste discharge requirements.	10/07/2013 - Vetoed by GOVERNOR.	
<u>AB 1212</u> Levine (D)	Public Contracts: Bids: Equal Materials or Service		Prohibits certain bid specifications from requiring a bidder to provide submission of data substantiating a request for a substitution of an equal item prior to the bid or proposal deadline.	03/07/2013 - To ASSEMBLY Committee on ACCOUNTABILITY AND ADMINISTRATIVE	



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<u>AB 1248</u> Cooley (D)	Controller: Internal Guidelines for Local Agencies		Requires the Controller to develop internal control guidelines applicable to a local agency to prevent and detect financial errors and fraud. Requires the Controller to post the completed guidelines on the Controller's Internet Web site and update them, as he or she deems necessary.	REVIEW. 08/28/2013 - Signed by GOVERNOR.;08/28/2013 - Chaptered by Secretary of State. Chapter No. 190	
<u>AB 1251</u> Gorell (R)	Water Quality: Stormwater		Requires the Secretary for Environmental Protection to convene a stormwater task force to review, plan, and coordinate stormwater-related activity to maximize regulatory effectiveness in reducing water pollution. Requires the task force to submit a statewide stormwater management plan to the Legislature. Requires the task force to consider specified issues in developing the plan.	05/24/2013 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.	
<u>AB 1331</u> Rendon (D)	Climate Change Response for Clean and Safe Water		Repeals the Safe, Clean, and Reliable Drinking Water Supply Act of 2012, Enacts the Climate Change Response for Clean and Safe Drinking Water Act of 2014, which, if adopted by the voters, would authorize the issuance of bonds in a specified amount pursuant to the State General Obligation Bond Law to finance a climate change response for a clean and safe drinking water program.	09/11/2013 - In SENATE. Senate Rule 29.3(b) suspended.;09/11/2013 - From SENATE Committee on NATURAL RESOURCES AND WATER with author's amendments.;09/11/2013 - In SENATE. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES AND WATER.	
<u>AB 1349</u> Gatto (D)	CalConserve Water Use Efficiency Revolving Fund		Establishes the CalConserve Water Use Efficiency Revolving Fund for the purpose of water use efficiency projects. Requires moneys in the fund to be used for purposes that include, but are not limited to, at-or-below market interest rate loans.	05/24/2013 - In ASSEMBLY Committee on APPROPRIATIONS:	

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<b>AB 1365</b> Perez J (D)	State and Local Agency Reports: Legislative Counsel		Requires the Legislative Council to make a list of agency reports available to the public by posting it on an Internet Web site. Authorizes state and local agencies to file certain reports with the Counsel electronically, with a hyperlink for report access. Removes the requirement to remove obsolete reports from the list of reports and that the list be provided to each member of the Legislature. Requires providing a hyperlink to each member whereby the list or report could be accessed.	Held in committee. 08/28/2013 - Signed by GOVERNOR.;08/28/2013 - Chaptered by Secretary of State. Chapter No. 192	
<b>ACA 1</b> Donnelly (R)	Administrative Regulations: Legislative Approval		Requires an administrative agency to submit all regulations to the Legislature for approval. Authorizes the Legislature, by means of a concurrent resolution, to approve a regulation adopted by an administrative agency of the state.	05/01/2013 - In ASSEMBLY Committee on ACCOUNTABILITY AND ADMINISTRATIVE REVIEW: Failed passage.	
<b>ACA 8</b> Blumenfield (D)	Local Government Financing: Voter Approval		Proposes an amendment to the Constitution to create an additional exception to the 1% limit for an ad valorem tax rate imposed by a city, county, city and county, or special district, to service bonded indebtedness incurred to fund specified public improvements and facilities, or buildings used primarily to provide sheriff, police, or fire protection services, that is approved by 55% of the voters of the city, county, city and county, or special district.	06/27/2013 - To SENATE Committees on GOVERNANCE AND FINANCE and ELECTIONS AND CONSTITUTIONAL AMENDMENTS.	
<b>SB 1</b> Steinberg (D)	Sustainable Communities Investment Authority		Authorizes certain public entities of a Sustainable Communities Investment Area to form a Sustainable Communities Investment Authority to carry out the Community Redevelopment Law. Provides for tax increment funding receipt under certain economic development and planning criteria. Establishes prequalification requirements for receipt of funding. Requires monitoring and enforcement of prevailing wage requirements within the area. Excludes certain types of farmland.	09/12/2013 - In SENATE. To Inactive File.	
<b>SB 13</b>	Public Employees'		Corrects an erroneous cross-reference in the Public Employees'	10/04/2013 - Signed by	

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Beall (D)	Retirement Benefits		Pension Reform Act of 2013 regarding the Judges' Retirement System I and II defined benefit formula adoption. Amends the act regarding employer defined benefit formulas to new safety members. Relates to contribution rates for defined pension plans. Repeals provisions regarding disability retirements. Relates to state miscellaneous or industrial members service credit. Relates to public employee bargaining rights.	GOVERNOR.;10/04/2013 - Chaptered by Secretary of State. Chapter No. 528	
<b>SB 14</b> Gaines T (R)	Bear Lake Reservoir: Recreational Use		Relates to existing law which prohibits recreational use in which there is bodily contact with water in a reservoir in which water is stored for domestic use. Exempts from this prohibition any participant in the Bear Lake Reservoir, and establishes standards in this regard, including water treatment, monitoring, and reporting requirements. Subjects the Lake Alpine Water Company to suspension or revocation of any permit issued. Deems a violation would be subject to fines, penalties, or enforcement actions.	08/27/2013 - Signed by GOVERNOR.;08/27/2013 - Chaptered by Secretary of State. Chapter No. 172	
<b>SB 24</b> Walters (R)	Public Employees' Retirement: Benefit Plans		Authorizes a local agency public employer or public retirement system that offers a defined benefit pension plan to offer a benefit formula with a lower benefit factor at normal retirement age and that results in a lower normal cost than the benefit formulas that are currently required, for purposes of addressing a fiscal necessity.	01/10/2013 - To SENATE Committee on PUBLIC EMPLOYMENT AND RETIREMENT.	
<b>SB 33</b> Wolk (D)	Infrastructure Financing Districts: Voter Approval		Revises provisions governing infrastructure financing districts. Eliminates the requirement of voter approval for creation of the district and for bond issuance, and authorizes the legislative body to create the district subject to specified procedures. Authorizes the creation of such district subject to specified procedures. Authorizes a district to finance specified actions and project. Prohibits financing until a certain requirement is met. Prohibits assistance to a vehicle dealer or big box retailer.	09/11/2013 - In ASSEMBLY. To Inactive File.	
<b>SB 39</b> De Leon (D)	Local Agencies: Public Officers: Claims and Liability		Requires the forfeiture of a contractual, common law, constitutional, or statutory claim against a local public agency employer to retirement or pension rights or benefits by a local public officer who exercised discretionary authority and who was convicted of a felony for conduct arising out of, or in the performance of, his or her	10/12/2013 - Chaptered by Secretary of State. Chapter No. 775	



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<b>SB 40</b> Pavley (D)	Safe, Clean, and Reliable Drinking Water Supply Act		official duties. Changes the name of the Safe, Clean, and Reliable Drinking Water Supply Act of 2012 to the Safe, Clean, and Reliable Drinking Water Supply Act of 2014. Declares the intent of the Legislature to amend the act for the purpose of reducing and potentially refocusing the bond.	01/31/2013 - Re-referred to SENATE Committees on NATURAL RESOURCES AND WATER and RULES.	
<b>SB 42</b> Wolk (D)	Safe Drinking Water, Water Quality, Flood Protection		Enacts the Safe Drinking Water, Water Quality, and Flood Protection Act of 2014, which, if adopted by the voters, would authorize the issuance of bonds in a specified amount pursuant to the State General Obligation Bond Law to finance a safe drinking water, water quality, and flood protection program.	09/11/2013 - In SENATE. Senate Rule 29.3(b) suspended.;09/11/2013 - From SENATE Committee on NATURAL RESOURCES AND WATER with author's amendments.;09/11/2013 - In SENATE. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES AND WATER.	
<b>SB 64</b> Corbett (D)	Global Warming Solutions: Clean Technology Investment		Creates the Clean Technology Investment Account within the Greenhouse Gas Reduction Fund. Requires appropriations of moneys in the fund or other funds to the account in the Budget Act. Makes such funds available for grants to nonprofit public benefit corporations and regional technology alliances to design and implement program that accelerate the development, demonstration, and deployment of technologies that would reduce greenhouse gas emissions and foster job creation in the state.	06/24/2013 - Re-referred to ASSEMBLY Committee on NATURAL RESOURCES.	
<b>SB 123</b>	Environmental and Land-Use		Requires the Judicial Council to direct the creation of an	05/23/2013 - In	

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Corbett (D)	Court		environmental and land-use division within the Superior Courts selected by the Council to process civil proceedings brought pursuant to the California Environmental Quality Act or in specified subject areas, including air quality, biological resources, climate change, hazards and hazardous materials, land use planning, and water quality. Increases the fees for environmental license plates with revenue for the environmental and land use court.	SENATE Committee on APPROPRIATIONS: Held in committee.	
<b>SB 124</b> Corbett (D)	Public Contracts: Bid Preferences: Clean Energy		Authorizes a public agency including the Trustees of the California State University to award a contract based on the fact that a clean energy device, technology, or system was manufactured in the state if the contract is for an energy service contract determined to be in the best interests of the agency. Requires those entities to accept bids or proposals for such contract to provide a 5% preference to a bidder that certifies that everything regarding the device or technology was manufactured in the state.	08/30/2013 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.	
<b>SB 176</b> Galgiani (D)	Administrative Procedures		Requires the Office of Administrative Law to allow electronic submission to the Office by a state agency of notices required to be published and information required to be submitted pursuant to specified provisions of existing law. Expands the public discussion required described in existing law to require a state agency proposing to adopt regulations, prior to publication of a notice of proposed adoption, amendment, or repeal, to involve parties that would be subject to the regulations in such discussions.	08/30/2013 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.:08/30/2013 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.	
<b>SB 182</b> Governance and Finance Cmt	Validations		Enacts the Second State Validating Act of 2013, which would validate the organization, boundaries, acts, proceedings, and bonds of the state and counties, cities, and specified districts, agencies, and entities.	09/06/2013 - Signed by GOVERNOR.;09/06/2013 - Chaptered by Secretary of State. Chapter No. 207	
<b>SB 183</b> Governance and Finance	Validations		Enacts the Third State Validating Act of 2013, which would validate the organization, boundaries, acts, proceedings, and bonds of the state and counties, cities, and specified districts, agencies, and	09/06/2013 - Signed by GOVERNOR.;09/06/2013 - Chaptered by	

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Cmt			entities.	Secretary of State. Chapter No. 209	
<b>SB 184</b> Governance and Finance Cmt	Local Government: Omnibus Bill		Relates to the procedures governing the offering of subdivided lands for sale or lease, the definition of family member and domestic partner under the Public Cemetery District Law, the provisions of law regarding the abuse of public office or position to include bribery of a Member of the Legislature, subdivision map provisions, facsimile signatures and the county recorder, historical property use contracts recording, the Baldwin Hill Conservancy, and the Ventura County Resource Conservation District.	09/06/2013 - Signed by GOVERNOR.;09/06/20 13 - Chaptered by Secretary of State. Chapter No. 210	
<b>SB 193</b> Monning (D)	Hazard Evaluation System and Information Service		Relates to the repository of data on toxic materials and harmful physical agents in places of employment. Requires chemical manufacturers, formulators, suppliers, distributors, importers, and their agents to provide Hazard Evaluation System and Information Service the names and addresses of their customers who have purchased specified chemicals or commercial products containing those chemicals, and certain other information upon a request from the Service. Exempts the names and address from disclosure.	08/06/2013 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.	
<b>SB 322</b> Hueso (D)	Water Recycling	Support	Requires the State Department of Public Health to investigate the feasibility of developing uniform water recycling criteria for direct potable reuse. Requires the department to convene a panel to establish regulatory criteria for such reuse. Requires the panel to include a limnologist. Requires convening of a related advisory group, task force, or other group. Authorizes the department to contract with a public university or other research institution. Authorizes acceptance of funds from nonstate sources.	10/08/2013 - Signed by GOVERNOR.;10/08/20 13 - Chaptered by Secretary of State. Chapter No. 637	
<b>SB 367</b> Block (D)	Developmental Services: Regional Centers		Requires that training and support to contracted regional centers for persons with developmental disabilities include issues relating to linguistic and cultural competency. Requires each regional center to post on its Internet Web site information regarding the training and support provided. Requires an annual review of the regional center performance in providing services that are linguistically and culturally appropriate. Authorizes the board to provide the center	10/09/2013 - Signed by GOVERNOR.;10/09/20 13 - Chaptered by Secretary of State. Chapter No. 682	



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			direction with review recommendations.		
<b>SB 390</b> Wright (D)	Employee Wage Withholdings: Failure to Remit		Makes it a crime for an employer to fail to remit withholdings from an employee's wages that were made pursuant to state, local, or federal law. Prescribes how recovered withholdings or court-imposed restitution, if any, are to be forwarded or paid.	10/10/2013 - Signed by GOVERNOR.;10/10/20 13 - Chaptered by Secretary of State. Chapter No. 718	
<b>SB 395</b> Jackson (D)	Hazardous Waste: Wells		Amends part of the Hazardous Waste Control Law that prohibits a person from discharging hazardous waste into an injection well unless certain conditions are met and imposes other requirements upon the operator of such well and defines injection for these purposes as excluding wells regulated by the Division of Oil and Gas. Deletes the exclusion of those regulated wells from the definition of injection well. Requires testing of the waste. Specifies that oil field waste does not include hazardous waste.	05/30/2013 - In SENATE. From third reading. To Inactive File.	
<b>SB 407</b> Hill (D)	Local Government: Officers and Employees: Contracts		Relates to prohibitions against automatic renewal of contracts that provide compensation increases for local agency executives. Includes within the definition of local agency executive any person who is a deputy or assistant chief executive officer, and any person whose position is held by an employment contract between that person and the local agency.	09/06/2013 - Signed by GOVERNOR.;09/06/20 13 - Chaptered by Secretary of State. Chapter No. 213	
<b>SB 424</b> Emmerson (R)	Vehicles: Windshields: Obstructions		Exempts from the prohibition against placing an object that obstructs or reduces the driver's clear view in or upon a vehicle owned by a government agency if those objects or materials do not interfere with the driver's clear view of approaching traffic.	03/11/2013 - To SENATE Committee on TRANSPORTATION AND HOUSING.	
<b>SB 425</b> DeSaulnier (D)	Public Works: the Public Works Peer Review Act of 2013		Allows a public agency, principally tasked with administering, planning, developing, and operating a public works project, to establish a specified peer review group. Requires the administering agency, if a peer group is established, to draft a charter, published on the agency's Internet Web site, related to the duties of the peer review group.	09/06/2013 - Signed by GOVERNOR.;09/06/20 13 - Chaptered by Secretary of State. Chapter No. 252	
<b>SB 436</b> Jackson (D)	Port Hueneme Beach Shoreline Protection.		Relates to Port Hueneme Beach shoreline protection. Appropriates moneys from the Safe Neighborhood Parks, Clean Water, Clean Air,	09/28/2013 - Chaptered by Secretary of State.	

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			and Coastal Protection Bond Fund to the State Coastal Conservancy for a grant to the City of Port Hueneme. requires funding be allocated for emergency measures along Hueneme Beach to prevent severe infrastructure damage to streets and property caused by beach erosion and flooding.	Chapter No. 416	
<b>SB 449</b> Galgiani (D)	Local Water Supply Programs or Projects: Funding	Oppose	Requires the Department of Water Resources to conduct a statewide inventory of local regional water supply projects and post specified results of the inventory on the Department's Internet Web site.	08/22/2013 - Re-referred to SENATE Committee on NATURAL RESOURCES AND WATER.	
<b>SB 462</b> Monning (D)	Employment: Compensation		Amends existing law which requires a court in any action brought for the nonpayment of wages, fringe benefits, or health and welfare or pension fund contributions, to award reasonable attorney's fees and costs to the prevailing party. Makes the award where the prevailing party is not an employee contingent on a finding that the employee brought the court action in bad faith.	08/26/2013 - Signed by GOVERNOR.;08/26/2013 - Chaptered by Secretary of State. Chapter No. 142	
<b>SB 536</b> Berryhill T (R)	Property-Related Services		Provides that a county shall not be obligated to provide subsidies to cure any deficiencies in funding of property-related services provided within the jurisdiction of a defined district, under any of certain specified circumstances. Provides that this prohibition would not apply if the county's governing board had agreed to subsidize the district's services before the completion of a majority protest proceeding or election.	06/17/2013 - To ASSEMBLY Committee on LOCAL GOVERNMENT.	
<b>SB 556</b> Corbett (D)	Agency: Ostensible: Nongovernmental Entities		Relates to third person contracts and ostensible agencies. Prohibits a person, firm, corporation, or association that is a nongovernmental entity and contracts to perform labor or services relating to public health or safety for a public entity from displaying on a vehicle or uniform a logo that reasonably could be interpreted as implying the labor or services are being performed by employees of a public agency, unless the vehicle and uniform displays a specified disclosure.	09/11/2013 - In ASSEMBLY. To Inactive File.	
<b>SB 617</b>	California Environmental		Amends various provisions of the California Environmental Quality	05/30/2013 - In	

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Evans (D)	Quality Act		Act. Requires that notices regarding environmental impact reports filed by lead agencies need to be filed with the Office of Planning and Research and the county clerk and posted by that clerk for public review. Provides additional duties regarding notices by the Office and the clerk. Requires a statement in the report regarding the placement of the project near natural hazards or adverse environment conditions. Repeals specified exemptions.	SENATE. From third reading. To Inactive File.	
<b>SB 620</b> Wright (D)	Water Replenishment Districts		Amends the Water Replenishment District Act. Eliminates a requirement that a specified percentage of a district reserve fund be expended for water purchases. Provides that an operator of a water-producing facility is liable to a district for a specified financial penalty for failing to be registered with the district or to make specified reports. Requires a district to establish a budget advisory committee. Relates to the awarding of attorney's fees in related civil actions.	10/08/2013 - Signed by GOVERNOR.;10/08/2013 - Chaptered by Secretary of State. Chapter No. 638	
<b>SB 628</b> Beall (D)	Infrastructure Financing: Transit Priority Projects		Eliminates the requirement of voter approval for the adoption of an infrastructure financing plan, the creation of an infrastructure financing district, and the issuance of bonds with respect to a transit priority project. Requires a specified percentage of the revenue for increasing, improving, and preserving the supply of lower and moderate-income housing. Requires a low-income housing replacement ordinance.	08/19/2013 - Withdrawn from Enrollment.;08/19/2013 - Ordered Held at SENATE desk.	
<b>SB 633</b> Pavley (D)	CEQA		Amends the California Environmental Quality Act. Specifies, for purposes of new information exception to the prohibition on requiring a subsequent or supplement environmental impact report, that a specified exception applies if new information was not known and could not have been known by the lead or any responsible agency at the time the report was certified as complete. Authorizes the development of guidelines to exempt projects involving minor temporary uses of land and public gatherings.	08/06/2013 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.	
<b>SB 636</b> Hill (D)	Redevelopment Property Tax Trust		Modifies the provision of law relating to the allocation of remaining local property tax revenues in the Redevelopment Property Tax Trust Fund by deleting language requiring that the provision be	05/23/2013 - In SENATE Committee on	



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			construed in such a manner so as to not increase any allocations of excess, additional, or remaining Educational Revenue Augmentation Fund funds that would otherwise have been allocated to cities, counties, cities and counties, or special districts pursuant to existing law.	APPROPRIATIONS: Held in committee.	
<b>SB 658</b> Correa (D)	Orange County Water District Act	SupportinCo ncept	Relates to the Orange County Water District Act that requires the person causing or threatening to cause the contamination or pollution to the surface or groundwaters of the district to be liable to the district for reasonable costs actually incurred in cleaning up or containing the contamination or pollution, abating the effects of the contamination or pollution, or taking other remedial action. Makes that person also liable for costs in investigating the contamination and pollution.	05/24/2013 - In SENATE. From third reading. To Inactive File.	
<b>SB 673</b> DeSaulnier (D)	Land Use: Development Project Review		Requires a city, county, or city and county, including a charter city or charter city and county, prior to approving or disapproving a proposed development project to cause a cost benefit analysis to be prepared, which would be paid for by the project applicant. Provides that such analysis would include specified assessments and projections including an assessment of the effect that the construction and operation of the development would have on the ability to implement general plan goals.	05/30/2013 - In SENATE. From third reading. To Inactive File.	
<b>SB 731</b> Steinberg (D)	Environment: California Environmental Quality Act		Relates to the State Environmental Quality Act. Provides that certain impacts of a residential, mixed-use, or employment center project within a transit priority area shall not be considered significant impacts. Requires guidelines for thresholds of significance for noise and transportation impacts to be made available. Requires preparation of environmental impact reports. Extends the tolling of time for judicial actions and mitigation measures. Relates to sustainable communities planning and grants.	09/11/2013 - From ASSEMBLY Committee on LOCAL GOVERNMENT: Do pass as amended.	
<b>SB 735</b> Wolk (D)	Sacramento-San Joaquin Delta Reform Act		Amends existing law that establishes the Delta Stewardship Council to create a Delta management plan. Authorizes prescribed local entities to enter into a memorandum of understanding or other written agreement with the council and the Department of Fish and	08/13/2013 - In ASSEMBLY Committee on WATER, PARKS	

**EXHIBIT "A"**  
**IRWD 2013 LEGISLATIVE MATRIX**  
 Updated October 16, 2013

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			Wildlife regarding multispecies conservation plans that describes how the parties would ensure that multispecies conservation plans that have been adopted or are under development are consistent with the Delta Plan.	AND WILDLIFE: Not heard.	
<b>SB 749</b> Wolk (D)	Habitat Protection: Endangered Species		Authorizes the Department of Fish and Wildlife to lease department-managed lands for agricultural activities. Authorizes the moneys collected from those leases to support the management, maintenance, restoration and operations of such lands. Requires the Department to annually provide an opportunity for hunters to comment and make recommendations concerning hunting programs. Relates to endangered species petitions and public hearings and the transfer of water when agricultural lands are being idled.	09/27/2013 - Signed by GOVERNOR.;09/27/2013 - Chaptered by Secretary of State. Chapter No. 387	
<b>SB 750</b> Wolk (D)	Building Standards: Water Meters: Multiunits		Requires a water purveyor providing water service to new multiunit residential or mixed use structures to require water measurement to each unit and to permit measurement to be by water meters or submeters. Requires submeters to comply with existing laws and regulations. Prohibits purveyor fees for submeters installed by the owner. Imposes certain requirements on landlords in related to the submetered water service. Relates to separate charge notification to tenant. Authorizes damages for violations.	08/13/2013 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Failed passage.;08/13/2013 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Reconsideration granted.	
<b>SB 754</b> Evans (D)	Environmental Quality Act		Amends the California Environmental Quality Act. Authorizes a person meeting specified requirements to bring an action or proceeding to enforce the implementation of the mitigation measures specified in a reporting and monitoring program if a project applicant fails to implement those measures. Prohibits a project proponent to contract for, direct or prepare the initial study, environmental impact report or negative declaration. Prohibits the use of a prior EIR for specified purposes.	05/23/2013 - In SENATE Committee on APPROPRIATIONS: Held in committee.	

**EXHIBIT "A"**  
**IRWD 2013 LEGISLATIVE MATRIX**  
 Updated October 16, 2013

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
<u>SB 757</u> Berryhill T (R)	Junk Dealers		Relates to junk dealers and recyclers. Permits a seller to use a passport from any country or a Matricula Consular issued by Mexico, along with another form of identification bearing an address, or an identification card issued by the United States, as identification. Specifies that the provisions governing secondhand dealers and coin dealers do not apply to junk dealers.	09/06/2013 - In ASSEMBLY. To Inactive File.	
<u>SB 761</u> DeSaulnier (D)	Family Temporary Disability Insurance		Provides that it is unlawful for an employer who regularly employs 10 or more individuals, or agent of an employer to discharge or in any other manner to discriminate against an individual because he or she has applied for, used or indicated an intent to apply for or use, family temporary disability insurance benefits.	05/30/2013 - In SENATE. From third reading. To Inactive File.	
<u>SB 770</u> Jackson (D)	Unemployment Compensation: Disability Benefits		Relates to family temporary disability leave. Expands the scope of the family temporary disability insurance program to include time off to care for a seriously ill grandparent, grandchild, sibling, or parent-in-law.	09/24/2013 - Signed by GOVERNOR.;09/24/2013 - Chaptered by Secretary of State. Chapter No. 350	
<u>SB 772</u> Emmerson (R)	Drinking Water		Requires the Department of Health, or a local health agency, to provide the address and telephone number for each public water system and state small water system to the Public Utilities Commission and to a local agency. Provides for water storage, purification and recycling. Exempts the Elsinore Valley Municipal Water District and the Eastern Municipal Water District from liability for injuries or damages arising out of the delivery of water to County Water Company of Riverside customers.	09/09/2013 - Withdrawn from SENATE Committee on GOVERNANCE AND FINANCE.;09/09/2013 - Re-referred to SENATE Committees on GOVERNANCE AND FINANCE and JUDICIARY.	
<u>SCA 10</u> Huff (R)	Legislative Procedure		Authorizes a committee to hear or act on a bill if the bill, in the form to be considered by the committee, has been in print and published on the Internet for at least 15 days. Prohibits either house of the Legislature from passing a bill until the bill, in the form to be voted on, has been made available to the public, in print and published on the Internet, for at least 72 hours preceding the vote.	01/31/2013 - To SENATE Committee on RULES.	



## Exhibit "B"

### Drinking Water Reorganization Task Force Roster

#### Task Force Members

Last Name	First Name	Organization
Amezquita	Horacio	San Jerardo Cooperative
Boyer	Paul	Self Help Enterprises
Carrillo	Omar	Community Water Center
Clary	Jennifer	Clean Water Action
Coffey	Brad	Metropolitan Water District
Crebbin-Coates	Rebecca	Planning and Conservation League
Cuevas	Jesse	Office of Assembly Member Perea
Currie	Phyllis	CMUA
Davis	Martha	Inland Empire Utility Association
DeBra	Jacques	American Water Works Association
DeMoss	Dan	California Rural Water Association
Duerig	Jill	ACWA
Firestone	Laurel	Community Water Center
Fredenburg	Bob	Assembly Environmental Safety and Toxic
Freeman	Catherine	
Hawks	Jack	California Water Association
Kar	Avinash	Natural Resources Defense Council
Larsen	Judi	California Endowment
Malan	Justin	California Conference of Directors of
Manning	Ken	San Gabriel Water Authority
Margolis	Andrea	Assembly Budget Committee
Marsom	Matthew	Public Health Institute
Moreno	Melanie	Senate Health
Moreno, Dr.	Edward	Monterey County
Mosher, Dr.	Chuck	Mariposa County
Pulmano	Rosielyn	Assembly Health
Ramirez	John	Monterey County
Seaton	Phoebe	Leadership Counsel for Justice and Accountability
Smith	Dave	WateReuse
Wagoner	Rachel	Senate Environmental Quality

#### Agency Attendees

Last Name	First Name	Organization
Almy	Matt	DOF
Billingsley	Kathleen	CDPH
Burns	Gordon	CalEPA

[Type text]

Calvert	Teresa	DOF
Campbell	Donna	CHHS
Chapman, Dr.	Ron	CDPH
D'Amato	DeeDee	SWRCB
Davis	Debbie	OPR
Doduc	Tam	SWRCB
Egel	Rob	SWRCB
Guzman-Aceves	Martha	Office of the Governor
Haven	Liz	SWRCB
Heidorn	Nicolas	EPA
Howard	Tom	SWRCB
Marcus	Felicia	SWRCB
Moratti	Ellen	DOF
Olson-Morgan	Janne	CHHS
Rechs	Dave	Office of the Governor
Rechtschaffen	Cliff	Office of the Governor
Starr	Mark	CDPH
Stauffacher	Kristin	CalEPA
Wagoner	Monica	CDPH

**Alternates**

Last Name	First Name	Organization
Schoellerman	Randy	Ken manning, San Gabrield Water Authority
West	Jennifer	Jack Hawks, CMUA

**Observers**

Last Name	First Name	Organization
Book	Steven	CDPH
Chen	Philip	DOF
Cole	Kathy	Metropolitan Water District
Forbes	Cindy	CDPH
Mazzer	David	CDPH
Milleman	Greg	Cal Water
Nagasako	Julie	CDPH
Tuck	Cindy	ACWA
White	Dawn	JS Water

## EXHIBIT "C"

### ASSOCIATION OF CALIFORNIA WATER AGENCIES

#### COMPARISON OF THE SB 42 BOND WITH ACWA'S PROPOSAL FOR A MODIFIED 2014 WATER BOND AND AB 1331 (RENDON)

\*Bracketed funding amounts indicate the appropriation is part of a broader funding category.

Proposal for a Modified 2014 Water Bond	ACWA	SB 42 (Wolk) Sept. 11, 2013	AB 1331 (Rendon) Sept. 11, 2013
<b>Category 1: Local Resources Development Support</b>	<b>\$2.150</b>	<b>\$3.775</b>	<b>\$2.500</b>
Disadvantaged Communities	\$0.300	(Priority for DACs)	(Priority for DACs—See SDW & WW plus 10% of IRWMP funding)
IRWMP (Total: Rural and Urban)	\$1.100 <sup>1</sup> <sup>1</sup> (\$0.450 for rural support and \$0.650 for urban support)	\$1.500	\$1.500
Recycling and Conservation	\$0.450	N/A (Except IRWMP)	[\$0.500] <sup>2</sup> <sup>2</sup> (Part of \$1.500 total for IRWMP chapter – for water recycling and advanced treatment)
Water Conservation & Water Use Efficiency	N/A (Except IRWMP)	N/A (Except IRWMP)	[\$] <sup>3</sup> <sup>3</sup> (Up to \$0.250 is part of \$1.500 total for IRWMPs – for WC/WUE only)
Water Quality	(See Below)	(See Below)	\$1.000
Groundwater Quality	\$0.300	\$0.025	[\$0.250] <sup>4</sup> <sup>4</sup> (From \$1.0 billion allotted for Water Quality or Safe Drinking Water Projects.)
Safe Drinking Water	(See DACs above)	\$0.500 <sup>5</sup> <sup>5</sup> (10% for DACs)	[\$0.100] <sup>4</sup> (For deposit in the Emergency Clean Water Grant Fund for grants and direct expenditures to ensure safe drinking water supplies available from \$1.0 WQ category.)
Stormwater Management	N/A	\$0.375	[\$] <sup>4</sup> (Up to \$0.250 for Stormwater Management from \$1.0 WQ category.)
Levees/Flood (General)	N/A	\$0.575 <sup>6</sup> <sup>6</sup> (\$0.075 for flood control projects to S.F. Bay region.)	N/A
Levees/Flood (Delta)	[\$] <sup>7</sup> <sup>7</sup> (See Delta Sustainability)	\$0.400	[\$] <sup>8</sup> <sup>8</sup> (See Delta Sustainability)

[Type text]

Proposal for a Modified 2014 Water Bond	ACWA	SB 42 (Wolk) Sept. 11, 2013	AB 1331 (Rendon) Sept. 11, 2013
Wastewater	(See DACs above)	\$0.400	[\$] <sup>4</sup> <sup>4</sup> (Up to \$0.100 for deposit in the State Water Pollution Control Revolving Fund - Small Community Grant Fund for grants for wastewater treatment projects from \$1.0 WQ category.)
Infrastructure	N/A	N/A	[\$0.400] <sup>9</sup> <sup>9</sup> (Priority to DACs)
<b>Category 2: Delta Ecosystem Restoration &amp; Watersheds</b>	<b>\$3.050</b>	<b>\$1.700</b>	<b>\$2.500</b>
Delta Sustainability	\$2.250	\$0.600	\$1.000
Watersheds	\$0.800	\$1.100 <sup>10</sup> <sup>10</sup> (Outside Delta. See also State Conservancies.)	\$1.500
State Obligations	N/A	N/A	[\$0.500] <sup>11</sup> <sup>11</sup> (Part of the \$1.5B Watersheds total to fulfill obligations in complying with any of the following: Klamath Basin Restoration Agreement; Qualification Settlement Agreement; San Joaquin River Restoration Settlement.)
State Conservancy	(See Watersheds)	[\$0.500] <sup>12</sup> <sup>12</sup> (Minimum part of \$1.100 available to state conservancies from Water Quality & Watershed-Protection chapter.)	[\$0.250] <sup>13</sup> <sup>13</sup> (Part of the \$1.5B Watersheds total to the Natural Resources Agency to support projects of state conservancies.)
<b>Category 3: Storage for Coequal Goals</b>	<b>\$3.000</b>	<b>\$1.000</b>	<b>\$1.500</b>
Statewide Water System	\$3.000 (continuous appropriation)	\$1,000 (no continuous appropriation)	\$1.500 (continuous appropriation)
<b>Total Investments (in billions)</b>	<b>\$8.200</b>	<b>\$6.475</b>	<b>\$6.500</b>

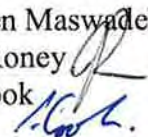


November 11, 2013

Prepared by: Gretchen Maswadeh

Submitted by: Jenny Roney

Approved by: Paul Cook



## CONSENT CALENDAR

### DENTAL INSURANCE COVERAGE FOR CALENDAR YEAR 2014

#### SUMMARY:

The Association of California Water Agencies Joint Powers Insurance Authority (ACWA/JPIA) has negotiated rates with Delta Dental for the plan year beginning January 1, 2014 which resulted in no increase in the premiums for IRWD's current dental plan, Plan A. Staff recommends that the Board extend IRWD's existing contract with ACWA/JPIA for Delta Dental Plan A coverage for calendar year 2014.

#### BACKGROUND:

IRWD's current dental coverage is provided by Delta Dental Plan of California through ACWA/JPIA. Delta Dental offers two different Delta Preferred Option (DPO) plans which are summarized in Exhibit "A." The major coverage differences between Plan A and Plan B include a higher level of diagnostic and preventive benefits and a higher annual maximum benefit under Plan B. IRWD currently contracts through ACWA/JPIA for DPO Plan A with child and adult orthodontic coverage added on.

ACWA/JPIA has negotiated rates with Delta Dental for calendar year 2014. Premiums for Plan A with child and adult orthodontic coverage, in which the District is currently enrolled, will remain unchanged from 2013 rates. Exhibit "B" details the estimated costs for the two dental plan options available to the District.

Premiums last increased in January 2013 by 2.01%. ACWA/JPIA will renew coverage for the District's current plan at the monthly rates of \$37.74 for employee only, \$76.18 for employee plus one, and \$143.10 for family coverage. Monthly rates for the upgraded DPO Plan B are \$51.01 for employee only, \$103.25 for employee plus one, and \$192.77 for family coverage. These rates are 35% higher than the rates for the current coverage.

ACWA/JPIA's administration fee was last increased in July 2008 from \$1.65 to \$1.72 per enrollee per month. There will be no change to the administration fee for calendar year 2014. The administration fee is included in the premiums shown above and in Exhibit "B." Staff recommends that the Board extend the District's existing contracts with ACWA/JPIA for Dental Plan A.

#### FISCAL IMPACTS:

Staff budgeted \$455,000 for FY 2013-14 dental premiums. Renewal of the District's current dental insurance coverage with no increase in premiums based on current enrollment would result in total projected expenses for FY 2013-14 of \$399,240 or \$55,760 (12.3%) under budget.

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 November 5, 2013.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXTEND THE EXISTING CONTRACT WITH ACWA/JPIA FOR DELTA DPO PLAN A WITH CHILD AND ADULT ORTHODONTIC COVERAGE.

LIST OF EXHIBITS:

Exhibit "A" – Dental Plan Benefits Comparison  
Exhibit "B" – Dental Plan Premiums Comparison

**IRVINE RANCH WATER DISTRICT  
JANUARY 2014  
DENTAL PLAN RENEWAL COMPARISON**

IRVINE RANCH WATER DISTRICT DENTAL PLAN BENEFITS	ACWA DELTA PREFERRED PLAN A		ACWA DELTA PREFERRED PLAN B	
	In Network	Out of Network	In Network	Out of Network
Individual Deductible	\$25		\$25	
Family Deductible	\$50		\$50	
Dependent Coverage Maximum Age	26 years		26 years	
Calendar Year Maximum	\$1,500		<b>\$2,000</b>	
Diagnostic & Preventive Treatments	85% Deductible waived	80% Deductible waived	<b>100%</b> Deductible waived	<b>100%</b> Deductible waived
Basic Treatments	80% after deductible	80% after deductible	<b>85%</b> after deductible	80% after deductible
Crowns, Jackets, & Casts	50% after deductible	50% after deductible	50% after deductible	50% after deductible
Prosthodontic Treatments*	50% after deductible	50% after deductible	50% after deductible	50% after deductible
Orthodontic Treatments*	50%	50%	50%	50%
Orthodontia Lifetime Maximum	\$2,000	\$2,000	\$2,000	\$2,000

\* 12 month waiting period from date of eligibility

**IRVINE RANCH WATER DISTRICT  
2014 DENTAL RENEWAL -- FINANCIAL COMPARISON  
CURRENT AND RENEWAL OPTION RATES**

	<b>Current Plan A w/ Child &amp; Adult Ortho</b>		<b>Option 1 Calendar Year 2014 Plan A w/ Child &amp; Adult Ortho</b>			<b>Option 2 Calendar Year 2014 Plan B w/ Child &amp; Adult Ortho</b>		
	<b>Enrollment</b>	<b>Premium</b>	<b>Enrollment</b>	<b>Premiums</b>	<b>% Increase</b>	<b>Enrollment</b>	<b>Premiums</b>	<b>% Increase</b>
<b>ACWA Delta Dental</b>								
Single	80	\$37.74	80	\$37.74	0.00%	80	\$50.96	35.03%
Two Party	74	\$76.18	74	\$76.18	0.00%	74	\$103.22	35.49%
Family	172	\$143.10	172	\$143.10	0.00%	172	\$192.72	34.68%
Monthly Dental Premium		<b>\$33,270</b>		<b>\$33,270</b>			<b>\$44,863</b>	
% Change to Current Monthly Premium				<b>0.00%</b>			<b>34.85%</b>	
<b>NET ANNUAL PREMIUM</b>		<b>\$399,237</b>		<b>\$399,237</b>			<b>\$538,355</b>	
<b>% Change to Current Annual Premium</b>				<b>0.00%</b>			<b>34.85%</b>	

Note: Costs for FY2013-14 for Plan A consist of 6 months at current premiums (\$33,270/month) and 6 months at new premium levels (\$33,270/month) for a total projected expense of \$399,240.

Note: Costs for FY2013-14 for Plan B consist of 6 months at current premiums (\$33,270/month) and 6 months at new premium levels (\$44,863/month) for a total projected expense of \$468,798.



November 11, 2013

Prepared by: Christopher Smithson *CS*

Submitted by: Cheryl Clary *CC*

Approved by: Paul Cook *P. Cook*

## ACTION CALENDAR

### ADOPTING REVISED CAPITAL DEFINITIONS

#### SUMMARY:

In early 2011, IRWD undertook a process to review and, if appropriate, develop modifications to the District's current capital funding plan. The focus of the review has been to identify issues with the District's existing capital funding plan and to consider adjustments that would improve and update the plan as the District approaches build-out, when its focus will transition to ongoing operations and maintenance activities. The review process has included the input and direction from the Finance and Personnel Committee (Committee), the Board, as well as input from interested outside participants (Working Group) which includes representatives from the development community and allows them to provide input as staff develops its updated Long-Term Capital Funding Plan (LTFP).

#### BACKGROUND:

The District has undertaken a comprehensive evaluation and study of its long-term financial requirements, including:

- A detailed planning, engineering and financial assessment of the total costs of existing and future facilities in the water and wastewater systems;
- Available bond authorization and other revenue sources to finance facilities to serve future development ("new capital"), augment system reliability and meet upgraded regulatory requirements for both existing and future demands ("enhancement") and replace and refurbish the existing systems ("replacement");
- Debt service;
- Simplification of the improvement district (ID) structure; and
- Assurance of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing IDs and other geographic areas served by the system.

IRWD has previously established criteria to designate projects as new capital, replacement or enhancements, for purposes of determining the funding requirements for projects. As one of several components of the actions to be taken based upon IRWD's comprehensive study, IRWD desires to make additional modifications and refinements to the capital definitions.

**FISCAL IMPACTS:**

Not applicable.

**ENVIRONMENTAL COMPLIANCE:**

These actions are not projects under CEQA (California Environmental Quality Act Code of Regulations, Title 14, Article 20, Section 15378(b)(4) - creation of government funding mechanisms or other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment).

**COMMITTEE STATUS:**

This item was not reviewed by a Committee.

**RECOMMENDATION:**

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2013- \_\_\_\_

RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE IRVINE RANCH WATER DISTRICT  
ADOPTING REVISED CAPITAL DEFINITIONS

**LIST OF EXHIBITS:**

Exhibit "A" – Resolution adopting revised capital definitions

# EXHIBIT "A"

RESOLUTION NO. 2013-\_\_\_\_\_

## RESOLUTION OF THE BOARD OF DIRECTORS OF THE IRVINE RANCH WATER DISTRICT ADOPTING REVISED CAPITAL DEFINITIONS

WHEREAS, the Irvine Ranch Water District ("IRWD") has established criteria to designate projects as new capital, replacement or enhancements, for purposes of determining the funding requirements for projects; and

WHEREAS such criteria were most recently modified on July 5, 2006; and

WHEREAS, IRWD has undertaken a comprehensive evaluation and study of its long-term financial requirements, including: a detailed planning, engineering and financial assessment of the total costs of existing and future facilities in the water and wastewater systems; available bond authorization and other revenue sources to finance facilities to serve future development ("new capital"), augment system reliability and meet upgraded regulatory requirements for both existing and future demands ("enhancement") and replace and refurbish the existing systems ("replacement"); debt service; simplification of the improvement district structure; and assurance of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system; and

WHEREAS, as one of several components of the actions to be taken based upon such study, IRWD desires to make additional modifications and refinements to the definitions;

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

Section 1. The capital definitions are hereby modified as set forth in Exhibit 1 to this resolution, attached hereto and incorporated herein by this reference.

Section 2. The definitions adopted July 5, 2006 and all other previous definitions are hereby superseded.

ADOPTED, SIGNED AND APPROVED this 11<sup>th</sup> day of November, 2013.

---

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

---

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

**EXHIBIT 1**  
**REVISED CAPITAL PROJECT DEFINITIONS**

**New Capital Projects**

- Provide facilities to meet demand at ultimate development and any increment of new demand from redevelopment;
- Integrate new development and/or redevelopment into existing infrastructure.

**Replacement Projects**

- Replace required facilities as they reach the end of their useful life;
- Refurbish facilities to contemporary standards.

**Enhancement Projects**

- Update infrastructure to meet the needs of existing development;
- Provide cost savings, additional reliability, and/or additional redundancy to existing and ultimate development.



November 11, 2013  
Prepared by: Gretchen Maswadeh  
Submitted by: Jenny Roney *JR*  
Approved by: Paul Cook *P. Cook*

## ACTION CALENDAR

### PROPOSED CONSUMER PRICE INDEX CHANGES TO SALARY GRADE SCHEDULE AND EMPLOYEE COST OF LIVING ADJUSTMENTS FOR UNREPRESENTED EMPLOYEES

#### SUMMARY:

The Bureau of Labor Statistics has released the Consumer Price Index (CPI) for the period ending September 2013, which reflects a 0.63% increase from September 2012 to September 2013. Staff is requesting that the Board:

- Approve an increase to the Salary Grade Schedule for eligible unrepresented positions.
- Approve a Cost of Living Adjustment of 0.63% for eligible unrepresented employees.

#### BACKGROUND:

On January 18, 1999, the Board of Directors approved the separation of the COLA component from the overall employee merit increase. Each year, staff recommends changes to the Salary Grade Schedule and employee cost of living adjustments based on a September to September comparison of the CPI for the Orange-Riverside-Los Angeles All Urban Consumers. The COLA adjustments are made effective December 1 of each year. This item implements the COLA to be effective December 1, 2013.

Due to the on-going negotiations with the IRWD Employees' Association (IRWDEA), the proposed changes to the salary ranges and salaries would only apply to those employees not included in the General Employees' Unit. Changes to salary ranges and salaries for those employees in the represented unit would be applied subsequent to the ratification and approval of a new Memorandum of Understanding between the IRWDEA and the District.

#### Salary Grade Schedule Changes:

The salary grade ranges were last adjusted December 1, 2012. This change was based on the Board-approved Cost of Living Adjustment.

Attached as Exhibit "B-1" is the Consumer Price Index information for September 2012 and September 2013, reflecting a change in CPI from 238.104 to 239.611, or 0.63%. Exhibit "B-2" reflects the calculation of the COLA.

The impact to the Salary Grade Schedule is detailed in Exhibit "C" and Exhibit "D". Staff has separated the Salary Grade Schedule into two separate schedules, one for unrepresented positions and one for positions represented by the General Employees' Unit. Exhibit "C" also contains the addition of 2 new job titles being used in Wastewater Operations.

FISCAL IMPACTS:

During the budgetary process, staff included a 1.7% or approximately \$270,000 increase in salaries for COLA for the last 7 months of FY 2013-14. Actual funds needed to implement a 0.63% increase for eligible unrepresented employees for the last 7 months of the fiscal year will be approximately \$44,000. Actual funds needed to implement a cost of living adjustment for represented employees is currently undetermined, pending the outcome of ratification and approval of a new MOU.

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 November 5, 2013.

RECOMMENDATION:

THAT THE BOARD APPROVE A 0.68% INCREASE TO THE SALARY GRADE RANGES FOR UNREPRESENTED POSITIONS AND A 0.68% COST OF LIVING ADJUSTMENT (COLA) FOR EACH ELIGIBLE UNREPRESENTED EMPLOYEE, BOTH EFFECTIVE DECEMBER 1, 2013 AND TO ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2013 –

RESOLUTION OF THE BOARD OF DIRECTORS  
OF IRVINE RANCH WATER DISTRICT, RESCINDING  
RESOLUTION NO. 2013-22 AND ESTABLISHING  
A REVISED SCHEDULE OF POSITIONS AND SALARY  
RATE RANGES

LIST OF EXHIBITS:

- Exhibit "A" – Resolution
- Exhibit "B" – Bureau of Labor Statistics Consumer Price Index
- Exhibit "C" – Revised Salary Grade Schedule for unrepresented positions
- Exhibit "D" – Revised Salary Grade Schedule for positions represented by the General Employees' Unit

EXHIBIT "A"

RESOLUTION NO. 2013 -

RESOLUTION OF THE BOARD OF DIRECTORS  
OF IRVINE RANCH WATER DISTRICT,  
RESCINDING RESOLUTION NO. 2013-22 AND  
ESTABLISHING A REVISED SCHEDULE OF POSITIONS  
AND SALARY RATE RANGES

WHEREAS, the Board of Directors of Irvine Ranch Water District, by adoption of Resolution No. 2013-22 on June 10, 2013, established a Schedule of Positions and Salary Rate Ranges of the Irvine Ranch Water District; and

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

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

Section 1. That the Schedule of Positions and Salary Rate Ranges adopted by Resolution No. 2013-22 on June 10, 2013 is hereby rescinded, effective December 1, 2013.

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

Section 3. That the provisions of this Resolution shall be effective December 1, 2013.

ADOPTED, SIGNED and APPROVED THIS 11<sup>th</sup> day of November 2013.

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

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

APPROVED AS TO FORM:  
BOWIE, ARNESON, WILES & GIANNONE

\_\_\_\_\_

## Western Information Office

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## Western Consumer Price Index Card

[Monthly and Bimonthly Indexes](#)  
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[1-Page PDF Version of Pacific Cities Card](#) — the PDF is preferred for printing (note that the tables below are updated several hours before the PDF version).

### Monthly and Bimonthly Indexes

#### Consumer Price Index for All Urban Consumers (CPI-U) in Pacific Cities and U.S. City Average (1982-84=100 unless otherwise noted)

Monthly Data	All Items Indexes			Percent change		
	Sep 2012	Aug 2013	Sep 2013	12 months ended		1 month ended
				Aug 2013	Sep 2013	Sep 2013
<b>U.S. City Average</b>	231.407	233.877	234.149	1.5	1.2	0.1
<b>(1967=100)</b>	693.192	700.593	701.406			
<b>Los Angeles-Riverside-Orange County, CA</b>	238.104	239.219	239.611	0.8	0.6	0.2
<b>(1967=100)</b>	703.465	706.758	707.917			
<b>West</b>	234.083	236.591	237.146	1.5	1.3	0.2
<b>(Dec. 1977=100)</b>	378.382	382.436	383.334			
<b>West - A (1)</b>	238.684	241.088	241.884	1.5	1.3	0.3
<b>(Dec. 1977=100)</b>	389.208	393.127	394.426			
<b>West - B/C (Dec. 1996=100) (2)</b>	140.600	142.228	142.277	1.6	1.2	0.0

Footnotes  
 (1) 1,500,000 population and over  
 (2) Less than 1,500,000

Schedule of [Upcoming Releases for the Consumer Price Index](#)



Consumer Price Index Calculation

SEP 12	0.37%	238.104	2.18%	
OCT 12	0.84%	240.111	3.03%	
NOV 12	-1.01%	237.675	2.12%	
DEC 12	-0.69%	236.042	1.93%	
JAN 13	0.84%	238.015	1.96%	
FEB 13	0.73%	239.753	2.22%	
MAR 13	0.10%	239.995	1.29%	
APR 13	-0.40%	239.043	0.92%	
MAY 13	0.13%	239.346	0.98%	
JUN 13	-0.05%	239.223	1.35%	
JUL 13	-0.13%	238.920	1.33%	
AUG 13	0.13%	239.219	0.84%	
SEP 13	0.16%	239.611	0.63%	9/2012 to 9/2013: 0.63% increase

EXHIBIT "C"

**IRVINE RANCH WATER DISTRICT**  
**SALARY GRADE SCHEDULE**  
**UNREPRESENTED POSITIONS**  
 July-December 1, 2013

<b><u>NON-EXEMPT</u></b>	<b><u>MINIMUM</u></b>	<b><u>MAXIMUM</u></b>	<b><u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u></b>
SALARY GRADE 1.N	\$25882604	\$32083228	\$3368-3389
SALARY GRADE 2.N	\$26442661	\$32963317	\$3461-3483
SALARY GRADE 3.N	\$27002717	\$33873408	\$35573579
SALARY GRADE 4.N	\$27492766	\$34853507	\$3659-3682
SALARY GRADE 5.N	\$28102828	\$35813604	\$3761-3785
SALARY GRADE 6.N Office Assistant Mail Coordinator	\$28672885	\$36863709	\$38703894
SALARY GRADE 7.N	\$29242942	\$37883812	\$39784003
SALARY GRADE 8.N	\$29883007	\$38973922	\$40924118
SALARY GRADE 9.N	\$30463065	\$40044029	\$42054231
SALARY GRADE 10.N	\$31073127	\$41134139	\$43184345
SALARY GRADE 11.N Material Control Clerk I Maintenance Apprentice Utility Worker	\$31683188	\$42194246	\$44284456
SALARY GRADE 12.N	\$32313251	\$43434370	\$45604589
SALARY GRADE 13.N Customer Service Specialist I Support Specialist	\$32913312	\$44674495	\$46914721
SALARY GRADE 14.N	\$33653386	\$45934622	\$48234853

<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 15.N <del>Office Specialist</del> <del>Collection Systems Technician I</del>	\$ <del>3437-3459</del>	\$ <del>4715-4745</del>	\$ <del>4951-4982</del>
SALARY GRADE 16.N <del>Accounting Clerk</del> <del>Customer Service Field Technician</del> <del>Metering Systems Technician I</del> <del>Water Maintenance Technician I</del> <del>Laboratory Analyst</del>	\$ <del>3518-3540</del>	\$ <del>4846-4877</del>	\$ <del>5089-5121</del>
SALARY GRADE 17.N <del>Customer Service Specialist II</del>	\$ <del>3593-3616</del>	\$ <del>4968-4999</del>	\$ <del>5216-5249</del>
SALARY GRADE 18.N <del>Material Control Clerk II</del> <del>Senior Support Specialist</del>	\$ <del>3672-3695</del>	\$ <del>5102-5134</del>	\$ <del>5357-5391</del>
SALARY GRADE 19.N <del>Senior Office Specialist</del> <del>Purchasing Coordinator</del>	\$ <del>3755-3779</del>	\$ <del>5231-5264</del>	\$ <del>5493-5528</del>
SALARY GRADE 20.N <del>Senior Accounting Clerk</del> <del>Engineering Technician I</del> <del>Operator I</del> <del>Maintenance Mechanic</del> <del>Collection Systems Technician II</del>	\$ <del>3856-3880</del>	\$ <del>5399-5433</del>	\$ <del>5670-5706</del>
SALARY GRADE 21.N <del>Customer Service Specialist III</del> <del>Senior Customer Service Field Technician</del> <del>Collection Systems CCTV Technician II</del>	\$ <del>3965-3990</del>	\$ <del>5563-5598</del>	\$ <del>5842-5879</del>
SALARY GRADE 22.N <del>Executive Secretary</del> <del>Human Resources Assistant</del> <del>Sr. Purchasing Coordinator</del> <del>Metering Systems Tech. II</del> <del>Water Maintenance Technician II</del> <del>Facilities Services Technician</del> <del>Vehicle/Equipment Mechanic</del> <del>Recycled Water Specialist</del>	\$ <del>4074-4100</del>	\$ <del>5738-5774</del>	\$ <del>6026-6064</del>

<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 23.N <del>Construction Inspector I</del>	<u>\$41824208</u>	<u>\$59125949</u>	<u>\$62076246</u>
SALARY GRADE 24.N <del>Buyer Cross-Connection Specialist Wetlands Specialist Water Use Efficiency Specialist</del>	<u>\$43004327</u>	<u>\$60976135</u>	<u>\$64026442</u>
SALARY GRADE 25.N <del>Engineering Technician II Senior Facilities Services Technician Senior Collection Systems Technician Senior Collection Systems CCTV Technician</del>	<u>\$44134441</u>	<u>\$62846324</u>	<u>\$65996641</u>
SALARY GRADE 26.N <del>Executive Assistant Safety and Security Specialist Metering Systems Tech. III Water Maintenance Technician III Scientist</del>	<u>\$45494578</u>	<u>\$64716512</u>	<u>\$67946837</u>
SALARY GRADE 27.N <del>Accountant Risk Analyst Senior Vehicle/Equipment Maintenance Mechanic Operator II Senior Maintenance Mechanic Senior Recycled Water Specialist</del>	<u>\$46824711</u>	<u>\$66616703</u>	<u>\$69947038</u>
SALARY GRADE 28.N <del>Construction Inspector II Automation Technician Landscape Contracts Administrator Electrical Technician Instrumentation Technician</del>	<u>\$48194849</u>	<u>\$68596902</u>	<u>\$72037248</u>
SALARY GRADE 29.N <del>Public Affairs Specialist Payroll Administrator Senior Buyer Engineering Technician III Senior Wetlands Specialist Operator III Lead Maintenance Mechanic Recycled Water Project Specialist Senior Water Use Efficiency Specialist</del>	<u>\$49624993</u>	<u>\$70597103</u>	<u>\$74117458</u>



<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 30.N Facilities Services Supervisor Fleet Supervisor <del>Senior Electrical Technician</del> <del>Senior Instrumentation Technician</del> Collection Systems Supervisor	<del>\$51125144</del>	<del>\$72677313</del>	<del>\$76317679</del>
SALARY GRADE 31.N Human Resources Analyst <del>Treasury Analyst</del> <del>Information Services Coordinator</del> <del>Construction Inspector III</del> Cross Connection Supervisor Water Maintenance Supervisor <del>Senior Scientist</del> <del>Water Use Efficiency Analyst</del>	<del>\$52635296</del>	<del>\$74867533</del>	<del>\$78597909</del>
SALARY GRADE 32.N <del>Automation Specialist</del> Network Administrator Mechanical Maintenance Supervisor	<del>\$54155449</del>	<del>\$77077756</del>	<del>\$80938144</del>
SALARY GRADE 33.N Supervising Wetlands//Wildlife Biologist <del>Operations Coordinator</del>	<del>\$55735608</del>	<del>\$79317981</del>	<del>\$83288380</del>
SALARY GRADE 34.N <del>Electrical/Instrumentation Designer</del> Automation Supervisor Electrical Supervisor Instrumentation Supervisor	<del>\$57385774</del>	<del>\$81518202</del>	<del>\$85598613</del>
SALARY GRADE 35.N Operations Supervisor	<del>\$59115948</del>	<del>\$83958448</del>	<del>\$88158871</del>

Effective Date ~~7/01/13~~ 12/1/13

**IRVINE RANCH WATER DISTRICT**

**SALARY GRADE SCHEDULE**

**UNREPRESENTED POSITIONS**

July-December 1, 2013

<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 1.E	<u>\$41614187</u>	<u>\$53465380</u>	<u>\$56135648</u>
SALARY GRADE 2.E	<u>\$42994326</u>	<u>\$55535588</u>	<u>\$58315868</u>
SALARY GRADE 3.E	<u>\$44384466</u>	<u>\$57615797</u>	<u>\$60496087</u>
SALARY GRADE 4.E	<u>\$45764605</u>	<u>\$59816019</u>	<u>\$62806320</u>
SALARY GRADE 5.E	<u>\$47154745</u>	<u>\$62036242</u>	<u>\$65146555</u>
SALARY GRADE 6.E	<u>\$48774908</u>	<u>\$64436484</u>	<u>\$67666809</u>
SALARY GRADE 7.E	<u>\$50345066</u>	<u>\$66826724</u>	<u>\$70157059</u>
SALARY GRADE 8.E	<u>\$51975230</u>	<u>\$69426986</u>	<u>\$72907336</u>
SALARY GRADE 9.E	<u>\$53555389</u>	<u>\$71977242</u>	<u>\$75567604</u>
SALARY GRADE 10.E Customer Service Supervisor <del>Assistant Engineer</del> Administrative Assistant Analyst	<u>\$55355570</u>	<u>\$74707517</u>	<u>\$78447893</u>
SALARY GRADE 11.E Senior Accountant <del>Laboratory QA/QC</del> Recycled Water Supervisor	<u>\$57125748</u>	<u>\$77467795</u>	<u>\$81348185</u>
SALARY GRADE 12.E <del>Programmer/Analyst</del> <del>Energy Analyst</del>	<u>\$58985935</u>	<u>\$80438094</u>	<u>\$84448497</u>

<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 13.E Senior Human Resources Analyst <del>Right of Way &amp; Real Property Manager</del> <del>Automation Programmer</del> Senior Analyst Laboratory Supervisor Water Use Efficiency Supervisor	\$ <del>60886126</del>	\$ <del>83358388</del>	\$ <del>87518806</del>
SALARY GRADE 14.E District Secretary <del>Associate Engineer</del> Assistant Facilities/Fleet Manager	\$ <del>62866326</del>	\$ <del>86578712</del>	\$ <del>90899146</del>
SALARY GRADE 15.E Senior Programmer/Analyst Senior Network Administrator Applications Analyst Assistant Preventive Maintenance Manager Assistant Construction & Repair Manager	\$ <del>64856526</del>	\$ <del>89809037</del>	\$ <del>94289487</del>
SALARY GRADE 16.E Customer Service Manager Assistant Operations Manager Principal Analyst Collection Systems Manager Laboratory Manager Regulatory Compliance Manager	\$ <del>67026744</del>	\$ <del>93209379</del>	\$ <del>97869848</del>
SALARY GRADE 17.E District Safety and Security Manager Purchasing Manager <del>Engineer</del> Construction Inspection Manager Construction & Repair Manager Water Maintenance Manager Facilities/Fleet Manager Electrical Services Manager Government Relations Manager	\$ <del>69166960</del>	\$ <del>96639724</del>	\$ <del>1014510209</del>
SALARY GRADE 18.E Public Affairs Manager Human Resources Manager Treasury Manager Manager of Contracts Admin & Risk Senior Applications Analyst	\$ <del>71397184</del>	\$ <del>1003110094</del>	\$ <del>1053210598</del>

<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
Chief Plant Operator Water Quality Manager <del>Water Resources Manager</del>			
SALARY GRADE 19.E Operations Manager Superintendent of Maintenance & Reliability Recycled Water Development Manager	<del>\$73677413</del>	<del>\$1040110467</del>	<del>\$1092210991</del>
SALARY GRADE 20.E Assistant Controller Manager of Strategic Planning and Analysis Applications Manager Networking & Support Manager Senior Engineer Assistant Director of Water Operations <del>Assistant Director of Maintenance</del>	<del>\$75957643</del>	<del>\$1078610854</del>	<del>\$11326-11397</del>
SALARY GRADE 21.E	<del>\$7827-7876</del>	<del>\$1117611246</del>	<del>\$1173511809</del>
SALARY GRADE 22.E	<del>\$80788129</del>	<del>\$1159111664</del>	<del>\$12172-12249</del>
SALARY GRADE 23.E Principal Engineer <del>Assistant Director of Recycling Operations</del> Assistant Director of Water Policy	<del>\$83348387</del>	<del>\$1201112087</del>	<del>\$1261312692</del>
SALARY GRADE 24.E	<del>\$85608614</del>	<del>\$1249512574</del>	<del>\$1311913202</del>
SALARY GRADE 25.E	<del>\$88248880</del>	<del>\$1296813050</del>	<del>\$1361513701</del>
SALARY GRADE 26.E	<del>\$92279285</del>	<del>\$1365313739</del>	<del>\$1433614426</del>
SALARY GRADE 27.E Director of Public Affairs Director of Human Resources Treasurer/Director of Risk Management Director of Administrative Services Director of Wastewater Operations Director of Water Resources	<del>\$96509711</del>	<del>\$1437614467</del>	<del>\$1509515190</del>
SALARY GRADE 28.E	<del>\$1009310157</del>	<del>\$1513415229</del>	<del>\$1589115991</del>



<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 29.E	<del>\$1055410620</del>	<del>\$1593516035</del>	<del>\$1673216837</del>
SALARY GRADE 30.E Executive Director of Finance Executive Director of Engineering & Water Quality Executive Director of Operations Executive Director of Water Policy	<del>\$1104111111</del>	<del>\$1678016886</del>	<del>\$17619-17730</del>
SALARY GRADE 31.E	<del>\$1159011663</del>	<del>\$1773217844</del>	<del>\$1861918736</del>
SALARY GRADE 32.E	<del>\$1217112248</del>	<del>\$1874318861</del>	<del>\$1968019804</del>
SALARY GRADE 33.E	<del>\$1277712857</del>	<del>\$1980619931</del>	<del>\$2079720928</del>
SALARY GRADE 34.E General Manager	<del>\$1341713502</del>	<del>\$2093121063</del>	<del>\$2197722115</del>

| *Effective Date* ~~7/01/13~~ 12/1/13

EXHIBIT "D"

**IRVINE RANCH WATER DISTRICT**  
**SALARY GRADE SCHEDULE**  
**GENERAL EMPLOYEES' UNIT**  
 July-December 1, 2013

<b><u>NON-EXEMPT</u></b>	<b><u>MINIMUM</u></b>	<b><u>MAXIMUM</u></b>	<b><u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u></b>
SALARY GRADE 1.N	\$2588	\$3208	\$3368
SALARY GRADE 2.N	\$2644	\$3296	\$3461
SALARY GRADE 3.N	\$2700	\$3387	\$3557
SALARY GRADE 4.N	\$2749	\$3485	\$3659
SALARY GRADE 5.N	\$2810	\$3581	\$3761
SALARY GRADE 6.N Office Assistant Mail Coordinator	\$2867	\$3686	\$3870
SALARY GRADE 7.N	\$2924	\$3788	\$3978
SALARY GRADE 8.N	\$2988	\$3897	\$4092
SALARY GRADE 9.N	\$3046	\$4004	\$4205
SALARY GRADE 10.N	\$3107	\$4113	\$4318
SALARY GRADE 11.N Material Control Clerk I Maintenance Apprentice Utility Worker	\$3168	\$4219	\$4428
SALARY GRADE 12.N	\$3231	\$4343	\$4560
SALARY GRADE 13.N Customer Service Specialist I Support Specialist	\$3291	\$4467	\$4691

<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 14.N	\$3365	\$4593	\$4823
SALARY GRADE 15.N Office Specialist Collection Systems Technician I	\$3437	\$4715	\$4951
SALARY GRADE 16.N Accounting Clerk Customer Service Field Technician Metering Systems Technician I Water Maintenance Technician I Laboratory Analyst	\$3518	\$4846	\$5089
SALARY GRADE 17.N Customer Service Specialist II	\$3593	\$4968	\$5216
SALARY GRADE 18.N Material Control Clerk II Senior Support Specialist	\$3672	\$5102	\$5357
SALARY GRADE 19.N Senior Office Specialist Purchasing Coordinator	\$3755	\$5231	\$5493
SALARY GRADE 20.N Senior Accounting Clerk Engineering Technician I Operator I Maintenance Mechanic Collection Systems Technician II	\$3856	\$5399	\$5670
SALARY GRADE 21.N Customer Service Specialist III Senior Customer Service Field Technician Collection Systems CCTV Technician II	\$3965	\$5563	\$5842
SALARY GRADE 22.N <del>Executive Secretary</del> <del>Human Resources Assistant</del> Sr. Purchasing Coordinator Metering Systems Tech. II Water Maintenance Technician II Facilities Services Technician Vehicle/Equipment Mechanic Recycled Water Specialist	\$4074	\$5738	\$6026

<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 23.N Construction Inspector I	\$4182	\$5912	\$6207
SALARY GRADE 24.N Buyer Cross Connection Specialist Wetlands Specialist Water Use Efficiency Specialist	\$4300	\$6097	\$6402
SALARY GRADE 25.N Engineering Technician II Senior Facilities Services Technician Senior Collection Systems Technician Senior Collection Systems CCTV Technician	\$4413	\$6284	\$6599
SALARY GRADE 26.N Executive Assistant Safety and Security Specialist Metering Systems Tech. III Water Maintenance Technician III Scientist	\$4549	\$6471	\$6794
SALARY GRADE 27.N Accountant Risk Analyst Senior Vehicle/Equipment Maintenance Mechanic Operator II Senior Maintenance Mechanic Senior Recycled Water Specialist	\$4682	\$6661	\$6994
SALARY GRADE 28.N Construction Inspector II Automation Technician Landscape Contracts Administrator Electrical Technician Instrumentation Technician	\$4819	\$6859	\$7203
SALARY GRADE 29.N Public Affairs Specialist <del>Payroll Administrator</del> Senior Buyer Engineering Technician III Senior Wetlands Specialist Operator III Lead Maintenance Mechanic Recycled Water Project Specialist	\$4962	\$7059	\$7411



<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
Senior Water Use Efficiency Specialist			
SALARY GRADE 30.N	\$5112	\$7267	\$7631
<del>Facilities Services Supervisor</del> <del>Fleet Supervisor</del> Senior Electrical Technician Senior Instrumentation Technician Collection Systems Supervisor			
SALARY GRADE 31.N	\$5263	\$7486	\$7859
<del>Human Resources Analyst</del> Treasury Analyst Information Services Coordinator Construction Inspector III <del>Cross Connection Supervisor</del> <del>Water Maintenance Supervisor</del> Senior Scientist Water Use Efficiency Analyst			
SALARY GRADE 32.N	\$5415	\$7707	\$8093
Automation Specialist <del>Network Administrator</del> <del>Mechanical Maintenance Supervisor</del>			
SALARY GRADE 33.N	\$5573	\$7931	\$8328
<del>Supervising Wetlands/Wildlife Biologist</del> Operations Coordinator			
SALARY GRADE 34.N	\$5738	\$8151	\$8559
<del>Electrical/Instrumentation Designer</del> Automation Supervisor Electrical Supervisor Instrumentation Supervisor			
SALARY GRADE 35.N	\$5911	\$8395	\$8815
Operations Supervisor			

Effective Date ~~07/1/13~~ 12/1/13

**IRVINE RANCH WATER DISTRICT**  
**SALARY GRADE SCHEDULE**

July 1, 2013

<b><u>EXEMPT</u></b>	<b><u>MINIMUM</u></b>	<b><u>MAXIMUM</u></b>	<b><u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u></b>
SALARY GRADE 1.E	\$4161	\$5346	\$5613
SALARY GRADE 2.E	\$4299	\$5553	\$5831
SALARY GRADE 3.E	\$4438	\$5761	\$6049
SALARY GRADE 4.E	\$4576	\$5981	\$6280
SALARY GRADE 5.E	\$4715	\$6203	\$6514
SALARY GRADE 6.E	\$4877	\$6443	\$6766
SALARY GRADE 7.E	\$5034	\$6682	\$7015
SALARY GRADE 8.E	\$5197	\$6942	\$7290
SALARY GRADE 9.E	\$5355	\$7197	\$7556
SALARY GRADE 10.E <del>Customer Service Supervisor</del> Assistant Engineer <del>Administrative Assistant</del> Analyst	\$5535	\$7470	\$7844
SALARY GRADE 11.E <del>Senior Accountant</del> Laboratory QA/QC <del>Recycled Water Supervisor</del>	\$5712	\$7746	\$8134
SALARY GRADE 12.E Programmer/Analyst Energy Analyst	\$5898	\$8043	\$8444

<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 13.E <del>Senior Human Resources Analyst</del> Right of Way & Real Property Manager Automation Programmer <del>Senior Analyst</del> <del>Laboratory Supervisor</del> <del>Water Use Efficiency Supervisor</del>	\$6088	\$8335	\$8751
SALARY GRADE 14.E <del>District Secretary</del> Associate Engineer <del>Assistant Facilities/Fleet Manager</del>	\$6286	\$8657	\$9089
SALARY GRADE 15.E <del>Senior Programmer/Analyst</del> <del>Senior Network Administrator</del> <del>Applications Analyst</del> <del>Assistant Preventive Maintenance Manager</del> <del>Assistant Construction &amp; Repair Manager</del>	\$6485	\$8980	\$9428
SALARY GRADE 16.E <del>Customer Service Manager</del> <del>Assistant Operations Manager</del> <del>Principal Analyst</del> <del>Collection Systems Manager</del> <del>Laboratory Manager</del> <del>Regulatory Compliance Manager</del>	\$6702	\$9320	\$9786
SALARY GRADE 17.E <del>District Safety and Security Manager</del> <del>Purchasing Manager</del> Engineer <del>Construction Inspection Manager</del> <del>Construction &amp; Repair Manager</del> <del>Water Maintenance Manager</del> <del>Facilities/Fleet Manager</del> <del>Electrical Services Manager</del> <del>Government Relations Manager</del>	\$6916	\$9663	\$10145
SALARY GRADE 18.E <del>Public Affairs Manager</del> <del>Human Resources Manager</del> <del>Treasury Manager</del> <del>Manager of Contracts Admin &amp; Risk</del> <del>Senior Applications Analyst</del> <del>Chief Plant Operator</del>	\$7139	\$10031	\$10532

<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
<del>Water Quality Manager</del> Water Resources Manager			
SALARY GRADE 19.E	\$7367	\$10401	\$10922
<del>Operations Manager</del> <del>Superintendent of Maintenance &amp; Reliability</del> <del>Recycled Water Development Manager</del>			
SALARY GRADE 20.E	\$7595	\$10786	\$11326
<del>Assistant Controller</del> <del>Manager of Strategic Planning and Analysis</del> <del>Applications Manager</del> <del>Networking &amp; Support Manager</del> <del>Senior Engineer</del> <del>Assistant Director of Water Operations</del> <del>Assistant Director of Maintenance/Wastewater Operations</del>			
SALARY GRADE 21.E	\$7827	\$11176	\$11735
SALARY GRADE 22.E	\$8078	\$11591	\$12172
SALARY GRADE 23.E	\$8334	\$12011	\$12613
<del>Principal Engineer</del> <del>Assistant Director of Water Policy</del>			
SALARY GRADE 24.E	\$8560	\$12495	\$13119
SALARY GRADE 25.E	\$8824	\$12968	\$13615
SALARY GRADE 26.E	\$9227	\$13653	\$14336
SALARY GRADE 27.E	\$9650	\$14376	\$15095
<del>Director of Public Affairs</del> <del>Director of Human Resources</del> <del>Treasurer/Director of Risk Management</del> <del>Director of Administrative Services</del> <del>Director of Wastewater Operations</del> <del>Director of Water Resources</del>			
SALARY GRADE 28.E	\$10093	\$15134	\$15891
SALARY GRADE 29.E	\$10554	\$15935	\$16732



<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 30.E <del>Executive Director of Finance</del> <del>Executive Director of Engineering &amp; Water Quality</del> <del>Executive Director of Operations</del> <del>Executive Director of Water Policy</del>	\$11041	\$16780	\$17619
SALARY GRADE 31.E	\$11590	\$17732	\$18619
SALARY GRADE 32.E	\$12171	\$18743	\$19680
SALARY GRADE 33.E	\$12777	\$19806	\$20797
SALARY GRADE 34.E <del>General Manager</del>	\$13417	\$20931	\$21977

Effective Date ~~7/01/13~~ 12/1/13

November 11, 2013

Prepared by: Tony Mossbarger

Submitted by: Cheryl Clary

Approved by: Paul Cook 

## ACTION CALENDAR

### UTILITY BILLING SOFTWARE IMPLEMENTATION UPDATE AND CONSULTANT VARIANCE APPROVAL FOR BACKFLOW TEST TRACKING, CROSS CONNECTION AND RECYCLED WATER ON-SITE INSPECTIONS

#### SUMMARY:

The District is currently in the seventh month of a 16-month implementation of the Oracle Customer Care and Billing (CC&B) software system, which focuses on replacing the District's legacy utility billing and customer service request system. Staff has identified the need to include additional functions currently supported in the legacy system; backflow test tracking, cross connection inspections, and recycled water on-site inspections. Initially, these functions were planned to be implemented using a third-party web-based hosted software solution. Staff selected a third-party implementer who after much effort on both sides was not able to provide a workable solution for the District.

Staff reviewed other alternatives and determined that including the additional functions as part of the CC&B implementation was the most cost effective and efficient approach. Infosys, the District's CC&B implementation consultant, provided a fixed fee quote of \$110,000 to implement the additional functionality. Staff recommends that the Board authorize the General Manager to execute Variance No. 2, in the amount of \$110,000, with Infosys for additional implementation services for the Utility Billing Software Implementation.

#### BACKGROUND:

The Utility Billing Software Implementation project was awarded to Infosys in February 2013 in the amount of \$4,975,000. In April, 2013 staff began the process to implement a commercial off-the-shelf Customer Information System (CIS) solution, the Oracle CC&B software system. The key reasons to implement this system are:

- Customers will benefit from a streamlined and enhanced experience interacting with IRWD;
- The existing system's outdated architecture limits the District's ability to support and maintain the legacy system into the future; and
- Implementation of Oracle CC&B puts the framework in place to allow future expansion, consolidations, and new services.

#### Status of the CIS Solution Implementation:

The District is currently in the seventh month of a 16-month implementation of the Oracle CC&B software system, which focuses on replacing the District's legacy utility billing and

customer service request system. The CC &B Software System is scheduled to “Go-Live” in August, 2014. The project consists of five major phases:

1. Requirements Analysis
2. Configuration Design
3. Configuration Build
4. Data Conversion
5. Testing and Training

To date, many additional tasks have been completed or are tasks in process. The overall project is on time and within budget.

Variance No. 2 with Infosys:

Staff has identified the need to include additional functions currently supported in the legacy utility billing system:

- Backflow test tracking;
- Cross connection inspections; and
- Recycled Water On-site inspections.

Initially, the additional functions were planned to be implemented using a third-party web-based hosted software solution. Staff worked with a third-party implementer but the solution proved to be unworkable for the District. Staff reviewed one other available hosted solution, but the cost for this solution was more than double the cost of the Infosys solution. This hosted solution also carried a significant amount of risk, due to the vendor only serving one customer to date.

Staff believes that the solution provided by Infosys is the most effective as it leverages the integrated customer information contained in CC&B and will not require a separate interface to import and export information to another system. The solution also takes advantage of built-in CC&B software functions such as workflow processes that do not require customization.

The work effort required by Infosys to implement the additional functions will not impact the project schedule or require a project time extension as the new requirements will be integrated into the above five major phases.

Staff recommends that a variance be executed to the Infosys contract for the additional services necessary to implement backflow test tracking, cross connection, and recycled water on-site inspections. This variance, in the total sum of \$110,000, is included in Exhibit “A”.

FISCAL IMPACTS:

The Utility Billing Software Implementation project, Projects 11615 (3236) and 21615 (3237), are included in the FY 2013-14 Capital Budget. The existing budget and Expenditure Authorization are sufficient to fund Variance No. 2 with Infosys.

Action Calendar: Utility Billing Software Implementation Update and Consultant Variance Approval for Backflow Test Tracking, Cross Connection and Recycled Water On-site Inspections  
November 11, 2013  
Page 3

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on November 5, 2013.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 2, IN THE AMOUNT OF \$110,000, WITH INFOSYS FOR ADDITIONAL IMPLEMENTATION SERVICES FOR THE UTILITY BILLING SOFTWARE IMPLEMENTATION, PROJECTS 11615 (3236) AND 21615 (3237).

LIST OF EXHIBITS:

Exhibit "A" – Variance No. 2 – Infosys Implementation Services



## Exhibit "A"

### IRVINE RANCH WATER DISTRICT PROFESSIONAL SERVICES VARIANCE

Project: System Integration Services to Implement a Comprehensive Customer Care & Billing Solution

Project No.: 3236/3237 Date: 10/07/2013

Purchase Order No.: 512980 Variance No.: 2

Originator:  IRWD  ENGINEER/CONSULTANT  Other (Explain) \_\_\_\_\_

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

This is a variance request to add Implementation of Backflow Test Tracking, Cross Connection Site Surveys, and On-site Inspections tasks to the scope of the project.

Engineering & Management Cost Impact:

Classification	Manhours	Billing Rate	Labor \$	Direct Costs	Subcon, \$	Total \$
Add Implementation of Backflow Test Tracking, Cross Connection Site Surveys, and On-site Inspection tasks.				110,000		110,000.00
<b>Total \$ =</b>						<b>110,000.00</b>

Schedule Impact:

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule

Required Approval Determination:

Total Original Contract	\$ <u>4,975,000.00</u>	<input type="checkbox"/> General Manager: Single Variance less than or equal to \$30,000. <input type="checkbox"/> Committee: Single Variance greater than \$30,000, and less than or equal to \$60,000. <input checked="" type="checkbox"/> Board: Single Variance greater than \$60,000. <input type="checkbox"/> Board: Cumulative total of Variances greater than \$60,000, or 30% of the original contract, whichever is higher.
Previous Variances	\$ <u>0.00</u>	
This Variance	\$ <u>110,000.00</u>	
Total Sum of Variances	\$ <u>110,000.00</u>	
New Contract Amount	\$ <u>5,085,000.00</u>	
Percentage of Total Variances to Original Contract	2 %	

ENGINEER/CONSULTANT: INFOSYS LIMITED

IRVINE RANCH WATER DISTRICT

Company Name  
Saurabh Kumar  
Project Engineer/Manager

Date 10/10/2013

Tony Mossbarger  
Department Director

Date 10-17-2013

Engineer's/Consultant's Management Date \_\_\_\_\_

General Manager/Comm./Board Date \_\_\_\_\_

IRVINE RANCH WATER DISTRICT

PROFESSIONAL SERVICES VARIANCE REGISTER

Project Title: <b>System Integration Services to Implement a Comprehensive Customer Care &amp; Billing Solution</b>				
Project No.: <u>3236/3237</u> Project Manager: <u>Tony Mossbarger</u>				
Variance No.	Description	Dates		Variance Amount
		Initiated	Approved	
1	Rearrange Functional and Technical Design Phase Task Schedule	10/01/2013		\$0.00
2	Implementation of Backflow Test Tracking, Cross Connection Site Surveys, and On-site Inspection tasks.	10/07/13		\$110,000.00

M#	Description	Milestone Date	Services Amount	Retainage Amount	Net Payment (USD)	Received Date	Approved Date	Paid Date
M0	Contract Completion & Mobilization	12-Apr-13	\$150,000.00	\$ -	\$150,000.00			
M1	Initiation Complete	25-Apr-13	\$254,000.00	\$25,400.00	\$228,600.00			
M2	Functional Workshop	11-Jul-13	\$404,000.00	\$40,400.00	\$363,600.00			
M3	Design Phase 1 : Functional & Technical Specifications (64 ICE Objects)	2-Sep-13	\$304,000.00	\$30,400.00	\$273,600.00			
M4	Design Phase 2 : Functional & Technical Specifications (44 ICE Objects)	4-Nov-13	\$304,000.00	\$30,400.00	\$273,600.00			
M4A	Design Phase 3 : Functional & Technical Specifications (64 report Objects)	20-Jan-14	\$200,000.00	\$20,000.00	\$180,000.00			
M4B	Analysis & Design : Cross Connection testing	15-Dec-13	\$40,000.00	\$4,000.00	\$36,000.00			
M5	Data Migration Design Completion	30-Dec-13	\$406,000.00	\$40,600.00	\$365,400.00			
M6	Solution Configuration + Build (ICE Objects)	26-Feb-14	\$622,500.00	\$62,250.00	\$560,250.00			
M6A	Solution Configuration + Build (Reports)	14-Mar-14	\$200,000.00	\$20,000.00	\$180,000.00			
M7	Completion of ST	2-Apr-14	\$595,500.00	\$59,550.00	\$535,950.00			
M8	Completion of SIT	5-May-14	\$671,000.00	\$67,100.00	\$603,900.00			
M9	Completion of UAT	30-Jun-14	\$395,000.00	\$39,500.00	\$355,500.00			
M10	Go Live	4-Aug-14	\$277,500.00	\$27,750.00	\$249,750.00			
M11	Completion of Warranty Support - Month 1	29-Aug-14	\$105,500.00	\$10,550.00	\$94,950.00			
M12	Completion of Warranty Support - Month 2	26-Sep-14	\$79,000.00	\$7,900.00	\$71,100.00			
M13	Completion of Warranty Support - Month 3	24-Oct-14	\$77,000.00	\$7,700.00	\$69,300.00			
M14	Final Acceptance	24-Oct-14			\$493,500			
	TOTALS		\$5,085,000.00	\$493,500.00	\$5,085,000.00			

November 11, 2013

Prepared by: Tanja Fournier

Submitted by: Rob Jacobson/Cheryl Clary

Approved by: Paul Cook

## ACTION CALENDAR

### BAKER WATER TREATMENT FACILITY PARTICIPANT PROJECT FINANCING – EL TORO WATER DISTRICT

#### SUMMARY:

In March 2011, the Finance and Personnel Committee approved general terms under which the District would be willing to provide project financing to El Toro Water District (ETWD), in the form of an investment by IRWD, for ETWD's future capital contribution requirement for capacity in the Baker Water Treatment Facility ("Baker"). On October 22, 2013, the ETWD Board of Directors approved an Installment Sale Agreement ("Agreement") between IRWD and ETWD. Staff is requesting that the Board approve the Installment Sale Agreement to facilitate the financing, as well as approval of a municipal investment with a maturity greater than five years.

#### BACKGROUND:

In July 2010, District staff met with representatives from ETWD and Trabuco Canyon Water District (TCWD) to discuss possible options available to provide funding for ETWD's and TCWD's respective capital contribution requirements for the new Baker Water Treatment Facility. Based on research and feedback from legal counsel, it was determined that IRWD could finance all, or a portion of, the required capital contributions by making an investment in the respective districts, subject to terms consistent with an equivalent fair market municipal investment.

The Committee approved general fair market investment terms in March 2011, and the ETWD Board subsequently approved the same general financing terms in May 2011. Since that time, District counsel and staff have drafted an Installment Sale Agreement to detail the specific terms of the financing and, based on input from ETWD and its counsel, the final proposed Agreement was completed. A copy of the Agreement is attached as Exhibit "A". On October 22, 2013, the ETWD Board of Directors approved the proposed Installment Sale Agreement between IRWD and ETWD.

The proposed Installment Sale Agreement includes key investment terms including:

- Maximum investment amount of \$12.5 million,
- Investment maturity of up to 20 years from project completion,
- Interest rate to be set at the *Bloomberg Fair Value Municipal Index* for A-rated utilities using the 20-year index rate (4.67% as of 10/28/13) on the initial funding date,
- No rate resets or pre-payment penalty; and
- Related legal expenses shall be paid by ETWD.



The exact amount of the proposed investment has not been determined at this time, however the agreement reflects a maximum investment amount of \$12.5 million. The District's actual investment amount will accumulate as ETWD's progress payments for the Baker project become due. Following completion of the project, the total investment amount will be determined and an amortization schedule for payment of principal and interest for the total amount will be finalized. While ETWD currently has no outstanding debt rated by a credit rating agency, the last bond rating for the district was an "A" rating from Standard & Poors for a bond issue that has since matured.

TCWD remains interested in this project financing option; however, no further discussions have been held with TCWD since the initial meeting. Should TCWD request similar financing for their portion of the Baker project capacity in the future, staff will notify the Committee and Board separately.

#### Updated Financing Information:

In September 2013, staff provided the Committee with a review of the financing terms and an update on ETWD's capital structure, as construction of the Baker facility is approaching. Since IRWD and ETWD agreed to general financing terms in 2011, certain changes have occurred including the Baker Plant's project timing and scope, and increased capital contribution requirements for project participants. Additionally, ETWD has recently completed a financing commitment (State Revolving Fund) to fund non-related projects. Staff has reviewed ETWD's debt service coverage projections, which include repayment of the State Revolving Fund loans, and the proposed Installment Sale Agreement. Projected debt service coverage (net revenues available to pay debt service) provided by ETWD for the next five year period ranges from 164% to 322%, with 125% being a typical minimum requirement for similar municipal debt.

#### Long-Term Investment Maturity:

Consistent with California Government Code Section 53601 regarding investments made by municipalities, Board approval is required for any investment with a maturity greater than five years. The District's 2013 Investment Policy further states that concurrence of the Finance & Personnel Committee is required. Accordingly, staff recommends that the Committee approve the investment maturity term of 20-years from project completion and recommends the same to the Board.

#### FISCAL IMPACTS:

The interest rate for a proposed financing shall be set at the *Bloomberg Fair Value Municipal Index* for A-rated utilities using the 20-year index rate (4.67% as of 10/28/13) on the initial funding date. The exact amount of the proposed financing has not been determined at this time, however the agreement reflects a not to exceed provision of \$12.5 million.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on November 5, 2013.

RECOMMENDATION:

THAT THE BOARD APPROVE THE INSTALLMENT SALE AGREEMENT BETWEEN EL TORO WATER DISTRICT AND IRWD, AND RECOMMEND APPROVAL OF A MUNICIPAL INVESTMENT WITH A MATURITY GREATER THAN FIVE YEARS.

LIST OF EXHIBITS:

Exhibit "A" –Installment Sale Agreement

**DRAFT**  
**INSTALLMENT SALE AGREEMENT BETWEEN**  
**EL TORO WATER DISTRICT AND**  
**IRVINE RANCH WATER DISTRICT**

Relating to Baker Water Treatment Plant Capacity

This Installment Sale Agreement (this "Agreement"), is entered into as of \_\_\_\_\_, 2013, by and between the El Toro Water District, as purchaser, and the Irvine Ranch Water District, as seller, each a California water district duly formed and existing under Section 34000 and following of the Water Code of the State of California.

**RECITALS:**

**WHEREAS**, ETWD is authorized by the Act (capitalized terms used herein and not otherwise defined shall have the meanings given such terms pursuant to Section 1 hereof) to join with one or more public agencies, private corporations or other persons for the purpose of carrying out any of the powers of ETWD and for that purpose to contract with such other public agencies, private corporations or persons for the purpose of financing or refinancing ETWD's acquisition and construction of facilities and other properties to provide water services; and

**WHEREAS**, to provide for the financing of the Capacity on favorable terms and conditions, ETWD has determined to purchase the Capacity on an installment sale basis on the terms and conditions set forth in this Agreement; and

**WHEREAS**, ETWD has determined that the purchase of the Capacity as provided in this Agreement is necessary and proper for ETWD purposes under the terms of applicable law and is for the common benefit of the inhabitants of ETWD; and

**WHEREAS**, IRWD is authorized by Section 53601 of the California Government Code to invest any portion of the monies in its treasury not required for the immediate needs of IRWD in specified investments, including bonds, notes, warrants or other evidences of indebtedness of a local agency within California. Pursuant to said Section 53601, IRWD's Board of Directors has not less than three months prior to the date of this Agreement expressly authorized the making of this investment as an investment with a term remaining to maturity of more than five (5) years; and

**WHEREAS**, IRWD and ETWD, along with other public entities, have entered into the Baker WTP Agreement, to acquire and construct the facilities and property in which the Capacity acquired by ETWD and the capacities of IRWD and other participating entities will constitute property interests; and

**WHEREAS**, each of ETWD and IRWD has determined that all acts, conditions and things required by law to exist, to have happened and to have been performed precedent to and in connection with its respective execution, delivery and performance of this Agreement do exist, have happened and have been performed in regular and due time, form and manner as required

by law, and that it is duly authorized to execute, and enter into this Agreement and to perform its respective obligations hereunder;

**NOW, THEREFORE**, in consideration of the premises and of the mutual agreements and covenants contained herein and for other valuable consideration, the parties hereto do hereby agree as follows:

I.

DEFINITIONS

Section 1.1. Definitions. Unless the otherwise context requires, the capitalized terms in this Agreement shall have the meanings specified below.

“Act” means the California Water District Law, constituting Division 13 of the Water Code of the State of California.

“Additional Payments” means the payments made pursuant to Section 2.4(e)

“Agreement” means this Installment Sale Agreement between ETWD and IRWD, as originally entered into and as amended pursuant to the provisions hereof.

“Applicable Index” means the current *Bloomberg Municipal Utility* “A” rated municipal bond market index selected by IRWD, or if such comparable *Bloomberg Municipal Utility* “A” rated municipal bond market index is no longer available, a substitute index selected by IRWD as the most equivalent index.

“Baker WTP Agreement” means the Agreement For Construction, Operation and Maintenance of Baker Water Treatment Plant, dated as of December 15, 2008, entered into by and among ETWD, IRWD, Moulton-Niguel Water District, Santa Margarita Water District, Trabuco Canyon Water District and Municipal Water District of Orange County, as amended by Amendment No. 1, dated as of December 23, 2009, and as may be hereafter amended.

“Business Day” means any day, Monday through Friday, which is not a legal holiday of the State.

“Capacity” means ETWD’s Capacity Right.

“Capacity Right” shall have the meaning given such term in the Baker WTP Agreement.

“Certificate of ETWD” means a request or certificate, in writing, signed by a duly authorized representative of ETWD.

“Debt Service” means, for any Fiscal Year, the sum of interest and principal due and payable under this Agreement during such Fiscal Year and any Senior and Parity Debt Service for such Fiscal Year.



“Effective Date” means \_\_\_\_\_, 2013, the date on which this Agreement becomes effective and binding on ETWD and IRWD.

“Enterprise Fund” means the \_\_\_\_\_ fund established by ETWD in which all System Revenues are deposited and maintained by ETWD pursuant to Section 3.2 herein and in which a security interest is pledged pursuant to the terms of this Agreement.

“ETWD” means the El Toro Water District, a California water district formed and existing under the Act.

“Event of Default” means any of the events described in Section 7.1.

“Final Disbursement Date” means the date of the final disbursement of Project Funds pursuant to Section 2.4.

“Fiscal Year” means any twelve month period extending from July 1 in one calendar year to June 30 of the succeeding calendar year, both dates inclusive, or any other twelve month period selected and designated by ETWD as its official fiscal year period.

“Government Code” means the California Government Code, as amended.

“Independent Accountant” means any certified public accountant or firm of certified public accountants duly licensed or registered or entitled to practice and practicing as such under the laws of the State, appointed by ETWD who, or each of whom:

- (a) Is in fact independent and not under the control of ETWD or IRWD;
- (b) Does not have any substantial interest, direct or indirect, in ETWD, IRWD or the Capacity; and
- (c) Is not connected with ETWD or IRWD as an officer or employee of ETWD or IRWD, but who may be regularly retained to make reports to ETWD or IRWD.

“Independent Consultant” means any consultant or firm of such consultants judged by ETWD to have experience in matters relating to the collection of System Revenues or other experience with respect to the financing of System projects, as appropriate, appointed and paid by ETWD who, or each of whom:

- (a) Is in fact independent and not under the control of ETWD or IRWD;
- (b) Does not have any substantial interest, direct or indirect, in ETWD, IRWD or the Capacity; and
- (c) Is not connected with ETWD or IRWD as an officer or employee of ETWD or IRWD, but who may be regularly retained to make reports to ETWD or IRWD.

“Installment Payments” means payments to be made by ETWD pursuant to Section 3.3 of this Agreement, including any delinquent payments.

“Interest Payment Date” means each July 1, October 1, January 1 and April 1, commencing on the first such date to occur after the [[thirtieth (30th)]] day following the initial disbursement of Project Funds pursuant to Section 2.4.

“IRWD” means the Irvine Ranch Water District, a California water district formed and existing under the Act.

“Net System Revenues” means, for any Fiscal Year, all System Revenues received by ETWD for such Fiscal Year less the Operations and Maintenance Costs for such Fiscal Year.

“Operations and Maintenance Costs” means the reasonable and necessary costs paid or incurred by ETWD for maintaining and operating the System, determined in accordance with generally accepted accounting principles, including all reasonable expenses of management and repair and all other expenses necessary to maintain and preserve the System in good repair and working order, and including all administrative costs of ETWD that are charged directly or apportioned to the operation of the System, such as salaries and wages of employees, overhead, taxes (if any), the cost of permits and licenses to operate the System and insurance premiums, and including all other reasonable and necessary costs of ETWD or charges required to be paid by it to comply with the terms hereof; but excluding in all cases depreciation, replacement and obsolescence charges or reserves therefor and amortization of intangibles.

“Parity Debt” means any loan, bond, note, advance, installment sale agreement, capital lease or other evidence of indebtedness payable from and secured by a lien on the Net System Revenues on a parity with the Installment Payments and Additional Payments.

“Parity Debt Instrument” means:

- (1) An Installment Payment Agreement (El Toro Water District Water Facilities) by and between ETWD and Laguna Hills Water Company (“Laguna”), dated as of June 1, 1983;
- (2) An Installment Payment Agreement (El Toro Water District Sanitation Facilities) by and between ETWD and Laguna, dated June 1, 1983; and
- (3) A State Water Resources Control Board Loan by and between the California State Water Resources Control Board (“CSWRCB”) and ETWD, dated December 28, 1995.

“Parity Debt Service” means, for any Fiscal Year, the sum of: (1) the principal and interest due and payable during such Fiscal Year for all outstanding Parity Debt, and (2) annual fees, if any, under Parity Debt.

“Principal Payment Date” means each July 1, October 1, January 1 and April 1, commencing on the first such date to occur after the thirtieth (30th) day following the Final Disbursement Date.

“Project” means the Baker WTP as defined in the Baker WTP Agreement.

“Project Funds” mean the moneys provided by IRWD, on behalf of ETWD, pursuant to Section 2.4 of this Agreement to fund , up to the maximum amount specified in Section 2.3(b)(1), ETWD’s obligations under Section 3 of the Baker WTP Agreement.

“Purchase Price” means the principal amount plus the interest thereon owed by ETWD to IRWD under the conditions and terms hereof for the aggregate amount of Project Funds disbursed for payment of the costs of the Capacity and the incidental costs and expenses related thereto paid by IRWD.

“Report” means a document in writing signed by an Independent Consultant or an Independent Accountant, and including:

(a) A statement that the person or firm making or giving such Report has read the pertinent provisions of this Agreement to which such Report relates;

(b) A brief statement as to the nature and scope of the examination or investigation upon which the Report is based; and

(c) A statement that, in the opinion of such person or firm, sufficient examination or investigation was made as is necessary to enable said consultant to express an informed opinion with respect to the subject matter referred to in the Report.

“Senior Debt” means the obligations evidenced by the Senior Debt Instruments and any additional loan, bond, note, advance, installment sale agreement, or other indebtedness or capital lease of ETWD payable from and secured by a first lien on the Net System Revenues which is senior to this Agreement.

“Senior Debt Instrument” means:

(1) A Project Finance Agreement by and between ETWD and the CSWRCB, dated October 13, 2010; and

(2) A Project Finance Agreement by and between ETWD and the CSWRCB, dated June 13, 2013.

“State” means the State of California.

“Subordinate Debt Instruments” means any additional loan, bond, note, advance, installment sale agreement, or other indebtedness or capital lease of ETWD payable from and secured by a lien on the Net System Revenues subordinate to this Agreement.

“System” means all water and wastewater enterprise system facilities owned by ETWD, and all other properties, structures or works hereafter acquired and constructed by ETWD and determined to be a part of the System, together with all additions, betterments, extensions or improvements to such facilities, properties, structures or works or any part thereof hereafter acquired and constructed.

“System Revenues” means, for each Fiscal Year, all gross income and revenue received or receivable by ETWD from the ownership or operation of the System, determined in accordance with generally accepted accounting principles, including all rates, fees and charges (including connection fees and charges and property taxes) received by ETWD for the services of the System, and all other collections, income and revenue howsoever derived by ETWD from the ownership or operation of the System or arising from the System, and also including all income from the deposit or investment of any money in the Enterprise Fund or any rate stabilization fund and the proceeds of any taxes, but excluding in all cases any refundable deposits made to establish credit, and advances or contributions in aid of construction.

Section 1.2. Rules of Construction. Except where the context otherwise requires, words imparting the singular number shall include the plural number and vice versa, and pronouns inferring the masculine gender shall include the feminine gender and vice versa. All references herein to particular articles or sections are references to articles or sections of this Agreement. The headings and Table of Contents herein are solely for convenience of reference and shall not constitute a part of this Agreement, nor shall they affect its meanings, construction or effect.

## II.

### TERMS OF SALE

Section 2.1. Purchase of Capacity by ETWD. In consideration of the obligation of ETWD to make the Installment Payments, and the other agreements and obligations of ETWD set forth in this Agreement, IRWD hereby agrees to fully fund the remaining acquisition cost of, and sell, assign, and transfer to ETWD on an installment sale basis, and ETWD hereby agrees to purchase from IRWD, all right, title and interest in and to the Capacity generally described on Exhibit 1 hereto. This Agreement constitutes a continuing agreement between ETWD and IRWD to secure the full and final payment of the Purchase Price, subject to the covenants, agreements, provisions and conditions herein contained. Nothing herein shall be construed to diminish or restrict any right of ETWD or IRWD under the Baker WTP Agreement, as amended. In the event of a conflict between this Agreement and the Baker WTP Agreement, with respect to rights of ETWD or IRWD, the Baker WTP Agreement shall prevail.

Section 2.2. Design, Acquisition, Construction and Purchase/Sale of the Capacity. IRWD hereby agrees to sell, and hereby sells, the Capacity to ETWD. ETWD hereby agrees to purchase, and hereby purchases, the Capacity from IRWD. ETWD and IRWD acknowledge and agree that the Baker WTP is currently being designed, acquired and constructed pursuant to the Baker WTP Agreement. In order to implement this provision, it is hereby agreed that IRWD shall acquire the Capacity by funding ETWD’s obligations accruing after the date hereof under Section 3 of the Baker WTP Agreement. It is acknowledged that prior to the date hereof, ETWD has cash-funded its costs of the Capacity, and such costs will not be reimbursed or financed under this Agreement. The amount of the Capacity for this purpose shall be the amount established pursuant to Amendment No. 1 of the Baker WTP Agreement and/or any future amendments to the Baker WTP.



Section 2.3. Payment of Purchase Price; Terms; Interest Rates.

(a) The Purchase Price to be paid by ETWD to IRWD hereunder is the sum of the principal amount of ETWD's obligation hereunder plus interest, subject to prepayment as provided in Section 2.5. Interest shall accrue on the outstanding amount disbursed and remaining unpaid.

(b) For purposes of this Agreement:

(1) The principal amount of the Purchase Price to be paid by ETWD to IRWD hereunder shall be equal to the total amount of Project Funds disbursed by IRWD pursuant to Section 2.4, up to the maximum amount of [[\$12,500,000.00]] .

(2) The term of this Agreement is twenty (20) years from the Final Disbursement Date.

(3) The interest rate shall be fixed on the first disbursement of Project Funds pursuant to Section 2.4. Such rate shall be based on the Applicable Index. On the Effective Date, ETWD shall pay to IRWD a one-time sale origination fee to compensate IRWD for its expenses in preparing this Agreement in an amount not to exceed Fifteen Thousand dollars (\$15,000.00).

(c) Commencing on the day following the Final Disbursement Date, the Purchase Price shall be amortized by IRWD on a straight-line basis over the term of this Agreement. ETWD shall be billed by IRWD for the amortized principal payments, which will be due quarterly on the Principal Payment Dates.

(1) The interest-only period shall be in effect through the last Interest Payment Date occurring prior to the first Principal Payment Date. The first principal payment shall be due on the first Principal Payment Date specified in the definition of such term.

(2) Interest-only payments will be based upon the total Project Funds disbursed as of the day prior to the interest payment, using the interest rate specified in paragraph (b)(3) of this Section. Interest-only payments shall be due on each Interest Payment Date during the interest-only period.

(d) If any portion of the principal of the Purchase Price is prepaid in part pursuant to Section 2.5 hereof, the schedule of the principal payments shall be modified to reflect such partial prepayment.

(e) The obligation of ETWD to pay the Purchase Price by paying the Installment Payments and Additional Payments is, subject to Section 4.7, absolute and unconditional; and until such time as the Purchase Price shall have been paid in full (or provision for the payment thereof shall have been made as provided in Section 8.5), ETWD shall not discontinue or suspend any Installment Payments or Additional Payments required to be paid by it under this Agreement when due, whether or not the Project or any part thereof is operating or operable, or its use is suspended, interfered with, reduced, curtailed or terminated in whole or in

part, or ETWD is not using all or any part of the Capacity, whether due to outage or for other reason; and such payments shall not be subject to reduction whether by offset or otherwise and shall not be conditional upon the performance or nonperformance by any party to any agreement for any cause whatsoever.

Section 2.4. Disbursement of Project Funds; Additional Payments.

(a) Project Funds shall be deemed to be disbursed automatically hereunder upon each due date following presentation of an invoice for a deposit by ETWD in accordance with Section 3.2 of the Baker WTP Agreement, in an amount equal to the amount of such invoice, unless IRWD has provided notice to ETWD of a withheld disbursement under Section 2.12 hereof. The disbursement of Project Funds shall be adjusted to reflect the actual costs of the Project (and any adjustments shall be applied to the amount of disbursed Project Funds if a refund or additional required payment of deposited funds occurs) concurrent with the adjustment of deposits that is made under the Baker WTP Agreement within sixty (60) days of completion of the Project; provided, no adjustment shall be made as a result in any payments of interest previously made under this Agreement. ETWD shall not be required to pay an invoice for a deposit by ETWD in accordance with Section 3 of the Baker WTP Agreement unless IRWD has provided notice to ETWD of a withheld disbursement under Section 2.12 hereof or IRWD has notified ETWD that the Project Funds disbursements have equaled the maximum amount of the Project Funds available under this Agreement. If ETWD believes the amount of an invoice is incorrect, ETWD shall so notify IRWD within 15 days of discovery of the error; if the parties are in agreement as to a correction of the amount, IRWD shall issue a revised invoice and the Project Funds disbursement will be made in the corrected amount. If the parties have not resolved the issue by the time of the deposit due date, the Project Funds disbursement shall be made in the amount as invoiced by IRWD, subject to correction (with interest adjustment) in a subsequent deposit pursuant to Section 3.2 of the Baker WTP Agreement when resolved.

(b) The total cumulative amount of such disbursements of Project Funds shall not exceed the total maximum principal amount of the Project Funds available under Section 2.3(b)(1) of this Agreement.

(c) Notwithstanding any contrary provisions of this Agreement or any related documents, under no circumstances will IRWD be obligated to make disbursements in excess of the lesser of (i) ETWD's share of actual Project costs incurred in connection with the completion of the Project or (ii) the maximum principal amount of the Purchase Price.

(d) Interest shall be calculated on the basis of a 360-day year of twelve 30-day months. Any installment of principal or interest that is not paid when due shall continue to accrue interest at the lesser of twelve percent (12%) per annum or the maximum rate permitted by law from and including the Principal Payment Date or Interest Payment Date with respect to which such principal or interest is payable to, but not including, the date of actual payment.

(e) ETWD shall pay Additional Payments to IRWD as follows:

(1) An annual administrative fee of \$250.00 and any additional amounts in each year as shall be required by IRWD for the payment of extraordinary expenses of

IRWD in connection with an Event of Default, the enforcement of this Agreement or any amendments hereto requested by ETWD, including all expenses, fees of accountants, trustees, attorneys, litigation costs, insurance premiums and all other extraordinary costs of IRWD. Extraordinary expenses and extraordinary costs are those expenses and costs related to this Agreement in excess of ordinary and customary expenses and costs incurred as part of the administration of the Agreement. Such Additional Payments shall be billed by IRWD from time to time, together with a statement certifying that the amount so billed has been paid by, or will be paid by, IRWD for one or more of the items above described, or that such amount is then payable by IRWD for such items; and

(2) ETWD shall pay to IRWD the amount billed pursuant to subsection (1) within thirty (30) days after mailing of the bill by IRWD. Any amounts not promptly paid shall accrue interest at the lesser of twelve percent (12%) per annum or the maximum rate permitted by law.

(f) All payments hereunder shall be payable by ETWD in immediately available funds which constitute lawful money of the United States of America. Such payments shall be secured, and amounts for the payment thereof shall be deposited with IRWD as set forth in Article III.

Section 2.5. Prepayment and Reduction in Project Funds.

(a) ETWD may at any time prepay all or a portion of the principal component of the Purchase Price at a prepayment price equal to the principal component of the Purchase Price to be prepaid, together with accrued interest from the last Interest Payment Date to the date of prepayment.

(b) ETWD hereby covenants to notify IRWD at least fifteen (15) days before making any prepayment of this Agreement.

Section 2.6. Encumbrance of Project Funds. No funds of IRWD are encumbered under this Agreement.

Section 2.7. Additional Debt.

(a) Incompliance with this Section 2.7, ETWD may after the Effective Date issue or incur Parity Debt in such principal amount as shall be determined by ETWD without IRWD's consent but subject to the requirements for additional obligations as set forth in all Parity Debt Instruments and the following specific condition, which are hereby made conditions precedent to the issuance and delivery of such Parity Debt issued under this section, provided that to the extent that a requirement for additional obligations as set forth in a Parity Debt Instrument conflicts with any of the requirements set forth in this Section 2.7, the more restrictive provision shall prevail:

(1) No Event of Default hereunder or under any other instrument secured by System Revenues shall have occurred and be continuing to which ETWD has actual notice, and ETWD shall otherwise be in compliance with all covenants set forth in this Agreement.

(b) Senior Debt (other than the Senior Debt Instruments) shall not be issued by ETWD without the prior written consent of IRWD, which consent shall not be unreasonably withheld, conditioned or delayed.

Section 2.8. Reserved..

Section 2.9. ETWD's Payment of Project Costs. In accordance with the Baker WTP Agreement, ETWD agrees to pay any and all costs connected with the Capacity, including, without limitation, any and all Capacity costs exceeding the maximum amount of Project Funds that may be disbursed.

Section 2.10. Obligation To Pay Not Contingent. The obligation of ETWD to pay the Purchase Price as and when due shall not be dependent upon the completion or continued operation of the Project, retention by ETWD, IRWD or any other party of any or all of its interest in the Project or upon the performance by any person of his or her obligation with respect to the Project, and shall not be affected by the sale or disposition by ETWD, IRWD or any other party of any or all of its interest in the Project.

Section 2.11. Reasonable Cost of the Capacity. The reasonable cost of the Capacity is estimated to be \$[insert amount – should at least equal the maximum under 2.3(b)(1) plus any amount already paid in cash by ETWD or that will have been paid in cash by ETWD by the Effective date] of which a portion valued at the Purchase Price shall be purchased hereunder, and the remainder shall be paid in cash by ETWD including funds disbursed by ETWD prior to the Effective Date.

Section 2.12. Withholding of Project Funds.

(a) IRWD may withhold the disbursement of all or any portion of the Project Funds if an Event of Default has occurred.

(b) In the event that any disbursement of Project Funds is withheld from ETWD pursuant to this section, IRWD shall notify ETWD of the reasons and advise ETWD that ETWD has thirty (30) days in which to remedy the Event of Default.

(c) If any disbursement of Project Funds is withheld pursuant to this section, ETWD remains obligated to repay the amount of the Purchase Price disbursed and Capacity will be adjusted in accordance with the Baker WTP Agreement

### III.

#### PLEDGE OF REVENUES; APPLICATION OF FUNDS

Section 3.1. Pledge of Net System Revenues. The Installment Payments and Additional Payments and all Parity Debt shall be equally secured by a pledge of and lien on all of the Net System Revenues and all amounts in the Enterprise Fund, without preference or priority for series, issue, number, dated date, sale date, date of execution or date of delivery, subject and subordinate solely to the Senior Debt. The Net System Revenues and all amounts in the Enterprise Fund are hereby pledged in their entirety to the payment of Installment Payments and



Additional Payments, subject and subordinate to the Senior Debt Instruments. The Net System Revenues and all amounts in the Enterprise Fund shall be subject to the lien of such pledge without any physical delivery thereof or further act, and the lien of such pledge shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against ETWD.

Neither the Installment Payments, the Additional Payments nor this Agreement is a debt of IRWD, the State or any of its political subdivisions (other than ETWD) and neither IRWD, the State nor any of its political subdivisions (other than ETWD) is liable thereon, nor in any event shall the Installment Payments or the Additional Payments be payable out of any funds or properties of ETWD other than Net System Revenues as provided herein.

Section 3.2. Enterprise Fund; Payments. In order to carry out its obligation to pay the Installment Payments and Additional Payments, ETWD agrees and covenants that it shall maintain the Enterprise Fund. All System Revenues received by it shall be deposited when and as received in trust in the Enterprise Fund and shall be applied and used only as provided herein: ETWD shall pay all Operations and Maintenance Costs (including amounts reasonably required to be set aside in contingency reserves for Operations and Maintenance Costs the payment of which is not then immediately required) from the Enterprise Fund as they become due and payable, and all remaining money on deposit in the Enterprise Fund shall then be used to pay Senior Debt as a first priority and then, Section 3.3 amounts. After making all the set asides and payments hereinabove required to be made in each Fiscal Year, ETWD may expend in such Fiscal Year any remaining money in the Enterprise Fund for any lawful purpose of ETWD. ETWD agrees and covenants to maintain the Enterprise Fund so long as any portion of the Purchase Price remains unpaid.

Section 3.3. Amounts Payable from the Enterprise Fund. (a) IRWD Payments. ETWD shall promptly pay to IRWD the following amounts at the following times:

(1) The principal portions of the Installment Payments are due on the Principal Payment Dates. The interest portions of Installment Payments are due on the Interest Payment Dates.

(2) ETWD shall promptly pay to IRWD the Additional Payments due pursuant to Section 2.4 (e).

(3) All payments required pursuant to this agreement shall be paid by federal funds wire to IRWD at: Bank of America ABA: 0260-0959-3; FBO: Irvine Ranch Water District; Account Number 14588-50341 or pursuant to such other arrangement as agreed to by IRWD and ETWD.

(b) Parity Debt. ETWD shall promptly pay to the holder of any Parity Debt the Parity Debt Service as it becomes due and payable on Parity Debt.

#### IV.

#### REPRESENTATIONS AND WARRANTIES OF ETWD

Section 4.1. Organization; Authority. ETWD is duly organized and existing as a California water district under the laws of the State and has all necessary power and authority to enter into and perform its duties (including the authority to set rents, rates and charges and to pledge the Net System Revenues) under this Agreement.

Section 4.2. Agreement Valid and Binding. This Agreement has been duly authorized, executed and delivered by ETWD and constitutes the legal, valid and binding obligation of ETWD, enforceable in accordance with its terms, except as enforcement may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws or equitable principles relating to or limiting creditors' rights generally.

Section 4.3. No Conflict in Execution of Agreement. To the actual knowledge of ETWD, the execution and delivery by ETWD of this Agreement and compliance with the provisions hereof will not conflict with or constitute a breach of or default under any law, administrative regulation, court decree, resolution, charter, by-law or any agreement to which ETWD is subject or by which it is bound or by which its properties may be affected.

Section 4.4. No Litigation. There is no action, suit, proceeding or investigation at law or in equity before or by any court or governmental agency or body pending or, to the actual knowledge of ETWD, threatened against ETWD to restrain or enjoin the execution or delivery of this Agreement, or in any way contesting or affecting the validity of this Agreement, or contesting the powers of ETWD to enter into or perform its obligations under this Agreement, including the pledge of Net System Revenues.

Section 4.5. No Breach or Default.

ETWD is not in breach of or in default under any applicable law or administrative regulation of the State or the United States, the Constitution of the State, any applicable judgment or decree, any agreement, indenture, bond, note, resolution, agreement or other instrument to which ETWD is a party or is otherwise subject which would have a material adverse impact on ETWD's ability to perform its obligations under this Agreement and no event has occurred and is continuing which, with the passage of time or the giving of notice, or both, would constitute a default or an event of default under any such instrument.

Section 4.6. No Consent, Approval or Permission Necessary No consent or approval of any trustee or holder of any indebtedness of ETWD, and no consent, permission, authorization, order or licenses of, or filing or registration with, any governmental authority is necessary in connection with the execution and delivery of this Agreement or the consummation of any transaction contemplated herein, except as have been obtained or made and as are in full force and effect.

Section 4.7. Pledged Funds; Limited Obligation. ETWD expects that in each Fiscal Year, Net System Revenues will equal or exceed such Fiscal Year's payments due under this Agreement, and such payments will be treated as paid from current Net System Revenues. ETWD shall have no obligation to use any funds other than the Net System Revenues, directly or indirectly, to pay principal of or interest on the Purchase Price and Additional Payments; nor are

any funds other than the Net System Revenues so pledged as security for the payment of the Installment Payments and Additional Payments.

Section 4.8. Pledge and Lien. The pledge of the Net System Revenues and amounts in the Enterprise Fund constitute a valid pledge of and a lien on all of the Net System Revenues, subject only to the prior lien of the Senior Debt.

Section 4.9. Information Submitted to IRWD. The information relating to ETWD and its System submitted by ETWD to IRWD was true at the time submitted to IRWD and, as of the Effective Date, remains true and correct in all material respects; and such information did not and does not contain any untrue or misleading statement of a material fact or omit to state any material fact necessary to make the statements therein not misleading in light of the circumstances under which they were made.

Section 4.10. Financial Statements of ETWD. ETWD's financial statements furnished to IRWD have been prepared in conformity with generally accepted accounting principles and fairly present in all material respects the financial condition of ETWD as of the date thereof and the results of its operations for the period covered thereby. There has been no material adverse change in the business, condition (financial or otherwise) or operations of ETWD since the date of such financial statements.

Section 4.11. Notification to IRWD. ETWD agrees to notify IRWD, immediately, by telephone promptly confirmed in writing, if ETWD has actual knowledge that any representation made herein shall, at any time so long as the Agreement is outstanding, prove untrue or incorrect in any manner.

Section 4.12. Licenses, Permits and Approvals for Operation of System. ETWD has obtained or will obtain all licenses, permits and approvals from any governmental agency or authority having jurisdiction over ETWD now required for the operation of the System and will obtain all licenses, permits and approvals as required in the future.

Section 4.13. Project Completion. Reserved.

Section 4.14. Existing Obligations. As of the Effective Date, the only obligations (other than this Agreement) secured by a lien on Net System Revenues are those listed in Section 1.1 in the definitions of Senior Debt Instrument and Parity Debt Instrument.

## V.

### AFFIRMATIVE COVENANTS OF ETWD

Section 5.1. Punctual Payment. ETWD will punctually pay, or cause to be paid, all payments required hereunder in strict conformity with the terms of this Agreement, and it will faithfully observe and perform all of the conditions, covenants and requirements of this Agreement.

Section 5.2. Payment of Claims. ETWD will pay and discharge, or cause to be paid and discharged, any and all lawful claims for labor, materials or supplies, which, if unpaid,

might become liens or charges upon the properties owned by ETWD, including the System, or upon the System Revenues or any part thereof, or upon any funds in the hands of IRWD, or which might impair the security for the payment of the Installment Payments or Additional Payments. Nothing herein contained shall require ETWD to make any such payment so long as ETWD in good faith shall contest the validity of said claims.

Section 5.3. Books and Accounts; Financial Statements.

ETWD will keep proper books of record and accounts in which complete and correct entries shall be made of all transactions relating to the System Revenues. Such books of record and accounts shall at all times during business hours be subject to the inspection of IRWD or its designee

Section 5.4. Protection of Security and Rights. ETWD will preserve and protect the security for payment of the Installment Payments, Additional Payments and the rights of IRWD.

Section 5.5. Payments of Taxes and Other Charges. will pay and discharge, or cause to be paid and discharged, all taxes, service charges, assessments and other governmental charges, or charges in lieu thereof, which may hereafter be lawfully imposed upon ETWD, the System or the System Revenue when the same shall become due. Nothing herein contained shall require ETWD to make any such payment so long as ETWD in good faith shall contest the validity of said taxes, assessments or charges. ETWD will duly observe and conform to all valid requirements of any governmental authority relative to the System or any part thereof.

Section 5.6. Maintenance of System Revenues.

(a) ETWD will fix, charge and collect, or cause to be fixed, charged and collected, in each Fiscal Year, such rates and charges for the use of and for the service furnished by the System so that Net System Revenues are in an amount which will be sufficient to be at least equal to 1.10 times the annual Debt Service, and at least equal to one hundred percent (100%) of the sum of annual Debt Service and annual debt service on Subordinate Debt for such Fiscal Year.

(b) If for any reason Net System Revenues prove insufficient to comply with the requirements of subsection (a), ETWD agrees to increase System Revenues through increased rents, rates, fees, charges, and/or assessments not later than one hundred eighty (180) days following the date ETWD has actual knowledge that Net System Revenues fail to meet those requirements. ETWD may make adjustments from time to time in such rents, rates, fees and charges and may make such classification thereof as it deems necessary, but shall not reduce the rents, rates, fees, and charges then in effect unless the Net System Revenues from such reduced rents, rates, fees and charges will at all times be sufficient to meet the requirements of this section.

Section 5.7. Operation of System. ETWD will, so long as any portion of the Purchase Price is unpaid, maintain and operate the System in good condition, repair and working order, and will operate the System in an efficient and economical manner, and will pay all



Operations and Maintenance Costs as they become due and payable. ETWD shall ensure that all activities undertaken by ETWD with respect to the operation of the System are undertaken and accomplished in conformity with all applicable requirements of law.

Section 5.8. Assumption of Agreement. The obligations of ETWD under this Agreement may not be assumed by another entity except in connection with a transfer of the entire System by ETWD and only upon receipt by IRWD of:

(1) a Report signed by an Independent Consultant or Independent Accountant concluding that such transfer would not materially adversely affect the security for the Installment Payments, Additional Payments or the rights of IRWD; and

(2) evidence satisfactory to IRWD that the entity assuming ETWD's obligation hereunder has assumed all rights and liabilities hereunder and is eligible pursuant to the Act.

Section 5.9. Further Assurances. ETWD will adopt, make, execute and deliver any and all such further resolutions, instruments and assurances as may be reasonably required by IRWD as necessary or proper to carry out the intention or to facilitate the performance of this Agreement and for the better assuring and confirming unto IRWD of the rights and benefits provided in this Agreement.

Section 5.10. Collection of Rates, Fees and Charges. ETWD will have in effect at all times rules and regulations requiring each user of the System to pay the rates, fees and charges applicable to the services provided by the System to each user. ETWD will not permit any part of the System or any facility thereof to be used or taken advantage of free of charge by any corporation, firm or person, or by any public agency (including the United States of America, the State and any city, county, district, political subdivision, public corporation or agency of any thereof), except for programs established by the board of directors of ETWD, such as the current "lifeline program"; provided, that (a) ETWD and other public agencies may without charge use the services provided by the System; and (b) ETWD may allow individuals or entities to use the services provided by the System, provided that such free use (i) is in accordance with California law, and (ii) does not adversely affect the payments due IRWD hereunder.

Section 5.11. Operation and Maintenance of the Project. Operation, maintenance, repair and replacement costs for the Project shall be governed pursuant to the Baker WTP Agreement.

Section 5.12. Notice of Event of Default. ETWD covenants that it will deliver to IRWD, immediately after ETWD shall have obtained knowledge of the occurrence of an Event of Default or a failure as described in Section 7.1(a)(2), the written statement of an authorized officer of ETWD setting forth the details of such Event of Default or failure and the action which ETWD proposes to take with respect thereto.

Section 5.13. Maintenance of Insurance. ETWD will procure and maintain or cause to be maintained insurance on the System with responsible insurers, or as part of a reasonable system of self-insurance, in such amounts and against such risks (including damage to

or destruction of the System) as are usually covered in connection with systems similar to the System. In the event of any damage to or destruction of the System caused by the perils covered by such insurance, the net proceeds thereof shall be applied to the reconstruction, repair or replacement of the damaged or destroyed portion of the System. ETWD shall begin such reconstruction, repair or replacement as expeditiously as possible, and shall pay out of such net proceeds all costs and expenses in connection with such reconstruction, repair or replacement so that the same shall be completed and the System shall be free and clear of all claims and liens. If such net proceeds are sufficient to enable ETWD to pay all remaining unpaid Installment Payments and Additional Payments, ETWD may elect not to reconstruct, repair or replace the damaged or destroyed portion of the System, and thereupon such net proceeds shall be applied to the prepayment of Installment Payments and Additional Payments as provided herein.

Section 5.14. Compliance with Contracts. ETWD will comply with, keep, observe and perform all agreements, conditions, covenants and terms, express or implied, required to be performed by it contained in all contracts for the use of the System and all other contracts affecting or involving the System to the extent that ETWD is a party thereto.

## VI

### NEGATIVE COVENANTS OF ETWD

Section 6.1. Limitation on Additional Obligations. ETWD hereby covenants that, until the Purchase Price has been paid in full and this Agreement has been discharged pursuant to Section 8.5, ETWD shall not issue Parity Debt or Senior Debt, excepting only Parity Debt and Senior Debt meeting the requirements of Section 2.7 herein. Nothing herein is intended nor shall be construed in any way to prohibit or impose any limitations upon the issuance or incurrence by ETWD of Subordinate Obligations or granting a pledge of, lien on or charge upon the System Revenues in all respects junior and subordinate to the payment of amounts due with respect to the Agreement and Parity Debt to secure any such Subordinate Obligations. Nothing in this Agreement shall limit ETWD's payment of the Operation and Maintenance Costs prior to the payment of the Parity Debt as provided herein.

Section 6.2. Disposition of Property; Disposition of Capacity or Acquisition of Capacity Rights.

(a) Except as set forth in Section 5.8 when the entire System is being transferred, ETWD will not authorize the disposition of real or personal property constituting more than ten percent (10%) of the value of the System unless ETWD first obtains a Report, and provides a copy to IRWD, of an Independent Consultant concluding that such disposition will not substantially adversely affect the security for the payment of the Installment Payments and Additional Payments.

(b) ETWD agrees that it shall not have any right to sell, or otherwise dispose of any of the Capacity, pursuant to Section 5 or any other provision of the Baker WTP Agreement, unless all of its obligations under this Agreement, or an amount of the principal balance proportional to the amount of Capacity disposed of, has been paid and discharged. ETWD shall have the right to lease the Capacity, provided, however, that ETWD shall remain

responsible for performing all of its obligations under this Agreement. ETWD agrees that IRWD shall not be required by this Agreement to fund ETWD's cost of purchasing or otherwise acquiring any additional Capacity Rights, pursuant to Section 5 or any other provision of the Baker WTP Agreement.

## VII.

### EVENTS OF DEFAULT AND REMEDIES

#### Section 7.1. Events of Default and Acceleration.

(a) Each of the following events shall constitute an Event of Default hereunder:

(1) Failure by ETWD to pay any Installment Payment or interest or any Additional Payment pursuant to Section 3.3(a) when and as the same shall become due, and such failure continues for more than ten (10) days following receipt of notice from IRWD ;

(2) Failure by ETWD to observe and perform any of the covenants, agreements or conditions on its part contained in this Agreement, other than as referred to in the preceding subsection (1), for a period of sixty (60) days after written notice has been given to ETWD by IRWD, specifying such failure and requesting that such failure be remedied; provided, however, that if the failure stated in such notice can be corrected, but not within such sixty (60) day period, IRWD may consent (which consent shall not be unreasonably withheld, conditioned or delayed) to an extension of such time if corrective action is instituted by ETWD within such sixty (60) day period and diligently pursued until such failure is corrected;

(3) The filing by ETWD of a petition or answer seeking reorganization or arrangement under the federal bankruptcy laws or any other applicable law of the United States of America, or if a court of competent jurisdiction shall approve a petition, filed with or without the consent of ETWD, seeking reorganization under the federal bankruptcy laws or any other applicable law of the United States of America, or if, under the provisions of any other law for the relief or aid of debtors, any court of competent jurisdiction shall assume custody or control of ETWD or of the whole or any substantial part of its property;

(4) Any representation made by ETWD contained in this Agreement shall prove to have been incorrect in any material respect;

(5) An unexcused failure by ETWD to pay amounts due under any bond, note, installment sale agreement, capital lease or other agreement or instrument to which it is a party relating to the borrowing of money, if such unpaid amount shall exceed fifty thousand dollars (\$50,000); or

(6) The occurrence of an event of default with respect to any Senior Debt Instrument, any Parity Debt or any Subordinate Debt which causes all principal of such

Senior Debt Instrument, Parity Debt or Subordinate Debt to become due and payable immediately.

(b) If an Event of Default has occurred and is continuing, IRWD may (i) declare the principal of the Purchase Price, together with the accrued interest on all unpaid installments thereof, to be due and payable immediately, and upon any such declaration the same shall become immediately due and payable, anything in this Agreement to the contrary notwithstanding, and (ii) exercise any other remedies available to IRWD in law or at equity. Immediately upon becoming aware of the occurrence of an Event of Default, IRWD shall give notice of such Event of Default to ETWD by telephone, telecopier, facsimile or other telecommunication device, promptly confirmed in writing. This provision, however, is subject to the condition that if, at any time after the principal of the Purchase Price shall have been so declared due and payable, and before any judgment or decree for the payment of the moneys due shall have been obtained or entered, ETWD shall deposit with IRWD a sum sufficient to pay all installments of principal of the Purchase Price due prior to such declaration and all accrued interest thereon, with interest on such overdue Installment Payments at the rate of the lesser of twelve percent (12%) per annum or the maximum rate permitted by law, and the reasonable expenses of IRWD (including but not limited to attorneys fees and costs), and any and all other defaults known to IRWD (other than in the payment of principal of and interest on the Purchase Price due and payable solely by reason of such declaration), including the payment of Additional Payments due and owing, shall have been made good or cured to the satisfaction of IRWD or provision deemed by IRWD to be adequate shall have been made therefor, then, and in every such case, IRWD may, by written notice to ETWD, rescind and annul such declaration and its consequences. However, no such rescission and annulment shall extend to or shall affect any subsequent default, or shall impair or exhaust any right or power consequent thereon.

Section 7.2. Remedies. Upon the occurrence of an Event of Default IRWD shall have the following rights, in addition to its rights under Section 7.1:

(a) By mandamus or other action or proceeding or suit at law or in equity to enforce its rights against ETWD or any member, officer or employee thereof, and to compel ETWD or any such member, officer or employee to perform and carry out its or his duties under law and the agreements and covenants required to be performed by it or him contained herein;

(b) By suit in equity to enjoin any acts or things which are unlawful or violate the rights of IRWD; or

(c) By suit in equity to require ETWDs and its members, officers and employees to account as the trustee of an express trust.

Section 7.3. Application of Funds upon Default. All amounts received by IRWD pursuant to any right given or action taken by IRWD under provisions of this Agreement, or otherwise held by IRWD upon the occurrence of an Event of Default, shall be applied by IRWD in the following order:



(a) First, to the payment of the costs and expenses of IRWD, including reasonable compensation to their agents and attorneys, including IRWD employees, as set forth in Section 2.4(e)(1); and

(b) Second, to the payment of the whole amount of Installment Payments then due and unpaid, with interest on overdue Installment Payments at the rate of the lesser of twelve percent (12%) per annum or the maximum rate permitted by law; provided, however, that in the event such amounts shall be insufficient to pay in full the amount of such Installment Payments, then such amounts shall be applied in the following order of priority:

(1) First, to the payment of all installments of interest on the Purchase Price then due and unpaid;

(2) Second, to the payment of principal of all installments of the Purchase Price then due and unpaid, other than principal having come due and payable solely by reason of acceleration pursuant to Section 7.1;

(3) Third, to the payment of principal of the Purchase Price then due and unpaid and having come due and payable solely by reason of acceleration pursuant to Section 7.1.

Section 7.4. No Waiver. Nothing in this Article VII or in any other provision of this Agreement shall affect or impair the obligation of ETWD, which is absolute and unconditional, to pay from the Net System Revenues and other amounts pledged hereunder, all payments due hereunder, or affect or impair the right of action, which is also absolute and unconditional, of IRWD to institute suit to enforce such payment by virtue of the contract embodied in this Agreement.

A waiver of any default by IRWD shall not affect any subsequent default or impair any rights or remedies on the subsequent default. No delay or omission of IRWD to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver of any such default or an acquiescence therein, and every power and remedy conferred upon IRWD by this Article VII may be enforced and exercised from time to time and as often as shall be deemed expedient by IRWD.

If a suit, action or proceeding to enforce any right or exercise any remedy shall be abandoned or determined adversely to IRWD, ETWD and IRWD shall be restored to their former positions, rights and remedies as if such suit, action or proceeding had not been brought or taken.

Section 7.5. Remedies Not Exclusive. No remedy herein conferred upon or reserved to IRWD is intended to be exclusive of any other remedy. Every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise, and may be exercised without exhausting and without regard to any other remedy conferred by law.

## VIII.

### MISCELLANEOUS

Section 8.1. Venue. IRWD and ETWD hereby agree that any action arising out of this Agreement shall be filed and maintained in the Superior Court in and for the County of Orange, California, or in the United States District Court in and for the Central District of California.

Section 8.2. Assignment. IRWD shall have the right to assign its rights to receive Installment Payments hereunder with the prior written consent of ETWD, which consent shall not be unreasonably withheld, conditioned or delayed. Section 8.3. Benefits Limited to Parties. Nothing in this Agreement, expressed or implied, is intended to give to any person other than ETWD and IRWD, any right, remedy or claim under or by reason of this Agreement. All covenants, stipulations, promises or agreements contained in this Agreement by and on behalf of ETWD shall be for the sole and exclusive benefit of IRWD.

Section 8.4. Successor. Whenever in this Agreement either ETWD or IRWD is named or referred to, such reference shall be deemed to include the successors or assigns thereof, and all the covenants and agreements in this Agreement contained by or on behalf of ETWD or IRWD shall bind and inure to the benefit of the respective successors and assigns thereof whether so expressed or not.

Section 8.5. Discharge of Agreement. If ETWD shall pay and discharge the entire indebtedness hereunder by paying or causing to be paid the principal of and interest on the Purchase Price and Additional Payments, as and when the same become due and payable, including any prepayment pursuant to Section 2.5, then the pledge of and lien upon the Net System Revenues and other funds provided for in this Agreement and all other obligations of IRWD and ETWD under this Agreement with respect to the Purchase Price shall cease and terminate, except only the obligations of ETWD under Sections 8.1 and 8.12.

Section 8.6. Amendment. This Agreement may be amended by the parties in writing.

Section 8.7. Waiver of Personal Liability. No member, officer, agent or employee of ETWD shall be individually or personally liable for the payment of the principal of premium if any, or the interest under this Agreement; but nothing herein contained shall relieve any such member, officer, agent or employee from the performance of any official duty provided by law.

Section 8.8. Payment on Business Days. Whenever in this Agreement any amount is required to be paid on a day that is not a Business Day, such payment shall be required to be made on the Business Day immediately following such day and no further interest shall accrue.

Section 8.9. Notices. All written notices to be given under this Agreement shall be given by first-class mail or personal delivery to the party entitled thereto at its address set

forth below, or at such address as the party may provide to the other party in writing from time to time, except that notices from ETWD to IRWD shall be given by registered mail, or by telecommunication confirmed in writing. Notice shall be effective forty-eight (48) hours after deposit in the United States mail, postage prepaid or, in the case of any notice to IRWD or in the case of personal delivery to any person, upon actual receipt at the address set forth below:

If to IRWD:

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

Attn: \_\_\_\_\_

Or to such other address as may be designated in writing by IRWD.

If to ETWD:

El Toro Water District  
24251 Los Alisos Blvd.  
Lake Forest, CA 92630

Attn: \_\_\_\_\_

Or to such other address as may be designated in writing by ETWD.

Section 8.10. Partial Invalidity. If any portion of this Agreement shall for any reason be held illegal, invalid or unenforceable, such holding shall not affect the validity and enforceability of the remaining portions of this Agreement.

Section 8.11. Governing Law. This Agreement shall be construed and governed in accordance with the laws of the State.

Section 8.12. Reserved.

Section 8.13. Contact Persons.

(a) The Treasurer of IRWD or such other person as designated in writing by IRWD shall manage this Agreement for IRWD and shall have authority to make determinations and findings with respect to each controversy arising under or in connection with the interpretation, performance, or payment for work performed under this Agreement.

(b) The ETWD General Manager or such other person as may be designated in writing by ETWD shall be ETWD's representative for the administration of this Agreement and shall have full authority to act on behalf of ETWD. The General Manager or such other person as designated by the General Manager may designate in writing another person or persons authorized to request disbursement of Project Funds. All communications given to the ETWD General Manager shall be as binding as if given to ETWD.

Section 8.14. Costs. Except as provided in Section 2.3(b)(3), IRWD and ETWD shall each be responsible for their respective attorney's costs and expenses in the preparation, negotiation and review of this Agreement.

Section 8.15. Effective Date; Execution. This Agreement shall become enforceable upon its execution and delivery.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed by the respective officers, all as of the day and year first above written.

IRVINE RANCH WATER DISTRICT, as seller

By \_\_\_\_\_  
President

By \_\_\_\_\_  
Secretary

EL TORO WATER DISTRICT, as purchaser

By \_\_\_\_\_  
President

By \_\_\_\_\_  
Secretary



**EXHIBIT 1**

**DESCRIPTION OF CAPACITY**

**EXHIBIT A**

RESOLUTION NO. \_\_\_\_

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE EL TORO WATER DISTRICT AUTHORIZING THE EXECUTION AND DELIVERY OF THE INSTALLMENT SALE AGREEMENT BY AND BETWEEN THE EL TORO WATER DISTRICT AND THE IRVINE RANCH WATER DISTRICT AND APPROVING CERTAIN OTHER MATTERS IN CONNECTION THEREWITH

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE EL TORO WATER DISTRICT, AS FOLLOWS:

Section 1. The President and Secretary are authorized and directed individually to execute and deliver the Installment Sale Agreement (the "Agreement") proposed to be entered into by the El Toro Water District and the Irvine Ranch Water District. As executed and delivered, such document shall be in substantially the form presented at this meeting, with such minor additions thereto or minor changes therein as the officers executing such document shall require or approve, such approval to be conclusively evidenced by the execution and delivery thereof.

Section 2. The President and Secretary are hereby authorized and directed individually, in the name and on behalf of the El Toro Water District, to take any and all steps and to execute and deliver any and all certificates, contracts and other documents which they might deem necessary or appropriate in order to consummate the delivery of the Agreement and otherwise to effectuate the purposes of this resolution, and such actions previously taken by the officers and employees of the El Toro Water District are hereby ratified and confirmed.

Section 3. This resolution shall take effect from and after its passage, approval and adoption.

PASSED, APPROVED and ADOPTED this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_ by the following vote:

Ayes:  
Noes:  
Absent:  
Abstain:

By \_\_\_\_\_

ATTEST

By \_\_\_\_\_

**CERTIFICATION OF RESOLUTION**

The undersigned hereby states and certifies:

(1) I am the duly qualified and acting \_\_\_\_\_ of the El Toro Water District (“ETWD”), and, as such, am familiar with the facts herein certified and am fully authorized to certify the same.

(2) Attached hereto is a true, correct and complete copy of the resolution of the governing body of ETWD authorizing the execution and delivery of the Installment Sale Agreement by and between ETWD and Irvine Ranch Water District at a meeting thereof duly held on the date set forth in such resolution, of which meeting all of the members of said governing body had due notice and at which a quorum was present and acting throughout.

(3) I further certify that I have carefully compared the attached copy of the resolution with the original minutes of said meeting on file and of record in my office; that said copy is a true, correct and complete copy of the original resolution duly adopted by said governing body at said meeting and entered in said minutes; and that said resolution has not been amended, modified or rescinded since its adoption and is in full force and effect as of the date hereof.

(4) I further certify that in accordance with Government Code section 54954.2, the agenda of the meeting contained a brief description of the resolution to be considered at the meeting, and a copy thereof was posted at least seventy-two (72) hours before the meeting in a location freely accessible to members of the public.

Dated: \_\_\_\_\_

EL TORO WATER DISTRICT

By \_\_\_\_\_

**EXHIBIT B**

**CERTIFICATE OF THE CHIEF FINANCIAL OFFICER OF THE  
EL TORO WATER DISTRICT**

The undersigned hereby states and certifies, in connection with the execution and delivery of the Installment Sale Agreement (“Agreement”) by and between ETWD and the Irvine Ranch Water District:

(1) I am the duly qualified and acting chief financial officer of the El Toro Water District (“ETWD”), and, as such, am familiar with the facts herein certified and am fully authorized to certify the same.

(2) ETWD is not in breach of or in default under any bond indenture, loan agreement, note or other instrument to which it is a party.

(3) The security for the Agreement will be a pledge on the Water Enterprise Fund and Net System Revenues, [[subordinate to the existing obligation described in Section 4.14 of the Agreement]].

(4) The only outstanding obligations secured by Net System Revenues are those listed in Section 1.1 of the Agreement in the definitions of Senior Debt Instrument and Parity Debt Instrument.

(5) The representations and warranties made in the Agreement are true and correct as if made on the date of this certificate.

Dated: \_\_\_\_\_

EL TORO WATER DISTRICT

By \_\_\_\_\_



## EXHIBIT C

### CONDITIONS PRECEDENT TO DISBURSEMENT

(a) Initial Disbursement.

No funds shall be disbursed pursuant to this Agreement until and unless ETWD, in the good faith judgment of IRWD, has specifically complied with the following and provided a copy of the specified documents satisfactory to IRWD:

(1) Documents in a form substantially similar to Exhibit A with Certification, Exhibit B.

(b) Other Disbursement.

Disbursement shall be deemed to occur as provided in Section 2.4 of the Agreement.

## EXHIBIT D

*Form of:*

Legal Opinion on Attorney's Letterhead

[date]

Irvine Ranch Water District  
15600 Sand Canyon Ave.  
Irvine, CA

RE: Installment Sale Agreement, By and Between the El Toro Water District, as purchaser and the Irvine Ranch Water District, as Seller, Dated as of \_\_\_\_\_, in the amount not to exceed \_\_\_\_\_ Dollars (\$\_\_\_\_\_), for capacity in the Baker Water Treatment Plant

Ladies and Gentlemen:

In my capacity as counsel to the El Toro Water District ("ETWD") and in connection with the above described Installment Sale Agreement (the "Agreement"), I have examined the laws pertaining to the ETWD; the original of the Agreement, signed by ETWD; ETWD's resolution adopted \_\_\_\_\_, (the "Resolution"); and such other information and documents as I considered necessary to render this opinion.

*Other documents to include if applicable:*

- 1. Senior Debt Instruments;*
- 3. Parity Debt Instruments.*

Based upon the foregoing, it is my opinion that:

(i) ETWD is a California water district duly organized and validly existing pursuant to the laws of the State of California;

(ii) The Resolution and other actions of ETWD approving and authorizing the execution and delivery of the Agreement were duly adopted at a meeting of the governing body of ETWD which was called and held pursuant to law and with all public notice required by law and at which a quorum was present and acting throughout;

(iii) ETWD has full right and lawful authority to execute and deliver the Agreement and the Agreement has been duly authorized and executed on behalf of ETWD and the Agreement is the legal, valid and binding obligation of ETWD enforceable in accordance with its respective terms, except as enforcement may be limited by bankruptcy, insolvency, moratorium, or similar laws, or by legal or equitable principles relating to or limiting creditors' rights generally;

(iv) To the best of my knowledge, after due inquiry, the execution and delivery of the Agreement and compliance with the provisions thereof, under the circumstances contemplated thereby, do not and will not in any material respect conflict with or constitute on the part of ETWD a breach of or default under any agreement or other instrument to which ETWD is a party or by which it is bound or any existing law, regulation, court order or consent decree to which ETWD is subject; and

(v) To the best of my knowledge, after due inquiry, there is no action, suit, proceeding, inquiry or investigation before or by any court or public body pending or threatened against or affecting ETWD: 1) challenging or questioning the transactions contemplated by the Agreement or any other agreement, document or certificate related to such transactions; 2) challenging or questioning the creation, organization, existence or powers of ETWD; 3) seeking to enjoin or restrain the execution of the Agreement or the collection of any of the revenues pledged under the Agreement; 4) in any way questioning or affecting any of the rights, powers, duties or obligations of ETWD with respect to the revenues pledged under the Agreement; 5) in any way questioning or affecting any authority for the execution of the Agreement or validity or enforceability of the Agreement; or 6) in any way questioning or affecting any other agreement or instrument concerning the Agreement to which ETWD is a party.

I do not render any opinion as to any federal or state securities or tax law. I am furnishing this letter solely for your benefit. This letter is not to be used, circulated, quoted or otherwise referred to for any other purpose.

The opinions expressed herein may be affected by actions taken or events occurring after the date hereof. The undersigned has not undertaken to determine or to inform any person whether any such subsequent actions or events are taken or occur.

Sincerely,

Counsel for ETWD



## AMORTIZATION SCHEDULE

*[to be prepared after Final Disbursement Date, pursuant to Section 2.3(c)]*

Payment Date	Ending Principal Balance	Principal Payment	Interest Payment	Total Principal & Interest	Total Payment	Total Payment Fiscal Year Ending 30-Jun
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November 11, 2013  
 Prepared by: C. Compton  
 Submitted by: G. Heiertz  
 Approved by: Paul Cook



**ACTION CALENDAR**

**ASSOCIATION OF CALIFORNIA WATER AGENCIES'  
STATEWIDE WATER ACTION PLAN**

**SUMMARY:**

This report provides an update on the Association of California Water Agencies' (ACWA) Statewide Water Action Plan for California. Staff recommends that the IRWD Board adopt a resolution supporting the Plan.

**BACKGROUND:**

This past spring, ACWA convened a cross-section of its members to develop a plan to address the state's overall water supply reliability and ecosystem health. The members, who were asked to participate in the development of the plan, were from throughout the state and representative of a diverse set of perspectives on how to improve the state's water supply. The result of ACWA's effort was the development of the Statewide Water Action Plan. The ACWA members who participated in the development of the Statewide Water Action Plan are listed below.

**Statewide Water Action Plan Participation by Region**

<p><b><u>Bay Area</u></b></p> <p>East Bay Municipal Utility District          Contra Costa Water District          Sonoma County Water Agency          Santa Clara Valley Water District</p> <p><b><u>Delta and Sacramento Region</u></b></p> <p>City of Sacramento          San Juan Water District          Regional Water Authority          Reclamation District 2068</p> <p><b><u>Mountain Counties</u></b></p> <p>Mountain Counties Water Resources Assoc.          El Dorado County Water Agency          Placer County Water Agency</p>	<p><b><u>Sacramento Valley</u></b></p> <p>Glenn-Colusa Irrigation District          Northern California Water Association</p> <p><b><u>San Joaquin &amp; Kings Rivers</u></b></p> <p>San Joaquin Tributaries Authority          Merced Irrigation District          Friant Water Authority          Turlock Irrigation District          Kings River Conservation District</p> <p><b><u>West &amp; Southern San Joaquin Valley/          Southern California</u></b></p> <p>MWD of Southern California          Westlands Water District          Kern County Water Agency          San Luis Delta-Medota Water Authority</p>
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On September 27, 2013, the ACWA Board of Directors approved the Statewide Water Action Plan, and submitted it to Governor Brown as the water community's recommendations for developing the Administration's water plan for the state. ACWA is now asking its members to adopt a resolution in support of the Statewide Water Action Plan. A copy of the resolution supporting the Plan is attached as Exhibit "A".

#### Summary of ACWA's Statewide Water Action Plan:

ACWA's Statewide Water Action Plan calls for the State to take a number of specific actions in order to improve the state's overall water supply reliability. A copy of the ACWA Statewide Water Action Plan is attached as Exhibit "B". If the proposed recommendations were adopted by the State, ACWA suggests that it would provide the context for a Delta solution and other critical actions as components of a broader set of strategies to secure California's water future.

ACWA's Statewide Water Action Plan outlines six guiding principles. Each of the principles is meant to guide the implementation of the recommended actions contained in the Plan. The six guiding principles focus on long-term water supply reliability and improved ecosystem health; a new regulatory approach; use of the best available science; water rights and contract terms; bold actions guided by strong leadership; and the need for state financing of water infrastructure.

The Plan also includes 15 statewide action categories and recommended actions in each category in order to improve water supply reliability, protect water rights, protect the integrity of the state's water system and promote better stewardship. The 15 action categories are:

- Storage
- Water Use Efficiency
- Water Supply Assurances
- Operational Assurances
- Improved Regional Self-Reliance
- Headwaters
- Water Quality
- Bay Delta Conservation Plan
- Levee Improvement and Maintenance
- Emergency Preparedness and Public Safety
- Bay-Delta Water Quality Control Plan
- Water Bond
- Groundwater Resources
- Water Transfers
- Governmental Coordination

#### Staff Recommendation:

Overall, the ACWA Statewide Water Action Plan strives to present a balanced set of recommendations for securing California's water future, and outlines a path forward to improve water supply reliability and water quality in the state. Given the need for water supply reliability

in California and the balanced approach towards that goal outlined in ACWA's plan, staff recommends the Board adopt a resolution supporting the ACWA Statewide Water Action Plan for California.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on November 5, 2013.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE SUPPORTING THE ASSOCIATION OF CALIFORNIA WATER AGENCIES' STATEWIDE WATER ACTION PLAN FOR CALIFORNIA:

RESOLUTION NO. 2013-

RESOLUTION OF THE BOARD OF DIRECTORS OF  
THE IRVINE RANCH WATER DISTRICT IN SUPPORT OF  
THE ASSOCIATION OF CALIFORNIA WATER AGENCIES'  
STATEWIDE WATER ACTION PLAN

LIST OF EXHIBITS:

Exhibit "A" – Proposed Resolution of Support for the Association of California Water Agencies' Statewide Water Action Plan for California

Exhibit "B" – Copy of the Association of California Water Agencies' Statewide Water Action Plan for California



**EXHIBIT "A"**

**RESOLUTION NO. 2013-**

**RESOLUTION OF THE BOARD OF DIRECTORS OF  
THE IRVINE RANCH WATER DISTRICT IN SUPPORT OF  
THE ASSOCIATION OF CALIFORNIA WATER AGENCIES'  
STATEWIDE WATER ACTION PLAN**

WHEREAS, a broad cross-section of water interests convened by the Association of California Water Agencies (ACWA) has developed a Statewide Water Action Plan to address overall water supply reliability and ecosystem health in California; and

WHEREAS, the ACWA Board of Directors unanimously approved the Statewide Water Action Plan at its Sept. 27, 2013, meeting and directed that it be submitted to California Governor Jerry Brown as the water community's recommendations for developing the Administration's water plan; and

WHEREAS, ACWA's Statewide Water Action Plan outlines 15 actions to improve water supply reliability, protect water rights, protect the integrity of the state's water system and promote better stewardship; and

WHEREAS, the plan also includes guiding principles for implementation to help ensure actions benefit the entire state, respect water rights and contract terms, and reflect a new regulatory approach that can better meet the needs of California water users and ecosystems; and

WHEREAS, the Statewide Water Action Plan provides context for a Delta solution and other critical actions as components of a broader set of strategies to secure California's water future; and

WHEREAS, when implemented together, this suite of statewide actions will serve as a sustainable path forward for California; and

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Irvine Ranch Water District hereby supports ACWA's Statewide Water Action Plan and encourages its adoption as the basis for statewide action by Governor Brown.

ADOPTED, SIGNED AND APPROVED this November 11<sup>th</sup> day of November 2013.

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

---

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

APPROVED AS TO FORM:

---

Bowie, Arneson, Wiles & Giannone  
Legal Counsel – IRWD



ASSOCIATION OF CALIFORNIA WATER AGENCIES

# STATEWIDE WATER ACTION PLAN FOR CALIFORNIA



**Association  
of California  
Water Agencies**  
Since 1910  
Leadership • Advocacy  
Information • Service

# About the Statewide Water Action Plan

The Association of California Water Agencies (ACWA) convened a broad cross-section of member water interests in spring 2013 to develop a statewide plan addressing the state's overall water supply reliability and ecosystem health. The goal was to craft a specific plan that could be broadly supported by water interests throughout the state and serve as a sustainable path forward for California.

The resulting Statewide Water Action Plan was completed in September and unanimously approved by the ACWA Board of Directors on Sept. 27, 2013. ACWA submitted the Statewide Water Action Plan to California Governor Edmund G Brown Jr. on Oct. 2, 2013, as the water community's recommendations for developing the Administration's water plan for the state.

## Association of California Water Agencies

### **Contacts and Location:**

**Sacramento Office**  
910 K Street, Suite 100  
Sacramento CA, 95814  
tel 916.441.4545

**Randy Record**  
ACWA President

**John Coleman**  
ACWA Vice President

**Timothy Quinn**  
Executive Director

ACWA's mission is to assist its members in promoting the development, management and reasonable beneficial use of good quality water at the lowest practical cost in an environmentally balanced manner.

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ASSOCIATION OF CALIFORNIA WATER AGENCIES

# STATEWIDE WATER ACTION PLAN FOR CALIFORNIA

## Introduction

California's complex water management system is facing unprecedented challenges. Local investments in water supply reliability and ecosystem health have built upon the legacy infrastructure projects that served us well in the past, but the backbone water supply system we rely on today no longer satisfies the state's needs. California's statewide water system cannot respond effectively to our growing population, changing ecosystem needs, increasing flood risks and consecutive years of drought. Climate change and its impacts on public safety and long-term water supply reliability also pose a significant challenge to this generation of water and flood managers.

These problems are extraordinary, and their solutions will require an extraordinary commitment from state, local and federal agencies. They also will require a more evolved regulatory approach that will allow the system to operate efficiently and predictably to meet 21st century water supply and ecosystem needs.

The state has recognized the need for action in venues and initiatives such as the Department of Water Resources' (DWR) California Water Plan, the Delta Stewardship Council's Delta Plan, and the multi-agency Bay Delta Conservation Plan (BDCP). Now California's public water agencies are stepping forward to recommend this set of principles and actions to enhance these individual efforts and integrate them in a comprehensive Statewide Water Action Plan. Our recommended plan, submitted to the Governor for his consideration, provides context for a Delta solution and other critical actions as components of a broader set of strategies to address overall water supply reliability and ecosystem health in California.

When implemented together, this suite of statewide actions will serve as a sustainable path forward for California. Governor Brown's leadership and commitment will be central to the success of this action plan and to moving water policy forward in California.



# Guiding Principles for Implementation of the Statewide Water Action Plan

1. **Long-term water supply reliability and improved ecosystem health** are the core objectives of this statewide water action plan. In the course of achieving them, however, we must ensure that one region's increased reliability does not adversely affect another's near- or long-term water supplies.
2. **A new regulatory approach** is essential to reflect today's realities and better serve the needs of California water users and the ecosystem. This is critical if we are to reduce scientific uncertainty and incorporate new understanding of operational and ecosystem dynamics. Under the current approach, regulatory agencies tend to focus only on their specific goals, resulting in duplicative and contradictory requirements that fail to deliver benefits to our water supply, water quality or ecosystem. To combat this, state agencies should commit to using collaborative processes as extensively and transparently as possible to achieve regulatory goals in a way that satisfies water supply, water quality, and ecosystem needs. This new approach should embrace enhanced sharing of data, consistent use of peer-reviewed science (including climate change models), coordinated review under the California Environmental Quality Act (CEQA), and improved integration and coordination of all related processes. This approach will help ensure continued ecosystem protections and increase the water community's confidence that regulatory investments will achieve benefits.
3. **The best available science** should be used to support every action, report or decision made as part of this Statewide Water Action Plan. The science should be inclusive, objective, transparent, and peer reviewed.
4. **Water rights and contract terms**, including area-of-origin protections, are foundational to our water system and should be respected and adhered to whenever projects and initiatives are implemented. State and federal facilities should be operated consistent with the conditions of water rights, contracts, and other entitlements.
5. **Bold actions guided by strong leadership** at the state, federal and local levels are essential for the successful implementation of this action plan. In particular, increased commitments by federal partners are needed to ensure the plan moves forward. The Department of Water Resources should provide leadership and support for these efforts from the department's highest level.
6. **Financing:** The state should fund investments that provide broad public benefits such as improved water supply reliability, water quality and ecosystem health. The state should also incentivize local projects that advance statewide water priorities and require public assistance to be cost effective.

# Statewide Actions

To be most effective, the following suite of statewide actions should be implemented as a comprehensive package. Indeed, many elements — including a Delta conveyance solution — are much more likely to succeed if they are part of a broader action plan. Statewide support for the action plan is essential. Advancing all elements of the plan simultaneously will help secure and maintain that support and build a statewide coalition capable of achieving these ambitious goals.

## 1. Storage

California's water infrastructure has proven inadequate to meet the state's needs in a two-year drought, let alone a multi-year drought. This deficiency, coupled with the already measurable effects of climate change, makes construction of new storage facilities and expansion of existing storage imperative. A wide range of options should be on the table, including new surface water projects; re-operation and expansion/enlargement of existing storage projects; groundwater and conjunctive use; and development of other local and regional storage facilities. Additional storage will add flexibility to the water management system and help ensure a more reliable water supply to serve California's diverse needs, including drought resilience and ecosystem protection (e.g., improved temperatures and flows for fish).

### Actions

- **Studies.** In coordination with DWR, the responsible state, federal or local water agency proponents of projects should complete storage studies by June 2014 and formally determine whether a particular project is environmentally and economically sound and will provide benefits for water supply and the ecosystem.
- **Permitting.** Within six months of a local determination based on these studies, DWR and the California Department of Fish and Wildlife (CDF&W) should begin coordinating with local agencies to expedite permitting and CEQA compliance for new storage facilities. For storage projects found to have statewide benefit, DWR and CDF&W should take the lead in expediting the permitting process.

The state also should coordinate with federal agencies as needed on permitting, the National Environmental Policy Act (NEPA), water rights issues and potentially construction.

- **Financing.** Under comprehensive water legislation enacted in 2009, the California Water Commission is tasked with defining and quantifying the public benefits of water storage projects eligible for funding with state dollars. By June 2014, local water agencies that would receive identifiable water supply benefits from water storage projects should provide a plan outlining their commitment and steps they will take to pay for those benefits. This Statewide Water Action Plan recommends that any water bond that moves forward in 2014 provide for continuous appropriation of funding for the public benefits of storage as outlined in the bond measure currently slated for the November 2014 ballot.
- **Construction.** By January 2018, construction should commence for new groundwater and surface water storage projects with an initial target of 1.5 million acre-feet of new storage capacity, as documented in the 2000 CALFED Record of Decision.
- **Local Construction.** As soon as practicable, construction of local facilities with a target of 1 million acre-feet should be completed.
- **Reoperation.** DWR should complete its study of reservoir reoperation by June 2014, including reoperation of existing reservoirs and integration of new storage into system operations.

## 2. Water Use Efficiency

Water conservation and water use efficiency are central elements of the state's strategy to enhance water supply reliability, restore ecosystems and respond to climate change and a growing population. It should continue to be the state's policy to encourage investments in water conservation and water use efficiency by ensuring that the right to conserved water remains with the conserving entity. Local and regional water agencies have made significant multi-decade investments in water conservation and water use-efficiency activities and continue to do so under new state requirements

enacted in law. The state should acknowledge that local agencies are in the best position to determine compliance with these requirements and should respect local determinations as sufficient.

#### **Actions**

- The state should provide funding for water use efficiency activities in disadvantaged communities and support programs that are not locally cost effective but contribute broad benefits to California.
- DWR and local water agencies should coordinate with groundwater management agencies where applicable to enhance conjunctive use opportunities and minimize potential impacts on groundwater recharge that may result from water use efficiency and conservation efforts.

### **3. Water Supply Assurances**

California law establishes a goal of improving water supply reliability throughout the state. Water supply reliability in regions that rely on water conveyed across the Delta is of obvious importance to the California economy. A BDCP is being developed in part to improve and protect water supply reliability for the agencies that will benefit from its completion. However, it is important that these improvements be accomplished in a manner consistent with this principle.

When the Central Valley Project (CVP) and the State Water Project (SWP) were built, assurances were incorporated in their authorizing statutes that water needed to meet present and future beneficial uses in the areas of origin (i.e., the Sacramento Valley, the east side of the San Joaquin Valley and the Delta) would be available to those areas when needed. All of California has benefited from these fundamental assurances. The state should commit to implementing an action plan that augments storage and modifies regulatory approaches to ensure that positive storage balances can be maintained at all times to provide for improved water supply reliability and ecosystem health and protection of the state's economy.

#### **Actions**

- As the state implements this plan, all relevant agencies should adhere to water rights protections in state law and comply with existing water rights and contractual requirements.
- The Administration should continue to affirm through its policies and actions that the

implementation of a BDCP will not adversely affect existing water rights of those in the watershed of the Delta, nor will it impose any obligations on area-of-origin water users, including in the Delta, to supplement flows in and through the Delta.

- Those seeking to secure permits for a BDCP will be responsible for meeting all applicable conditions in their BDCP permits, including any obligations in those permits for Delta flow, which as required by law must avoid redirected impacts to area-of-origin water users, including in the Delta, unless provided for in voluntary agreements or settlements.

### **4. Operational Assurances**

Recent modeling indicates that, in the driest 10% of years, some major reservoirs will hit "dead pool," the condition in which water levels fall below a dam's lowest outlets and no operable storage exists to deliver water for supply, environmental, and power generation purposes. The ramifications of hitting dead pool at that frequency could be catastrophic for water users who rely on these facilities for a portion of their supply, for the environment, and particularly for affected water agencies that do not have another viable source of water supply for their customers.

Allowing reservoirs to reach dead pool is not sound policy and is at odds with overall efforts by the state and federal governments to address California's water supply reliability and ecosystem health. Adaptive strategies that address this issue are critical to ensure that the operational rules for California's water delivery system will provide the water supply assurances needed by water users throughout the state. It should be the policy of the state to adopt regulations, develop operating rules, or take other actions that will ensure that reservoirs are not drawn to dead pool conditions, even in multiple dry years.

#### **Actions**

- The Administration should develop a strategy in coordination with state agency leadership and federal agency partners by January 1, 2015, to ensure reservoirs are not driven to dead pool levels. This strategy should identify needed regulatory changes, infrastructure improvements including increased storage capacity, and changes in reservoir operations, as well as support for additional local resources development.

- Initial actions identified through this process that can be implemented prior to January 1, 2015, should be included as part of the report outlined in the Governmental Coordination section of this Statewide Water Action Plan.
- As part of this strategy, the Governor should direct state agencies to implement new and existing water management and water quality programs in a manner that will help ensure California's reservoirs do not reach dead pool conditions.

## 5. Improved Regional Self-Reliance

In addition to water use efficiency and water conservation, California's water agencies utilize a variety of methods to increase local water supplies and reliability for water users and the environment. The state should continue to support development of local and regional water resources that improve each region's water supply reliability and, where applicable, augment imported water supplies. This includes surface water diversions for in-basin uses, conjunctive use, stormwater capture, recycled water, desalination, and groundwater cleanup. Projects and programs that achieve multiple benefits should be a priority.

### Actions

- Local agencies should improve self-reliance by planning and implementing projects consistent with decisions made by local and regional water agencies.
- DWR should consult with local and regional agencies to develop a statewide strategy to improve regional supplies, in accordance with the Sacramento-San Joaquin Delta Reform Act.
- The state should continue to support Integrated Regional Water Management Plan (IRWMP) efforts that successfully provide for regional and local needs.
- DWR should work with existing IRWMP programs and stakeholders to evaluate the state's Integrated Regional Water Management program and identify areas for improvement, including streamlining the application process, developing specific criteria to determine successful plan implementation, and reducing transaction costs. This effort should include ways to enhance the program's effectiveness in serving disadvantaged communities in IRWMP-eligible areas.

## 6. Headwaters

Because nearly all of the state's water supplies originate in California's headwaters, more effectively managing these areas is integral to optimizing the water supplies that nature provides. Adapting to climate change and improving watershed resiliency to reduce the likelihood of catastrophic wildfires and increase water yield and quality will require substantial investments by the state.

### Actions

- State land and resource management agencies with jurisdiction in headwaters areas should draft a joint report to the Governor and the Legislature analyzing the impacts of climate change on headwaters. The report should identify the benefits that headwaters currently provide, identify models to assess the impacts of climate change on these resources and outline strategies to adapt to those impacts. The appropriate state agencies should invite their federal agency partners to participate in the development of the report.
- The Natural Resources Agency, in consultation with the Sierra Nevada Research Institute (UC Merced) and the U.S. Departments of Agriculture and the Interior, should provide a report to the Governor outlining and prioritizing investments that can be made on public lands to improve the condition and functions of California's headwaters to benefit water supply reliability for the state.
- Working with local agencies, the state should assess and support solutions for legacy issues affecting water quality and supply to improve the condition of affected watersheds.
- The state should seek to partner with the U.S. Forest Service in meadow restoration projects that can control excessive soil erosion and sediment delivery in California's watersheds to help maintain reservoir storage capacity, reduce flood risks and increase conjunctive use capability.

## 7. Water Quality

Protecting water quality is a critical aspect of water management in California. The state should continue to pursue actions to protect, maintain and enhance surface water and groundwater quality for all applicable beneficial uses, consistent with meeting all applicable standards, agreements and regulatory requirements.



## Actions

- The Department of Public Health should fund the development and use of new analytical methods and cost-effective treatment technologies to better detect and remove chemical and microbial contaminants from drinking water supplies.
- The state should provide funding support for local water agencies to develop and implement salt and nutrient management plans that will reduce salinity in surface and groundwater supplies and provide enhanced conjunctive use opportunities.
- The State Water Resources Control Board and the Regional Boards should review and better match water quality standards to the locally appropriate and demonstrated use of the water. Water quality program expenditures should be focused where they will provide the greatest water quality benefits. Source water quality for municipal uses should continue to be protected.
- The state should continue to develop solutions for assisting disadvantaged communities that do not have safe drinking water.

## 8. Bay Delta Conservation Plan

A Delta solution, including a BDCP, is a critical component of a broader set of actions that will address water supply reliability and ecosystem health in California.

### Actions

- Within the scope of existing regulatory statutes, all state agencies involved in developing a BDCP should exercise their discretion and authority to ensure the final project is consistent with the principles of this Statewide Water Action Plan.
- A Delta solution is expected to provide substantial public benefits, which will be funded from public sources including a revised 2014 water bond. The state should work with its federal partners to secure long-term, non-reimbursable federal funding to pay for the federal share of these public benefits.
- Any large construction project, including a BDCP, may have adverse impacts related to the project's "footprint." Where feasible, a BDCP should be designed to avoid or minimize adverse impacts in the first place. When adverse impacts cannot be avoided, the permittees of a BDCP should

mitigate project-related environmental impacts, including water supply impacts, in accordance with existing law.

- The permittees of a BDCP, including the Central Valley Project and State Water Project contractors, should work collaboratively with other water users in good faith on all statewide water issues to find mutually acceptable solutions on the broader statewide water issues.

## 9. Levee Improvement and Maintenance

Levees in the Delta and throughout California are key features of the state's water system and are subject to many risks, including those associated with earthquakes and floods. To protect against and prepare for future levee failures, the state should continue to support and prioritize the maintenance of levees in accordance with state law, including critical near-term actions and the Central Valley Flood Protection Plan.

### Actions

- The Delta Stewardship Council should complete its prioritization plan by July 1, 2014.
- The state should continue to support DWR's Delta Levee Maintenance and Special Projects programs and provide support for local flood protection measures throughout the Central Valley by partnering with local agencies in projects that can incorporate public benefits.

## 10. Emergency Preparedness and Public Safety

Recent events in California and other states have demonstrated that water-related emergencies can have significant impacts and put public safety at risk. A robust emergency response plan is essential for minimizing disruption due to floods, earthquakes, wildfires, power outages or contamination of drinking water supplies. The state, working with federal partners, should continue efforts to improve response strategies to enhance public safety during these unforeseen events.

### Actions

- DWR should implement pertinent recommendations of the Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report of 2012.

- To reduce the risk of catastrophic wildfires, the California Department of Forestry and Fire Protection (CAL FIRE) should review and, if necessary, revise relevant state regulations to better accommodate and effectuate the use of forest management tools such as forest thinning, biomass removal and controlled burns that reduce fuel loading.
- DWR should coordinate with the California Governor's Office of Emergency Services and the U.S. Army Corps of Engineers to ensure public safety in the Delta and upstream will not be compromised by actions that might otherwise degrade the performance of flood management facilities; create or redirect hydraulic impacts; or, interfere with or impede flood facility improvements, operations or maintenance.
- DWR should implement the pathway strategy adopted in its draft Delta Flood Emergency Preparedness and Response Plan and supported by the U.S. Army Corps of Engineers. This effort includes all measures to facilitate restoration of an emergency freshwater pathway to water export facilities in approximately six months.

## 11. Bay-Delta Water Quality Control Plan

Multiple regulatory agencies, including, but not limited to, the State Water Resources Control Board (State Water Board), National Oceanic and Atmospheric Administration (NOAA) Fisheries, U.S. Fish and Wildlife Service (USFWS), CDF&W, U.S. Environmental Protection Agency (USEPA), DWR, Army Corps of Engineers, and the Delta Stewardship Council are tasked with making decisions affecting California's water supplies. Continued coordination among these agencies is essential to avoid duplicative and possibly conflicting policies and regulations, and to make the most efficient use of the state's resources. Negotiated programs and planning efforts have been and likely will be the most effective tools to protect beneficial uses in the Bay-Delta. The State Water Board has the opportunity to lead this coordination through its review and update of the 2006 Water Quality Control Plan (Bay-Delta Plan). In its review of the Bay-Delta Plan, the State Water Board should:

### Actions

- Encourage and facilitate negotiated programs, planning efforts and settlements that will implement flow and non-flow actions consistent

with the need to protect beneficial uses and public trust balancing.

- Require a tri-annual review of water quality objectives and implementation accountability through annual reports by local agencies, state offices, departments and boards with responsibility to implement the Bay-Delta Plan.

## 12. Water Bond

Significant investments in California's water infrastructure, water management improvements and ecosystem health are critically needed and long overdue.

### Actions

- The water bond currently set for the November 2014 ballot should be modified, consistent with the ACWA Board of Directors' Water Bond Policy Principles, in early 2014 to ensure its placement on the November ballot. An appropriately crafted general obligation bond can fund broad public benefits associated with investments identified in this Statewide Water Action Plan. Priorities for funding should include new surface and groundwater storage; local and regional projects that support greater regional self-sufficiency; investments in Delta ecosystem restoration; safe drinking water projects and water quality improvements; water conservation and water use efficiency; and watershed management.

## 13. Groundwater Resources

Many regions of the state rely on groundwater for a significant portion of their water supply. In recent years, climate change, regulatory restrictions on surface water supplies, and increased demands have forced greater reliance on groundwater as a principal or supplemental supply for urban, agricultural and environmental uses. More sustainable management of groundwater is needed, but in order to succeed the state must invest in improvements to its water storage and Delta conveyance infrastructure to optimize both surface and groundwater supplies. Consistent with ACWA's strategic policy document, *Sustainability from the Ground Up: A Framework for Groundwater Management in California*, the state should support and incentivize effective local and regional groundwater management, resolve conflicting state regulatory requirements and streamline its policies to optimize and increase surface and groundwater storage opportunities.

## Actions

- DWR should convene a multi-agency workgroup with participation by local groundwater agencies to coordinate, review and facilitate implementation of local and regional groundwater management performance objectives.
- Groundwater recharge, banking and conjunctive use projects are critical to the future sustainability of California's groundwater resources. DWR and State Water Board (and Regional Boards) should support and facilitate these activities when programs are implemented as part of an IRWMP or legally recognized groundwater management plan.
- DWR, in consultation with other agencies that gather data, should develop a single data portal on a publicly accessible website for groundwater quality information. DWR also should continue to expand the CASGEM database for groundwater quantity.
- The state, through the Regional Boards, should support and incentivize local agencies' efforts to develop long-term, sustainable solutions for cleanup of existing groundwater contamination and prevention of future contamination.

## 14. Water Transfers

Water transfers can provide much-needed flexibility in meeting water supply and environmental needs and have proven invaluable in dry years and droughts. A well-defined set of policies and procedures that provide certainty to transferring parties is essential to facilitate future transfers and promote local and statewide economic, social and environmental sustainability.

While federal and state laws promote transfers, DWR's current approval processes should be streamlined. These issues should be resolved as expeditiously as possible so water transfers can be implemented quickly — when they are needed — without adversely affecting third parties.

### Actions

- DWR should convene stakeholder meetings, including with the U.S. Bureau of Reclamation, to identify and resolve, at a minimum, the following issues by December 1, 2013:

- Identify a process to expedite transfers within a region;
  - Assess the role of CEQA in water transfers,
  - Review DWR and Reclamation processes and criteria that are used to determine what water is transferable; and
  - Investigate and review contracting practices within Reclamation and DWR for approving agreements to use conveyance and storage facilities of the Central Valley Project and the State Water Project.
- DWR also should review the 2002 SWRCB report, *Water Transfers Issues in California*, for background and relevant recommendations to further facilitate water transfers.

## 15. Governmental Coordination

For this plan to be successful, improved coordination among state agencies and between the state and federal government will be critical.

### Actions

- The Governor and state agency leadership should follow up with their federal counterparts, including the President, to assess actions, policy direction and commitments in response to the memo from the President's Council on Environmental Quality (CEQ) to his cabinet directing that a BDCP be a priority for the Obama Administration. The state should further coordinate with federal agencies to advance other actions identified in the CEQ memo, including conservation and water use efficiency, enhancing water supplies and storage, and facilitating water transfers during times of shortage.
- The secretaries of the Natural Resources Agency, California Environmental Protection Agency and the Health and Human Services Agency, in coordination with their respective boards, departments, offices, councils, commissions and conservancies that have a role in implementation of this plan, should produce within 90 days of the Governor's approval of this plan a joint report that details how the agencies and entities they oversee will exercise their authorities to implement this plan in an expeditious and integrated manner.



# Statewide Water Action Plan Participation



*\* Participation in plan development does not necessarily imply formal endorsement of final document.*





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