

APPENDIX A: Checklist Arranged by Water Code Section

APPENDIX B: Notices

APPENDIX C: Memos to Wholesale Suppliers

APPENDIX D: Population Tool Results

APPENDIX E: Water Loss Audit

APPENDIX F: SB X7-7 Verification Forms

APPENDIX G: Chino Groundwater Basin Adjudication

APPENDIX H: Orange County Adjudication

APPENDIX I: Western-San Bernardino Adjudication

APPENDIX J: JCSD Water Supply Outlook

APPENDIX K: CASGEM Priorities Spreadsheet

APPENDIX L: JCSD Consumer Confidence Report 2014

APPENDIX M: JCSD Ordinance No. 389

APPENDIX N: JCSD Resolution Nos. 2627 and 2628

APPENDIX O: JCSD Resolution Nos. 2511 and 2512

APPENDIX P: Adoption Resolution

APPENDIX A

CHECKLIST ARRANGED BY WATER CODE SECTION

Checklist Arranged by Water Code Section

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location (Optional Column for Agency Use)
10608.20(b)	Retail suppliers shall adopt a 2020 water use target using one of four methods.	Baselines and Targets	Section 5.7 and App E	Section 5.7 (p. 5-7)
10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Chapter 5 and App E	Chapter 5 (p. 5-1 - 5-10)
10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.7.2	Section 5.7 (p. 5-8)
10608.24(a)	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App E	Section 5.7 (p. 5-9)
10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	Section 5.8.2	N/A
10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets.	Plan Adoption, Submittal, and Implementation	Section 10.3	Section 10.3 (p. 10-3)
10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	Section 5.1	N/A
10608.40	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	Baselines and Targets	Section 5.8 and App E	Section 5.7 (p. 5-10)
10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1	Section 2.1 (p. 2-1)
10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.5.2	Section 2.1 (p. 2-2)

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.4	p. 7-7
10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.	Plan Adoption, Submittal, and Implementation	Section 10.2.1	p. 10-1, Appendix B
10621(d)	Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.	Plan Adoption, Submittal, and Implementation	Sections 10.3.1 and 10.4	p. 10-4
10631(a)	Describe the water supplier service area.	System Description	Section 3.1	Section 3.1 (p. 3-1)
10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3	Section 3.3 (p. 3-6)
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	Section 3.5 (p. 3-9)
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	Section 3.5 (p. 3-9)
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	Section 3.5 (p. 3-10)
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	Table 6-8, p. 6-33 & Table 6-9,
10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2	p. 6-4
10631(b)(1)	Indicate whether a groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.2.2	p. 6-13 Appendix G, H, & I.
10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	p. 6-8 to 6-13
10631(b)(2)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2.2	p. 6-13 Appendix G, H, & I
10631(b)(2)	For unadjudicated basins, indicate whether or not the department has identified the basin as overdrafted, or projected to become overdrafted. Describe efforts by the supplier to eliminate the long-term overdraft condition.	System Supplies	Section 6.2.3	N/A
10631(b)(3)	Provide a detailed description and analysis of the location, amount, and sufficiency of	System Supplies	Section 6.2.4	Table 6-1, p. 6-4 p. 6-8

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
	groundwater pumped by the urban water supplier for the past five years			
10631(b)(4)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Sections 6.2 and 6.9	p. 6-30 to 6-34
10631(c)(1)	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.1	p. 7-2
10631(c)(1)	Provide data for an average water year, a single dry water year, and multiple dry water years	Water Supply Reliability Assessment	Section 7.2	p. 7-3 to 7-4
10631(c)(2)	For any water source that may not be available at a consistent level of use, describe plans to supplement or replace that source.	Water Supply Reliability Assessment	Section 7.1	p. 7-1 , 7-6
10631(d)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	p. 6-31
10631(e)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2	Section 4.1 - 4.2 (p. 4-1 - 4.4)
10631(e)(3)(A)	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	Section 4.3 (p. 4-4)
10631(f)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Sections 9.2 and 9.3	p. 9-2 to 9-12
10631(f)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	Sections 9.1 and 9.3	N/A
10631(g)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years.	System Supplies	Section 6.8	p. 6-32
10631(i)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	p. 6-30
10631(j)	CUWCC members may submit their 2013-2014 CUWCC BMP annual reports in lieu of, or in addition to, describing the DMM implementation in their UWMPs. This option is only allowable if the supplier has been found to be in full compliance with the CUWCC MOU.	Demand Management Measures	Section 9.5	p. 9-13
10631(j)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) – if any - with water use	System Supplies	Section 2.5.1	Appendix C

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
	projections from that source.			
10631(j)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Section 2.5.1	N/A
10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5	Section 4.4 (p. 4-6)
10632(a) and 10632(a)(1)	Provide an urban water shortage contingency analysis that specifies stages of action and an outline of specific water supply conditions at each stage.	Water Shortage Contingency Planning	Section 8.1	p. 8-2 to 8-4 Appendix M
10632(a)(2)	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency.	Water Shortage Contingency Planning	Section 8.9	p. 8-15
10632(a)(3)	Identify actions to be undertaken by the urban water supplier in case of a catastrophic interruption of water supplies.	Water Shortage Contingency Planning	Section 8.8	p. 8-13 to 8-15
10632(a)(4)	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	Table 8A, p. 8-5
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	p. 8-10
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	p. 8-9
10632(a)(7)	Provide an analysis of the impacts of each of the actions and conditions in the water shortage contingency analysis on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts.	Water Shortage Contingency Planning	Section 8.6	p. 8-12
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	p. 8-13 Appendix M
10632(a)(9)	Indicate a mechanism for determining actual reductions in water use pursuant to the water shortage contingency analysis.	Water Shortage Contingency Planning	Section 8.5	p. 8-12
10633	For wastewater and recycled water, coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.1	p. 6-21 to 6-27
10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area. Include quantification of the amount of	System Supplies (Recycled Water)	Section 6.5.2	p. 6-25, 6-26

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
	wastewater collected and treated and the methods of wastewater disposal.			
10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.5.2.2	Table 6-3, p. 6-26
10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.3 and 6.5.4	p. 6-26, 6-27
10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.5.4	p. 6-27
10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.5.4	Table 6-4, p. 6-28
10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.5.5	p. 6-29
10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.5	p. 6-29, 6-30
10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.1	p. 7-2
10635(a)	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.3	p. 7-4 to 7-6
10635(b)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 60 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	p. 10-4
10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	Plan Preparation	Section 2.5.2	Section 2.1 (p. 2-3)
10642	Provide supporting documentation that the urban water supplier made the plan available for public inspection, published notice of the public hearing, and held a public hearing	Plan Adoption, Submittal, and Implementation	Sections 10.2.2, 10.3, and 10.5	p. 10-2 to 10-5, Appendix B, Appendix P

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
	about the plan.			
10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Sections 10.2.1	p. 10-2, Appendix B
10642	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	p. 10-3, Appendix P
10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4.3	p. 10-4
10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	p. 10-4
10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Sections 10.4.1 and 10.4.2	p. 10-3
10645	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5	p. 10-5

APPENDIX B

NOTICES

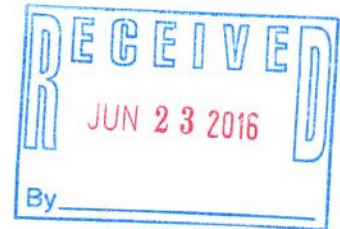
Documents

There are several locations on our website that provides access to a number of documents such as:

- [2016 California Environmental Quality Act Guidelines](#)
- [Agenda Packets for Public Meetings](#) (Board, Committee, Commission, and Citizens Advisory Board)
- [Capacity Charges Study](#)
- Community Facilities Districts (CFD)
 - [CFD Maps](#)
 - [Disclosure Reports](#)
- [Claim Form](#)
- [Development Services Forms](#)
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- [Financial Statements](#)
- Master Sewer Plan
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 - [MSP Part 9](#)
- [Operating Budgets](#)
- [Prop 218 Notice Regarding Water and Sewer Rates](#)
- [Sewer Rates for 2015 - 2019](#)
- [Strategic Plan](#)
- [Urban Water Management Plan - 2015 Draft](#)
- [Water Rates for 2015 - 2019](#)

If you looking for a document that is not on our website, please visit the [Public Records](#) page for information on how to obtain specific public documents.

DATE	ORDER NUMBER	PO Number	PRODUCT	SIZE	AMOUNT
6/13/16	0010171979	2015 UWMP	PE Riverside	2 x 61 Li	244.00
6/20/16	0010171979	2015 UWMP	PE Riverside	2 x 61 Li	244.00



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THE PRESS-ENTERPRISE

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Publication(s): The Press-Enterprise

PROOF OF PUBLICATION OF

Ad Desc.: 2015 UWMP

I am a citizen of the United States. I am over the age of eighteen years and not a party to or interested in the above entitled matter. I am an authorized representative of THE PRESS-ENTERPRISE, a newspaper in general circulation, printed and published daily in the County of Riverside, and which newspaper has been adjudicated a newspaper of general circulation by the Superior Court of the County of Riverside, State of California, under date of April 25, 1952, Case Number 54446, under date of March 29, 1957, Case Number 65673, under date of August 25, 1995, Case Number 267864, and under date of September 16, 2013, Case Number RIC 1309013; that the notice, of which the annexed is a printed copy, has been published in said newspaper in accordance with the instructions of the person(s) requesting publication, and not in any supplement thereof on the following dates, to wit:

06/13, 06/20/2016

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Date: Jun 20, 2016

At: Riverside, California


Legal Advertising Representative, The Press-Enterprise

JURUPA CSD
11201 HARREL ST
MIRA LOMA, CA 91752

Ad Number: 0010171979-01

P.O. Number: 2015 UWMP

Ad Copy:

NOTICE OF PREPARATION OF AN URBAN WATER MANAGEMENT PLAN

To: Responsible and Trustee Agencies; Interested Organizations and Individuals

From: Eddie Rhee, P.E., Interim Engineering Manager,
Jurupa Community Services District

Subject: Jurupa Community Services District 2015 Urban
Water Management Plan.

Notice of Preparation of an Urban Water Management Plan:

Pursuant to California Water Code §10608- 10656, Jurupa Community Services District (JCSD) has prepared its 2015 Urban Water Management Plan (UWMP). The purpose of the UWMP is to report, describe, and evaluate: water deliveries and uses, water supply sources, efficient water uses, demand management measures, and water shortage contingency planning.

This transmittal constitutes the official notice of public hearing on JCSD's 2015 UWMP and serves as an opportunity for you or your organization to provide input on the plan before it is adopted.

UWMP Public Hearing:

Notice is hereby given that the Jurupa Community Services District will hold a public hearing for the general public and any interested agencies regarding JCSD's 2015 UWMP. The meeting will be held on **June 27, 2016, at 7:00 p.m.** The meeting will be held at the Jurupa Community Services District Board Room located at 11201 Harrel Street, Jurupa Valley, CA 91752.

Public Review Period:

The 14-day public review period will commence on Monday, June 13, 2016 and conclude on Monday, June 27, 2016.

The UWMP can be reviewed at the following locations:

- JCSD District Office: 11201 Harrel Street, Jurupa Valley, CA 91752
- JCSD Web site: www.jcsd.us

Any responses must be submitted to JCSD at the earliest possible date, but no later than the June 27th deadline. Comments must be submitted in writing, or via email, to:

Eddie Rhee, P.E., Interim Engineering Manager
Jurupa Community Services District
11201 Harrel Street
Jurupa Valley, CA 91752
(951) 685-7434
erhee@jcsd.us

6/13, 20

THE PRESS-ENTERPRISE

1825 Chicago Ave, Suite 100
Riverside, CA 92507
951-684-1200
951-368-9018 FAX

PROOF OF PUBLICATION (2010, 2015.5 C.C.P)

Publication(s): The Press-Enterprise

PROOF OF PUBLICATION OF

Ad Desc.: 2015 UWMP

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06/13, 06/20/2016

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Date: Jun 20, 2016

At: Riverside, California


Legal Advertising Representative, The Press-Enterprise

JURUPA CSD
11201 HARREL ST
MIRA LOMA, CA 91752

Ad Number: 0010171979-01

P.O. Number: 2015 UWMP

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Jurupa Community Services District
11201 Harrel Street
Jurupa Valley, CA 91752
(951) 685-7434
erhee@jcsd.us

6/13, 20

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THE PRESS-ENTERPRISE

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Address: 11201 HARREL ST
MIRA LOMA, CA 91752

Account #: 1100141293
Client:
Placed By: SUSAN COLLETT
Fax #:

Gross price: \$488.00
Net price: \$488.00
Total Payments: \$0.00

Amount Due: **\$488.00**

Ad Copy:

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Jurupa Community Services District

Subject: Jurupa Community Services District 2015 Urban
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11201 Harrel Street
Jurupa Valley, CA 91752
(951) 685-7434
erhee@jcsd.us

6/13, 20

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Stop Date: 06/20/2016
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Ad type: C Legal

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Bill Size: 122.00

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Jane F. Anderson, Director



April 21, 2016

Mr. Curtis Paxton
General Manager
Chino Basin Desalter Authority
2151 S. Haven Avenue
Ontario, CA 91761

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Mr. Paxton:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

The public hearing will be held at the following time and place for the purpose of hearing any and all public testimony on the above-stated issue.

DATE: Monday, June 27, 2016 – 7:00 p.m.

PLACE: Jurupa Community Services District
Board Room
11201 Harrel Street
Mira Loma, CA 91752

All interested persons are invited to attend the public hearing and provide comments regarding the Draft 2015 UWMP. Oral statements will be heard, but for the accuracy of the record all important testimony should be submitted in writing.

A copy of the Draft 2015 UWMP will be available beginning on June 13, 2016, on the District's website at www.jcsd.us or by hard copy at the District office. Please direct comments and questions to me at (951) 685-7434.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eddie Rhee", is written over the word "Sincerely,".

Eddie Rhee, P.E.
Interim Engineering Manager

Chad Blais, President
Kenneth J. McLaughlin, Vice President
Betty A. Anderson, Director
Joan E. Roberts, Ph.D., Director
Jane F. Anderson, Director



April 21, 2016

Mr. Peter Kavounas
General Manager
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Mr. Kavounas:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

The public hearing will be held at the following time and place for the purpose of hearing any and all public testimony on the above-stated issue.

DATE: Monday, June 27, 2016 – 7:00 p.m.

PLACE: Jurupa Community Services District
Board Room
11201 Harrel Street
Mira Loma, CA 91752

All interested persons are invited to attend the public hearing and provide comments regarding the Draft 2015 UWMP. Oral statements will be heard, but for the accuracy of the record all important testimony should be submitted in writing.

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Sincerely,


Eddie Rhee, P.E.
Interim Engineering Manager

Chad Blais, President
Kenneth J. McLaughlin, Vice President
Betty A. Anderson, Director
Joan E. Roberts, Ph.D., Director
Jane F. Anderson, Director



April 21, 2016

Ms. Michele Nissen
City of Eastvale
12363 Limonite Ave., Suite 910
Eastvale, CA 91752

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Ms. Nissen:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

The public hearing will be held at the following time and place for the purpose of hearing any and all public testimony on the above-stated issue.

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PLACE: Jurupa Community Services District
Board Room
11201 Harrel Street
Mira Loma, CA 91752

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Eddie Rhee, P.E.
Interim Engineering Manager

Chad Blais, President
Kenneth J. McLaughlin, Vice President
Betty A. Anderson, Director
Joan E. Roberts, Ph.D., Director
Jane F. Anderson, Director



April 21, 2016

Mr. Gary Thompson
City Manager
City of Jurupa Valley
8930 Limonite Avenue
Jurupa Valley, CA 92509

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Mr. Thompson:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

The public hearing will be held at the following time and place for the purpose of hearing any and all public testimony on the above-stated issue.


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Board Room
11201 Harrel Street
Mira Loma, CA 91752

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Sincerely,


Eddie Rhee, P.E.
Interim Engineering Manager

Chad Blais, President
Kenneth J. McLaughlin, Vice President
Betty A. Anderson, Director
Joan E. Roberts, Ph.D., Director
Jane F. Anderson, Director



April 21, 2016

Mr. Andy Okoro
City of Norco
2870 Clark Avenue
Norco CA 92860

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Mr. Okoro:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

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DATE: Monday, June 27, 2016 – 7:00 p.m.

PLACE: Jurupa Community Services District
Board Room
11201 Harrel Street
Mira Loma, CA 91752

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Sincerely,



Eddie Rhee, P.E.
Interim Engineering Manager

Chad Blais, President
Kenneth J. McLaughlin, Vice President
Betty A. Anderson, Director
Joan E. Roberts, Ph.D., Director
Jane F. Anderson, Director



April 21, 2016

Mr. Al C. Boling
City Manager
City of Ontario
303 East "B" Street
Ontario, CA 91764

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Mr. Boling:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

The public hearing will be held at the following time and place for the purpose of hearing any and all public testimony on the above-stated issue.

DATE: Monday, June 27, 2016 – 7:00 p.m.

PLACE: Jurupa Community Services District
Board Room
11201 Harrel Street
Mira Loma, CA 91752

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Sincerely,



Eddie Rhee, P.E.
Interim Engineering Manager

Chad Blais, President
Kenneth J. McLaughlin, Vice President
Betty A. Anderson, Director
Joan E. Roberts, Ph.D., Director
Jane F. Anderson, Director



April 21, 2016

Mr. Girish Balachandran
General Manager
City of Riverside
Public Utilities Department
3901 Orange Street
Riverside, CA 92501

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Mr. Balachandran:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

The public hearing will be held at the following time and place for the purpose of hearing any and all public testimony on the above-stated issue.

DATE: Monday, June 27, 2016 – 7:00 p.m.

PLACE: Jurupa Community Services District
Board Room
11201 Harrel Street
Mira Loma, CA 91752

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Sincerely,

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Eddie Rhee, P.E.
Interim Engineering Manager

Chad Blais, President
Kenneth J. McLaughlin, Vice President
Betty Anderson, Director
Joan E. Roberts, Ph.D., Director
Jane F. Anderson, Director



April 21, 2016

Mr. Michael H. Lin, Ed.D.
Superintendent
Corona-Norco Unified School District
2820 Clark Avenue
Norco, CA 92860

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Mr. Lin:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

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DATE: Monday, June 27, 2016 – 7:00 p.m.

PLACE: Jurupa Community Services District
Board Room
11201 Harrel Street
Mira Loma, CA 91752

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Sincerely,

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Eddie Rhee, P.E.
Interim Engineering Manager

Chad Blais, President
Kenneth J. McLaughlin, Vice President
Betty A. Anderson, Director
Joan E. Roberts, Ph.D., Director
Jane F. Anderson, Director



April 21, 2016

Mr. P. Joseph Grindstaff
General Manager
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Mr. Grindstaff:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

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Board Room
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Mira Loma, CA 91752

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Sincerely,


Eddie Rhee, P.E.
Interim Engineering Manager

Chad Blais, President
Kenneth J. McLaughlin, Vice President
Betty A. Anderson, Director
Joan E. Roberts, Ph.D., Director
Jane F. Anderson, Director



April 21, 2016

Mr. Elliott Duchon
Superintendent
Jurupa Unified School District
4850 Pedley Road
Jurupa Valley, CA 92509

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Mr. Duchon:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

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Mira Loma, CA 91752

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Sincerely,



Eddie Rhee, P.E.
Interim Engineering Manager

Chad Blais, President
Kenneth J. McLaughlin, Vice President
Betty Anderson, Director
Joan E. Roberts, Ph.D., Director
Jane F. Anderson, Director



April 21, 2016

Mr. David Lopez
General Manager
Rubidoux Community Services District
3590 Rubidoux Blvd
Jurupa Valley, CA 92509

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Mr. Lopez:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

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Board Room
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Mira Loma, CA 91752

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Eddie Rhee, P.E.
Interim Engineering Manager

Chad Blais, President
Kenneth J. McLaughlin, Vice President
Betty A. Anderson, Director
Joan E. Roberts, Ph.D., Director
Jane F. Anderson, Director



April 21, 2016

Mr. J. Arnold Rodriguez
General Manager
Santa Ana River Water Company
10530 54th Street
Jurupa Valley, CA 91752-2331

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Mr. Rodriguez:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

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Board Room
11201 Harrel Street
Mira Loma, CA 91752

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Sincerely,


Eddie Rhee, P.E.
Interim Engineering Manager

Chad Blais, President
Kenneth J. McLaughlin, Vice President
Betty A. Anderson, Director
Joan E. Roberts, Ph.D., Director
Jane F. Anderson, Director



April 21, 2016

Mr. John Rossi
General Manager
Western Municipal Water District
14205 Meridian Parkway
Riverside, CA 92518

RE: Notice of Preparation of the 2015 Jurupa Community Services District Urban Water Management Plan (UWMP)

Dear Mr. Rossi:

The Board of Directors of the Jurupa Community Services District (JCSD) has scheduled a public hearing to provide comments on the Draft 2015 Urban Water Management Plan (UWMP).

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DATE: Monday, June 27, 2016 – 7:00 p.m.

PLACE: Jurupa Community Services District
Board Room
11201 Harrel Street
Mira Loma, CA 91752

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Sincerely,


Eddie Rhee, P.E.
Interim Engineering Manager

APPENDIX C

MEMOS TO WHOLESALE SUPPLIERS



Chad Blais, President
 Kenneth J. McLaughlin, Vice President
 Betty A. Anderson, Director
 Joan E. Roberts, Ph.D., Director
 Jane F. Anderson, Director

May 9, 2016

Ms. Karly Gaynor
 Water Resource Analyst
 Western Municipal Water District
 14205 Meridian Parkway
 Riverside, CA 92518

RE: Water Use Projections Provided per Requirement of California Water Code Section 10631(j)

Dear Karly:

Pursuant to your request, please find below tables that have been taken from Jurupa Community Services District's Draft 2015 Urban Water Management Plan that summarize the District's water use projections.

Table 4-2 Retail: Demands for Potable and Raw Water - Projected						
Use Type <i>(Add additional rows as needed)</i> <i>Use Drop down list.</i> <i>May select each use multiple times</i> <i>These are the only Use Types that will be recognized by the WUEdata online submittal tool</i>	Additional Description <i>(as needed)</i>	Projected Water Use <i>Report To the Extent that Records are Available</i>				
		2020	2025	2030	2035	2040-opt
Single Family		15,700	17,341	19,153	21,154	23,364
Multi-Family		1,359	1,501	1,657	1,830	2,022
Landscape	potable	2,353	2,599	2,870	3,170	3,502
Other	CII	3,119	3,444	3,804	4,202	4,641
Other	Hydrant (construction)	665	735	811	896	990
Landscape	non-potable (raw water)	592	654	722	797	881
Losses	potable & non-potable combined	1,189	1,314	1,451	1,602	1,770
TOTAL		24,977	27,588	30,468	33,651	37,170
NOTES: Units in AF. Assumes 0.5% per year growth. Losses are 5% of total demand. Source: JCSD Finance Dept.						

Table 6-9 Retail: Water Supplies — Projected											
Water Supply	Additional Detail on Water Supply	Projected Water Supply									
Drop down list <i>May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online</i>		2020		2025		2030		2035		2040 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Add additional rows as needed											
Purchased or Imported Water	Western Municipal Water District	5,000		7,500		10,000		10,000		10,000	
Other	Dry Year Yield conjunctive use agreement with City of Ontario	2,000		2,000		2,000		2,000		2,000	
Purchased or Imported Water	from Rubidoux Community Services District	2,000		2,000		2,000		2,000		2,000	
Groundwater	Current wells	10,000		12,000		14,000		14,000		14,000	
Purchased or Imported Water	Chino Desalter Authority	11,733		11,733		11,733		11,733		11,733	
Recycled Water	WRCWRA plant	500		500		500		500		500	
Groundwater	Non-Potable from Riverside Basin	450		450		450		450		450	
Groundwater	Non-Potable from Chino Basin	310		310		310		310		310	
Groundwater	Non-Potable from Temescal Basin	120		120		120		120		120	
Total		32,113	0	36,613	0	41,113	0	41,113	0	41,113	0
NOTES: Volumes in AF.											

Should you have any further questions or concerns, please feel free to contact me at (909) 685-7434 or e-mail me at erhee@jcsd.us.

Sincerely,



Eddie Rhee, P.E.
Interim Engineering Manager



Chad Blais, President
 Kenneth J. McLaughlin, Vice President
 Betty A. Anderson, Director
 Joan E. Roberts, Ph.D., Director
 Jane F. Anderson, Director

May 26, 2016

Ms. Casey Costa
 Chino Basin Desalter Authority
 2151 S. Haven Avenue, Suite 202
 Ontario, CA 91761

RE: Water Use Projections Provided per Requirement of California Water Code Section 10631(j)

Dear Casey:

Pursuant to California Water Code Section 10631(j), please find below tables that have been taken from Jurupa Community Services District's Draft 2015 Urban Water Management Plan that summarize the District's water use projections.

Table 4-2 Retail: Demands for Potable and Raw Water - Projected						
Use Type <i>(Add additional rows as needed)</i>	Additional Description <i>(as needed)</i>	Projected Water Use <i>Report To the Extent that Records are Available</i>				
<i>Use Drop down list</i> <i>May select each use multiple times</i> <i>These are the only Use Types that will be recognized by the WUEdata online submittal tool</i>		2020	2025	2030	2035	2040-opt
Single Family		15,700	17,341	19,153	21,154	23,364
Multi-Family		1,359	1,501	1,657	1,830	2,022
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Other	Hydrant (construction)	665	735	811	896	990
Landscape	non-potable (raw water)	592	654	722	797	881
Losses	potable & non-potable combined	1,189	1,314	1,451	1,602	1,770
TOTAL		24,977	27,588	30,468	33,651	37,170

NOTES: Units in AF. Assumes 2% per year growth. Losses are 5% of total demand. Source: JCSD Finance Dept.

Table 6-9 Retail: Water Supplies — Projected											
Water Supply		Projected Water Supply									
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online	Additional Detail on Water Supply	2020		2025		2030		2035		2040 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Add additional rows as needed											
Purchased or Imported Water	Western Municipal Water District	5,000		7,500		10,000		10,000		10,000	
Other	Dry Year Yield conjunctive use agreement with City of Ontario	2,000		2,000		2,000		2,000		2,000	
Purchased or Imported Water	Rubidoux CSD (Riverside Basin)	2,000		2,000		2,000		2,000		2,000	
Groundwater	Current potable wells (Chino Basin)	10,000		12,000		14,000		14,000		14,000	
Purchased or Imported Water	Chino Desalter Authority (Chino Basin)	11,733		11,733		11,733		11,733		11,733	
Recycled Water	WRCRWA plant	500		500		500		500		500	
Groundwater	Non-Potable from Riverside Basin	450		450		450		450		450	
Groundwater	Non-Potable from Chino Basin	310		310		310		310		310	
Groundwater	Non-Potable from Temescal Basin	0		0		0		0		0	
Total		31,993	0	36,493	0	40,993	0	40,993	0	40,993	0
NOTES: Volumes in AF provided by JCSD.											

NOTES: Volumes in AF provided by JCSD.

Should you have any questions or concerns, please feel free to contact me at (909) 685-7434 or e-mail me at erhee@jcsd.us.

Sincerely,



Eddie Rhee, P.E.
Interim Engineering Manager

ER/sc
Cc: Robert Tock
J:/Engineering/UWMP/2015 UWMP

APPENDIX D

POPULATION TOOL RESULTS

WUEdata - Jurupa Community Service District

[Sign Out](#)*Please print this page to a PDF and include as part of your UWMP submittal.***Confirmation Information**

Generated By	Water Supplier Name	Confirmation #	Generated On
Nanette Pratini	Jurupa Community Service District	4846418082	5/26/2016 3:27:09 PM

Boundary Information

Census Year	Boundary Filename	Internal Boundary ID
1990	jcsd_bnd_2000_for DWRtool.kml	898
2000	jcsd_bnd_2000_for DWRtool.kml	898
2010	jcsd_bnd_2000_for DWRtool.kml	898

Baseline Period Ranges**10 to 15-year baseline period**Number of years in baseline period: Year beginning baseline period range: Year ending baseline period range¹: 2008**5-year baseline period**Year beginning baseline period range: Year ending baseline period range²: 2007¹ The ending year must be between December 31, 2004 and December 31, 2010.² The ending year must be between December 31, 2007 and December 31, 2010.**Persons per Connection**

Year	Census Block Level	Number of Connections *	Persons per Connection
	Total Population		
1990	42,479	<input type="text" value="9700"/>	4.38
1991	-	-	4.39
1992	-	-	4.39
1993	-	-	4.40
1994	-	-	4.40
1995	-	-	4.40
1996	-	-	4.41
1997	-	-	4.42
1998	-	-	4.42
1999	-	-	4.43
2000	50,489	<input type="text" value="11391"/>	4.43
2001	-	-	4.41
2002	-	-	4.40
2003	-	-	4.38
2004	-	-	4.37
2005	-	-	4.35
2006	-	-	4.33
2007	-	-	4.32
2008	-	-	4.30
2009	-	-	4.29
2010	108,248	<input type="text" value="25374"/>	4.27
2015	-	-	4.18 **

Population Using Persons-Per-Connection

Year		Number of Connections *	Persons per Connection	Total Population
10 to 15 Year Baseline Population Calculations				
Year 1	1999	11280	4.43	49,914
Year 2	2000	11391	4.43	50,489
Year 3	2001	12425	4.41	54,844
Year 4	2002	14357	4.40	63,142
Year 5	2003	16085	4.38	70,484
Year 6	2004	18986	4.37	82,893
Year 7	2005	20762	4.35	90,315
Year 8	2006	22540	4.33	97,688
Year 9	2007	23551	4.32	101,693
Year 10	2008	24005	4.30	103,270
5 Year Baseline Population Calculations				
Year 1	2003	16085	4.38	70,484
Year 2	2004	18986	4.37	82,893
Year 3	2005	20762	4.35	90,315
Year 4	2006	22540	4.33	97,688
Year 5	2007	23551	4.32	101,693
2015 Compliance Year Population Calculations				
2015		28462	4.18 **	119,034

QUESTIONS / ISSUES? CONTACT THE [WUEdata HELP DESK](#)

APPENDIX E

WATER LOSS AUDIT

AWWA Free Water Audit Software v5.0

American Water Works Association Copyright © 2014, All Rights Reserved.

This spreadsheet-based water audit tool is designed to help quantify and track water losses associated with water distribution systems and identify areas for improved efficiency and cost recovery. It provides a "top-down" summary water audit format, and is not meant to take the place of a full-scale, comprehensive water audit format.

Auditors are strongly encouraged to refer to the most current edition of AWWA M36 Manual for Water Audits for detailed guidance on the water auditing process and targetting loss reduction levels

The spreadsheet contains several separate worksheets. Sheets can be accessed using the tabs towards the bottom of the screen, or by clicking the buttons below.

Please begin by providing the following information

Name of Contact Person:	Eddie Rhee	
Email Address:	erhee@jcsd.us	
Telephone Ext.:	9516857434 ext. 118	
Name of City / Utility:	Jurupa Community Services District	
City/Town/Municipality:	Jurupa Valley	
State / Province:	California (CA)	
Country:	USA	
Year:	2015	Calendar Year
Audit Preparation Date:	4/1/2016	
Volume Reporting Units:	Acre-feet	
PWSID / Other ID:	CA3310021	

The following guidance will help you complete the Audit

All audit data are entered on the [Reporting Worksheet](#)

<input type="text"/>	Value can be entered by user
<input type="text"/>	Value calculated based on input data
<input type="text"/>	These cells contain recommended default values

Use of Option (Radio) Buttons: Pcnt: 0.25% Value:

Select the default percentage by choosing the option button on the left

To enter a value, choose this button and enter a value in the cell to the right

The following worksheets are available by clicking the buttons below or selecting the tabs along the bottom of the page

Instructions

The current sheet.
Enter contact information and basic audit details (year, units etc)

Reporting Worksheet

Enter the required data on this worksheet to calculate the water balance and data grading

Comments

Enter comments to explain how values were calculated or to document data sources

Performance Indicators

Review the performance indicators to evaluate the results of the audit

Water Balance

The values entered in the Reporting Worksheet are used to populate the Water Balance

Dashboard

A graphical summary of the water balance and Non-Revenue Water components

Grading Matrix

Presents the possible grading options for each input component of the audit

Service Connection Diagram

Diagrams depicting possible customer service connection line configurations

Definitions

Use this sheet to understand the terms used in the audit process

Loss Control Planning

Use this sheet to interpret the results of the audit validity score and performance indicators

Example Audits

Reporting Worksheet and Performance Indicators examples are shown for two validated audits

Acknowledgements

Acknowledgements for the AWWA Free Water Audit Software v5.0

If you have questions or comments regarding the software please contact us via email at: wlc@awwa.org



All volumes to be entered as: ACRE-FEET PER YEAR

Reporting Worksheet 1



AWWA Free Water Audit Software: System Attributes and Performance Indicators

WAS v5.0

American Water Works Association.

Water Audit Report for: **Jurupa Community Services District (CA3310021)**

Reporting Year: **2015** | **1/2015 - 12/2015**

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 65 out of 100 ***

System Attributes:

Apparent Losses:	108.641	acre-ft/yr
+ Real Losses:	351.402	acre-ft/yr
= Water Losses:	460.043	acre-ft/yr

? Unavoidable Annual Real Losses (UARL): 539.84 acre-ft/yr

Annual cost of Apparent Losses: \$99,380

Annual cost of Real Losses: \$308,963

Valued at **Variable Production Cost**

Return to Reporting Worksheet to change this assumption

Performance Indicators:

Financial:

Non-revenue water as percent by volume of Water Supplied: 3.3%

Non-revenue water as percent by cost of operating system: 2.2% Real Losses valued at Variable Production Cost

Operational Efficiency:

Apparent Losses per service connection per day: 3.27 gallons/connection/day

Real Losses per service connection per day: 10.57 gallons/connection/day

Real Losses per length of main per day*: N/A

Real Losses per service connection per day per psi pressure: 0.15 gallons/connection/day/psi

From Above, Real Losses = Current Annual Real Losses (CARL): 351.40 acre-feet/year

? Infrastructure Leakage Index (ILI) [CARL/UARL]: 0.65

* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline



AWWA Free Water Audit Software: User Comments

WAS v5.0

American Water Works Association.
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Use this worksheet to add comments or notes to explain how an input value was calculated, or to document the sources of the information used.

General Comment:	
Audit Item	Comment
Volume from own sources:	Value is derived from the 2015 Annual Report Production table under section 5, by adding Produced from Groudnhwater annual value of 8992.563 AF (Column C) and Non-Potable annual total of 845.175 AF (Column H) to arrive at 9,837.738 AF
Vol. from own sources: Master meter error adjustment:	
Water imported:	This value is listed in the 2015 Annual Report Production table under section 5- Columne E (Annual Total).
Water imported: master meter error adjustment:	
Water exported:	This value is the value of the meter read on the 1st of the month. It is also listed in the Production table in the Annual Total for Column G.
Water exported: master meter error adjustment:	
Billed metered:	In 2015 Annual Report, Section 6b- Water Deliveries, this value is derived by adding Total values for Column H- 21,106.31 AF (Total Urban Retail) and Column I- 538.5 AF (Agricultural), then subtracting Swan Lake Annutal total volume of 284.754 AF (Column G in Production data in Section 5).
Billed unmetered:	
Unbilled metered:	

Audit Item	Comment
Unbilled unmetered:	
Unauthorized consumption:	
Customer metering inaccuracies:	
Systematic data handling errors:	
Length of mains:	
Number of active AND inactive service connections:	
Average length of customer service line:	
Average operating pressure:	Assumed Nomal pressure of 70 psi. Pressures range anywhere between 40 psi to 150 psi in the District, with majority in the 70 to 80 psi range
Total annual cost of operating water system:	
Customer retail unit cost (applied to Apparent Losses):	
Variable production cost (applied to Real Losses):	



AWWA Free Water Audit Software: Water Balance

WAS v5.0

American Water Works Association.
Copyright © 2014, All Rights Reserved.Water Audit Report for: **Jurupa Community Services District (CA3310021)**Reporting Year: **2015****1/2015 - 12/2015**Data Validity Score: **65**

Own Sources (Adjusted for known errors) 9,837.738	System Input 22,381.057	Water Exported 284.754	Billed Water Exported				Revenue Water 284.754
		Water Supplied 22,096.303	Authorized Consumption 21,636.260	Billed Authorized Consumption 21,360.056	Billed Metered Consumption (water exported is removed) 21,360.056		Revenue Water
					Billed Unmetered Consumption 0.000		21,360.056
			Water Losses 460.043	Unbilled Authorized Consumption 276.204	Unbilled Metered Consumption 0.000		Non-Revenue Water (NRW) 736.247
					Unbilled Unmetered Consumption 276.204		
		Apparent Losses 108.641		Unauthorized Consumption 55.241			
				Customer Metering Inaccuracies 0.000			
				Systematic Data Handling Errors 53.400			
				Real Losses 351.402	Leakage on Transmission and/or Distribution Mains Not broken down		
		Leakage and Overflows at Utility's Storage Tanks Not broken down					
Leakage on Service Connections Not broken down							



AWWA Free Water Audit Software: Dashboard

WAS v5.0

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The graphic below is a visual representation of the Water Balance with bar heights proportional to the volume of the audit components

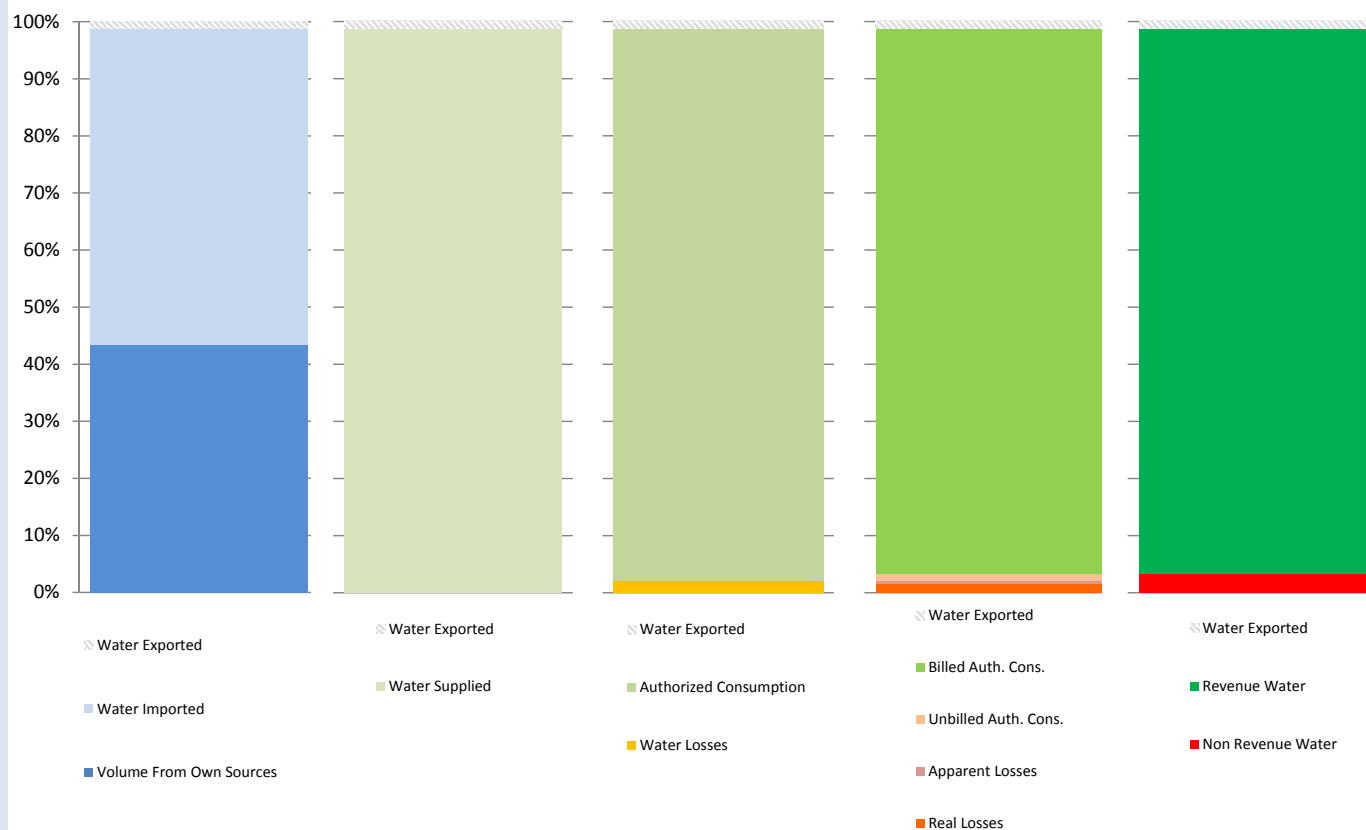
Water Audit Report for: **Jurupa Community Services District (CA3310021)**

Reporting Year: **2015** **1/2015 - 12/2015**

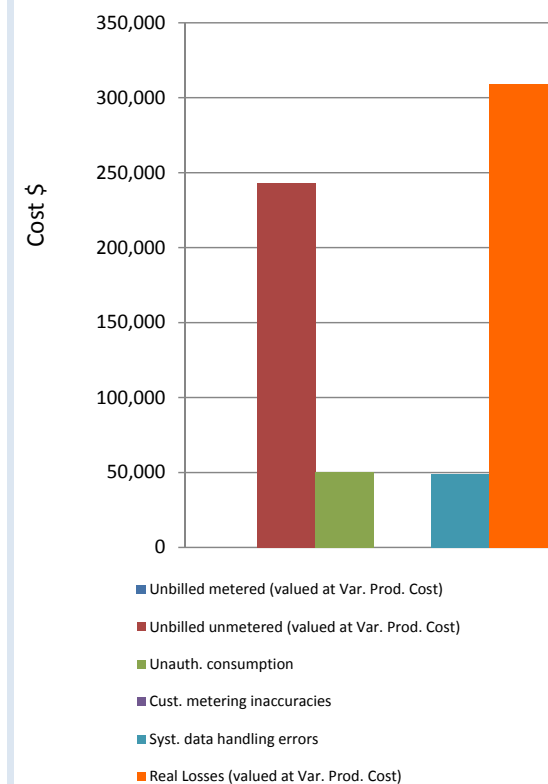
Data Validity Score: **65**

☐ Show me the VOLUME of Non-Revenue Water

☒ Show me the COST of Non-Revenue Water



Total Cost of NRW = \$651,190





AWWA Free Water Audit Software: Grading Matrix

WAS 5.0

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The grading assigned to each audit component and the corresponding recommended improvements and actions are highlighted in yellow. Audit accuracy is likely to be improved by prioritizing those items shown in red

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
WATER SUPPLIED											
Volume from own sources:	Select this grading only if the water utility purchases/imports all of its water resources (i.e. has no sources of its own)	Less than 25% of water production sources are metered, remaining sources are estimated. No regular meter accuracy testing or electronic calibration conducted.	25% - 50% of treated water production sources are metered; other sources estimated. No regular meter accuracy testing or electronic calibration conducted.	Conditions between 2 and 4	50% - 75% of treated water production sources are metered, other sources estimated. Occasional meter accuracy testing or electronic calibration conducted.	Conditions between 4 and 6	At least 75% of treated water production sources are metered, <u>at least 90% of the source flow is derived from metered sources.</u> Meter accuracy testing and/or electronic calibration of related instrumentation is conducted annually. Less than 25% of tested meters are found outside of +/- 6% accuracy.	Conditions between 6 and 8	100% of treated water production sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted annually, less than 10% of meters are found outside of +/- 6% accuracy	Conditions between 8 and 10	100% of treated water production sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted semi-annually, with less than 10% found outside of +/- 3% accuracy. Procedures are reviewed by a third party knowledgeable in the M36 methodology.
Improvements to attain higher data grading for "Volume from own Sources" component:		<u>to qualify for 2:</u> Organize and launch efforts to collect data for determining volume from own sources	<u>to qualify for 4:</u> Locate all water production sources on maps and in the field, launch meter accuracy testing for existing meters, begin to install meters on unmetered water production sources and replace any obsolete/defective meters.		<u>to qualify for 6:</u> Formalize annual meter accuracy testing for all source meters; specify the frequency of testing. Complete installation of meters on unmetered water production sources and complete replacement of all obsolete/defective meters.		<u>to qualify for 8:</u> Conduct annual meter accuracy testing and calibration of related instrumentation on all meter installations on a regular basis. Complete project to install new, or replace defective existing, meters so that entire production meter population is metered. Repair or replace meters outside of +/- 6% accuracy.		<u>to qualify for 10:</u> Maintain annual meter accuracy testing and calibration of related instrumentation for all meter installations. Repair or replace meters outside of +/- 3% accuracy. Investigate new meter technology; pilot one or more replacements with innovative meters in attempt to further improve meter accuracy.		<u>to maintain 10:</u> Standardize meter accuracy test frequency to semi-annual, or more frequent, for all meters. Repair or replace meters outside of +/- 3% accuracy. Continually investigate/pilot improving metering technology.
Volume from own sources master meter and supply error adjustment:	Select n/a only if the water utility fails to have meters on its sources of supply	Inventory information on meters and paper records of measured volumes exist but are incomplete and/or in a very crude condition; data error cannot be determined	No automatic datalogging of production volumes; daily readings are scribed on paper records without any accountability controls. Flows are not balanced across the water distribution system; tank/storage elevation changes are not employed in calculating the "Volume from own sources" component and archived flow data is adjusted only when grossly evident data error occurs.	Conditions between 2 and 4	Production meter data is logged automatically in electronic format and reviewed at least on a monthly basis with necessary corrections implemented. "Volume from own sources" tabulations include estimate of daily changes in tanks/storage facilities. Meter data is adjusted when gross data errors occur, or occasional meter testing deems this necessary.	Conditions between 4 and 6	Hourly production meter data logged automatically & reviewed on at least a weekly basis. Data is adjusted to correct gross error when meter/instrumentation equipment malfunction is detected; and/or error is confirmed by meter accuracy testing. Tank/storage facility elevation changes are automatically used in calculating a balanced "Volume from own sources" component, and data gaps in the archived data are corrected on at least a weekly basis.	Conditions between 6 and 8	Continuous production meter data is logged automatically & reviewed each business day. Data is adjusted to correct gross error from detected meter/instrumentation equipment malfunction and/or results of meter accuracy testing. Tank/storage facility elevation changes are automatically used in "Volume from own sources" tabulations and data gaps in the archived data are corrected on a daily basis.	Conditions between 8 and 10	Computerized system (SCADA or similar) automatically balances flows from all sources and storages; results are reviewed each business day. Tight accountability controls ensure that all data gaps that occur in the archived flow data are quickly detected and corrected. Regular calibrations between SCADA and sources meters ensures minimal data transfer error.
Improvements to attain higher data grading for "Master meter and supply error adjustment" component:		<u>to qualify for 2:</u> Develop a plan to restructure recordkeeping system to capture all flow data; set a procedure to review flow data on a daily basis to detect input errors. Obtain more reliable information about existing meters by conducting field inspections of meters and related instrumentation, and obtaining manufacturer literature.	<u>to qualify for 4:</u> Install automatic datalogging equipment on production meters. Complete installation of level instrumentation at all tanks/storage facilities and include tank level data in automatic calculation routine in a computerized system. Construct a computerized listing or spreadsheet to archive input volumes, tank/storage volume changes and import/export flows in order to determine the composite "Water Supplied" volume for the distribution system. Set a procedure to review this data on a monthly basis to detect gross anomalies and data gaps.		<u>to qualify for 6:</u> Refine computerized data collection and archive to include hourly production meter data that is reviewed at least on a weekly basis to detect specific data anomalies and gaps. Use daily net storage change to balance flows in calculating "Water Supplied" volume. Necessary corrections to data errors are implemented on a weekly basis.		<u>to qualify for 8:</u> Ensure that all flow data is collected and archived on at least an hourly basis. All data is reviewed and detected errors corrected each business day. Tank/storage levels variations are employed in calculating balanced "Water Supplied" component. Adjust production meter data for gross error and inaccuracy confirmed by testing.		<u>to qualify for 10:</u> Link all production and tank/storage facility elevation change data to a Supervisory Control & Data Acquisition (SCADA) System, or similar computerized monitoring/control system, and establish automatic flow balancing algorithm and regularly calibrate between SCADA and source meters. Data is reviewed and corrected each business day.		<u>to maintain 10:</u> Monitor meter innovations for development of more accurate and less expensive flowmeters. Continue to replace or repair meters as they perform outside of desired accuracy limits. Stay abreast of new and more accurate water level instruments to better record tank/storage levels and archive the variations in storage volume. Keep current with SCADA and data management systems to ensure that archived data is well-managed and error free.
Water Imported:	Select n/a if the water utility's supply is exclusively from its own water resources (no bulk purchased/ imported water)	Less than 25% of imported water sources are metered, remaining sources are estimated. No regular meter accuracy testing.	25% - 50% of imported water sources are metered; other sources estimated. No regular meter accuracy testing.	Conditions between 2 and 4	50% - 75% of imported water sources are metered, other sources estimated. Occasional meter accuracy testing conducted.	Conditions between 4 and 6	At least 75% of imported water sources are metered, meter accuracy testing and/or electronic calibration of related instrumentation is conducted annually for all meter installations. Less than 25% of tested meters are found outside of +/- 6% accuracy.	Conditions between 6 and 8	100% of imported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted annually, less than 10% of meters are found outside of +/- 6% accuracy	Conditions between 8 and 10	100% of imported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted semi-annually for all meter installations, with less than 10% of accuracy tests found outside of +/- 3% accuracy.
Improvements to attain higher data grading for "Water Imported Volume" component: (Note: usually the water supplier selling the water - "the Exporter" - to the utility being audited is responsible to maintain the metering installation measuring the imported volume. The utility should coordinate carefully with the Exporter to ensure that adequate meter upkeep takes place and an accurate measure of the Water Imported volume is quantified.)		<u>to qualify for 2:</u> Review bulk water purchase agreements with partner suppliers; confirm requirements for use and maintenance of accurate metering. Identify needs for new or replacement meters with goal to meter all imported water sources.	<u>To qualify for 4:</u> Locate all imported water sources on maps and in the field, launch meter accuracy testing for existing meters, begin to install meters on unmetered imported water interconnections and replace obsolete/defective meters.		<u>to qualify for 6:</u> Formalize annual meter accuracy testing for all imported water meters, planning for both regular meter accuracy testing and calibration of the related instrumentation. Continue installation of meters on unmetered imported water interconnections and replacement of obsolete/defective meters.		<u>to qualify for 8:</u> Complete project to install new, or replace defective, meters on all imported water interconnections. Maintain annual meter accuracy testing for all imported water meters and conduct calibration of related instrumentation at least annually. Repair or replace meters outside of +/- 6% accuracy.		<u>to qualify for 10:</u> Conduct meter accuracy testing for all meters on a semi-annual basis, along with calibration of all related instrumentation. Repair or replace meters outside of +/- 3% accuracy. Investigate new meter technology; pilot one or more replacements with innovative meters in attempt to improve meter accuracy.		<u>to maintain 10:</u> Standardize meter accuracy test frequency to semi-annual, or more frequent, for all meters. Continue to conduct calibration of related instrumentation on a semi-annual basis. Repair or replace meters outside of +/- 3% accuracy. Continually investigate/pilot improving metering technology.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Water imported master meter and supply error adjustment:	Select n/a if the Imported water supply is unmetered, with Imported water quantities estimated on the billing invoices sent by the Exporter to the purchasing Utility.	Inventory information on imported meters and paper records of measured volumes exist but are incomplete and/or in a very crude condition; data error cannot be determined. Written agreement(s) with water Exporter(s) are missing or written in vague language concerning meter management and testing.	No automatic datalogging of imported supply volumes; daily readings are scribed on paper records without any accountability controls to confirm data accuracy and the absence of errors and data gaps in recorded volumes. Written agreement requires meter accuracy testing but is vague on the details of how and who conducts the testing.	Conditions between 2 and 4	Imported supply metered flow data is logged automatically in electronic format and reviewed at least on a monthly basis by the Exporter with necessary corrections implemented. Meter data is adjusted by the Exporter when gross data errors are detected. A coherent data trail exists for this process to protect both the selling and the purchasing Utility. Written agreement exists and clearly states requirements and roles for meter accuracy testing and data management.	Conditions between 4 and 6	Hourly Imported supply metered data is logged automatically & reviewed on at least a weekly basis by the Exporter. Data is adjusted to correct gross error when meter/instrumentation equipment malfunction is detected; and to correct for error confirmed by meter accuracy testing. Any data gaps in the archived data are detected and corrected during the weekly review. A coherent data trail exists for this process to protect both the selling and the purchasing Utility.	Conditions between 6 and 8	Continuous Imported supply metered flow data is logged automatically & reviewed each business day by the Exporter. Data is adjusted to correct gross error from detected meter/instrumentation equipment malfunction and/or results of meter accuracy testing. Any data errors/gaps are detected and corrected on a daily basis. A data trail exists for the process to protect both the selling and the purchasing Utility.	Conditions between 8 and 10	Computerized system (SCADA or similar) automatically records data which is reviewed each business day by the Exporter. Tight accountability controls ensure that all error/data gaps that occur in the archived flow data are quickly detected and corrected. A reliable data trail exists and contract provisions for meter testing and data management are reviewed by the selling and purchasing Utility at least once every five years.
Improvements to attain higher data grading for "Water imported master meter and supply error adjustment" component:		<u>to qualify for 2:</u> Develop a plan to restructure recordkeeping system to capture all flow data; set a procedure to review flow data on a daily basis to detect input errors. Obtain more reliable information about existing meters by conducting field inspections of meters and related instrumentation, and obtaining manufacturer literature. Review the written agreement between the selling and purchasing Utility.	<u>to qualify for 4:</u> Install automatic datalogging equipment on Imported supply meters. Set a procedure to review this data on a monthly basis to detect gross anomalies and data gaps. Launch discussions with the Exporters to jointly review terms of the written agreements regarding meter accuracy testing and data management; revise the terms as necessary.		<u>to qualify for 6:</u> Refine computerized data collection and archive to include hourly Imported supply metered flow data that is reviewed at least on a weekly basis to detect specific data anomalies and gaps. Make necessary corrections to errors/data errors on a weekly basis.		<u>to qualify for 8:</u> Ensure that all Imported supply metered flow data is collected and archived on at least an hourly basis. All data is reviewed and errors/data gaps are corrected each business day.		<u>to qualify for 10:</u> Conduct accountability checks to confirm that all Imported supply metered data is reviewed and corrected each business day by the Exporter. Results of all meter accuracy tests and data corrections should be available for sharing between the Exporter and the purchasing Utility. Establish a schedule for a regular review and updating of the contractual language in the written agreement between the selling and the purchasing Utility; at least every five years.		<u>to maintain 10:</u> Monitor meter innovations for development of more accurate and less expensive flowmeters; work with the Exporter to help identify meter replacement needs. Keep communication lines with Exporters open and maintain productive relations. Keep the written agreement current with clear and explicit language that meets the ongoing needs of all parties.
Water Exported:	Select n/a if the water utility sells no bulk water to neighboring water utilities (no exported water sales)	Less than 25% of exported water sources are metered, remaining sources are estimated. No regular meter accuracy testing.	25% - 50% of exported water sources are metered; other sources estimated. No regular meter accuracy testing.	Conditions between 2 and 4	50% - 75% of exported water sources are metered, other sources estimated. Occasional meter accuracy testing conducted.	Conditions between 4 and 6	At least 75% of exported water sources are metered, meter accuracy testing and/or electronic calibration conducted annually. Less than 25% of tested meters are found outside of +/- 6% accuracy.	Conditions between 6 and 8	100% of exported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted annually, less than 10% of meters are found outside of +/- 6% accuracy	Conditions between 8 and 10	100% of exported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted semi-annually for all meter installations, with less than 10% of accuracy tests found outside of +/- 3% accuracy.
Improvements to attain higher data grading for "Water Exported Volume" component: (Note: usually, if the water utility being audited sells (Exports) water to a neighboring purchasing Utility, it is the responsibility of the utility exporting the water to maintain the metering installation measuring the Exported volume. The utility exporting the water should ensure that adequate meter upkeep takes place and an accurate measure of the Water Exported volume is quantified.)		<u>to qualify for 2:</u> Review bulk water sales agreements with purchasing utilities; confirm requirements for use & upkeep of accurate metering. Identify needs to install new, or replace defective meters as needed.	<u>To qualify for 4:</u> Locate all exported water sources on maps and in field, launch meter accuracy testing for existing meters, begin to install meters on unmetered exported water interconnections and replace obsolete/defective meters		<u>to qualify for 6:</u> Formalize annual meter accuracy testing for all exported water meters. Continue installation of meters on unmetered exported water interconnections and replacement of obsolete/defective meters.		<u>to qualify for 8:</u> Complete project to install new, or replace defective, meters on all exported water interconnections. Maintain annual meter accuracy testing for all exported water meters. Repair or replace meters outside of +/- 6% accuracy.		<u>to qualify for 10:</u> Maintain annual meter accuracy testing for all meters. Repair or replace meters outside of +/- 3% accuracy. Investigate new meter technology; pilot one or more replacements with innovative meters in attempt to improve meter accuracy.		<u>to maintain 10:</u> Standardize meter accuracy test frequency to semi-annual, or more frequent, for all meters. Repair or replace meters outside of +/- 3% accuracy. Continually investigate/pilot improving metering technology.
Water exported master meter and supply error adjustment:	Select n/a only if the water utility fails to have meters on its exported supply interconnections.	Inventory information on exported meters and paper records of measured volumes exist but are incomplete and/or in a very crude condition; data error cannot be determined. Written agreement(s) with the utility purchasing the water are missing or written in vague language concerning meter management and testing.	No automatic datalogging of exported supply volumes; daily readings are scribed on paper records without any accountability controls to confirm data accuracy and the absence of errors and data gaps in recorded volumes. Written agreement requires meter accuracy testing but is vague on the details of how and who conducts the testing.	Conditions between 2 and 4	Exported metered flow data is logged automatically in electronic format and reviewed at least on a monthly basis, with necessary corrections implemented. Meter data is adjusted by the utility selling (exporting) the water when gross data errors are detected. A coherent data trail exists for this process to protect both the utility exporting the water and the purchasing Utility. Written agreement exists and clearly states requirements and roles for meter accuracy testing and data management.	Conditions between 4 and 6	Hourly exported supply metered data is logged automatically & reviewed on at least a weekly basis by the utility selling the water. Data is adjusted to correct gross error when meter/instrumentation equipment malfunction is detected; and to correct for error found by meter accuracy testing. Any data gaps in the archived data are detected and corrected during the weekly review. A coherent data trail exists for this process to protect both the selling (exporting) utility and the purchasing Utility.	Conditions between 6 and 8	Continuous exported supply metered flow data is logged automatically & reviewed each business day by the utility selling (exporting) the water. Data is adjusted to correct gross error from detected meter/instrumentation equipment malfunction and any error confirmed by meter accuracy testing. Any data errors/gaps are detected and corrected on a daily basis. A data trail exists for the process to protect both the selling (exporting) Utility and the purchasing Utility.	Conditions between 8 and 10	Computerized system (SCADA or similar) automatically records data which is reviewed each business day by the utility selling (exporting) the water. Tight accountability controls ensure that all error/data gaps that occur in the archived flow data are quickly detected and corrected. A reliable data trail exists and contract provisions for meter testing and data management are reviewed by the selling Utility and purchasing Utility at least once every five years.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Improvements to attain higher data grading for "Water exported master meter and supply error adjustment" component.		<p><u>to qualify for 2:</u> Develop a plan to restructure recordkeeping system to capture all flow data; set a procedure to review flow data on a daily basis to detect input errors. Obtain more reliable information about existing meters by conducting field inspections of meters and related instrumentation, and obtaining manufacturer literature. Review the written agreement between the utility selling (exporting) the water and the purchasing Utility.</p>	<p><u>to qualify for 4:</u> Install automatic datalogging equipment on exported supply meters. Set a procedure to review this data on a monthly basis to detect gross anomalies and data gaps. Launch discussions with the purchasing utilities to jointly review terms of the written agreements regarding meter accuracy testing and data management; revise the terms as necessary.</p>		<p><u>to qualify for 6:</u> Refine computerized data collection and archive to include hourly exported supply metered flow data that is reviewed at least on a weekly basis to detect specific data anomalies and gaps. Make necessary corrections to errors/data errors on a weekly basis.</p>		<p><u>to qualify for 8:</u> Ensure that all exported metered flow data is collected and archived on at least an hourly basis. All data is reviewed and errors/data gaps are corrected each business day.</p>		<p><u>to qualify for 10:</u> Conduct accountability checks to confirm that all exported metered flow data is reviewed and corrected each business day by the utility selling the water. Results of all meter accuracy tests and data corrections should be available for sharing between the utility and the purchasing Utility. Establish a schedule for a regular review and updating of the contractual language in the written agreements with the purchasing utilities, at least every five years.</p>		<p><u>to maintain 10:</u> Monitor meter innovations for development of more accurate and less expensive flowmeters; work with the purchasing utilities to help identify meter replacement needs. Keep communication lines with the purchasing utilities open and maintain productive relations. Keep the written agreement current with clear and explicit language that meets the ongoing needs of all parties.</p>
AUTHORIZED CONSUMPTION											
Billed metered:	n/a (not applicable). Select n/a only if the entire customer population is not metered and is billed for water service on a flat or fixed rate basis. In such a case the volume entered must be zero.	Less than 50% of customers with volume-based billings from meter readings; flat or fixed rate billing exists for the majority of the customer population	At least 50% of customers with volume-based billing from meter reads; flat rate billing for others. Manual meter reading is conducted, with less than 50% meter read success rate; remaining accounts consumption is estimated. Limited meter records, no regular meter testing or replacement. Billing data maintained on paper records, with no auditing.	Conditions between 2 and 4	At least 75% of customers with volume-based, billing from meter reads; flat or fixed rate billing for remaining accounts. Manual meter reading is conducted with at least 50% meter read success rate; consumption for accounts with failed reads is estimated. Purchase records verify age of customer meters; only very limited meter accuracy testing is conducted. Customer meters are replaced only upon complete failure. Computerized billing records exist, but only sporadic internal auditing conducted.	Conditions between 4 and 6	At least 90% of customers with volume-based billing from meter reads; consumption for remaining accounts is estimated. Manual customer meter reading gives at least 80% customer meter reading success rate; consumption for accounts with failed reads is estimated. Good customer meter records exist, but only limited meter accuracy testing is conducted. Regular replacement is conducted for the oldest meters. Computerized billing records exist with annual auditing of summary statistics conducted by utility personnel.	Conditions between 6 and 8	At least 97% of customers exist with volume-based billing from meter reads. At least 90% customer meter reading success rate; at least 80% read success rate with planning and budgeting for trials of Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) in one or more pilot areas. Good customer meter records. Regular meter accuracy testing guides replacement of statistically significant number of meters each year. Routine auditing of computerized billing records for global and detailed statistics occurs annually by utility personnel, and is verified by third party at least once every five years.	Conditions between 8 and 10	At least 99% of customers exist with volume-based billing from meter reads. At least 95% customer meter reading success rate; minimum 80% meter reading success rate, with Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) trials underway. Statistically significant customer meter testing and replacement program in place on a continuous basis. Computerized billing with routine, detailed auditing, including field investigation of representative sample of accounts undertaken annually by utility personnel. Audit is conducted by third party auditors at least once every three years.
Improvements to attain higher data grading for "Billed Metered Consumption" component:	If n/a is selected because the customer meter population is unmetered, consider establishing a new policy to meter the customer population and employ water rates based upon metered volumes.	<p><u>to qualify for 2:</u> Conduct investigations or trials of customer meters to select appropriate meter models. Budget funding for meter installations. Investigate volume based water rate structures.</p>	<p><u>to qualify for 4:</u> Purchase and install meters on unmetered accounts. Implement policies to improve meter reading success. Catalog meter information during meter read visits to identify age/model of existing meters. Test a minimal number of meters for accuracy. Install computerized billing system.</p>		<p><u>to qualify for 6:</u> Purchase and install meters on unmetered accounts. Eliminate flat fee billing and establish appropriate water rate structure based upon measured consumption. Continue to achieve verifiable success in removing manual meter reading barriers. Expand meter accuracy testing. Launch regular meter replacement program. Launch a program of annual auditing of global billing statistics by utility personnel.</p>		<p><u>to qualify for 8:</u> Purchase and install meters on unmetered accounts. If customer meter reading success rate is less than 97%, assess cost-effectiveness of Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) system for portion or entire system; or otherwise achieve ongoing improvements in manual meter reading success rate to 97% or higher. Refine meter accuracy testing program. Set meter replacement goals based upon accuracy test results. Implement annual auditing of detailed billing records by utility personnel and implement third party auditing at least once every five years.</p>		<p><u>to qualify for 10:</u> Purchase and install meters on unmetered accounts. Launch Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) system trials if manual meter reading success rate of at least 99% is not achieved within a five-year program. Continue meter accuracy testing program. Conduct planning and budgeting for large scale meter replacement based upon meter life cycle analysis using cumulative flow target. Continue annual detailed billing data auditing by utility personnel and conduct third party auditing at least once every three years.</p>		<p><u>to maintain 10:</u> Continue annual internal billing data auditing, and third party auditing at least every three years. Continue customer meter accuracy testing to ensure that accurate customer meter readings are obtained and entered as the basis for volume based billing. Stay abreast of improvements in Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) and information management. Plan and budget for justified upgrades in metering, meter reading and billing data management to maintain very high accuracy in customer metering and billing.</p>
Billed unmetered:	Select n/a if it is the policy of the water utility to meter all customer connections and it has been confirmed by detailed auditing that all customers do indeed have a water meter; i.e. no intentionally unmetered accounts exist	Water utility policy does not require customer metering; flat or fixed fee billing is employed. No data is collected on customer consumption. The only estimates of customer population consumption available are derived from data estimation methods using average fixture count multiplied by number of connections, or similar approach.	Water utility policy does not require customer metering; flat or fixed fee billing is employed. Some metered accounts exist in parts of the system (pilot areas or District Metered Areas) with consumption read periodically or recorded on portable dataloggers over one, three, or seven day periods. Data from these sample meters are used to infer consumption for the total customer population. Site specific estimation methods are used for unusual buildings/water uses.	Conditions between 2 and 4	Water utility policy does require metering and volume based billing in general. However, a liberal amount of exemptions and a lack of clearly written and communicated procedures result in up to 20% of billed accounts believed to be unmetered by exemption; or the water utility is in transition to becoming fully metered, and a large number of customers remain unmetered. A rough estimate of the annual consumption for all unmetered accounts is included in the annual water audit, with no inspection of individual unmetered accounts.	Conditions between 4 and 6	Water utility policy does require metering and volume based billing but established exemptions exist for a portion of accounts such as municipal buildings. As many as 15% of billed accounts are unmetered due to this exemption or meter installation difficulties. Only a group estimate of annual consumption for all unmetered accounts is included in the annual water audit, with no inspection of individual unmetered accounts.	Conditions between 6 and 8	Water utility policy does require metering and volume based billing for all customer accounts. However, less than 5% of billed accounts remain unmetered because meter installation is hindered by unusual circumstances. The goal is to minimize the number of unmetered accounts. Reliable estimates of consumption are obtained for these unmetered accounts via site specific estimation methods.	Conditions between 8 and 10	Water utility policy does require metering and volume based billing for all customer accounts. Less than 2% of billed accounts are unmetered and exist because meter installation is hindered by unusual circumstances. The goal exists to minimize the number of unmetered accounts to the extent that is economical. Reliable estimates of consumption are obtained at these accounts via site specific estimation methods.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Improvements to attain higher data grading for "Billed Unmetered Consumption" component:		<p><u>to qualify for 2:</u> Conduct research and evaluate cost/benefit of a new water utility policy to require metering of the customer population; thereby greatly reducing or eliminating unmetered accounts. Conduct pilot metering project by installing water meters in small sample of customer accounts and periodically reading the meters or datalogging the water consumption over one, three, or seven day periods.</p>	<p><u>to qualify for 4:</u> Implement a new water utility policy requiring customer metering. Launch or expand pilot metering study to include several different meter types, which will provide data for economic assessment of full scale metering options. Assess sites with access difficulties to devise means to obtain water consumption volumes. Begin customer meter installation.</p>		<p><u>to qualify for 6:</u> Refine policy and procedures to improve customer metering participation for all but solidly exempt accounts. Assign staff resources to review billing records to identify errant unmetered properties. Specify metering needs and funding requirements to install sufficient meters to significant reduce the number of unmetered accounts</p>		<p><u>to qualify for 8:</u> Push to install customer meters on a full scale basis. Refine metering policy and procedures to ensure that all accounts including municipal properties, are designated for meters. Plan special efforts to address "hard-to-access" accounts. Implement procedures to obtain a reliable consumption estimate for the remaining few unmetered accounts awaiting meter installation.</p>		<p><u>to qualify for 10:</u> Continue customer meter installation throughout the service area, with a goal to minimize unmetered accounts. Sustain the effort to investigate accounts with access difficulties, and devise means to install water meters or otherwise measure water consumption.</p>		<p><u>to maintain 10:</u> Continue to refine estimation methods for unmetered consumption and explore means to establish metering, for as many billed remaining unmetered accounts as is economically feasible.</p>
Unbilled metered:	select n/a if all billing-exempt consumption is unmetered.	<p>Billing practices exempt certain accounts, such as municipal buildings, but written policies do not exist; and a reliable count of unbilled metered accounts is unavailable. Meter upkeep and meter reading on these accounts is rare and not considered a priority. Due to poor recordkeeping and lack of auditing, water consumption for all such accounts is purely guesstimated.</p>	<p>Billing practices exempt certain accounts, such as municipal buildings, but only scattered, dated written directives exist to justify this practice. A reliable count of unbilled metered accounts is unavailable. Sporadic meter replacement and meter reading occurs on an as-needed basis. The total annual water consumption for all unbilled, metered accounts is estimated based upon approximating the number of accounts and assigning consumption from actively billed accounts of same meter size.</p>	Conditions between 2 and 4	<p>Dated written procedures permit billing exemption for specific accounts, such as municipal properties, but are unclear regarding certain other types of accounts. Meter reading is given low priority and is sporadic. Consumption is quantified from meter readings where available. The total number of unbilled, unmetered accounts must be estimated along with consumption volumes.</p>	Conditions between 4 and 6	<p>Written policies regarding billing exemptions exist but adherence in practice is questionable. Metering and meter reading for municipal buildings is reliable but sporadic for other unbilled metered accounts. Periodic auditing of such accounts is conducted. Water consumption is quantified directly from meter readings where available, but the majority of the consumption is estimated.</p>	Conditions between 6 and 8	<p>Written policy identifies the types of accounts granted a billing exemption. Customer meter management and meter reading are considered secondary priorities, but meter reading is conducted at least annually to obtain consumption volumes for the annual water audit. High level auditing of billing records ensures that a reliable census of such accounts exists.</p>	Conditions between 8 and 10	<p>Clearly written policy identifies the types of accounts given a billing exemption, with emphasis on keeping such accounts to a minimum. Customer meter management and meter reading for these accounts is given proper priority and is reliably conducted. Regular auditing confirms this. Total water consumption for these accounts is taken from reliable readings from accurate meters.</p>
Improvements to attain higher data grading for "Unbilled Metered Consumption" component:		<p><u>to qualify for 2:</u> Reassess the water utility's policy allowing certain accounts to be granted a billing exemption. Draft an outline of a new written policy for billing exemptions, with clear justification as to why any accounts should be exempt from metering, and with the intention to keep the number of such accounts to a minimum.</p>	<p><u>to qualify for 4:</u> Review historic written directives and policy documents allowing certain accounts to be billing-exempt. Draft an outline of a written policy for billing exemptions, identify criteria that grants an exemption, with a goal of keeping this number of accounts to a minimum. Consider increasing the priority of reading meters on unbilled accounts at least annually.</p>		<p><u>to qualify for 6:</u> Draft a new written policy regarding billing exemptions based upon consensus criteria allowing this occurrence. Assign resources to audit meter records and billing records to obtain census of unbilled metered accounts. Gradually include a greater number of these metered accounts to the routes for regular meter reading.</p>		<p><u>to qualify for 8:</u> Communicate billing exemption policy throughout the organization and implement procedures that ensure proper account management. Conduct inspections of accounts confirmed in unbilled metered status and verify that accurate meters exist and are scheduled for routine meter readings. Gradually increase the number of unbilled metered accounts that are included in regular meter reading routes.</p>		<p><u>to qualify for 10:</u> Ensure that meter management (meter accuracy testing, meter replacement) and meter reading activities for unbilled accounts are accorded the same priority as billed accounts. Establish ongoing annual auditing process to ensure that water consumption is reliably collected and provided to the annual water audit process.</p>		<p><u>to maintain 10:</u> Reassess the utility's philosophy in allowing any water uses to go "unbilled". It is possible to meter and bill all accounts, even if the fee charged for water consumption is discounted or waived. Metering and billing all accounts ensures that water consumption is tracked and water waste from plumbing leaks is detected and minimized.</p>
Unbilled unmetered:		<p>Extent of unbilled, unmetered consumption is unknown due to unclear policies and poor recordkeeping. Total consumption is quantified based upon a purely subjective estimate.</p>	<p>Clear extent of unbilled, unmetered consumption is unknown, but a number of events are randomly documented each year, confirming existence of such consumption, but without sufficient documentation to quantify an accurate estimate of the annual volume consumed.</p>	Conditions between 2 and 4	<p>Extent of unbilled, unmetered consumption is partially known, and procedures exist to document certain events such as miscellaneous fire hydrant uses. Formulae is used to quantify the consumption from such events (time running multiplied by typical flowrate, multiplied by number of events).</p>	Default value of 1.25% of system input volume is employed	<p>Coherent policies exist for some forms of unbilled, unmetered consumption but others await closer evaluation. Reasonable recordkeeping for the managed uses exists and allows for annual volumes to be quantified by inference, but unsupervised uses are guesstimated.</p>	Conditions between 6 and 8	<p>Clear policies and good recordkeeping exist for some uses (ex. water used in periodic testing of unmetered fire connections), but other uses (ex. miscellaneous uses of fire hydrants) have limited oversight. Total consumption is a mix of well quantified use such as from formulae (time running multiplied by typical flow, multiplied by number of events) or temporary meters, and relatively subjective estimates of less regulated use.</p>	Conditions between 8 and 10	<p>Clear policies exist to identify permitted use of water in unbilled, unmetered fashion, with the intention of minimizing this type of consumption. Good records document each occurrence and consumption is quantified via formulae (time running multiplied by typical flow, multiplied by number of events) or use of temporary meters.</p>
Improvements to attain higher data grading for "Unbilled Unmetered Consumption" component:		<p><u>to qualify for 5:</u> Utilize the accepted default value of 1.25% of the volume of water supplied as an expedient means to gain a reasonable quantification of this use.</p> <p><u>to qualify for 2:</u> Establish a policy regarding what water uses should be allowed to remain as unbilled and unmetered. Consider tracking a small sample of one such use (ex: fire hydrant flushings).</p>	<p><u>to qualify for 5:</u> Utilize accepted default value of 1.25% of the volume of water supplied as an expedient means to gain a reasonable quantification of this use.</p> <p><u>to qualify for 4:</u> Evaluate the documentation of events that have been observed. Meet with user groups (ex: fire hydrants - fire departments, contractors to ascertain their need and/or volume requirements for water from fire hydrants).</p>		<p><u>to qualify for 5:</u> Utilize accepted default value of 1.25% of the volume of water supplied as an expedient means to gain a reasonable quantification of all such use. This is particularly appropriate for water utilities who are in the early stages of the water auditing process, and should focus on other components since the volume of unbilled, unmetered consumption is usually a relatively small quantity component, and other larger-quantity components should take priority.</p>	<p><u>to qualify for 6 or greater:</u> Finalize policy and begin to conduct field checks to better establish and quantify such usage. Proceed if top-down audit exists and/or a great volume of such use is suspected.</p>	<p><u>to qualify for 8:</u> Assess water utility policy and procedures for various unmetered usages. For example, ensure that a policy exists and permits are issued for use of fire hydrants by persons outside of the utility. Create written procedures for use and documentation of fire hydrants by water utility personnel. Use same approach for other types of unbilled, unmetered water usage.</p>		<p><u>to qualify for 10:</u> Refine written procedures to ensure that all uses of unbilled, unmetered water are overseen by a structured permitting process managed by water utility personnel. Reassess policy to determine if some of these uses have value in being converted to billed and/or metered status.</p>		<p><u>to maintain 10:</u> Continue to refine policy and procedures with intention of reducing the number of allowable uses of water in unbilled and unmetered fashion. Any uses that can feasibly become billed and metered should be converted eventually.</p>
APPARENT LOSSES											

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Unauthorized consumption:		Extent of unauthorized consumption is unknown due to unclear policies and poor recordkeeping. Total unauthorized consumption is guesstimated.	Unauthorized consumption is a known occurrence, but its extent is a mystery. There are no requirements to document observed events, but periodic field reports capture some of these occurrences. Total unauthorized consumption is approximated from this limited data.	conditions between 2 and 4	Procedures exist to document some unauthorized consumption such as observed unauthorized fire hydrant openings. Use formulae to quantify this consumption (time running multiplied typical flowrate, multiplied by number of events).	Default value of 0.25% of volume of water supplied is employed	Coherent policies exist for some forms of unauthorized consumption (more than simply fire hydrant misuse) but others await closer evaluation. Reasonable surveillance and recordkeeping exist for occurrences that fall under the policy. Volumes quantified by inference from these records.	Conditions between 6 and 8	Clear policies and good auditable recordkeeping exist for certain events (ex: tampering with water meters, illegal bypasses of customer meters); but other occurrences have limited oversight. Total consumption is a combination of volumes from formulae (time x typical flow) and subjective estimates of unconfirmed consumption.	Conditions between 8 and 10	Clear policies exist to identify all known unauthorized uses of water. Staff and procedures exist to provide enforcement of policies and detect violations. Each occurrence is recorded and quantified via formulae (estimated time running multiplied by typical flow) or similar methods. All records and calculations should exist in a form that can be audited by a third party.
Improvements to attain higher data grading for "Unauthorized Consumption" component:		to qualify for 5: Use accepted default of 0.25% of volume of water supplied. to qualify for 2: Review utility policy regarding what water uses are considered unauthorized, and consider tracking a small sample of one such occurrence (ex: unauthorized fire hydrant openings)	to qualify for 5: Use accepted default of 0.25% of system input volume to qualify for 4: Review utility policy regarding what water uses are considered unauthorized, and consider tracking a small sample of one such occurrence (ex: unauthorized fire hydrant openings)		to qualify for 5: Utilize accepted default value of 0.25% of volume of water supplied as an expedient means to gain a reasonable quantification of all such use. This is particularly appropriate for water utilities who are in the early stages of the water auditing process.	to qualify for 6 or greater: Finalize policy updates to clearly identify the types of water consumption that are authorized from those usages that fall outside of this policy and are, therefore, unauthorized. Begin to conduct regular field checks. Proceed if the top-down audit already exists and/or a great volume of such use is suspected.	to qualify for 8: Assess water utility policies to ensure that all known occurrences of unauthorized consumption are outlawed, and that appropriate penalties are prescribed. Create written procedures for detection and documentation of various occurrences of unauthorized consumption as they are uncovered.		to qualify for 10: Refine written procedures and assign staff to seek out likely occurrences of unauthorized consumption. Explore new locking devices, monitors and other technologies designed to detect and thwart unauthorized consumption.		to maintain 10: Continue to refine policy and procedures to eliminate any loopholes that allow or tacitly encourage unauthorized consumption. Continue to be vigilant in detection, documentation and enforcement efforts.
Customer metering inaccuracies:	select n/a only if the entire customer population is unmetered. In such a case the volume entered must be zero.	Customer meters exist, but with unorganized paper records on meters; no meter accuracy testing or meter replacement program for any size of retail meter. Metering workflow is driven chaotically with no proactive management. Loss volume due to aggregate meter inaccuracy is guesstimated.	Poor recordkeeping and meter oversight is recognized by water utility management who has allotted staff and funding resources to organize improved recordkeeping and start meter accuracy testing. Existing paper records gathered and organized to provide cursory disposition of meter population. Customer meters are tested for accuracy only upon customer request.	Conditions between 2 and 4	Reliable recordkeeping exists; meter information is improving as meters are replaced. Meter accuracy testing is conducted annually for a small number of meters (more than just customer requests, but less than 1% of inventory). A limited number of the oldest meters are replaced each year. Inaccuracy volume is largely an estimate, but refined based upon limited testing data.	Conditions between 4 and 6	A reliable electronic recordkeeping system for meters exists. The meter population includes a mix of new high performing meters and dated meters with suspect accuracy. Routine, but limited, meter accuracy testing and meter replacement occur. Inaccuracy volume is quantified using a mix of reliable and less certain data.	Conditions between 6 and 8	Ongoing meter replacement and accuracy testing result in highly accurate customer meter population. Statistically significant number of meters are tested in audit year. This testing is conducted on samples of meters of varying age and accumulated volume of throughput to determine optimum replacement time for various types of meters.	Ongoing meter replacement and accuracy testing result in highly accurate customer meter population. Statistically significant number of meters are tested in audit year. This testing is conducted on samples of meters of varying age and accumulated volume of throughput to determine optimum replacement time for these meters.	Good records of all active customer meters exist and include as a minimum: meter number, account number/location, type, size and manufacturer. Ongoing meter replacement occurs according to a targeted and justified basis. Regular meter accuracy testing gives a reliable measure of composite inaccuracy volume for the customer meter population. New metering technology is embraced to keep overall accuracy improving. Procedures are reviewed by a third party knowledgeable in the M36 methodology.
Improvements to attain higher data grading for "Customer meter inaccuracy volume" component:	If n/a is selected because the customer meter population is unmetered, consider establishing a new policy to meter the customer population and employ water rates based upon metered volumes.	to qualify for 2: Gather available meter purchase records. Conduct testing on a small number of meters believed to be the most inaccurate. Review staffing needs of the metering group and budget for necessary resources to better organize meter management.	to qualify for 4: Implement a reliable record keeping system for customer meter histories, preferably using electronic methods typically linked to, or part of, the Customer Billing System or Customer Information System. Expand meter accuracy testing to a larger group of meters.		to qualify for 6: Standardize the procedures for meter recordkeeping within an electronic information system. Accelerate meter accuracy testing and meter replacements guided by testing results.		to qualify for 8: Expand annual meter accuracy testing to evaluate a statistically significant number of meter makes/models. Expand meter replacement program to replace statistically significant number of poor performing meters each year.		to qualify for 9: Continue efforts to manage meter population with reliable recordkeeping. Test a statistically significant number of meters each year and analyze test results in an ongoing manner to serve as a basis for a target meter replacement strategy based upon accumulated volume throughput.	to qualify for 10: Continue efforts to manage meter population with reliable recordkeeping, meter testing and replacement. Evaluate new meter types and install one or more types in 5-10 customer accounts each year in order to pilot improving metering technology.	to maintain 10: Increase the number of meters tested and replaced as justified by meter accuracy test data. Continually monitor development of new metering technology and Advanced Metering Infrastructure (AMI) to grasp opportunities for greater accuracy in metering of water flow and management of customer consumption data.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Systematic Data Handling Errors:	Note: all water utilities incur some amount of this error. Even in water utilities with unmetered customer populations and fixed rate billing, errors occur in annual billing tabulations. Enter a positive value for the volume and select a grading.	Policies and procedures for activation of new customer water billing accounts are vague and lack accountability. Billing data is maintained on paper records which are not well organized. No auditing is conducted to confirm billing data handling efficiency. An unknown number of customers escape routine billing due to lack of billing process oversight.	Policy and procedures for activation of new customer accounts and oversight of billing records exist but need refinement. Billing data is maintained on paper records or insufficiently capable electronic database. Only periodic unstructured auditing work is conducted to confirm billing data handling efficiency. The volume of unbilled water due to billing lapses is a guess.	Conditions between 2 and 4	Policy and procedures for new account activation and oversight of billing operations exist but needs refinement. Computerized billing system exists, but is dated or lacks needed functionality. Periodic, limited internal audits conducted and confirm with approximate accuracy the consumption volumes lost to billing lapses.	Conditions between 4 and 6	Policy and procedures for new account activation and oversight of billing operations is adequate and reviewed periodically. Computerized billing system is in use with basic reporting available. Any effect of billing adjustments on measured consumption volumes is well understood. Internal checks of billing data error conducted annually. Reasonably accurate quantification of consumption volume lost to billing lapses is obtained.	Conditions between 6 and 8	New account activation and billing operations policy and procedures are reviewed at least biannually. Computerized billing system includes an array of reports to confirm billing data and system functionality. Checks are conducted routinely to flag and explain zero consumption accounts. Annual internal checks conducted with third party audit conducted at least once every five years. Accountability checks flag billing lapses. Consumption lost to billing lapses is well quantified and reducing year-by-year.	Conditions between 8 and 10	Sound written policy and procedures exist for new account activation and oversight of customer billing operations. Robust computerized billing system gives high functionality and reporting capabilities which are utilized, analyzed and the results reported each billing cycle. Assessment of policy and data handling errors are conducted internally and audited by third party at least once every three years, ensuring consumption lost to billing lapses is minimized and detected as it occurs.
Improvements to attain higher data grading for "Systematic Data Handling Error volume" component:		to qualify for 2: Draft written policy and procedures for activating new water billing accounts and oversight of billing operations. Investigate and budget for computerized customer billing system. Conduct initial audit of billing records by flow-charting the basic business processes of the customer account/billing function.	to qualify for 4: Finalize written policy and procedures for activation of new billing accounts and overall billing operations management. Implement a computerized customer billing system. Conduct initial audit of billing records as part of this process.		to qualify for 6: Refine new account activation and billing operations procedures and ensure consistency with the utility policy regarding billing, and minimize opportunity for missed billings. Upgrade or replace customer billing system for needed functionality - ensure that billing adjustments don't corrupt the value of consumption volumes. Procedurize internal annual audit process.		to qualify for 8: Formalize regular review of new account activation process and general billing practices. Enhance reporting capability of computerized billing system. Formalize regular auditing process to reveal scope of data handling error. Plan for periodic third party audit to occur at least once every five years.		to qualify for 10: Close policy/procedure loopholes that allow some customer accounts to go unbilled, or data handling errors to exist. Ensure that billing system reports are utilized, analyzed and reported every billing cycle. Ensure that internal and third party audits are conducted at least once every three years.		to maintain 10: Stay abreast of customer information management developments and innovations. Monitor developments of Advanced Metering Infrastructure (AMI) and integrate technology to ensure that customer endpoint information is well-monitored and errors/lapses are at an economic minimum.
SYSTEM DATA											
Length of mains:		Poorly assembled and maintained paper as-built records of existing water main installations makes accurate determination of system pipe length impossible. Length of mains is guesstimated.	Paper records in poor or uncertain condition (no annual tracking of installations & abandonments). Poor procedures to ensure that new water mains installed by developers are accurately documented.	Conditions between 2 and 4	Sound written policy and procedures exist for documenting new water main installations, but gaps in management result in a uncertain degree of error in tabulation of mains length.	Conditions between 4 and 6	Sound written policy and procedures exist for permitting and commissioning new water mains. Highly accurate paper records with regular field validation; or electronic records and asset management system in good condition. Includes system backup.	Conditions between 6 and 8	Sound written policy and procedures exist for permitting and commissioning new water mains. Electronic recordkeeping such as a Geographical Information System (GIS) and asset management system are used to store and manage data.	Conditions between 8 and 10	Sound written policy exists for managing water mains extensions and replacements. Geographic Information System (GIS) data and asset management database agree and random field validation proves truth of databases. Records of annual field validation should be available for review.
Improvements to attain higher data grading for "Length of Water Mains" component:		to qualify for 2: Assign personnel to inventory current as-built records and compare with customer billing system records and highway plans in order to verify poorly documented pipelines. Assemble policy documents regarding permitting and documentation of water main installations by the utility and building developers; identify gaps in procedures that result in poor documentation of new water main installations.	to qualify for 4: Complete inventory of paper records of water main installations for several years prior to audit year. Review policy and procedures for commissioning and documenting new water main installation.		to qualify for 6: Finalize updates/improvements to written policy and procedures for permitting/commissioning new main installations. Confirm inventory of records for five years prior to audit year; correct any errors or omissions.		to qualify for 8: Launch random field checks of limited number of locations. Convert to electronic database such as a Geographic Information System (GIS) with backup as justified. Develop written policy and procedures.		to qualify for 10: Link Geographic Information System (GIS) and asset management databases, conduct field verification of data. Record field verification information at least annually.		to maintain 10: Continue with standardization and random field validation to improve the completeness and accuracy of the system.
Number of active AND inactive service connections:		Vague permitting (of new service connections) policy and poor paper recordkeeping of customer connections/billings result in suspect determination of the number of service connections, which may be 10-15% in error from actual count.	General permitting policy exists but paper records, procedural gaps, and weak oversight result in questionable total for number of connections, which may vary 5-10% of actual count.	Conditions between 2 and 4	Written account activation policy and procedures exist, but with some gaps in performance and oversight. Computerized information management system is being brought online to replace dated paper recordkeeping system. Reasonably accurate tracking of service connection installations & abandonments; but count can be up to 5% in error from actual total.	Conditions between 4 and 6	Written new account activation and overall billing policies and procedures are adequate and reviewed periodically. Computerized information management system is in use with annual installations & abandonments totaled. Very limited field verifications and audits. Error in count of number of service connections is believed to be no more than 3%.	Conditions between 6 and 8	Policies and procedures for new account activation and overall billing operations are written, well-structured and reviewed at least biannually. Well-managed computerized information management system exists and routine, periodic field checks and internal system audits are conducted. Counts of connections are no more than 2% in error.	Conditions between 8 and 10	Sound written policy and well managed and audited procedures ensure reliable management of service connection population. Computerized information management system, Customer Billing System, and Geographic Information System (GIS) information agree; field validation proves truth of databases. Count of connections recorded as being in error is less than 1% of the entire population.
Improvements to attain higher data grading for "Number of Active and Inactive Service Connections" component:	Note: The number of Service Connections does not include fire hydrant leads/lines connecting the hydrant to the water main	to qualify for 2: Draft new policy and procedures for new account activation and overall billing operations. Research and collect paper records of installations & abandonments for several years prior to audit year.	to qualify for 4: Refine policy and procedures for new account activation and overall billing operations. Research computerized recordkeeping system (Customer Information System or Customer Billing System) to improve documentation format for service connections.		to qualify for 6: Refine procedures to ensure consistency with new account activation and overall billing policy to establish new service connections or decommission existing connections. Improve process to include all totals for at least five years prior to audit year.		to qualify for 8: Formalize regular review of new account activation and overall billing operations policies and procedures. Launch random field checks of limited number of locations. Develop reports and auditing mechanisms for computerized information management system.		to qualify for 10: Close any procedural loopholes that allow installations to go undocumented. Link computerized information management system with Geographic Information System (GIS) and formalize field inspection and information system auditing processes. Documentation of new or decommissioned service connections encounters several levels of checks and balances.		to maintain 10: Continue with standardization and random field validation to improve knowledge of system.
	Note: if customer water	Gratings 1-9 apply if customer properties are unmetered, if customer meters exist and are located inside the customer building premises, or if the water utility owns and is responsible for the entire service connection piping from the water main to the customer building. In any of these cases the average distance between the curb stop or boundary separating utility/customer responsibility for service connection piping, and the typical first point of use (ex: faucet) or the customer meter must be quantified. Gratings of 1-9 are used to grade the validity of the means to quantify this value. (See the "Service Connection Diagram" worksheet)									Either of two conditions can be met for a grading of 10:

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Average length of customer service line:	meters are located outside of the customer building next to the curb stop or boundary separating utility/customer responsibility, then the auditor should answer "Yes" to the question on the Reporting Worksheet asking about this. If the answer is Yes, the grading description listed under the Grading of 10(a) will be followed, with a value of zero automatically entered at a Grading of 10. See the Service Connection Diagram worksheet for a visual presentation of this distance.	Vague policy exists to define the delineation of water utility ownership and customer ownership of the service connection piping. Curb stops are perceived as the breakpoint but these have not been well-maintained or documented. Most are buried or obscured. Their location varies widely from site-to-site, and estimating this distance is arbitrary due to the unknown location of many curb stops.	Policy requires that the curb stop serves as the delineation point between water utility ownership and customer ownership of the service connection piping. The piping from the water main to the curb stop is the property of the water utility, and the piping from the curb stop to the customer building is owned by the customer. Curb stop locations are not well documented and the average distance is based upon a limited number of locations measured in the field.	Conditions between 2 and 4	Good policy requires that the curb stop serves as the delineation point between water utility ownership and customer ownership of the service connection piping. Curb stops are generally installed as needed and are reasonably documented. Their location varies widely from site-to-site, and an estimate of this distance is hindered by the availability of paper records of limited accuracy.	Conditions between 4 and 6	Clear written policy exists to define utility/customer responsibility for service connection piping. Accurate, well-maintained paper or basic electronic recordkeeping system exists. Periodic field checks confirm piping lengths for a sample of customer properties.	Conditions between 6 and 8	Clearly worded policy standardizes the location of curb stops and meters, which are inspected upon installation. Accurate and well maintained electronic records exist with periodic field checks to confirm locations of service lines, curb stops and customer meter pits. An accurate number of customer properties from the customer billing system allows for reliable averaging of this length.	Conditions between 8 and 10	a) Customer water meters exist outside of customer buildings next to the curb stop or boundary separating utility/customer responsibility for service connection piping. If so, answer "Yes" to the question on the Reporting Worksheet asking about this condition. A value of zero and a Grading of 10 are automatically entered in the Reporting Worksheet. b). Meters exist inside customer buildings, or properties are unmeasured. In either case, answer "No" to the Reporting Worksheet question on meter location, and enter a distance determined by the auditor. For a Grading of 10 this value must be a very reliable number from a Geographic Information System (GIS) and confirmed by a statistically valid number of field checks.
Improvements to attain higher data grading for "Average Length of Customer Service Line" component:		<u>to qualify for 2:</u> Research and collect paper records of service line installations. Inspect several sites in the field using pipe locators to locate curb stops. Obtain the length of this small sample of connections in this manner.	<u>to qualify for 4:</u> Formalize and communicate policy delineating utility/customer responsibilities for service connection piping. Assess accuracy of paper records by field inspection of a small sample of service connections using pipe locators as needed. Research the potential migration to a computerized information management system to store service connection data.		<u>to qualify for 6:</u> Establish coherent procedures to ensure that policy for curb stop, meter installation and documentation is followed. Gain consensus within the water utility for the establishment of a computerized information management system.		<u>to qualify for 8:</u> Implement an electronic means of recordkeeping, typically via a customer information system, customer billing system, or Geographic Information System (GIS). Standardize the process to conduct field checks of a limited number of locations.		<u>to qualify for 10:</u> Link customer information management system and Geographic Information System (GIS), standardize process for field verification of data.		<u>to maintain 10:</u> Continue with standardization and random field validation to improve knowledge of service connection configurations and customer meter locations.
Average operating pressure:		Available records are poorly assembled and maintained paper records of supply pump characteristics and water distribution system operating conditions. Average pressure is guesstimated based upon this information and ground elevations from crude topographical maps. Widely varying distribution system pressures due to undulating terrain, high system head loss and weak/erratic pressure controls further compromise the validity of the average pressure calculation.	Limited telemetry monitoring of scattered pumping station and water storage tank sites provides some static pressure data, which is recorded in handwritten logbooks. Pressure data is gathered at individual sites only when low pressure complaints arise. Average pressure is determined by averaging relatively crude data, and is affected by significant variation in ground elevations, system head loss and gaps in pressure controls in the distribution system.	Conditions between 2 and 4	Effective pressure controls separate different pressure zones; moderate pressure variation across the system, occasional open boundary valves are discovered that breach pressure zones. Basic telemetry monitoring of the distribution system logs pressure data electronically. Pressure data gathered by gauges or dataloggers at fire hydrants or buildings when low pressure complaints arise, and during fire flow tests and system flushing. Reliable topographical data exists. Average pressure is calculated using this mix of data.	Conditions between 4 and 6	Reliable pressure controls separate distinct pressure zones; only very occasional open boundary valves are encountered that breach pressure zones. Well-covered telemetry monitoring of the distribution system (not just pumping at source treatment plants or wells) logs extensive pressure data electronically. Pressure gathered by gauges/dataloggers at fire hydrants and buildings when low pressure complaints arise, and during fire flow tests and system flushing. Average pressure is determined by using this mix of reliable data.	Conditions between 6 and 8	Well-managed, discrete pressure zones exist with generally predictable pressure fluctuations. A current full-scale SCADA System or similar realtime monitoring system exists to monitor the water distribution system and collect data, including real time pressure readings at representative sites across the system. The average system pressure is determined from reliable monitoring system data.	Conditions between 8 and 10	Well-managed pressure districts/zones, SCADA System and hydraulic model exist to give very precise pressure data across the water distribution system. Average system pressure is reliably calculated from extensive, reliable, and cross-checked data. Calculations are reported on an annual basis as a minimum.
Improvements to attain higher data grading for "Average Operating Pressure" component:		<u>to qualify for 2:</u> Employ pressure gauging and/or datalogging equipment to obtain pressure measurements from fire hydrants. Locate accurate topographical maps of service area in order to confirm ground elevations. Research pump data sheets to find pump pressure/flow characteristics	<u>to qualify for 4:</u> Formalize a procedure to use pressure gauging/datalogging equipment to gather pressure data during various system events such as low pressure complaints, or operational testing. Gather pump pressure and flow data at different flow regimes. Identify faulty pressure controls (pressure reducing valves, altitude valves, partially open boundary valves) and plan to properly configure pressure zones. Make all pressure data from these efforts available to generate system-wide average pressure.		<u>to qualify for 6:</u> Expand the use of pressure gauging/datalogging equipment to gather scattered pressure data at a representative set of sites, based upon pressure zones or areas. Utilize pump pressure and flow data to determine supply head entering each pressure zone or district. Correct any faulty pressure controls (pressure reducing valves, altitude valves, partially open boundary valves) to ensure properly configured pressure zones. Use expanded pressure dataset from these activities to generate system-wide average pressure.		<u>to qualify for 8:</u> Install a Supervisory Control and Data Acquisition (SCADA) System, or similar realtime monitoring system, to monitor system parameters and control operations. Set regular calibration schedule for instrumentation to insure data accuracy. Obtain accurate topographical data and utilize pressure data gathered from field surveys to provide extensive, reliable data for pressure averaging.		<u>to qualify for 10:</u> Annually, obtain a system-wide average pressure value from the hydraulic model of the distribution system that has been calibrated via field measurements in the water distribution system and confirmed in comparisons with SCADA System data.		<u>to maintain 10:</u> Continue to refine the hydraulic model of the distribution system and consider linking it with SCADA System for real-time pressure data calibration, and averaging.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
COST DATA											
Total annual cost of operating water system:		Incomplete paper records and lack of financial accounting documentation on many operating functions makes calculation of water system operating costs a pure guesstimate	Reasonably maintained, but incomplete, paper or electronic accounting provides data to estimate the major portion of water system operating costs.	Conditions between 2 and 4	Electronic, industry-standard cost accounting system in place. However, gaps in data are known to exist, periodic internal reviews are conducted but not a structured financial audit.	Conditions between 4 and 6	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Data audited periodically by utility personnel, but not a Certified Public Accountant (CPA).	Conditions between 6 and 8	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Data audited at least annually by utility personnel, and at least once every three years by third-party CPA.	Conditions between 8 and 10	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Data audited annually by utility personnel and annually also by third-party CPA.
Improvements to attain higher data grading for "Total Annual Cost of Operating the Water System" component:		to qualify for 2: Gather available records, institute new financial accounting procedures to regularly collect and audit basic cost data of most important operations functions.	to qualify for 4: Implement an electronic cost accounting system, structured according to accounting standards for water utilities		to qualify for 6: Establish process for periodic internal audit of water system operating costs; identify cost data gaps and institute procedures for tracking these outstanding costs.		to qualify for 8: Standardize the process to conduct routine financial audit on an annual basis. Arrange for CPA audit of financial records at least once every three years.		to qualify for 10: Standardize the process to conduct a third-party financial audit by a CPA on an annual basis.		to maintain 10: Maintain program, stay abreast of expenses subject to erratic cost changes and long-term cost trend, and budget/track costs proactively
Customer retail unit cost (applied to Apparent Losses):	Customer population unmetered, and/or only a fixed fee is charged for consumption.	Antiquated, cumbersome water rate structure is used, with periodic historic amendments that were poorly documented and implemented; resulting in classes of customers being billed inconsistent charges. The actual composite billing rate likely differs significantly from the published water rate structure, but a lack of auditing leaves the degree of error indeterminate.	Dated, cumbersome water rate structure, not always employed consistently in actual billing operations. The actual composite billing rate is known to differ from the published water rate structure, and a reasonably accurate estimate of the degree of error is determined, allowing a composite billing rate to be quantified.	Conditions between 2 and 4	Straight-forward water rate structure in use, but not updated in several years. Billing operations reliably employ the rate structure. The composite billing rate is derived from a single customer class such as residential customer accounts, neglecting the effect of different rates from varying customer classes.	Conditions between 4 and 6	Clearly written, up-to-date water rate structure is in force and is applied reliably in billing operations. Composite customer rate is determined using a weighted average residential rate using volumes of water in each rate block.	Conditions between 6 and 8	Effective water rate structure is in force and is applied reliably in billing operations. Composite customer rate is determined using a weighted average composite consumption rate, which includes residential, commercial, industrial, institutional (CII), and any other distinct customer classes within the water rate structure.	Conditions between 8 and 10	Current, effective water rate structure is in force and applied reliably in billing operations. The rate structure and calculations of composite rate - which includes residential, commercial, industrial, institutional (CII), and other distinct customer classes - are reviewed by a third party knowledgeable in the M36 methodology at least once every five years.
Improvements to attain higher data grading for "Customer Retail Unit Cost" component:		to qualify for 2: Formalize the process to implement water rates, including a secure documentation procedure. Create a current, formal water rate document and gain approval from all stakeholders.	to qualify for 4: Review the water rate structure and update/formalize as needed. Assess billing operations to ensure that actual billing operations incorporate the established water rate structure.		to qualify for 6: Evaluate volume of water used in each usage block by residential users. Multiply volumes by full rate structure.	Launch effort to fully meter the customer population and charge rates based upon water volumes	to qualify for 8: Evaluate volume of water used in each usage block by all classifications of users. Multiply volumes by full rate structure.		to qualify for 10: Conduct a periodic third-party audit of water used in each usage block by all classifications of users. Multiply volumes by full rate structure.		to maintain 10: Keep water rate structure current in addressing the water utility's revenue needs. Update the calculation of the customer unit rate as new rate components, customer classes, or other components are modified.
Variable production cost (applied to Real Losses):	Note: if the water utility purchases/imports its entire water supply, then enter the unit purchase cost of the bulk water supply in the Reporting Worksheet with a grading of 10	Incomplete paper records and lack of documentation on primary operating functions (electric power and treatment costs most importantly) makes calculation of variable production costs a pure guesstimate	Reasonably maintained, but incomplete, paper or electronic accounting provides data to roughly estimate the basic operations costs (pumping power costs and treatment costs) and calculate a unit variable production cost.	Conditions between 2 and 4	Electronic, industry-standard cost accounting system in place. Electric power and treatment costs are reliably tracked and allow accurate weighted calculation of unit variable production costs based on these two inputs and water imported purchase costs (if applicable). All costs are audited internally on a periodic basis.	Conditions between 4 and 6	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Pertinent additional costs beyond power, treatment and water imported purchase costs (if applicable) such as liability, residuals management, wear and tear on equipment, impending expansion of supply, are included in the unit variable production cost, as applicable. The data is audited at least annually by utility personnel.	Conditions between 6 and 8	Reliable electronic, industry-standard cost accounting system in place, with all pertinent primary and secondary variable production and water imported purchase (if applicable) costs tracked. The data is audited at least annually by utility personnel, and at least once every three years by a third-party knowledgeable in the M36 methodology.	Conditions between 8 and 10	Either of two conditions can be met to obtain a grading of 10: 1) Third party CPA audit of all pertinent primary and secondary variable production and water imported purchase (if applicable) costs on an annual basis. or: 2) Water supply is entirely purchased as bulk water imported, and the unit purchase cost - including all applicable marginal supply costs - serves as the variable production cost. If all applicable marginal supply costs are not included in this figure, a grade of 10 should not be selected.
Improvements to attain higher data grading for "Variable Production Cost" component:		to qualify for 2: Gather available records, institute new procedures to regularly collect and audit basic cost data and most important operations functions.	to qualify for 4: Implement an electronic cost accounting system, structured according to accounting standards for water utilities		to qualify for 6: Formalize process for regular internal audits of production costs. Assess whether additional costs (liability, residuals management, equipment wear, impending infrastructure expansion) should be included to calculate a more representative variable production cost.		to qualify for 8: Formalize the accounting process to include direct cost components (power, treatment) as well as indirect cost components (liability, residuals management, etc.) Arrange to conduct audits by a knowledgeable third-party at least once every three years.		to qualify for 10: Standardize the process to conduct a third-party financial audit by a CPA on an annual basis.		to maintain 10: Maintain program, stay abreast of expenses subject to erratic cost changes and budget/track costs proactively



AWWA Free Water Audit Software: Customer Service Line Diagrams

WAS v5.0

American Water Works Association.
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Average Length of Customer Service Line

The three figures shown on this worksheet display the assignment of the Average Length of Customer Service Line, L_p , for the three most common piping configurations.

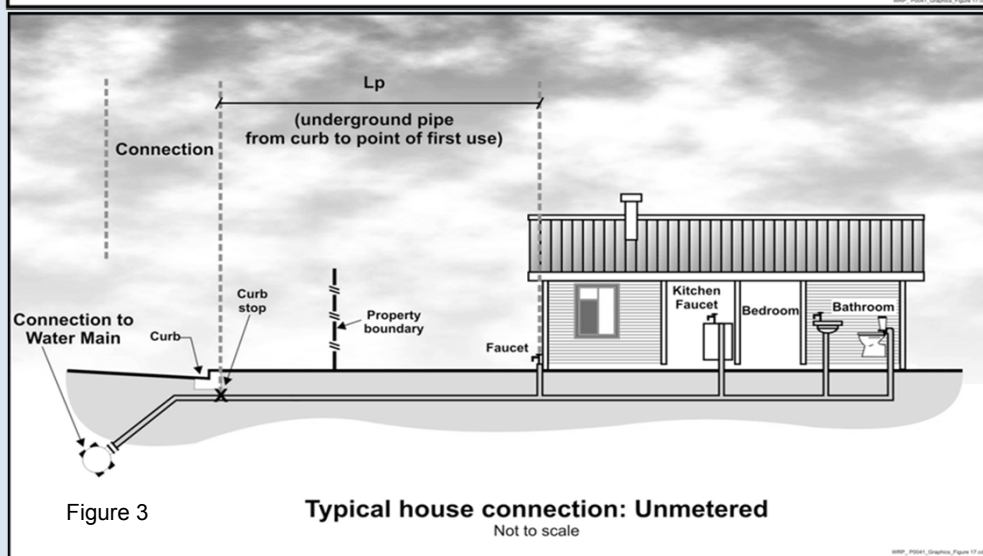
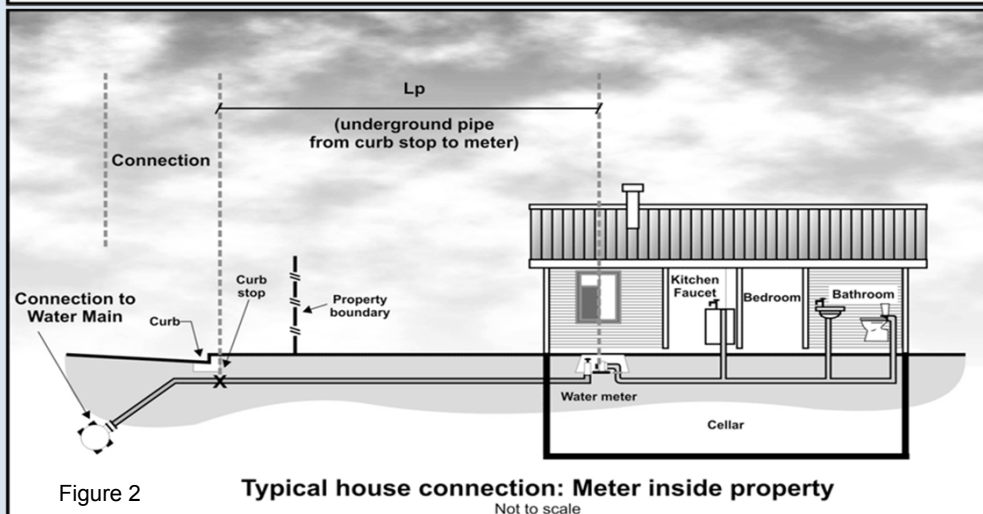
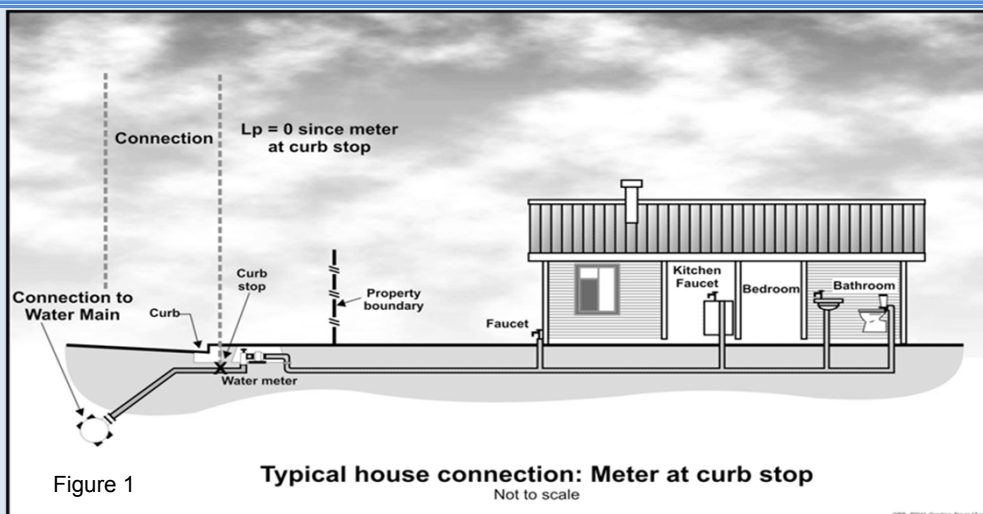
Figure 1 shows the configuration of the water meter outside of the customer building next to the curb stop valve. In this configuration $L_p = 0$ since the distance between the curb stop and the customer metering point is essentially zero.

Figure 2 shows the configuration of the customer water meter located inside the customer building, where L_p is the distance from the curb stop to the water meter.

Figure 3 shows the configuration of an unmetered customer building, where L_p is the distance from the curb stop to the first point of customer water consumption, or, more simply, the building line.

In any water system the L_p will vary notably in a community of different structures, therefore the average L_p value is used and this should be approximated or calculated if a sample of service line measurements has been gathered.

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AWWA Free Water Audit Software: Definitions

WAS v5.0

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Item Name	Description
Apparent Losses Find	<p>= unauthorized consumption + customer metering inaccuracies + systematic data handling errors</p> <p>Apparent Losses include all types of inaccuracies associated with customer metering (worn meters as well as improperly sized meters or wrong type of meter for the water usage profile) as well as systematic data handling errors (meter reading, billing, archiving and reporting), plus unauthorized consumption (theft or illegal use).</p> <p>NOTE: Over-estimation of Apparent Losses results in under-estimation of Real Losses. Under-estimation of Apparent Losses results in over-estimation of Real Losses.</p>
AUTHORIZED CONSUMPTION Find	<p>= billed water exported + billed metered + billed unmetered + unbilled metered + unbilled unmetered consumption</p> <p>The volume of metered and/or unmetered water taken by registered customers, the water utility's own uses, and uses of others who are implicitly or explicitly authorized to do so by the water utility; for residential, commercial, industrial and public-minded purposes.</p> <p>Typical retail customers' consumption is tabulated usually from established customer accounts as billed metered consumption, or - for unmetered customers - billed unmetered consumption. These types of consumption, along with billed water exported, provide revenue potential for the water utility. Be certain to tabulate the water exported volume as a separate component and do not "double-count" it by including in the billed metered consumption component as well as the water exported component.</p> <p>Unbilled authorized consumption occurs typically in non-account uses, including water for fire fighting and training, flushing of water mains and sewers, street cleaning, watering of municipal gardens, public fountains, or similar public-minded uses. Occasionally these uses may be metered and billed (or charged a flat fee), but usually they are unmetered and unbilled. In the latter case, the water auditor may use a default value to estimate this quantity, or implement procedures for the reliable quantification of these uses. This starts with documenting usage events as they occur and estimating the amount of water used in each event. (See Unbilled unmetered consumption)</p>
View Service Connection Diagram Average length of customer service line Find	<p>This is the average length of customer service line, Lp, that is owned and maintained by the customer; from the point of ownership transfer to the customer water meter, or building line (if unmetered). The quantity is one of the data inputs for the calculation of Unavoidable Annual Real Losses (UARL), which serves as the denominator of the performance indicator: Infrastructure Leakage Index (ILI). The value of Lp is multiplied by the number of customer service connections to obtain a total length of customer owned piping in the system. The purpose of this parameter is to account for the unmetered service line infrastructure that is the responsibility of the customer for arranging repairs of leaks that occur on their lines. In many cases leak repairs arranged by customers take longer to be executed than leak repairs arranged by the water utility on utility-maintained piping. Leaks run longer - and lose more water - on customer-owned service piping, than utility owned piping.</p> <p>If the customer water meter exists near the ownership transfer point (usually the curb stop located between the water main and the customer premises) this distance is zero because the meter and transfer point are the same. This is the often encountered configuration of customer water meters located in an underground meter box or "pit" outside of the customer's building. The Free Water Audit Software asks a "Yes/No" question about the meter at this location. If the auditor selects "Yes" then this distance is set to zero and the data grading score for this component is set to 10.</p> <p>If water meters are typically located inside the customer premise/building, or properties are unmetered, it is up to the water auditor to estimate a system-wide average Lp length based upon the various customer land parcel sizes and building locations in the service area. Lp will be a shorter length in areas of high density housing, and a longer length in areas of low density housing and varied commercial and industrial buildings. General parcel demographics should be employed to obtain a composite average Lp length for the entire system.</p> <p>Refer to the "Service Connection Diagram" worksheet for a depiction of the service line/metering configurations that typically exist in water utilities. This worksheet gives guidance on the determination of the Average Length, Lp, for each configuration.</p>
Average operating pressure Find	<p>This is the average pressure in the distribution system that is the subject of the water audit. Many water utilities have a calibrated hydraulic model of their water distribution system. For these utilities, the hydraulic model can be utilized to obtain a very accurate quantity of average pressure. In the absence of a hydraulic model, the average pressure may be approximated by obtaining readings of static water pressure from a representative sample of fire hydrants or other system access points evenly located across the system. A weighted average of the pressure can be assembled; but be sure to take into account the elevation of the fire hydrants, which typically exist several feet higher than the level of buried water pipelines. If the water utility is compiling the water audit for the first time, the average pressure can be approximated, but with a low data grading. In subsequent years of auditing, effort should be made to improve the accuracy of the average pressure quantity. This will then qualify the value for a higher data grading.</p>
Billed Authorized Consumption	<p>All consumption that is billed and authorized by the utility. This may include both metered and unmetered consumption. See "Authorized Consumption" for more information.</p>
Billed metered consumption Find	<p>All metered consumption which is billed to retail customers, including all groups of customers such as domestic, commercial, industrial or institutional. It does NOT include water supplied to neighboring utilities (water exported) which is metered and billed. Be sure to subtract any consumption for exported water sales that may be included in these billing roles. Water supplied as exports to neighboring water utilities should be included only in the Water Exported component. The metered consumption data can be taken directly from billing records for the water audit period. The accuracy of yearly metered consumption data can be refined by including an adjustment to account for customer meter reading lag time since not all customer meters are read on the same day of the meter reading period. However additional analysis is necessary to determine the lag time adjustment value, which may or may not be significant.</p>
Billed unmetered consumption Find	<p>All billed consumption which is calculated based on estimates or norms from water usage sites that have been determined <u>by utility policy</u> to be left unmetered. This is typically a very small component in systems that maintain a policy to meter their customer population. However, this quantity can be the key consumption component in utilities that have not adopted a universal metering policy. This component should NOT include any water that is supplied to neighboring utilities (water exported) which is unmetered but billed. Water supplied as exports to neighboring water utilities should be included only in the Water Exported component.</p>

Item Name	Description
Customer metering inaccuracies Find	<p>Apparent water losses caused by the collective under-registration of customer water meters. Many customer water meters gradually wear as large cumulative volumes of water are passed through them over time. This causes the meters to under-register the flow of water. This occurrence is common with smaller residential meters of sizes 5/8-inch and 3/4 inch after they have registered very large cumulative volumes of water, which generally occurs only after periods of years. For meters sized 1-inch and larger - typical of multi-unit residential, commercial and industrial accounts - meter under-registration can occur from wear or from the improper application of the meter; i.e. installing the wrong type of meter or the wrong size of meter, for the flow pattern (profile) of the consumer. For instance, many larger meters have reduced accuracy at low flows. If an oversized meter is installed, most of the time the routine flow will occur in the low flow range of the meter, and a significant portion of it may not be registered. It is important to properly select and install all meters, but particularly large customer meters, size 1-inch and larger.</p> <p>The auditor has two options for entering data for this component of the audit. The auditor can enter a percentage under-registration (typically an estimated value), this will apply the selected percentage to the two categories of metered consumption to determine the volume of water not recorded due to customer meter inaccuracy. Note that this percentage is a composite average inaccuracy for <u>all</u> customer meters in the entire meter population. The percentage will be multiplied by the sum of the volumes in the Billed Metered and Unbilled Metered components. Alternatively, if the auditor has substantial data from meter testing activities, he or she can calculate their own loss volumes, and this volume may be entered directly.</p> <p>Note that a value of zero will be accepted but an alert will appear asking if the customer population is unmetered. Since all metered systems have some degree of inaccuracy, a positive value should be entered. A value of zero in this component is valid only if the water utility does not meter its customer population.</p>
Customer retail unit cost Find	<p>The Customer Retail Unit Cost represents the charge that customers pay for water service. This unit cost is applied routinely to the components of Apparent Loss, since these losses represent water reaching customers but not (fully) paid for. Since most water utilities have a rate structure that includes a variety of different costs based upon class of customer, a weighted average of individual costs and number of customer accounts in each class can be calculated to determine a single composite cost that should be entered into this cell. Finally, the weighted average cost should also include additional charges for sewer, storm water or biosolids processing, <u>but only if</u> these charges are based upon the volume of potable water consumed.</p> <p>For water utilities in regions with limited water resources and a questionable ability to meet the drinking water demands in the future, the Customer Retail Unit Cost might also be applied to value the Real Losses; instead of applying the Variable Production Cost to Real Losses. In this way, it is assumed that every unit volume of leakage reduced by leakage management activities will be sold to a customer.</p> <p>Note: the Free Water Audit Software allows the user to select the units that are charged to customers (either \$/1,000 gallons, \$/hundred cubic feet, or \$/1,000 litres) and automatically converts these units to the units that appear in the "WATER SUPPLIED" box. The monetary units are United States dollars, \$.</p>
Infrastructure Leakage Index (ILI) Find	<p>The ratio of the Current Annual Real Losses (Real Losses) to the Unavoidable Annual Real Losses (UARL). The ILI is a highly effective performance indicator for comparing (benchmarking) the performance of utilities in operational management of real losses.</p>
Length of mains Find	<p>Length of all pipelines (except service connections) in the system starting from the point of system input metering (for example at the outlet of the treatment plant). It is also recommended to include in this measure the total length of fire hydrant lead pipe. Hydrant lead pipe is the pipe branching from the water main to the fire hydrant. Fire hydrant leads are typically of a sufficiently large size that is more representative of a pipeline than a service connection. The average length of hydrant leads across the entire system can be assumed if not known, and multiplied by the number of fire hydrants in the system, which can also be assumed if not known. This value can then be added to the total pipeline length. Total length of mains can therefore be calculated as:</p> <p>Length of Mains, miles = (total pipeline length, miles) + [{(average fire hydrant lead length, ft) x (number of fire hydrants)} / 5,280 ft/mile] or Length of Mains, kilometres = (total pipeline length, kilometres) + [{(average fire hydrant lead length, metres) x (number of fire hydrants)} / 1,000 metres/kilometre]</p>
NON-REVENUE WATER Find	<p>= Apparent Losses + Real Losses + Unbilled Metered Consumption + Unbilled Unmetered Consumption. This is water which does not provide revenue potential to the utility.</p>
Number of <u>active</u> AND <u>inactive</u> service connections Find	<p>Number of customer service connections, extending from the water main to supply water to a customer. Please note that this includes the actual number of distinct piping connections, including fire connections, whether active or inactive. This may differ substantially from the number of customers (or number of accounts). Note: this number does not include the pipeline leads to fire hydrants - the total length of piping supplying fire hydrants should be included in the "Length of mains" parameter.</p>
Real Losses Find	<p>Physical water losses from the pressurized system (water mains and customer service connections) and the utility's storage tanks, up to the point of customer consumption. In metered systems this is the customer meter, in unmetered situations this is the first point of consumption (stop tap/tap) within the property. The annual volume lost through all types of leaks, breaks and overflows depends on frequencies, flow rates, and average duration of individual leaks, breaks and overflows.</p>
Revenue Water	<p>Those components of System Input Volume that are billed and have the potential to produce revenue.</p>
Service Connection Density Find	<p>=number of customer service connections / length of mains</p>

Item Name	Description
<p>Systematic data handling errors</p> <p>Find</p>	<p>Apparent losses caused by accounting omissions, errant computer programming, gaps in policy, procedure, and permitting/activation of new accounts; and any type of data lapse that results in under-stated customer water consumption in summary billing reports.</p> <p>Systematic Data Handling Errors result in a direct loss of revenue potential. Water utilities can find "lost" revenue by keying on this component.</p> <p>Utilities typically measure water consumption registered by water meters at customer premises. The meter should be read routinely (ex: monthly) and the data transferred to the Customer Billing System, which generates and sends a bill to the customer. <u>Data Transfer Errors</u> result in the consumption value being less than the actual consumption, creating an apparent loss. Such error might occur from illegible and mis-recorded hand-written readings compiled by meter readers, inputting an incorrect meter register unit conversion factor in the automatic meter reading equipment, or a variety of similar errors.</p> <p>Apparent losses also occur from <u>Data Analysis Errors</u> in the archival and data reporting processes of the Customer Billing System. Inaccurate estimates used for accounts that fail to produce a meter reading are a common source of error. Billing adjustments may award customers a rightful monetary credit, but do so by creating a negative value of consumption, thus under-stating the actual consumption. Account activation lapses may allow new buildings to use water for months without meter readings and billing. Poor permitting and construction inspection practices can result in a new building lacking a billing account, a water meter and meter reading; i.e., the customer is unknown to the utility's billing system.</p> <p>Close auditing of the permitting, metering, meter reading, billing and reporting processes of the water consumption data trail can uncover data management gaps that create volumes of systematic data handling error. Utilities should routinely analyze customer billing records to detect data anomalies and quantify these losses. For example, a billing account that registers zero consumption for two or more billing cycles should be checked to explain why usage has seemingly halted. Given the revenue loss impacts of these losses, water utilities are well-justified in providing continuous oversight and timely correction of data transfer errors & data handling errors.</p> <p>If the water auditor has not yet gathered detailed data or assessment of systematic data handling error, it is recommended that the auditor apply the default value of 0.25% of the Billed Authorized Consumption volume. However, if the auditor <u>has</u> investigated the billing system and its controls, and <u>has</u> well validated data that indicates the volume from systematic data handling error is substantially higher or lower than that generated by the default value, then the auditor should enter a quantity that was derived from the utility investigations and select an appropriate grading. <u>Note:</u> negative values are not allowed for this audit component. If the auditor enters zero for this component then a grading of 1 will be automatically assigned.</p>
<p>Total annual cost of operating the water system</p> <p>Find</p>	<p>These costs include those for operations, maintenance and any annually incurred costs for long-term upkeep of the drinking water supply and distribution system. It should include the costs of day-to-day upkeep and long-term financing such as repayment of capital bonds for infrastructure expansion or improvement. Typical costs include employee salaries and benefits, materials, equipment, insurance, fees, administrative costs and all other costs that exist to sustain the drinking water supply. Depending upon water utility accounting procedures or regulatory agency requirements, it may be appropriate to include depreciation in the total of this cost. This cost should not include any costs to operate wastewater, biosolids or other systems outside of drinking water.</p>
<p>Unauthorized consumption</p> <p>Find</p>	<p>Includes water illegally withdrawn from fire hydrants, illegal connections, bypasses to customer consumption meters, or tampering with metering or meter reading equipment; as well as any other ways to receive water while thwarting the water utility's ability to collect revenue for the water. Unauthorized consumption results in uncaptured revenue and creates an error that understates customer consumption. In most water utilities this volume is low and, if the water auditor has not yet gathered detailed data for these loss occurrences, it is recommended that the auditor apply a default value of 0.25% of the volume of water supplied. However, if the auditor has investigated unauthorized occurrences, and has well validated data that indicates the volume from unauthorized consumption is substantially higher or lower than that generated by the default value, then the auditor should enter a quantity that was derived from the utility investigations. Note that a value of zero will not be accepted since all water utilities have some volume of unauthorized consumption occurring in their system.</p> <p>Note: if the auditor selects the default value for unauthorized consumption, a data grading of 5 is automatically assigned, but not displayed on the Reporting Worksheet.</p>
<p>Unavoidable Annual Real Losses (UARL)</p> <p>Find</p>	<p>UARL (gallons)=(5.41Lm + 0.15Nc + 7.5Lc) xP, or UARL (litres)=(18.0Lm + 0.8Nc + 25.0Lc) xP</p> <p>where: Lm = length of mains (miles or kilometres) Nc = number of customer service connections Lp = the average distance of customer service connection piping (feet or metres) (see the Worksheet "Service Connection Diagram" for guidance on deterring the value of Lp) Lc = total length of customer service connection piping (miles or km) Lc = Nc X Lp (miles or kilometres) P = Pressure (psi or metres)</p> <p>The UARL is a theoretical reference value representing the technical low limit of leakage that could be achieved if all of today's best technology could be successfully applied. It is a key variable in the calculation of the Infrastructure Leakage Index (ILI). Striving to reduce system leakage to a level close to the UARL is usually not needed unless the water supply is unusually expensive, scarce or both.</p> <p>NOTE: The UARL calculation has not yet been proven as fully valid for very small, or low pressure water distribution systems. If,</p> <p><u>in gallons:</u> (Lm x 32) + Nc < 3000 or P < 35psi</p> <p><u>in litres:</u> (Lm x 20) + Nc < 3000 or P < 25m</p> <p>then the calculated UARL value may not be valid. The software does not display a value of UARL or ILI if either of these conditions is true.</p>

Item Name	Description
Unbilled Authorized Consumption	All consumption that is unbilled, but still authorized by the utility. This includes Unbilled Metered Consumption + Unbilled Unmetered Consumption. See "Authorized Consumption" for more information. For Unbilled Unmetered Consumption, the Free Water Audit Software provides the auditor the option to select a default value if they have not audited unmetered activities in detail. The default calculates a volume that is 1.25% of the Water Supplied volume. If the auditor has carefully audited the various unbilled, unmetered, authorized uses of water, and has established reliable estimates of this collective volume, then he or she may enter the volume directly for this component, and not use the default value.
Unbilled metered consumption <div>Find</div>	Metered consumption which is authorized by the water utility, but, for any reason, is <u>deemed by utility policy</u> to be unbilled. This might for example include metered water consumed by the utility itself in treatment or distribution operations, or metered water provided to civic institutions free of charge. It does <u>not</u> include water supplied to neighboring utilities (water exported) which may be metered but not billed.
Unbilled unmetered consumption <div>Find</div>	<p>Any kind of Authorized Consumption which is neither billed or metered. This component typically includes water used in activities such as fire fighting, flushing of water mains and sewers, street cleaning, fire flow tests conducted by the water utility, etc. In most water utilities it is a small component which is very often substantially overestimated. It does NOT include water supplied to neighboring utilities (water exported) which is unmetered and unbilled – an unlikely case. This component has many sub-components of water use which are often tedious to identify and quantify. Because of this, and the fact that it is usually a small portion of the water supplied, it is recommended that the auditor apply the default value, which is 1.25% of the Water Supplied volume. Select the default percentage to enter this value.</p> <p>If the water utility <u>has</u> carefully audited the unbilled, unmetered activities occurring in the system, and has well validated data that gives a value substantially higher or lower than the default volume, then the auditor should enter their own volume. However the default approach is recommended for most water utilities.</p> <p>Note that a value of zero is not permitted, since all water utilities have some volume of water in this component occurring in their system.</p>
Units and Conversions	<p>The user may develop an audit based on one of three unit selections:</p> <p>1) Million Gallons (US) 2) Megalitres (Thousand Cubic Metres) 3) Acre-feet</p> <p>Once this selection has been made in the instructions sheet, all calculations are made on the basis of the chosen units. Should the user wish to make additional conversions, a unit converter is provided below (use drop down menus to select units from the yellow unit boxes):</p> <div><div>Enter Units:</div><div>Convert From...</div><div>Converts to....</div><div>1</div><div>Million Gallons (US)</div><div>=</div><div>3.06888329</div><div>Acre-feet</div><div>(conversion factor = 3.06888328973723)</div></div>
Use of Option Buttons	<p>To use the default percent value choose this button</p> <p>To enter a value choose this button and enter the value in the cell to the right</p> <div><div>Pcnt:</div><div>Value:</div><div>1.25%</div><div><input checked="" type="radio"/></div><div><input type="radio"/></div><div></div></div> <p>NOTE: For Unbilled Unmetered Consumption, Unauthorized Consumption and Systematic Data Handling Errors, a recommended default value can be applied by selecting the Percent option. The default values are based on fixed percentages of Water Supplied or Billed Authorized Consumption and are recommended for use in this audit unless the auditor has well validated data for their system. Default values are shown by purple cells, as shown in the example above.</p> <p>If a default value is selected, the user does not need to grade the item; a grading value of 5 is automatically applied (however, this grade will not be displayed).</p>
Variable production cost (applied to Real Losses) <div>Find</div>	<p>The cost to produce and supply the next unit of water (e.g., \$/million gallons). This cost is determined by calculating the summed unit costs for ground and surface water treatment and all power used for pumping from the source to the customer. It may also include other miscellaneous unit costs that apply to the production of drinking water. It should also include the unit cost of bulk water purchased as an import if applicable.</p> <p>It is common to apply this unit cost to the volume of Real Losses. However, if water resources are strained and the ability to meet future drinking water demands is in question, then the water auditor can be justified in applying the Customer Retail Rate to the Real Loss volume, rather than applying the Variable Production Cost.</p> <p>The Free Water Audit Software applies the Variable Production costs to Real Losses by default. However, the auditor has the option on the Reporting Worksheet to select the Customer Retail Cost as the basis for the Real Loss cost evaluation if the auditor determines that this is warranted.</p>
Volume from own sources <div>Find</div>	<p>The volume of water withdrawn (abstracted) from water resources (rivers, lakes, streams, wells, etc) controlled by the water utility, and then treated for potable water distribution. Most water audits are compiled for utility retail water distribution systems, so this volume should reflect the amount of <u>treated</u> drinking water that entered the distribution system. Often the volume of water measured at the effluent of the treatment works is slightly less than the volume measured at the raw water source, since some of the water is used in the treatment process. Thus, it is useful if flows are metered at the effluent of the treatment works. If metering exists only at the raw water source, an adjustment for water used in the treatment process should be included to account for water consumed in treatment operations such as filter backwashing, basin flushing and cleaning, etc. If the audit is conducted for a wholesale water agency that sells untreated water, then this quantity reflects the measure of the raw water, typically metered at the source.</p>

Item Name	Description
Volume from own sources: Master meter and supply error adjustment Find	<p>An estimate or measure of the degree of inaccuracy that exists in the master (production) meters measuring the annual Volume from own Sources, and any error in the data trail that exists to collect, store and report the summary production data. This adjustment is a weighted average number that represents the collective error for all master meters for all days of the audit year and any errors identified in the data trail. Meter error can occur in different ways. A meter or meters may be inaccurate by under-registering flow (did not capture all the flow), or by over-registering flow (overstated the actual flow). Data error can occur due to data gaps caused by temporary outages of the meter or related instrumentation. All water utilities encounter some degree of inaccuracy in master meters and data errors in archival systems are common; thus a value of zero should <u>not</u> be entered. Enter a negative percentage or value for metered data under-registration; or, enter a positive percentage or value for metered data over-registration.</p>
Water exported Find	<p>The Water Exported volume is the bulk water conveyed and sold by the water utility to neighboring water systems that exists outside of their service area. Typically this water is metered at the custody transfer point of interconnection between the two water utilities. Usually the meter(s) are owned by the water utility that is selling the water: i.e. the exporter. If the water utility who is compiling the annual water audit sells bulk water in this manner, they are an exporter of water.</p> <p>Note: The Water Exported volume is sold to wholesale customers who are typically charged a wholesale rate that is different than retail rates charged to the retail customers existing within the service area. Many state regulatory agencies require that the Water Exported volume be reported to them as a quantity separate and distinct from the retail customer billed consumption. For these reasons - and others - the Water Exported volume is always quantified separately from Billed Authorized Consumption in the standard water audit. Be certain not to "double-count" this quantity by including it in both the Water Exported box and the Billed Metered Consumption box of the water audit Reporting Worksheet. This volume should be included only in the Water Exported box.</p>
Water exported: Master meter and supply error adjustment Find	<p>An estimate or measure of the volume in which the Water Exported volume is incorrect. This adjustment is a weighted average that represents the collective error for all of the metered and archived exported flow for all days of the audit year. Meter error can occur in different ways. A meter may be inaccurate by under-registering flow (did not capture all the flow), or by over-registering flow (overstated the actual flow). Error in the metered, archived data can also occur due to data gaps caused by temporary outages of the meter or related instrumentation. All water utilities encounter some degree of error in their metered data, particularly if meters are aged and infrequently tested. Occasional errors also occur in the archived data. Thus, a value of zero should <u>not</u> be entered. Enter a negative percentage or value for metered data under-registration; or enter a positive percentage or value for metered data over-registration. If regular meter accuracy testing is conducted on the meter(s) - which is usually conducted by the water utility selling the water - then the results of this testing can be used to help quantify the meter error adjustment. Corrections to data gaps or other errors found in the archived data should also be included as a portion of this meter error adjustment.</p>
Water imported Find	<p>The Water Imported volume is the bulk water purchased to become part of the Water Supplied volume. Typically this is water purchased from a neighboring water utility or regional water authority, and is metered at the custody transfer point of interconnection between the two water utilities. Usually the meter(s) are owned by the water supplier selling the water to the utility conducting the water audit. The water supplier selling the bulk water usually charges the receiving utility based upon a wholesale water rate.</p>
Water imported: Master meter and supply error adjustment Find	<p>An estimate or measure of the volume in which the Water Imported volume is incorrect. This adjustment is a weighted average that represents the collective error for all of the metered and archived imported flow for all days of the audit year. Meter error can occur in different ways. A meter may be inaccurate by under-registering flow (did not capture all the flow), or by over-registering flow (overstated the actual flow). Error in the metered, archived data can also occur due to data gaps caused by temporary outages of the meter or related instrumentation. All water utilities encounter some level of meter inaccuracy, particularly if meters are aged and infrequently tested. Occasional errors also occur in the archived metered data. Thus, a value of zero should <u>not</u> be entered. Enter a negative percentage or value for metered data under-registration; or, enter a positive percentage or value for metered data over-registration. If regular meter accuracy testing is conducted on the meter(s) - which is usually conducted by the water utility selling the water - then the results of this testing can be used to help quantify the meter error adjustment.</p>
WATER LOSSES Find	<p>= apparent losses + real losses</p> <p>Water Losses are the difference between Water Supplied and Authorized Consumption. Water losses can be considered as a total volume for the whole system, or for partial systems such as transmission systems, pressure zones or district metered areas (DMA); if one of these configurations are the basis of the water audit.</p>



AWWA Free Water Audit Software: Determining Water Loss Standing

WAS v5.0

American Water Works Association.
Copyright © 2014, All Rights Reserved.Water Audit Report for: **Jurupa Community Services District (CA3310021)**Reporting Year: **2015** **1/2015 - 12/2015**Data Validity Score: **65**

Water Loss Control Planning Guide

Functional Focus Area	Water Audit Data Validity Level / Score				
	Level I (0-25)	Level II (26-50)	Level III (51-70)	Level IV (71-90)	Level V (91-100)
Audit Data Collection	Launch auditing and loss control team; address production metering deficiencies	Analyze business process for customer metering and billing functions and water supply operations. Identify data gaps.	Establish/revise policies and procedures for data collection	Refine data collection practices and establish as routine business process	Annual water audit is a reliable gauge of year-to-year water efficiency standing
Short-term loss control	Research information on leak detection programs. Begin flowcharting analysis of customer billing system	Conduct loss assessment investigations on a sample portion of the system: customer meter testing, leak survey, unauthorized consumption, etc.	Establish ongoing mechanisms for customer meter accuracy testing, active leakage control and infrastructure monitoring	Refine, enhance or expand ongoing programs based upon economic justification	Stay abreast of improvements in metering, meter reading, billing, leakage management and infrastructure rehabilitation
Long-term loss control		Begin to assess long-term needs requiring large expenditure: customer meter replacement, water main replacement program, new customer billing system or Automatic Meter Reading (AMR) system.	Begin to assemble economic business case for long-term needs based upon improved data becoming available through the water audit process.	Conduct detailed planning, budgeting and launch of comprehensive improvements for metering, billing or infrastructure management	Continue incremental improvements in short-term and long-term loss control interventions
Target-setting			Establish long-term apparent and real loss reduction goals (+10 year horizon)	Establish mid-range (5 year horizon) apparent and real loss reduction goals	Evaluate and refine loss control goals on a yearly basis
Benchmarking			Preliminary Comparisons - can begin to rely upon the Infrastructure Leakage Index (ILI) for performance comparisons for real losses (see below table)	Performance Benchmarking - ILI is meaningful in comparing real loss standing	Identify Best Practices/ Best in class - the ILI is very reliable as a real loss performance indicator for best in class service
For validity scores of 50 or below, the shaded blocks should not be focus areas until better data validity is achieved.					

Once data have been entered into the Reporting Worksheet, the performance indicators are automatically calculated. How does a water utility operator know how well his or her system is performing? The AWWA Water Loss Control Committee provided the following table to assist water utilities in gauging an approximate Infrastructure Leakage Index (ILI) that is appropriate for their water system and local conditions. The lower the amount of leakage and real losses that exist in the system, then the lower the ILI value will be.

Note: this table offers an approximate guideline for leakage reduction target-setting. The best means of setting such targets include performing an economic assessment of various loss control methods. However, this table is useful if such an assessment is not possible.

General Guidelines for Setting a Target ILI
(without doing a full economic analysis of leakage control options)

Target ILI Range	Financial Considerations	Operational Considerations	Water Resources Considerations
1.0 - 3.0	Water resources are costly to develop or purchase; ability to increase revenues via water rates is greatly limited because of regulation or low ratepayer affordability.	Operating with system leakage above this level would require expansion of existing infrastructure and/or additional water resources to meet the demand.	Available resources are greatly limited and are very difficult and/or environmentally unsound to develop.
>3.0 -5.0	Water resources can be developed or purchased at reasonable expense; periodic water rate increases can be feasibly imposed and are tolerated by the customer population.	Existing water supply infrastructure capability is sufficient to meet long-term demand as long as reasonable leakage management controls are in place.	Water resources are believed to be sufficient to meet long-term needs, but demand management interventions (leakage management, water conservation) are included in the long-term
>5.0 - 8.0	Cost to purchase or obtain/treat water is low, as are rates charged to customers.	Superior reliability, capacity and integrity of the water supply infrastructure make it relatively immune to supply shortages.	Water resources are plentiful, reliable, and easily extracted.
Greater than 8.0	Although operational and financial considerations may allow a long-term ILI greater than 8.0, such a level of leakage is not an effective utilization of water as a resource. Setting a target level greater than 8.0 - other than as an incremental goal to a smaller long-term target - is discouraged.		
Less than 1.0	If the calculated Infrastructure Leakage Index (ILI) value for your system is 1.0 or less, two possibilities exist. a) you are maintaining your leakage at low levels in a class with the top worldwide performers in leakage control. b) A portion of your data may be flawed, causing your losses to be greatly understated. This is likely if you calculate a low ILI value but do not employ extensive leakage control practices in your operations. In such cases it is beneficial to validate the data by performing field measurements to confirm the accuracy of production and customer meters, or to identify any other potential sources of error in the data.		



Example Audit 1b:

AWWA Free Water Audit Software: System Attributes and Performance Indicators

WAS v5.0
American Water Works Association
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Water Audit Report for: **City of Asheville (01-11-010)**

Reporting Year: **2013** **7/2012 - 6/2013**

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 72 out of 100 ***

System Attributes:

Apparent Losses: **140.844** MG/Yr
+ Real Losses: **1,958.789** MG/Yr
= **Water Losses: 2,099.633** MG/Yr

? Unavoidable Annual Real Losses (UARL): **794.34** MG/Yr

Annual cost of Apparent Losses: **\$606,265**

Annual cost of Real Losses: **\$658,036**

Valued at **Variable Production Cost**
Return to Reporting Worksheet to change this assumption

Performance Indicators:

Financial:

Non-revenue water as percent by volume of Water Supplied: **32.3%**
Non-revenue water as percent by cost of operating system: **3.9%** Real Losses valued at Variable Production Cost

Operational Efficiency:

Apparent Losses per service connection per day: **6.98** gallons/connection/day
Real Losses per service connection per day: **97.12** gallons/connection/day
Real Losses per length of main per day*: **N/A**
Real Losses per service connection per day per psi pressure: **0.67** gallons/connection/day/psi

From Above, Real Losses = Current Annual Real Losses (CARL): **1,958.79** million gallons/year

? Infrastructure Leakage Index (ILI) [CARL/UARL]: **2.47**

* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline



Example Audit 2a:

AWWA Free Water Audit Software: Reporting Worksheet

WAS v5.0
American Water Works Association
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[Click to access definition](#)
[Click to add a comment](#)

Water Audit Report for: **The City of Calgary**
Reporting Year: **2013** 1/2013 - 12/2013

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: MEGALITRES (THOUSAND CUBIC METRES) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

Volume from own sources: 7 174,324.000 ML/Yr
Water imported: n/a 0.000 ML/Yr
Water exported: 7 8,190.131 ML/Yr

Master Meter Error Adjustments

Pcnt Value:
1.00% ML/Yr
1.00% ML/Yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: **164,488.979** ML/Yr

AUTHORIZED CONSUMPTION

Billed metered: 6 125,111.268 ML/Yr
Billed unmetered: 8 3,503.386 ML/Yr
Unbilled metered: 7 166.157 ML/Yr
Unbilled unmetered: 6 1,444.000 ML/Yr

Click here: [?](#)
for help using option
buttons below

Pcnt Value:
 1,444.000 ML/Yr

Use buttons to select
percentage of water
supplied
OR
value

AUTHORIZED CONSUMPTION: **130,224.811** ML/Yr

WATER LOSSES (Water Supplied - Authorized Consumption)

34,264.168 ML/Yr

Apparent Losses

Unauthorized consumption: 411.222 ML/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies: 6 1,265.429 ML/Yr
Systematic data handling errors: 312.778 ML/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: **1,989.429** ML/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **32,274.739** ML/Yr

WATER LOSSES: **34,264.168** ML/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **35,874.325** ML/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains: 8 4,945.0 kilometers
Number of active AND inactive service connections: 8 312,075
Service connection density: 63 conn./km main

Are customer meters typically located at the curbstop or property line? No (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line: 8 12.0 metres

Average operating pressure: 8 50.8 metres (head)

COST DATA

Total annual cost of operating water system: 9 \$169,973,759 \$/Year
Customer retail unit cost (applied to Apparent Losses): 9 \$2.35 \$/1000 litres
Variable production cost (applied to Real Losses): 9 \$73.54 \$/Megalitre ☒ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 72 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources

2: Billed metered

3: Customer metering inaccuracies



Example Audit 2b:

AWWA Free Water Audit Software: System Attributes and Performance Indicators

WAS v5.0

American Water Works Association
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Water Audit Report for: **The City of Calgary**

Reporting Year: **2013** **1/2013 - 12/2013**

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 72 out of 100 ***

System Attributes:

Apparent Losses:	1,989.429	ML/Yr
+	Real Losses:	32,274.739 ML/Yr
=	Water Losses:	34,264.168 ML/Yr

? Unavoidable Annual Real Losses (UARL): 8,015.57 ML/Yr

Annual cost of Apparent Losses: \$4,675,159

Annual cost of Real Losses: \$75,845,637 Valued at **Customer Retail Unit Cost**

Return to Reporting Worksheet to change this assumption

Performance Indicators:

Financial: { Non-revenue water as percent by volume of Water Supplied: 21.8%
Non-revenue water as percent by cost of operating system: 49.6% Real Losses valued at Customer Retail Unit Cost

Operational Efficiency: { Apparent Losses per service connection per day: 17.47 litres/connection/day
Real Losses per service connection per day: 283.34 litres/connection/day
Real Losses per length of main per day*: N/A
Real Losses per service connection per day per meter (head) pressure: 5.58 litres/connection/day/m

From Above, Real Losses = Current Annual Real Losses (CARL): 32,274.74 ML/year

? Infrastructure Leakage Index (ILI) [CARL/UARL]: 4.03

* This performance indicator applies for systems with a low service connection density of less than 20 service connections/kilometre of pipeline



AWWA Water Audit Software Version 5.0 Developed by the Water Loss Control Committee of the American Water Works Association August, 2014

This software is intended to serve as a basic tool to compile a preliminary, or “top-down”, water audit. It is recommended that users also refer to the current edition of the AWWA M36 Publication, Water Audits and Loss Control Programs, for detailed guidance on compiling a comprehensive, or “bottom-up”, water audit using the same water audit methodology.

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- AWWA Water Audits and Loss Control Programs, M36 Publication, 3rd Edition, 2009
- Service Connection Diagrams courtesy of Ronnie McKenzie, WRP Pty Ltd.

VERSION HISTORY:

Version:	Release Date:	Number of Worksheets:	Key Features and Developments
v1	2005/ 2006	5	The AWWA Water Audit Software was piloted in 2005 (v1.0 beta). The early versions (1.x) of the software restricted data entry to units of Million Gallons per year. For each entry into the audit, users identified whether the input was measured or estimated.
v2	2006	5	The most significant enhancement in v2 of the software was to allow the user to choose the volumetric units to be used in the audit, Million Gallons or Thousand Cubic Metres (megalitres) per year. Two financial performance indicators were added to provide feedback to the user on the cost of Real and Apparent losses.
v3	2007	7	In v3, the option to report volumetric units in acre-feet was added. Another new feature in v3 was the inclusion of default values for two water audit components (unbilled unmetered and unauthorized consumption). v3 also included two examples of completed audits in units of million gallons and Megalitres. Several checks were added into v3 to provide instant feedback to the user on common data entry problems, in order to help the user complete an accurate water audit.
v4 - v4.2	2010	10	v4 (and versions 4.x) of the software included a new approach to data grading. The simple "estimated" or "measured" approach was replaced with a more granular scale (typically 1-10) that reflected descriptions of utility practices and served to describe the confidence and accuracy of the input data. Each input value had a corresponding scale fully described in the Grading Matrix tab. The Grading Matrix also showed the actions required to move to a higher grading score. Grading descriptions were available on the Reporting Worksheet via a pop-up box next to each water audit input. A water audit data validity score is generated (max = 100) and priority areas for attention (to improve audit accuracy) are identified, once a user completes the required data grading. A service connection diagram was also added to help users understand the impact of customer service line configurations on water losses and how this information should be entered into the water audit software. An acknowledgements section was also added. Minor bug fixes resulted in the release of versions 4.1 and 4.2. A French language version was also made available for v4.2.
v5	2014	12	In v5, changes were made to the way Water Supplied information is entered into software, with each major component having a corresponding Master Meter Error Adjustment entry (and data grading requirement). This required changes to the data validity score calculation; v5 of the software uses a weighting system that is, in part, proportional to the volume of input components. The Grading Matrix was updated to reflect the new audit inputs and also to include clarifications and additions to the scale descriptions. The appearance of the software was updated in v5 to make the software more user-friendly and several new features were added to provide more feedback to the user. Notably, a dashboard tab has been added to provide more visual feedback on the water audit results and associated costs of Non-Revenue Water. A comments sheet was added to allow the user to track notes, comments and to cite sources used.

APPENDIX F
SB X7-7 VERIFICATION FORMS

SB X7-7 Table 0: Units of Measure Used in UWMP**(select one from the drop down list)*

Acre Feet

**The unit of measure must be consistent with Table 2-3*

NOTES: Data from PWSS/Annual Reports reported Calendar Year.

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	24,279	Acre Feet
	2008 total volume of delivered recycled water	0	Acre Feet
	2008 recycled water as a percent of total deliveries	0.00%	Percent
	Number of years in baseline period ¹	10	Years
	Year beginning baseline period range	1999	
	Year ending baseline period range ²	2008	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range ³	2007	
¹ If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water			
² The ending year must be between December 31, 2004 and December 31, 2010.			
³ The ending year must be between December 31, 2007 and December 31, 2010.			
NOTES: Source: PWSS Reports.			

SB X7-7 Table 2: Method for Population Estimates**Method Used to Determine Population**
(may check more than one)☐**1. Department of Finance (DOF)**DOF Table E-8 (1990 - 2000) and (2000-2010) and
DOF Table E-5 (2011 - 2015) when available☐**2. Persons-per-Connection Method**☒**3. DWR Population Tool**☐**4. Other**

DWR recommends pre-review

NOTES:

SB X7-7 Table 3: Service Area Population		
Year		Population
10 to 15 Year Baseline Population		
Year 1	1999	49,914
Year 2	2000	50,489
Year 3	2001	54,844
Year 4	2002	63,142
Year 5	2003	70,484
Year 6	2004	82,893
Year 7	2005	90,315
Year 8	2006	97,688
Year 9	2007	101,693
Year 10	2008	103,270
5 Year Baseline Population		
Year 1	2003	70,484
Year 2	2004	82,893
Year 3	2005	90,315
Year 4	2006	97,688
Year 5	2007	101,693
2015 Compliance Year Population		
2015		119,034
NOTES: From Population Tool.		

SB X7-7 Table 4: Annual Gross Water Use *

	Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Into Distribution System <i>Fm SB X7-7 Table(s) 4-A</i>	Deductions					Annual Gross Water Use
			Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>Fm SB X7-7 Table 4-B</i>	Water Delivered for Agricultural Use	Process Water <i>Fm SB X7-7 Table(s) 4-D</i>	
10 to 15 Year Baseline - Gross Water Use								
Year 1	1999	16233			0		0	16,233
Year 2	2000	18706			0		0	18,706
Year 3	2001	17551			0		0	17,551
Year 4	2002	17485			0		0	17,485
Year 5	2003	19793			0		0	19,793
Year 6	2004	21314			0		0	21,314
Year 7	2005	23894			0		0	23,894
Year 8	2006	26475			0		0	26,475
Year 9	2007	28848			0		0	28,848
Year 10	2008	26587			0		0	26,587
10 - 15 year baseline average gross water use								21,689
5 Year Baseline - Gross Water Use								
Year 1	2003	19,793			0		0	19,793
Year 2	2004	21,314			0		0	21,314
Year 3	2005	23,894			0		0	23,894
Year 4	2006	26,475			0		0	26,475
Year 5	2007	28,848			0		0	28,848
5 year baseline average gross water use								24,065
2015 Compliance Year - Gross Water Use								
2015		22,381			0		0	22,381
* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3								
NOTES: Volume in AF from PWSS/Annual Reports								

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source	JCSD Wells			
This water source is:				
<input checked="" type="checkbox"/>	The supplier's own water source			
<input type="checkbox"/>	A purchased or imported source			
Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System	Meter Error Adjustment* <i>Optional</i> (+/-)	Rounded Volume Entering Distribution System	
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1999	16233.18		16,233
Year 2	2000	16746.12		16,746
Year 3	2001	13905.24		13,905
Year 4	2002	14562		14,562
Year 5	2003	16810.86		16,811
Year 6	2004	19990.57		19,991
Year 7	2005	18913		18,913
Year 8	2006	17836		17,836
Year 9	2007	15761		15,761
Year 10	2008	18559		18,559
5 Year Baseline - Water into Distribution System				
Year 1	2003	16810.86		16,811
Year 2	2004	19990.57		19,991
Year 3	2005	18913		18,913
Year 4	2006	17836		17,836
Year 5	2007	15761		15,761
2015 Compliance Year - Water into Distribution System				
2015	9837.738			9,838
* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document				
Source: PWSS reports. Potable and non-potable. (AF)				

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source	Purchased sources			
This water source is:				
<input type="checkbox"/>	The supplier's own water source			
<input checked="" type="checkbox"/>	A purchased or imported source			
Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System	Meter Error Adjustment* <i>Optional</i> (+/-)	Rounded Volume Entering Distribution System	
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1999	0		0
Year 2	2000	1959.722		1,960
Year 3	2001	3645.56		3,646
Year 4	2002	2922.77		2,923
Year 5	2003	2982.18		2,982

Year 6	2004	1323.22		1,323
Year 7	2005	4981		4,981
Year 8	2006	8639		8,639
Year 9	2007	13087		13,087
Year 10	2008	8028		8,028
5 Year Baseline - Water into Distribution System				
Year 1	2003	2982.18		2,982
Year 2	2004	1323.22		1,323
Year 3	2005	4981		4,981
Year 4	2006	8639		8,639
Year 5	2007	13087		13,087
2015 Compliance Year - Water into Distribution System				
2015		12,543		12,543
* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document				
Source: PWSS reports. (AF)				

SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)

Baseline Year <i>Fm SB X7-7 Table 3</i>		Service Area Population <i>Fm SB X7-7 Table 3</i>	Annual Gross Water Use <i>Fm SB X7-7 Table 4</i>	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	1999	49,914	16,233	290
Year 2	2000	50,489	18,706	331
Year 3	2001	54,844	17,551	286
Year 4	2002	63,142	17,485	247
Year 5	2003	70,484	19,793	251
Year 6	2004	82,893	21,314	230
Year 7	2005	90,315	23,894	236
Year 8	2006	97,688	26,475	242
Year 9	2007	101,693	28,848	253
Year 10	2008	103,270	26,587	230
10-15 Year Average Baseline GPCD				260
5 Year Baseline GPCD				
Baseline Year <i>Fm SB X7-7 Table 3</i>		Service Area Population <i>Fm SB X7-7 Table 3</i>	Gross Water Use <i>Fm SB X7-7 Table 4</i>	Daily Per Capita Water Use
Year 1	2003	70,484	19,793	251
Year 2	2004	82,893	21,314	230
Year 3	2005	90,315	23,894	236
Year 4	2006	97,688	26,475	242
Year 5	2007	101,693	28,848	253
5 Year Average Baseline GPCD				242
2015 Compliance Year GPCD				
2015		119,034	22,381	168
NOTES: Annual Gross Water Use in AF.				

SB X7-7 Table 6: Gallons per Capita per Day
Summary From Table SB X7-7 Table 5

10-15 Year Baseline GPCD	260
5 Year Baseline GPCD	242
2015 Compliance Year GPCD	168
NOTES:	

SB X7-7 Table 7: 2020 Target Method		
Target Method		Supporting Documentation
<input checked="" type="checkbox"/>	Method 1	SB X7-7 Table 7A
<input type="checkbox"/>	Method 2	SB X7-7 Tables 7B, 7C, and 7D <i>Contact DWR for these tables</i>
<input type="checkbox"/>	Method 3	SB X7-7 Table 7-E
<input type="checkbox"/>	Method 4	Method 4 Calculator
NOTES:		

SB X7-7 Table 7-A: Target Method 1	
20% Reduction	
10-15 Year Baseline	2020 Target
GPCD	GPCD
260	208
NOTES:	

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target

5 Year Baseline GPCD <i>From SB X7-7 Table 5</i>	Maximum 2020 Target*	Calculated 2020 Target <i>Fm Appropriate Target Table</i>	Confirmed 2020 Target
242	230	208	208
* Maximum 2020 Target is 95% of the 5 Year Baseline GPCD			
NOTES:			

SB X7-7 Table 8: 2015 Interim Target GPCD

Confirmed 2020 Target <i>Fm SB X7-7 Table 7-F</i>	10-15 year Baseline GPCD <i>Fm SB X7-7 Table 5</i>	2015 Interim Target GPCD
208	260	234
NOTES:		

SB X7-7 Table 9: 2015 Compliance

Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments <i>(in GPCD)</i>					2015 GPCD <i>(Adjusted if applicable)</i>	Did Supplier Achieve Targeted
		Extraordinary Events	Weather Normalization	Economic Adjustment	TOTAL Adjustments	Adjusted 2015 GPCD		
168	234	0	0	0	0	167.8531783	167.8531783	YES

NOTES:

APPENDIX G

CHINO GROUNDWATER BASIN ADJUDICATION

JUDGMENT No. 164327, January 2, 1975

JUDGMENT
TABLE OF CONTENTS

I. INTRODUCTION.

1. Pleadings, Parties and Jurisdiction
2. Stipulation for Judgment
3. Trial; Findings and Conclusions
4. Definitions
5. Exhibits

II. DECLARATION OF RIGHTS

A. HYDROLOGY

6. Safe Yield
7. Overdraft and Prescriptive Circumstances

B. WATER RIGHTS IN SAFE YIELD

8. Overlying Rights
9. Appropriative Rights
10. Rights of the State of California

C. RIGHTS TO AVAILABLE GROUND WATER STORAGE CAPACITY

11. Available Ground Water Storage Capacity
12. Utilization of Available Ground Water
Capacity

III. INJUNCTION

13. Injunction Against Unauthorized Production
of Basin Water
14. Injunction Against Unauthorized Storage or
Withdrawal of Stored Water

IV. CONTINUING JURISDICTION

15. Continuing jurisdiction

V. WATERMASTER

1
2
3
4
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8
9
10
11
12
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17
18
19
20
21
22
23
24
25
26
27
28

A. APPOINTMENT

16. Watermaster Appointment

B. POWERS AND DUTIES

- 17. Powers and Duties
- 18. Rules and Regulations
- 19. Acquisition of Facilities
- 20. Employment of Experts and Agents
- 21. Measuring Devices
- 22. Assessments
- 23. Investment of Funds
- 24. Borrowing
- 25. Contracts
- 26. Cooperation With Other Agencies
- 27. Studies
- 28. Ground Water Storage Agreements
- 29. Accounting for Stored Water
- 30. Annual Administrative Budget
- 31. Review Procedures

C. ADVISORY AND POOL COMMITTEES

- 32. Authorization
- 33. Term and Vacancies
- 34. Voting Power
- 35. Quorum
- 36. Compensation
- 37. Organization
- 38. Powers and Functions

VI. PHYSICAL SOLUTION

1
2
3
4
5
6
7
8
9
10
11
12
13
14
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16
17
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19
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23
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25
26
27
28

A. GENERAL

- 39. Purpose and Objective
- 40. Need for Flexibility
- 41. Watermaster Control
- 42. General Pattern of Operations

B. POOLING

- 43. Multiple Pools Established
- 44. Determination and Allocation of Rights to
Safe Yield of Chino Basin
- 45. Annual Replenishment
- 46. Initial Pooling Plans

C. REPORTS AND ACCOUNTING

- 47. Production Reports
- 48. Watermaster Reports and Accounting

D. REPLENISHMENT

- 49. Sources of Supplemental Water
- 50. Methods of Replenishment

E. REVENUES

- 51. Production Assessment
- 52. Minimal Producers
- 53. Assessment Proceeds -- Purposes
- 54. Administrative Expenses
- 55. Assessments -- Procedure
- 56. Accumulation of Replenishment Water
Assessment Proceeds
- 57. Effective Date

VII. MISCELLANEOUS PROVISIONS

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

- 58. Designation of Address for Notice and
Service
- 59. Service of Documents
- 60. Intervention After Judgment
- 61. Loss of Rights
- 62. Scope of Judgment
- 63. Judgment Binding on Successors
- 64. Costs

- EXHIBIT 'A' -- Location Map of Chino Basin
- EXHIBIT 'B' -- Hydrologic Map of Chino basin
- EXHIBIT 'C' -- Parties With Overlying Agricultural Rights
- EXHIBIT 'D' -- Parties With Overlying Non-Agricultural
Rights
- EXHIBIT 'E' -- Appropriative Rights
- EXHIBIT 'F' -- Overlying Agricultural Pooling Plan
- EXHIBIT 'G' -- Overlying Non-Agricultural Pooling Plan
- EXHIBIT 'H' -- Appropriative Pooling Plan
- EXHIBIT 'I' -- Engineering Appendix
- EXHIBIT 'J' -- Map of In Lieu Area No. 1
- EXHIBIT 'K' -- Legal Description of Chino Basin

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9 SUPERIOR COURT OF THE STATE OF CALIFORNIA
10 FOR THE COUNTY OF SAN BERNARDINO

11 CHINO BASIN MUNICIPAL WATER)
12 DISTRICT,)

13 Plaintiff,)

No. 164327

14 v.)

15 CITY OF CHINO, et al.)

16 Defendants.)
17)
18)

JUDGMENT

19 I. INTRODUCTION

20 1. Pleadings, Parties and Jurisdiction. The complaint here-
21 in was filed on January 2, 1975, seeking an adjudication of water
22 rights, injunctive relief and the imposition of a physical solu-
23 tion. A first amended complaint was filed on July 16, 1976. The
24 defaults of certain defendants have been entered, and certain
25 other defendants dismissed. Other than defendants who have been
26 dismissed or whose defaults have been entered, all defendants have
27 appeared herein. By answers and order of this Court, the issues
28 have been made those of a full inter se adjudication between the

1 parties. This Court has jurisdiction of the subject matter of
2 this action and of the parties herein.

3 2. Stipulation For Judgment. Stipulation for entry of
4 judgment has been filed by and on behalf of a majority of the
5 parties, representing a majority of the quantitative rights herein
6 adjudicated.

7 3. Trial; Findings and Conclusions. Trial was commenced on
8 December 16, 1977, as to the non-stipulating parties, and findings
9 of fact and conclusions of law have been entered disposing of the
10 issues in the case.

11 4. Definitions. As used in this Judgment, the following
12 terms shall have the meanings herein set forth:

13 (a) Active Parties. All parties other than those who
14 have filed with Watermaster a written waiver of service of
15 notices, pursuant to Paragraph 58.

16 (b) Annual or Year -- A fiscal year, July 1 through
17 June 30, following, unless the context shall clearly indicate
18 a contrary meaning.

19 (c) Appropriative Right -- The annual production right
20 of a producer from the Chino Basin other than pursuant to an
21 overlying right.

22 (d) Basin Water -- Ground water within Chino Basin which
23 is part of the Safe Yield, Operating Safe Yield, or replen-
24 ishment water in the Basin as a result of operations under the
25 Physical Solution decreed herein. Said term does not include
26 Stored Water.

27 (e) CBMWD -- Plaintiff Chino Basin Municipal Water
28 District.

1 (f) Chino Basin or Basin -- The ground water basin
2 underlying the area shown as such on Exhibit "B" and within
3 the boundaries described in Exhibit "K".

4 (g) Chino Basin Watershed -- The surface drainage area
5 tributary to and overlying Chino Basin.

6 (h) Ground Water -- Water beneath the surface of the
7 ground and within the zone of saturation, i.e., below the
8 existing water table.

9 (i) Ground Water Basin -- An area underlain by one or
10 more permeable formations capable of furnishing substantial
11 water storage.

12 (j) Minimal Producer -- Any producer whose production
13 does not exceed five acre-feet per year.

14 (k) MWD -- The Metropolitan Water District of Southern
15 California.

16 (l) Operating Safe Yield -- The annual amount of ground
17 water which Watermaster shall determine, pursuant to criteria
18 specified in Exhibit "I", can be produced from Chino Basin by
19 the Appropriative Pool parties free of replenishment obliga-
20 tion under the Physical Solution herein.

21 (m) Overdraft -- A condition wherein the total annual
22 production from the Basin exceeds the Safe Yield thereof.

23 (n) Overlying Right -- The appurtenant right of an owner
24 of lands overlying Chino Basin to produce water from the Basin
25 for overlying beneficial use on such lands.

26 (o) Person. Any individual, partnership, association,
27 corporation, governmental entity or agency, or other organ-
28 ization.

1 (p) PVMWD -- Defendant Pomona Valley Municipal Water
2 District.

3 (q) Produce or Produced -- To pump or extract ground
4 water from Chino Basin.

5 (r) Producer -- Any person who produces water from Chino
6 Basin.

7 (s) Production -- Annual quantity, stated in acre feet,
8 of water produced.

9 (t) Public Hearing -- A hearing after notice to all
10 parties and to any other person legally entitled to notice.

11 (u) Reclaimed Water -- Water which, as a result of
12 processing of waste water, is suitable for a controlled use.

13 (v) Replenishment Water -- Supplemental water used to
14 recharge the Basin pursuant to the Physical Solution, either
15 directly by percolating the water into the Basin or indirectly
16 by delivering the water for use in lieu of production and use
17 of safe yield or Operating Safe Yield.

18 (w) Responsible Party -- The owner, co-owner, lessee or
19 other person designated by multiple parties interested in a
20 well as the person responsible for purposes of filing reports
21 hereunder.

22 (x) Safe Yield -- The long-term average annual quantity
23 of ground water (excluding replenishment or stored water but
24 including return flow to the Basin from use of replenishment
25 or stored water) which can be produced from the Basin under
26 cultural conditions of a particular year without causing an
27 undesirable result.

28 (y) SBVMWD -- San Bernardino Valley Municipal Water

1 District.

2 (z) State Water -- Supplemental Water imported through
3 the State Water Resources Development System, pursuant to
4 Chapter 8, Division 6, Part 6 of the Water Code.

5 (aa) Stored Water -- Supplemental water held in storage,
6 as a result of direct spreading, in lieu delivery, or other-
7 wise, for subsequent withdrawal and use pursuant to agreement
8 with Watermaster.

9 (bb) Supplemental Water -- Includes both water imported
10 to Chino Basin from outside Chino Basin Watershed, and re-
11 claimed water.

12 (cc) WMWD -- Defendant Western Municipal Water District
13 of Riverside County.

14 5. List of Exhibits. The following exhibits are attached to
15 this Judgment and made a part hereof:

16 "A" -- "Location Map of Chino Basin" showing boundaries
17 of Chino Basin Municipal Water District, and other geographic
18 and political features.

19 "B" -- "Hydrologic Map of Chino Basin" showing hydrologic
20 features of Chino Basin.

21 "C" -- Table Showing Parties in Overlying (Agricultural)
22 Pool.

23 "D" -- Table Showing Parties in Overlying (Non-
24 agricultural Pool and Their Rights.

25 "E" -- Table Showing Appropriators and Their Rights.

26 "F" -- Overlying (Agricultural) Pool Pooling Plan.

27 "G" -- Overlying (Non-agricultural) Pool Pooling Plan.

28 "H" -- Appropriative Pool Pooling Plan.

1 "I" -- Engineering Appendix.

2 "J" -- Map of In Lieu Area No. 1.

3 "K" -- Legal Description of Chino Basin.

4
5 II. DECLARATION OF RIGHTS

6 A. HYDROLOGY

7 6. Safe Yield. The Safe Yield of Chino Basin is 140,000 acre
8 feet per year.

9 7. Overdraft and Prescriptive Circumstances. In each year
10 for a period in excess of five years prior to filing of the First
11 Amended Complaint herein, the Safe Yield of the Basin has been
12 exceeded by the annual production therefrom, and Chino Basin is and
13 has been for more than five years in a continuous state of over-
14 draft. The production constituting said overdraft has been open,
15 notorious, continuous, adverse, hostile and under claim of right.
16 The circumstances of said overdraft have given notice to all
17 parties of the adverse nature of such aggregate over-production.

18 B. WATER RIGHTS IN SAFE YIELD

19 8. Overlying Rights. The parties listed in Exhibits "C" and
20 "D" are the owners or in possession of lands which overlie Chino
21 Basin. As such, said parties have exercised overlying water
22 rights in Chino Basin. All overlying rights owned or exercised by
23 parties listed in Exhibits "C" and "D" have, in the aggregate, been
24 limited by prescription except to the extent such rights have been
25 preserved by self-help by said parties. Aggregate preserved
26 overlying rights in the Safe Yield for agricultural pool use,
27 including the rights of the State of California, total 82,800 acre
28 feet per year. Overlying rights for non-agricultural pool use

1 total 7,366 acre feet per year and are individually decreed for
2 each affected party in Exhibit "D". No portion of the Safe Yield
3 of Chino Basin exists to satisfy unexercised overlying rights, and
4 such rights have all been lost by prescription. However, uses may
5 be made of Basin Water on overlying lands which have no preserved
6 overlying rights pursuant to the Physical Solution herein. All
7 overlying rights are appurtenant to the land and cannot be assigned
8 or conveyed separate or apart therefrom.

9 9. Appropriative Rights. The parties listed in Exhibit "E"
10 are the owners of appropriative rights, including rights by pres-
11 cription, in the unadjusted amounts therein set forth, and by
12 reason thereof are entitled under the Physical Solution to share in
13 the remaining Safe Yield, after satisfaction of overlying rights
14 and rights of the State of California, and in the Operating Safe
15 Yield in Chino Basin, in the annual shares set forth in Exhibit
16 "E".

17 (a) Loss of Priorities. By reason of the long continued
18 overdraft in Chino Basin, and in light of the complexity of
19 determining appropriative priorities and the need for con-
20 serving and making maximum beneficial use of the water re-
21 sources of the State, each and all of the parties listed in
22 Exhibit "E" are estopped and barred from asserting special
23 priorities or preferences, inter se. All of said appropri-
24 ative rights are accordingly deemed and considered of equal
25 priority.

26 (b) Nature and Quantity. All rights listed in Exhibit
27 "E" are appropriative and prescriptive in nature. By reason
28 of the status of the parties, and the provisions of Section

1 storage capacity of Chino Basin for storage of supplemental water;
2 provided that no such use shall be made except pursuant to written
3 agreement with Watermaster, as authorized by Paragraph 28. In the
4 allocation of such storage capacity, the needs and requirements of
5 lands overlying Chino Basin and the owners of rights in the Safe
6 Yield or Operating Safe Yield of the Basin shall have priority and
7 preference over storage for export.

8
9 III. INJUNCTION

10 13. Injunction Against Unauthorized Production of Basin
11 Water. Each party in each of the respective pools is enjoined, as
12 follows:

13 (a) Overlying (Agricultural) Pool. Each party in the
14 Overlying (Agricultural) Pool, its officers, agents, employees,
15 successors and assigns, is and they each are ENJOINED AND
16 RESTRAINED from producing ground water from Chino Basin in any
17 year hereafter in excess of such party's correlative share of
18 the aggregate of 82,800 acre feet allocated to said Pool,
19 except pursuant to the Physical Solution or a storage water
20 agreement.

21 (b) Overlying (Non-Agricultural) Pool. Each party in
22 the Overlying (Non-agricultural) Pool, its officers, agents,
23 employees, successors and assigns, is and they each are
24 ENJOINED AND RESTRAINED from producing ground water of Chino
25 Basin in any year hereafter in excess of such party's decreed
26 rights in the Safe Yield, except pursuant to the provisions of
27 the Physical Solution or a storage water agreement.

28 (c) Appropriative Pool. Each party in the

Appropriative Pool, its officers, agents, employees, successors and assigns, is and they are each ENJOINED AND RESTRAINED from producing ground water of Chino Basin in any year hereafter in excess of such party's decreed share of Operating Safe Yield, except pursuant to the provisions of the Physical Solution or a storage water agreement.

14. Injunction Against Unauthorized Storage or Withdrawal of Stored Water. Each party, its officers, agents, employees, successors and assigns is and they each are ENJOINED AND RESTRAINED from storing supplemental water in Chino Basin for withdrawal, or causing withdrawal of, water stored by that party, except pursuant to the terms of a written agreement with Watermaster and in accordance with Watermaster regulations. Any supplemental water stored or recharged in the Basin, except pursuant to such a Watermaster agreement, shall be deemed abandoned and not classified as Stored Water. This paragraph has no application, as such, to supplemental water spread or provided in lieu by Watermaster pursuant to the Physical Solution.

IV. CONTINUING JURISDICTION

15. Continuing Jurisdiction. Full jurisdiction, power and authority are retained and reserved to the Court as to all matters contained in this judgment, except:

(a) The redetermination of Safe Yield, as set forth in Paragraph 6, during the first ten (10) years of operation of the Physical Solution;

(b) The allocation of Safe Yield as between the several pools as set forth in Paragraph 44 of the Physical Solution;

1 at least 30 days' notice thereof, and after hearing thereon, to
2 make such further or supplemental orders or directions as may be
3 necessary or appropriate for interpretation, enforcement or carry-
4 ing out of this Judgment, and to modify, amend or amplify any of
5 the provisions of this Judgment.

6
7 V. WATERMASTER

8 A. APPOINTMENT

9 16. Watermaster Appointment. CBMWD, acting by and through a
10 majority of its board of directors, is hereby appointed Water-
11 master, to administer and enforce the provisions of this Judgment
12 and any subsequent instructions or orders of the Court hereunder.
13 The term of appointment of Watermaster shall be for five (5) years.
14 The Court will by subsequent orders provide for successive terms or
15 for a successor Watermaster. Watermaster may be changed at any
16 time by subsequent order of the Court, on its own motion, or on the
17 motion of any party after notice and hearing. Unless there are
18 compelling reasons to the contrary, the Court shall act in con-
19 formance with a motion requesting the Watermaster be changed if
20 such motion is supported by a majority of the voting power of the
21 Advisory Committee.

22 B. POWERS AND DUTIES

23 17. Powers and Duties. Subject to the continuing supervision
24 and control of the Court, Watermaster shall have and may exercise
25 the express powers, and shall perform the duties, as provided in
26 this Judgment or hereafter ordered or authorized by the Court in
27 the exercise of the Court's continuing jurisdiction.

28 18. Rules and Regulations. Upon recommendation by the

1 Advisory Committee, Watermaster shall make and adopt, after public
2 hearing, appropriate rules and regulations for conduct of Water-
3 master affairs, including meeting schedules and procedures, and
4 compensation of members of Watermaster at not to exceed \$25 per
5 member per meeting, or \$300 per member per year, whichever is less,
6 plus reasonable expenses related to activities within the Basin.
7 Thereafter, Watermaster may amend said rules from time to time upon
8 recommendation, or with approval of the Advisory Committee after
9 hearing noticed to all active parties. A copy of said rules and
10 regulations, and of any amendments thereof, shall be mailed to each
11 active party.

12 19. Acquisition of Facilities. Watermaster may purchase,
13 lease, acquire and hold all necessary facilities and equipment;
14 provided, that it is not the intent of the Court that Watermaster
15 acquire any interest in real property or substantial capital
16 assets.

17 20. Employment of Experts and Agents. Watermaster may
18 employ or retain such administrative, engineering, geologic,
19 accounting, legal or other specialized personnel and consultants as
20 may be deemed appropriate in the carrying out of its powers and
21 shall require appropriate bonds from all officers and employees
22 handling Watermaster funds. Watermaster shall maintain records for
23 purposes of allocation of costs of such services as well as of all
24 other expenses of Watermaster administration as between the several
25 pools established by the Physical Solution.

26 21. Measuring Devices. Watermaster shall cause parties,
27 pursuant to uniform rules, to install and maintain in good opera-
28 ting condition, at the cost of each party, such necessary measuring

1 devices or meters as Watermaster may deem appropriate. Such
2 measuring devices shall be inspected and tested as deemed necessary
3 by Watermaster, and the cost thereof shall constitute an expense of
4 Watermaster.

5 22. Assessments. Watermaster is empowered to levy and
6 collect all assessments provided for in the pooling plans and
7 Physical Solution.

8 23. Investment of Funds. Watermaster may hold and invest any
9 and all Watermaster funds in investments authorized from time to
10 time for public agencies of the State of California.

11 24. Borrowing. Watermaster may borrow from time to time
12 amounts not exceeding the annual anticipated receipts of Water-
13 master during such year.

14 25. Contracts. Watermaster may enter into contracts for the
15 performance of any powers herein granted; provided, however, that
16 Watermaster may not contract with or purchase materials, supplies
17 or services from CBMWD, except upon the prior recommendation and
18 approval of the Advisory Committee and pursuant to written order of
19 the Court.

20 26. Cooperation With Other Agencies. Subject to prior
21 recommendation or approval of the Advisory Committee, Watermaster
22 may act jointly or cooperate with agencies of the United States and
23 the State of California or any political subdivisions, munici-
24 palities or districts or any person to the end that the purpose of
25 the Physical Solution may be fully and economically carried out.

26 27. Studies. Watermaster may, with concurrence of the
27 Advisory Committee or affected Pool Committee and in accordance
28 with Paragraph 54 (b), undertake relevant studies of hydrologic

1 conditions, both quantitative and qualitative, and operating
2 aspects of implementation of the management program for Chino
3 Basin.

4 28. Ground Water Storage Agreements. Watermaster shall
5 adopt, with the approval of the Advisory Committee, uniformly
6 applicable rules and a standard form of agreement for storage of
7 supplemental water, pursuant to criteria therefore set forth in
8 Exhibit "I". Upon appropriate application by any person, Water-
9 master shall enter into such a storage agreement; provided that all
10 such storage agreements shall first be approved by written order of
11 the Court, and shall by their terms preclude operations which will
12 have a substantial adverse impact on other producers.

13 29. Accounting for Stored Water. Watermaster shall calculate
14 additions, extractions and losses and maintain an annual account of
15 all Stored Water in Chino Basin, and any losses of water supplies
16 or Safe Yield of Chino Basin resulting from such Stored Water.

17 30. Annual Administrative Budget. Watermaster shall submit
18 to Advisory Committee an administrative budget and recommendation
19 for each fiscal year on or before March 1. The Advisory Committee
20 shall review and submit said budget and their recommendations to
21 Watermaster on or before April 1, following. Watermaster shall
22 hold a public hearing on said budget at its April quarterly meeting
23 and adopt the annual administrative budget which shall include the
24 administrative items for each pool committee. The administrative
25 budget shall set forth budgeted items in sufficient detail as
26 necessary to make a proper allocation of the expense among the
27 several pools, together with Watermaster's proposed allocation.
28 The budget shall contain such additional comparative information

1 or explanation as the Advisory Committee may recommend from time
2 to time. Expenditures within budgeted items may thereafter be
3 made by Watermaster in the exercise of powers herein granted, as a
4 matter of course. Any budget transfer in excess of 20% of a
5 budget category during any budget year or modification of such
6 administrative budget during any year shall be first submitted to
7 the Advisory Committee for review and recommendation.

8 31. Review Procedures. All actions, decisions or rules of
9 Watermaster shall be subject to review by the Court on its own
10 motion or on timely motion by any party, the Watermaster (in the
11 case of a mandated action), the Advisory Committee, or any Pool
12 Committee, as follows:

13 (a) Effective Date of Watermaster Action. Any action,
14 decision or rule of Watermaster shall be deemed to have
15 occurred or been enacted on the date on which written
16 notice thereof is mailed. Mailing of copies of approved
17 Watermaster minutes to the active parties shall constitute
18 such notice to all parties.

19 (b) Noticed Motion. Any party, the Watermaster (as
20 to any mandated action), the Advisory Committee, or any
21 Pool Committee may, by a regularly noticed motion, apply
22 to the Court for review of any Watermaster's action,
23 decision or rule. Notice of such motion shall be served
24 personally or mailed to Watermaster and to all active
25 parties. Unless otherwise ordered by the Court, such
26 motion shall not operate to stay the effect of such
27 Watermaster action, decision or rule.

28 - - - - -

1 (c) Time for Motion. Notice of motion to review any
2 Watermaster action, decision or rule shall be served and filed
3 within ninety (90) days after such Watermaster action, de-
4 cision or rule, except for budget actions, in which event said
5 notice period shall be sixty (60) days.

6 (d) De Novo Nature of Proceedings. Upon the filing of
7 any such motion, the Court shall require the moving party to
8 notify the active parties, the Watermaster, the Advisory
9 Committee, and each Pool Committee, of a date for taking
10 evidence and argument, and on the date so designated shall
11 review de novo the question at issue. Watermaster's findings
12 or decision, if any, may be received in evidence at said
13 hearing, but shall not constitute presumptive or prima facie
14 proof of any fact in issue.

15 (e) Decision. The decision of the Court in such proceed-
16 ing shall be an appealable supplemental order in this case.
17 When the same is final, it shall be binding upon the Water-
18 master and all parties.

19 C. ADVISORY AND POOL COMMITTEES

20 32. Authorization. Watermaster is authorized and directed to
21 cause committees of producer representatives to be organized to
22 act as Pool Committees for each of the several pools created under
23 the Physical Solution. Said Pool Committees shall, in turn,
24 jointly form an Advisory Committee to assist Watermaster in per-
25 formance of its functions under this judgment. Pool Committees
26 shall be composed as specified in the respective pooling plans, and
27 the Advisory Committee shall be composed of not to exceed ten (10)
28 voting representatives from each pool, as designated by the

1 respective Pool Committee. WMWD, PVMWD and SBVMWD shall each be
2 entitled to one non-voting representative on said Advisory Com-
3 mittee.

4 33. Term and Vacancies. Members of any Pool Committee, shall
5 serve for the term, and vacancies shall be filled, as specified in
6 the respective pooling plan. Members of the Advisory Committee
7 shall serve at the will of their respective Pool Committee.

8 34. Voting Power. The voting power on each Pool Committee
9 shall be allocated as provided in the respective pooling plan. The
10 voting power on the Advisory Committee shall be one hundred (100)
11 votes allocated among the three pools in proportion to the total
12 assessments paid to Watermaster during the preceding year; pro-
13 vided, that the minimum voting power of each pool shall be

- 14 (a) Overlying (Agricultural) Pool 20,
15 (b) Overlying (Non-agricultural) Pool 5, and
16 (c) Appropriative Pool 20.

17 In the event any pool is reduced to its said minimum vote, the re-
18 maining votes shall be allocated between the remaining pools on
19 said basis of assessments paid to Watermaster by each such remain-
20 ing pool during the preceding year. The method of exercise of
21 each pool's voting power on the Advisory Committee shall be as
22 determined by the respective pool committees.

23 35. Quorum. A majority of the voting power of the Advisory
24 Committee or any Pool Committee shall constitute a quorum for the
25 transaction of affairs of such Advisory or Pool Committee; pro-
26 vided, that at least one representative of each Pool Committee
27 shall be required to constitute a quorum of the Advisory Committee.
28 No Pool Committee representative may purposely absent himself or

1 herself, without good cause, from an Advisory Committee meeting to
2 deprive it of a quorum. Action by affirmative vote of a majority
3 of the entire voting power of any Pool Committee or the Advisory
4 Committee shall constitute action by such committee. Any action or
5 recommendation of a Pool Committee or the Advisory Committee shall
6 be transmitted to Watermaster in writing, together with a report of
7 any dissenting vote or opinion.

8 36. Compensation. Pool or Advisory Committee members may
9 receive compensation, to be established by the respective pooling
10 plan, but not to exceed twenty-five dollars (\$25.00) for each
11 meeting of such Pool or Advisory Committee attended, and provided
12 that no member of a Pool or Advisory Committee shall receive
13 compensation of more than three hundred (\$300.00) dollars for
14 service on any such committee during any one year. All such com-
15 pensation shall be a part of Watermaster administrative expense.
16 No member of any Pool or Advisory Committee shall be employed by
17 Watermaster or compensated by Watermaster for professional or other
18 services rendered to such Pool or Advisory Committee or to Water-
19 master, other than the fee for attendance at meetings herein
20 provided, plus reimbursement of reasonable expenses related to
21 activities within the Basin.

22 37. Organization.

23 (a) Organizational Meeting. At its first meeting in
24 each year, each Pool Committee and the Advisory Committee
25 shall elect a chairperson and a vice chairperson from its
26 membership. It shall also select a secretary, a treasurer
27 and such assistant secretaries and treasurers as may be
28 appropriate, any of whom may, but need not, be members of

1 such Pool or Advisory Committee.

2 (b) Regular Meetings. All Pool Committees and the
3 Advisory Committee shall hold regular meetings at a place and
4 time to be specified in the rules to be adopted by each Pool
5 and Advisory Committee. Notice of regular meetings of any
6 Pool or Advisory Committee, and of any change in time or
7 place thereof, shall be mailed to all active parties in said
8 pool or pools.

9 (c) Special Meetings. Special meetings of any Pool or
10 Advisory Committee may be called at any time by the Chair-
11 person or by any three (3) members of such Pool or Advisory
12 Committee by delivering notice personally or by mail to each
13 member of such Pool or Advisory Committee and to each active
14 party at least 24 hours before the time of each such meeting
15 in the case of personal delivery, and 96 hours in the case of
16 mail. The calling notice shall specify the time and place of
17 the special meeting and the business to be transacted. No
18 other business shall be considered at such meeting.

19 (d) Minutes. Minutes of all Pool Committee, Advisory
20 Committee and Watermaster meetings shall be kept at Water-
21 master's offices. Copies thereof shall be mailed or otherwise
22 furnished to all active parties in the pool or pools con-
23 cerned. Said copies of minutes shall constitute notice of any
24 Pool or Advisory Committee action therein reported, and shall
25 be available for inspection by any party.

26 (e) Adjournments. Any meeting of any Pool or Advisory
27 Committee may be adjourned to a time and place specified in
28 the order of adjournment. Less than a quorum may so adjourn

1 from time to time. A copy of the order or notice of adjourn-
2 ment shall be conspicuously posted forthwith on or near the
3 door of the place where the meeting was held.

4 38. Powers and Functions. The powers and functions of the
5 respective Pool Committees and the Advisory Committee shall be as
6 follows:

7 (a) Pool Committees. Each Pool Committee shall have the
8 power and responsibility for developing policy recommendations
9 for administration of its particular pool, as created under
10 the Physical Solution. All actions and recommendations of any
11 Pool Committee which require Watermaster implementation shall
12 first be noticed to the other two pools. If no objection is
13 received in writing within thirty (30) days, such action or
14 recommendation shall be transmitted directly to Watermaster for
15 action. If any such objection is received, such action or
16 recommendation shall be reported to the Advisory Committee
17 before being transmitted to Watermaster.

18 (b) Advisory Committee. The Advisory Committee shall
19 have the duty to study, and the power to recommend, review
20 and act upon all discretionary determinations made or to be
21 made hereunder by Watermaster.

22 [1] Committee Initiative. When any recommendation
23 or advice of the Advisory Committee is received by
24 Watermaster, action consistent therewith may be taken by
25 Watermaster; provided, that any recommendation approved
26 by 80 votes or more in the Advisory Committee shall
27 constitute a mandate for action by Watermaster consistent
28 therewith. If Watermaster is unwilling or unable to act

1 pursuant to recommendation or advice from the Advisory
2 Committee (other than such mandatory recommendations),
3 Watermaster shall hold a public hearing, which shall be
4 followed by written findings and decision. Thereafter,
5 Watermaster may act in accordance with said decision,
6 whether consistent with or contrary to said Advisory
7 Committee recommendation. Such action shall be subject
8 to review by the Court, as in the case of all other
9 Watermaster determinations.

10 [2]. Committee Review. In the event Watermaster
11 proposes to take discretionary action, other than
12 approval or disapproval of a Pool Committee action or
13 recommendation properly transmitted, or execute any
14 agreement not theretofore within the scope of an Advisory
15 Committee recommendation, notice of such intended action
16 shall be served on the Advisory Committee and its members
17 at least thirty (30) days before the Watermaster meeting
18 at which such action is finally authorized.

19 (c) Review of Watermaster Actions. Watermaster (as to
20 mandated action), the Advisory Committee or any Pool Committee
21 shall be entitled to employ counsel and expert assistance in
22 the event Watermaster or such Pool or Advisory Committee seeks
23 Court review of any Watermaster action or failure to act. The
24 cost of such counsel and expert assistance shall be Water-
25 master expense to be allocated to the affected pool or pools.

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1 VI. PHYSICAL SOLUTION

2 A. GENERAL

3 39. Purpose and Objective. Pursuant to the mandate of
4 Section 2 of Article X of the California Constitution, the Court
5 hereby adopts and orders the parties to comply with a Physical
6 Solution. The purpose of these provisions is to establish a legal
7 and practical means for making the maximum reasonable beneficial
8 use of the waters of Chino Basin by providing the optimum economic,
9 long-term, conjunctive utilization of surface waters, ground waters
10 and supplemental water, to meet the requirements of water users
11 having rights in or dependent upon Chino Basin.

12 40. Need for Flexibility. It is essential that this Physical
13 solution provide maximum flexibility and adaptability in order that
14 Watermaster and the Court may be free to use existing and future
15 technological, social, institutional and economic options, in order
16 to maximize beneficial use of the waters of Chino Basin. To that
17 end, the Court's retained jurisdiction will be utilized, where
18 appropriate, to supplement the discretion herein granted to the
19 Watermaster.

20 41. Watermaster Control. Watermaster, with the advice of the
21 Advisory and Pool Committees, is granted discretionary powers in
22 order to develop an optimum basin management program for Chino
23 Basin, including both water quantity and quality considerations.
24 Withdrawals and supplemental water replenishment of Basin Water,
25 and the full utilization of the water resources of Chino Basin,
26 must be subject to procedures established by and administered
27 through Watermaster with the advice and assistance of the Advisory
28 and Pool Committees composed of the affected producers. Both the

1 quantity and quality of said water resources may thereby be pre-
2 served and the beneficial utilization of the Basin maximized.

3 42. General Pattern of Operations. It is contemplated that
4 the rights herein decreed will be divided into three (3) operating
5 pools for purposes of Watermaster administration. A fundamental
6 premise of the Physical Solution is that all water users dependent
7 upon Chino Basin will be allowed to pump sufficient waters from the
8 Basin to meet their requirements. To the extent that pumping
9 exceeds the share of the Safe Yield assigned to the Overlying
10 Pools, or the Operating Safe Yield in the case of the Appropriative
11 Pool, each pool will provide funds to enable Watermaster to replace
12 such overproduction. The method of assessment in each pool shall
13 be as set forth in the applicable pooling plan.

14 B. POOLING

15 43. Multiple Pools Established. There are hereby established
16 three (3) pools for Watermaster administration of, and for the
17 allocation of responsibility for, and payment of, costs of re-
18 plenishment water and other aspects of this Physical Solution.

19 (a) Overlying (Agricultural) Pool. The first pool shall
20 consist of the State of California and all overlying producers
21 who produce water for other than industrial or commercial
22 purposes. The initial members of the pool are listed in
23 Exhibit "C".

24 (b) Overlying (Non-agricultural) Pool. The second pool
25 shall consist of overlying producers who produce water for
26 industrial or commercial purposes. The initial members of
27 this pool are listed in Exhibit "D".

28 (c) Appropriative Pool. A third and separate pool shall

1 consist of owners of appropriative rights. The initial
2 members of the pool are listed in Exhibit "E".

3 Any party who changes the character of his use may, by sub-
4 sequent order of the Court, be reassigned to the proper pool; but
5 the allocation of Safe Yield under Paragraph 44 hereof shall not be
6 changed. Any non-party producer or any person who may hereafter
7 commence production of water from Chino Basin, and who may become a
8 party to this physical solution by intervention, shall be assigned
9 to the proper pool by the order of the Court authorizing such
10 intervention.

11 44. Determination and Allocation of Rights to Safe Yield of
12 Chino Basin. The declared Safe Yield of Chino Basin is hereby
13 allocated as follows:

14	<u>Pool</u>	<u>Allocation</u>
15	Overlying (Agricultural) Pool	414,000 acre feet in any five
16		(5) consecutive years.
17	Overlying (Non-agricultural) Pool.	7,366 acre feet per year.
18	Appropriative Pool	49,834 acre feet per year.

19 The foregoing acre foot allocations to the overlying pools are
20 fixed. Any subsequent change in the Safe Yield shall be debited or
21 credited to the Appropriative Pool. Basin Water available to the
22 Appropriative Pool without replenishment obligation may vary from
23 year to year as the Operating Safe Yield is determined by Water-
24 master pursuant to the criteria set forth in Exhibit "I".

25 45. Annual Replenishment. Watermaster shall levy and collect
26 assessments in each year, pursuant to the respective pooling plans,
27 in amounts sufficient to purchase replenishment water to replace
28 production by any pool during the preceding year which exceeds that

1 pool's allocated share of Safe Yield in the case of the overlying
2 pools, or Operating Safe Yield in the case of the Appropriative
3 Pool. It is anticipated that supplemental water for replenishment
4 of Chino Basin may be available at different rates to the various
5 pools to meet their replenishment obligations. If such is the
6 case, each pool will be assessed only that amount necessary for the
7 cost of replenishment water to that pool, at the rate available to
8 the pool, to meet its replenishment obligation.

9 46. Initial Pooling Plans. The initial pooling plans, which
10 are hereby adopted, are set forth in Exhibits "F", "G" and "H",
11 respectively. Unless and until modified by amendment of the
12 judgment pursuant to the Court's continuing jurisdiction, each
13 such plan shall control operation of the subject pool.

14 C. REPORTS AND ACCOUNTING

15 47. Production Reports. Each party or responsible party
16 shall file periodically with Watermaster, pursuant to Watermaster
17 rules, a report on a form to be prescribed by Watermaster showing
18 the total production of such party during the preceding reportage
19 period, and such additional information as Watermaster may require,
20 including any information specified by the affected Pool Com-
21 mittee.

22 48. Watermaster Report and Accounting. Watermaster's
23 annual report, which shall be filed on or before November 15 of
24 each year and shall apply to the preceding year's operation, shall
25 contain details as to operation of each of the pools and a certi-
26 fied audit of all assessments and expenditures pursuant to this
27 Physical Solution and a review of Watermaster activities.

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1 D. REPLENISHMENT

2 49. Sources of Supplemental Water. Supplemental water may be
3 obtained by Watermaster from any available source. Watermaster
4 shall seek to obtain the best available quality of supplemental
5 water at the most reasonable cost for recharge in the Basin. To
6 the extent that costs of replenishment water may vary between
7 pools, each pool shall be liable only for the costs attributable to
8 its required replenishment. Available sources may include, but are
9 not limited to:

10 (a) Reclaimed Water. There exist a series of agreements
11 generally denominated the Regional Waste Water Agreements
12 between CBMWD and owners of the major municipal sewer systems
13 within the basin. Under those agreements, which are recog-
14 nized hereby but shall be unaffected and unimpaired by this
15 judgment, substantial quantities of reclaimed water may be
16 made available for replenishment purposes. There are addi-
17 tional sources of reclaimed water which are, or may become,
18 available to Watermaster for said purposes. Maximum benefi-
19 cial use of reclaimed water shall be given high priority by
20 Watermaster.

21 (b) State Water. State water constitutes a major
22 available supply of supplemental water. In the case of State
23 Water, Watermaster purchases shall comply with the water
24 service provisions of the State's water service contracts.
25 More specifically, Watermaster shall purchase State Water from
26 MWD for replenishment of excess production within CBMWD, WMWD
27 and PVMWD, and from SBVMWD to replenish excess production
28 within SBVMWD's boundaries in Chino Basin, except to the

1 extent that MWD and SBVMWD give their consent as required by
2 such State water service contracts.

3 (c) Local Import. There exists facilities and methods
4 for importation of surface and ground water supplies from
5 adjacent basins and watersheds.

6 (d) Colorado River Supplies. MWD has water supplies
7 available from its Colorado River Aqueduct.

8 50. Methods of Replenishment. Watermaster may accomplish
9 replenishment of overproduction from the Basin by any reasonable
10 method, including:

11 (a) Spreading and percolation or Injection of water in
12 existing or new facilities, subject to the provisions of
13 Paragraphs 19, 25 and 26 hereof.

14 (b) In Lieu Procedures. Watermaster may make, or cause
15 to be made, deliveries of water for direct surface use, in
16 lieu of ground water production.

17 E. REVENUES

18 51. Production Assessment. Production assessments, on what-
19 ever basis, may be levied by Watermaster pursuant to the pooling
20 plan adopted for the applicable pool.

21 52. Minimal Producers. Minimal Producers shall be exempted
22 from payment of production assessments, upon filing of production
23 reports as provided in Paragraph 47 of this Judgment, and payment
24 of an annual five dollar (\$5.00) administrative fee as specified by
25 Watermaster rules.

26 53. Assessment Proceeds -- Purposes. Watermaster shall have
27 the power to levy assessments against the parties (other than
28 minimal pumpers) based upon production during the preceding period

1 of assessable production, whether quarterly, semi-annually or
2 annually, as may be determined most practical by Watermaster or the
3 affected Pool Committee.

4 54. Administrative Expenses. The expenses of administration
5 of this Physical Solution shall be categorized as either (a) gen-
6 eral Watermaster administrative expense, or (b) special project
7 expense.

8 (a) General Watermaster Administrative Expense shall
9 include office rental, general personnel expense, supplies and
10 office equipment, and related incidental expense and general
11 overhead.

12 (b) Special Project Expense shall consist of special
13 engineering, economic or other studies, litigation expense,
14 meter testing or other major operating expenses. Each such
15 project shall be assigned a Task Order number and shall be
16 separately budgeted and accounted for.

17 General Watermaster administrative expense shall be allocated
18 and assessed against the respective pools based upon allocations
19 made by the Watermaster, who shall make such allocations based upon
20 generally accepted cost accounting methods. Special Project
21 Expense shall be allocated to a specific pool, or any portion there
22 of, only upon the basis of prior express assent and finding of
23 benefit by the Pool Committee, or pursuant to written order of the
24 Court.

25 55. Assessments -- Procedure. Assessments herein provided
26 for shall be levied and collected as follows:

27 (a) Notice of Assessment. Watermaster shall give
28 written notice of all applicable assessments to each party on

1 or before ninety (90) days after the end of the production
2 period to which such assessment is applicable.

3 (b) Payment. Each assessment shall be payable on or
4 before thirty (30) days after notice, and shall be the ob-
5 ligation of the party or successor owning the water production
6 facility at the time written notice of assessment is given,
7 unless prior arrangement for payment by others has been made
8 in writing and filed with Watermaster.

9 (c) Delinquency. Any delinquent assessment shall bear
10 interest at 10% per annum (or such greater rate as shall equal
11 the average current cost of borrowed funds to the Watermaster)
12 from the due date thereof. Such delinquent assessment and
13 interest may be collected in a show-cause proceeding herein
14 instituted by the Watermaster, in which case the Court may
15 allow Watermaster its reasonable costs of collection, include-
16 ing attorney's fees.

17 56. Accumulation of Replenishment Water Assessment Proceeds.

18 In order to minimize fluctuation in assessment and to give Water-
19 master flexibility in purchase and spreading of replenishment
20 water, Watermaster may make reasonable accumulations of replen-
21 ishment water assessment proceeds. Interest earned on such re-
22 tained funds shall be added to the account of the pool from which
23 the funds were collected and shall be applied only to the purchase
24 of replenishment water.

25 57. Effective Date. The effective date for accounting and
26 operation under this Physical Solution shall be July 1, 1977, and
27 the first production assessments hereunder shall be due after July
28 1, 1978. Watermaster shall, however, require installation of

1 meters or measuring devices and establish operating procedures
2 immediately, and the cost of such Watermaster activity (not
3 including the cost of such meters and measuring devices) may be
4 recovered in the first administrative assessment in 1978.

5
6 VII. MISCELLANEOUS PROVISIONS

7 58. Designation of Address for Notice and Service. Each
8 party shall designate the name and address to be used for purposes
9 of all subsequent notices and service herein, either by its en-
10 dorsement on the Stipulation for Judgment or by a separate desig-
11 nation to be filed within thirty (30) days after Judgment has been
12 served. Said designation may be changed from time to time by
13 filing a written notice of such change with the Watermaster. Any
14 party desiring to be relieved of receiving notices of Watermaster
15 or committee activity may file a waiver of notice on a form to be
16 provided by Watermaster. Thereafter such party shall be removed
17 from the Active Party list. Watermaster shall maintain at all
18 times a current list of all active parties and their addresses for
19 purposes of service. Watermaster shall also maintain a full
20 current list of names and addresses of all parties or their suc-
21 cessors, as filed herein. Copies of such lists shall be available,
22 without cost, to any party, the Advisory Committee or any Pool
23 Committee upon written request therefor.

24 59. Service of Documents. Delivery to or service upon any
25 party or active party by the Watermaster, by any other party, or by
26 the Court, of any item required to be served upon or delivered to
27 such party or active party under or pursuant to the Judgment shall
28 be made personally or by deposit in the United States mail, first

1 class, postage prepaid, addressed to the designee and at the
2 address in the latest designation filed by such party or active
3 party.

4 60. Intervention After Judgment. Any non-party assignee of
5 the adjudicated appropriative rights of any appropriator, or any
6 other person newly proposing to produce water from Chino Basin, may
7 become a party to this judgment upon filing a petition in inter-
8 vention. Said intervention must be confirmed by order of this
9 Court. Such intervenor shall thereafter be a party bound by this
10 judgment and entitled to the rights and privileges accorded under
11 the Physical Solution herein, through the pool to which the Court
12 shall assign such intervenor.

13 61. Loss of Rights. Loss, whether by abandonment, forfeiture
14 or otherwise, of any right herein adjudicated shall be accomplished
15 only (1) by a written election by the owner of the right filed with
16 Watermaster, or (2) by order of the Court upon noticed motion and
17 after hearing.

18 62. Scope of Judgment. Nothing in this Judgment shall be
19 deemed to preclude or limit any party in the assertion against a
20 neighboring party of any cause of action now existing or hereafter
21 arising based upon injury, damage or depletion of water supply
22 available to such party, proximately caused by nearby pumping which
23 constitutes an unreasonable interference with such complaining
24 party's ability to extract ground water.

25 63. Judgment Binding on Successors. This Judgment and all
26 provisions thereof are applicable to and binding upon not only the
27 parties to this action, but also upon their respective heirs,
28 executors, administrators, successors, assigns, lessees and

1 licensees and upon the agents, employees and attorneys in fact of
2 all such persons.

3 64. Costs. No party shall recover any costs in this pro-
4 ceeding from any other party.

5 Dated: 1/27/78.

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7
8 /s/ Howard B. Wiener

9 Judge
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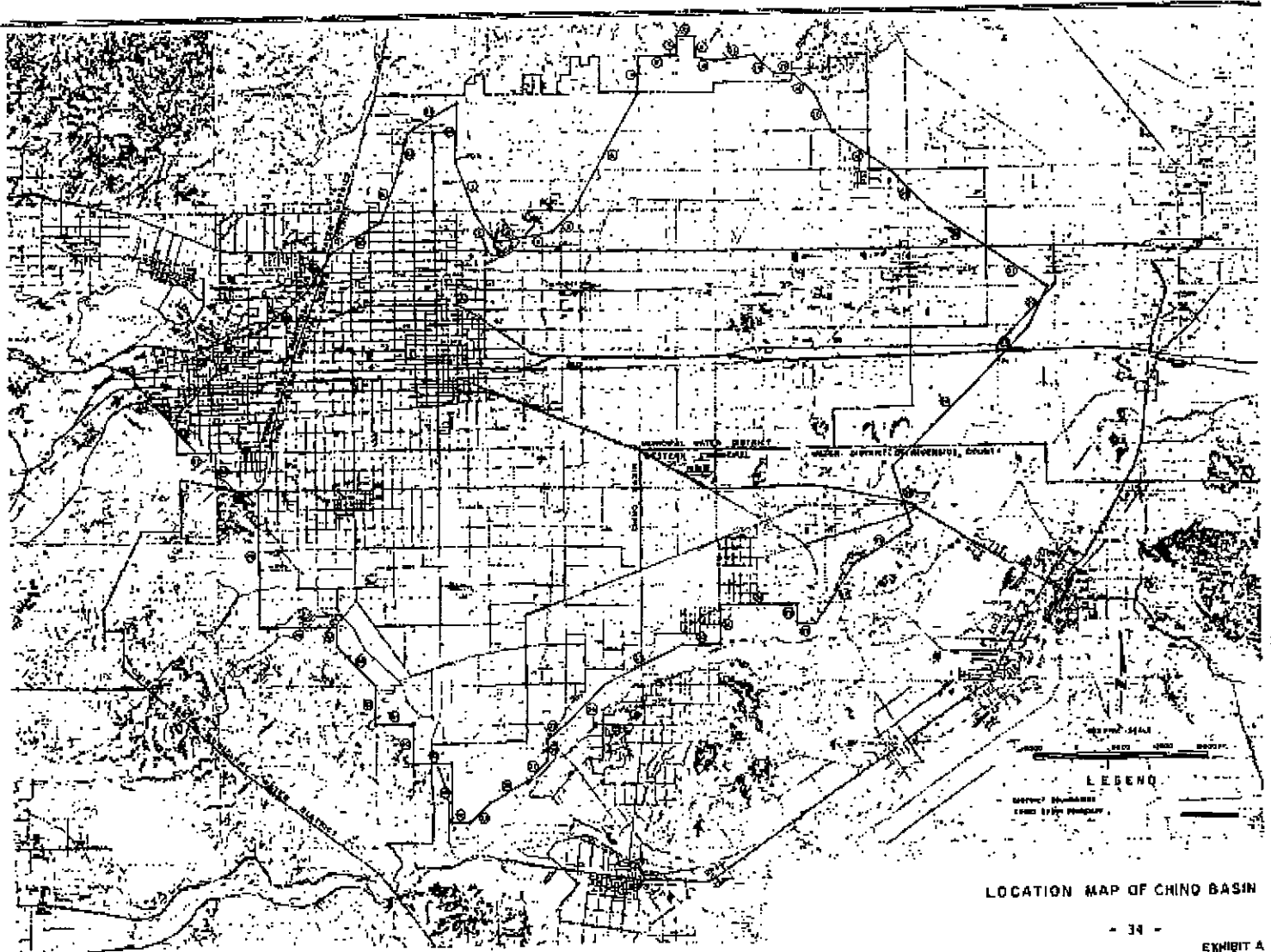
1 DONALD D. STARK
A Professional Corporation
2 Suite 201 Airport Plaza
2061 Business Center Drive
3 Irvine, California 92715
Telephone: (714) 752-8971
4 CLAYSON, ROTHROCK & MANN
5 601 South Main Street
Corona, California 91720
6 Telephone: (714) 737-1910
7 Attorneys for Plaintiff

8
9 SUPERIOR COURT OF THE STATE OF CALIFORNIA
10 FOR THE COUNTY OF SAN BERNARDINO
11

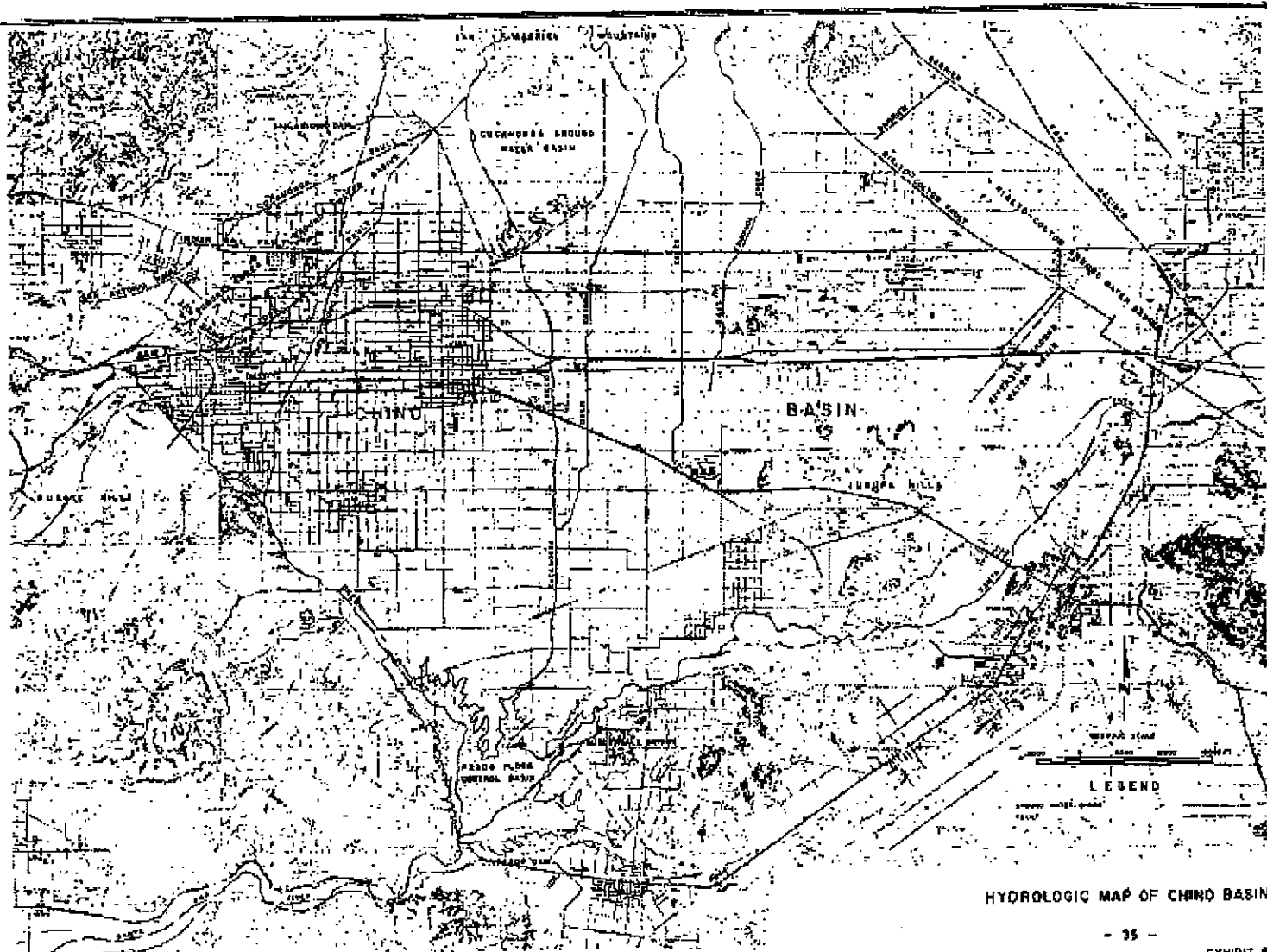
12 CHINO BASIN MUNICIPAL WATER)
13 DISTRICT,)
Plaintiff,)
14 v.)
15 CITY OF CHINO, et al.)
16 Defendants.)
17)
18)
19)
20)
21)
22)
23)
24)
25)
26)
27)
28)

No. 164327

JUDGMENT



LOCATION MAP OF CHINO BASIN



STIPULATING OVERLYING AGRICULTURAL PRODUCERS

1	STATE OF CALIFORNIA	Aphesssetche, Xavier
2	COUNTY OF SAN BERNARDINO	Arena Mutual Water Assn.
3	Abacherli, Dairy, Inc.	Armstrong Nurseries, Inc.
4	Abacherli, Frank	Arretche, Frank
5	Abacherli, Shirley	Arretche, Jean Pierre
6	Abbona, Anna	Arvidson, Clarence F.
7	Abbona, James	Arvidson, Florence
8	Abbona, Jim	Ashley, George W.
9	Abbona, Mary	Ashley, Pearl E.
10	Agliani, Amelia H.	Atlas Farms
11	Agman, Inc.	Atlas Ornamental Iron Works, Inc.
12	Aguerre, Louis B.	Aukeman, Carol
13	Ahmanson Trust Co.	Aukeman, Lewis
14	Akiyama, Shizuye	Ayers, Kenneth C., aka
15	Akiyama, Tomoo	Kelley Ayers
16	Akkerman, Dave	Bachoc, Raymond
17	Albers, J.N.	Baldwin, Edgar A.
18	Albers, Nellie	Baldwin, Lester
19	Alewyn, Jake J.	Banbury, Carolyn
20	Alewyn, Normalee	Bangma Dairy
21	Alger, Mary D.	Bangma, Arthur
22	Alger, Raymond	Bangma, Ida
23	Allen, Ben F.	Bangma, Martin
24	Allen, Jane F.	Bangma, Sam
25	Alta-Dena Dairy	Barba, Anthony B.
26	Anderson Farms	Barba, Frank
27	Anguiano, Sarah L.S.	Barcellos, Joseph
28	Anker, Gus	Barnhill, Maurine W.

EXHIBIT "C"

1	Barnhill, Paul	Boersma, Angie
2	Bartel, Dale	Boersma, Berdina
3	Bartel, Ursula	Boersma, Frank
4	Bartel, Willard	Boersma, Harry
5	Barthelemy, Henry	Boersma, Paul
6	Barthelemy, Roland	Boersma, Sam
7	Bassler, Donald V., M.D.	Boersma, William L.
8	Bates, Lowell R.	Bohlender & Holmes, Inc.
9	Bates, Mildred L.	Bokma, Peter
10	Beahm, James W.	Bollema, Jacob
11	Beahm, Joan M.	Boonstoo, Edward
12	Bekendam, Hank	Bootsma, Jim
13	Bekendam, Pete	Borba, Dolene
14	Bello, Eugene	Borba, Dolores
15	Bello, Olga	Borba, Emily
16	Beltman, Evelyn	Borba, George
17	Beltman, Tony	Borba, John
18	Bergquist Properties, Inc.	Borba, John & Sons
19	Bevacqua, Joel A.	Borba, John Jr.
20	Bevacqua, Marie B.	Borba, Joseph A.
21	Bidart, Bernard	Borba, Karen E.
22	Bidart, Michael J.	Borba, Karen M.
23	Binnell, Wesley	Borba, Pete, Estate of
24	Black, Patricia E.	Borba, Ricci
25	Black, Victor	Borba, Steve
26	Bodger, John & Sons Co.	Borba, Tom
27	Boer, Adrian	Bordisso, Alleck
28	Boersma and Wind Dairy	Borges, Angelica M.

EXHIBIT "C"

1	Borges, Bernadette	Bothof, Roger W.
2	Borges, John O.	Bouma, Cornie
3	Borges, Linda L.	Bouma, Emma
4	Borges, Manual Jr.	Bouma, Henry P.
5	Borges, Tony	Bouma, Martin
6	Bos, Aleid	Bouma, Peter G. & Sons Dairy
7	Bos, Gerrit	Bouma, Ted
8	Bos, John	Bouman, Helen
9	Bos, John	Bouman, Sam
10	Bos, Margaret	Bower, Mabel E.
11	Bos, Mary	Boys Republic
12	Bos, Mary Beth	Breedyk, Arie
13	Bos, Tony	Breedyk, Jessie
14	Bosch, Henrietta	Briano Brothers
15	Bosch, Peter T.	Briano, Albert
16	Boschma, Betty	Briano, Albert Trustee for
17	Boschma, Frank	Briano, Albert Frank
18	Boschma, Greta	Briano, Lena
19	Boschma, Henry	Brink, Russell N.
20	Bosma, Dick	Brinkerhoff, Margaret
21	Bosma, Florence G.	Brinkerhoff, Robert L.
22	Bosma, Gerrit	Britschgi, Florence
23	Bosma, Jacob J.	Britschgi, Magdalena Garetto
24	Bosma, Jeanette Thea	Britschgi, Walter P.
25	Bosman, Frank	Brommer, Marvin
26	Bosman, Nellie	Brookside Enterprizes, dba
27	Bosnyak, Goldie M.	Brookside Vineyard Co.
28	Bosnyak, Martin	Brothers Three Dairy

EXHIBIT "C"

1	Brown, Eugene	Chino Corona Investment
2	Brun, Martha M.	Chino Water Co.
3	Brun, Peter Robert	Christensen, Leslie
4	Buma, Duke	Christensen, Richard G.
5	Buma, Martha	Christian, Ada R.
6	Bunse, Nancy	Christian, Harold F.
7	Bunse, Ronnie L.	Christy, Ella J.
8	Caballero, Bonnie L.	Christy, Ronald S.
9	Caballero, Richard F.	Cihigoyenetché, Jean
10	Cable Airport Inc.	Cihigoyenetché, Leona
11	Cadlini, Donald	Cihigoyenetché, Martin
12	Cadlini, Jesse R.	Clarke, Arthur B.
13	Cadlini, Marie Edna	Clarke, Nancy L.
14	Cambio, Anna	Clarke, Phyllis J.
15	Cambio, Charles, Estate of	Coelho, Isabel
16	Cambio, William V.	Coelho, Joe A. Jr.
17	Cardoza, Florence	Collins, Howard E.
18	Cardoza, Olivi	Collins, Judith F.
19	Cardoza, Tony	Collinsworth, Ester L.
20	Carnesi, Tom	Collinsworth, John E.
21	Carver, Robt M., Trustee	Collinsworth, Shelby
22	Cauffman, John R.	Cone Estate (05-2-00648/649)
23	Chacon Bros.	Consolidated Freightways Corp.
24	Chancon, Elvera P.	of Delaware
25	Chacon, Joe M.	Corona Farms Co.
26	Chacon, Robert M.	Corra, Rose
27	Chacon, Virginia L.	Costa, Dimas S.
28	Chez, Joseph C.	Costa, Laura

EXHIBIT "C"

1	Costa, Myrtle	De Boer, L.H.
2	Costamagna, Antonio	De Boer, Sidney
3	Costamagna, Joseph	De Bos, Andrew
4	Cousyn, Claus B.	De Graaf, Anna Mae
5	Cramer, Carole F.	De Graaf, Gerrit
6	Cramer, William R.	De Groot, Dick
7	Crossroads Auto Dismantlers, Inc.	De Groot, Dorothy
8	Crouse, Beatrice I.	De Groot, Ernest
9	Crouse, Roger	De Groot, Henrietta
10	Crowley, Juanita C.	De Groot, Jake
11	Crowley, Ralph	De Groot, Pete Jr.
12	Cucamonga Vintners	De Haan, Bernadene
13	D'Astici, Teresa	De Haan, Henry
14	Da Costa, Cecilia B.	De Hoog, Adriana
15	Da Costa, Joaquim F.	De Hoog, Joe
16	Daloisio, Norman	De Hoog, Martin
17	De Berard Bros.	De Hoog, Martin L.
18	De Berard, Arthur, Trustee	De Hoog, Mitch
19	De Berard, Charles	De Hoog, Tryntje
20	De Berard, Chas., Trustee	De Jager, Cobi
21	De Berard, Helan J.	De Jager, Edward D.
22	De Berard, Robert	De Jong Brothers Dairy
23	De Berard, Robert Trustee	De Jong, Cornelis
24	De Bie, Adrian	De Jong, Cornelius
25	De Bie, Henry	De Jong, Grace
26	De Bie, Margaret M.	De Jong, Jake
27	De Bie, Marvin	De Jong, Lena
28	De Boer, Fred	De Leeuw, Alice

EXHIBIT "C"

1	De Leeuw, Sam	Dirkse, Catherine
2	De Soete, Agnes	Dirkse, Charles C.
3	De Soete, Andre	Dixon, Charles E.
4	De Vries, Abraham	Dixon, Geraldine A.
5	De Vries, Case	Doesberg, Hendrica
6	De Vries, Dick	Doesburg, Theodorus, P.
7	De Vries, Evelyn	Dolan, Marion
8	De Vries, Henry, Estate of	Dolan, Michael H.
9	De Vries, Hermina	Dominguez, Helen
10	De Vries, Jack H.	Dominguez, Manual
11	De Vries, Jane	Donkers, Henry A.
12	De Vries, Janice	Donkers, Nellie G.
13	De Vries, John	Dotta Bros.
14	De Vries, John J.	Douma Brothers Dairy
15	De Vries, Neil	Douma, Betty A.
16	De Vries, Ruth	Douma, Fred A.
17	De Vries, Theresa	Douma, Hendrika
18	De Wit, Gladys	Douma, Herman G.
19	De Wit, Peter S.	Douma, Narleen J.
20	De Wyn, Evert	Douma, Phillip M.
21	De Zoete, Hattie V.	Dow Chemical Co.
22	Do Zoete, Leo A.	Dragt, Rheta
23	Decker, Hallie	Dragt, William
24	Decker, Henry A.	Driftwood Dairy Farm
25	Demmer, Ernest	Droogh, Case
26	Di Carlo, Marie	Duhalde, Marian
27	Di Carlo, Victor	Duhalde, Lauren
28	Di Tommaso, Frank	Duits, Henrietta

EXHIBIT "C"

1	Duits, John	Excelsior Farms
2	Dunlap, Edna Kraemer,	F.D.I.C.
3	Estate of	Fagundes, Frank M.
4	Durrington, Glen	Fagundes, Mary
5	Durrington, William F.	Fernandes, Joseph Jr.
6	Dusi, John Sr.	Fernandes, Velma C.
7	Dykstra, Dick	Ferraro, Ann
8	Dykstra, John	Ferreira, Frank J.
9	Dykstra, John & Sons	Ferreira, Joe C. Jr.
10	Dykstra, Wilma	Ferreira, Narcie
11	Dyt, Cor	Fillippi, J. Vintage Co.
12	Dyt, Johanna	Filippi, Joseph
13	E and S Grape Growers	Filippi, Joseph A.
14	Eaton, Thomas, Estate of	Filippi, Mary E.
15	Echeverria, Juan	Fitzgerald, John R.
16	Echeverria, Carlos	Flameling Dairy Inc.
17	Echeverria, Pablo	Flamingo Dairy
18	Eilers, E. Myrle	Foss, Douglas E.
19	Eilers, Henry W.	Foss, Gerald R.
20	El Prado Golf Course	Foss, Russel
21	Ellsworth, Rex C.	Fred & John Troost No. 1 Inc.
22	Engelsma, Jake	Fred & Maynard Troost No. 2 Inc.
23	Engelsma, Susan	Freitas, Beatriz
24	Escojeda, Henry	Freitas, Tony T.
25	Etiwanda Grape Products Co.	Gakle, Louis L.
26	Euclid Ave. Investment One	Galleano Winery, Inc.
27	Euclid Ave. Investment Four	Galleano, Bernard D.
28	Euclid Ave. Three Investment	Galleano, D.
		Galleano, Mary M.

EXHIBIT "C"

1	Garcia, Pete	Hansen, Raymond F.
2	Gardner, Leland V.	Hanson, Ardeth W.
3	Gardner, Lola M.	Harada, James T.
4	Garrett, Leonard E.	Harada, Violet A.
5	Garrett, Patricia T.	Haringa, Earl and Sons
6	Gastelluberry, Catherine	Haringa, Herman
7	Gastelluberry, Jean	Haringa, Rudy
8	Gilstrap, Glen E.	Haringa, William
9	Gilstrap, Marjorie J.	Harper, Cecilia de Mille
10	Godinho, John	Harrington, Winona
11	Godinho, June	Harrison, Jacqueline A.
12	Gonsalves, Evelyn	Hatanaka, Kenichi
13	Gonsalves, John	Heida, Annie
14	Gorzeman, Geraldine	Heida, Don
15	Gorzeman, Henry A.	Heida, Jim
16	Gorzeman, Joe	Heida, Sam
17	Govea, Julia	Helms, Addison D.
18	Goyenetché, Albert	Helms, Irma A.
19	Grace, Caroline E.	Hermans, Alma I.
20	Grace, David J.	Hermans, Harry
21	Gravatt, Glenn W.	Hettinga, Arthur
22	Gravatt, Sally Mae	Hettinga, Ida
23	Greydanus Dairy, Inc.	Hettinga, Judy
24	Greydanus, Rena	Hettinga, Mary
25	Griffin Development Co.	Hettinga, Wilbur
26	Haagsma, Dave	Heublein, Inc., Grocery Products
27	Haagsma, John	Group
28	Hansen, Mary D.	Hibma, Catherine M.

EXHIBIT "C"

1	Hibma, Sidney	Hohberg, Harold C.
2	Hicks, Kenneth I.	Hohberg, Harold W.
3	Hicks, Minnie M.	Holder, Arthur B.
4	Higgins Brick Co.	Holder, Dorothy F.
5	Highstreet, Alfred V.	Holmes, A. Lee
6	Highstreet, Evada V.	Holmes, Frances P.
7	Hilarides, Bertha as Trustee	Hoogeboom, Gertrude
8	Hilarides, Frank	Hoogeboom, Pete
9	Hilarides, John as Trustee	Hoogendam, John
10	Hindelang, Tillie	Hoogendam, Tena
11	Hindelang, William	Houssels, J. K. Thoroughbred
12	Hobbs, Bonnie C.	Farm
13	Hobbs, Charles W.	Hunt Industries
14	Hobbs, Hazel I.	Idsinga, Ann
15	Hobbs, Orlo M.	Idsinga, William W.
16	Hoekstra, Edward	Imbach Ranch, Inc.
17	Hoekstra, George	Imbach, Kenneth E.
18	Hoekstra, Grace	Imbach, Leonard K.
19	Hoekstra, Louie	Imbach, Oscar K.
20	Hofer, Paul B.	Imbach, Ruth M.
21	Hofer, Phillip F.	Indaburu, Jean
22	Hofstra, Marie	Indaburu, Marceline
23	Hogeboom, Jo Ann M.	Iseli, Kurt H.
24	Hogeboom, Maurice D.	Ito, Kow
25	Hogg, David V.	J & B Dairy Inc.
26	Hogg, Gene P.	Jaques, Johnny C. Jr.
27	Hogg, Warren G.	Jaques, Mary
28	Hohberg, Edith J.	Jaques, Mary Lou

EXHIBIT "C"

1	Jay Em Bee Farms	Knevelbaard, John
2	Johnson Bro's Egg Ranches, Inc.	Knudsen, Ejnar
3	Johnston, Ellwood W.	Knudsen, Karen M.
4	Johnston, George F. Co.	Knudsen, Kenneth
5	Johnston, Judith H.	Knudson, Robert
6	Jones, Leonard P.	Knudson, Darlene
7	Jongsma & Sons Dairy	Koel, Helen S.
8	Jongsma, Diana A.	Koetsier, Gerard
9	Jongsma, Dorothy	Koetsier, Gerrit J.
10	Jongsma, George	Koetsier, Jake
11	Jongsma, Harold	Koning, Fred W.
12	Jongsma, Henry	Koning, Gloria
13	Jongsma, John	Koning, J. W. Estate
14	Jongsma, Nadine	Koning, James A.
15	Jongsma, Tillie	Koning, Jane
16	Jordan, Marjorie G.	Koning, Jane C.
17	Jordan, Troy O.	Koning, Jennie
18	Jorritsma, Dorothy	Koning, John
19	Juliano, Albert	Koning, Victor A.
20	Kamper, Cornelis	Kooi Holstein Corporation
21	Kamstra, Wilbert	Koolhaas, Kenneth E.
22	Kaplan, Lawrence J.	Koolhaas, Simon
23	Kasbergen, Martha	Koolhaas, Sophie Grace
24	Kasbergen, Neil	Koopal, Grace
25	Kazian, Angelen Estate of	Koopal, Silas
26	Kingsway, Const. Corp.	Koopman, Eka
27	Klapps Market	Koopman, Gene T.
28	Kline, James K.	Koopman, Henry G.

EXHIBIT "C"

1	Koopman, Ted	Leck, Arthur A.
2	Koopman, Tena	Leck, Evelyn M.
3	Koot, Nick	Lee, Harold E.
4	Koster, Aart	Lee, Helen J.
5	Koster, Frances	Lee, Henrietta C.
6	Koster, Henry B.	Lee, R. T. Construction Co.
7	Koster, Nellie	Lekkerkerk, Adriana
8	Kroes, Jake R.	Lekkerkerk, L. M.
9	Kroeze, Bros	Lekkerkerker, Nellie
10	Kroeze, Calvin E.	Lekkerkerker, Walt
11	Kroeze, John	Lewis Homes of California
12	Kroeze, Wesley	Livingston, Dorothy M.
13	Kruckenberg, Naomi	Livingston, Rex E.
14	Kruckenberg, Perry	Lokey, Rosemary Kraemer
15	L. D. S. Welfare Ranch	Lopes, Candida A.
16	Labrucherie, Mary Jane	Lopes, Antonio S.
17	Labrucherie, Raymond F.	Lopez, Joe D.
18	Lako, Samuel	Lourenco, Carlos, Jr.
19	Landman Corp.	Lourenco, Carmelina P.
20	Lanting, Broer	Lourenco, Jack C.
21	Lanting, Myer	Lourenco, Manual H.
22	Lass, Jack	Lourenco, Mary
23	Lass, Sandra L.	Lourenco, Mary
24	Lawrence, Cecelia, Estate of	Luiten, Jack
25	Lawrence, Joe H., Estate of	Luiz, John M.
26	Leal, Bradley W.	Luna, Christine I.
27	Leal, John C.	Luna, Ruben T.
28	Leal, John Craig	Lusk, John D. and Sons

EXHIBIT "C" A California corporation

1	Lyon, Gregory E.	Mickel, Louise
2	Lyon, Paula E.	Miersma, Dorothy
3	M & W Co. #2	Meirsma, Harry C.
4	Madole, Betty M.	Minaberry, Arnaud
5	Madole, Larry B.	Minaberry, Marie
6	Marquez, Arthur	Mistretta, Frank J.
7	Marquine, Jean	Mocho and Plaa Inc.
8	Martin, Lelon O.	Mocho, Jean
9	Martin, Leon O.	Mocho, Noeline
10	Martin, Maria D.	Modica, Josephine
11	Martin, Tony J.	Montes, Elizabeth
12	Martins, Frank	Montes, Joe
13	Mathias, Antonio	Moons, Beatrice
14	Mc Cune, Robert M.	Moons, Jack
15	Mc Masters, Gertrude	Moramarco, John A. Enterprise
16	Mc Neill, J. A.	Moreno, Louis W.
17	Mc Neill, May F.	Moss, John R.
18	Mees, Leon	Motion Pictures Associates, Inc.
19	Mello and Silva Dairy	Moynier, Joe
20	Mello and Sousa Dairy	Murphy, Frances V.
21	Mello, Emilia	Murphy, Myrl L.
22	Mello, Enos C.	Murphy, Naomi
23	Mello, Mercedes	Nanne, Martin Estate of
24	Mendiondo, Catherine	Nederend, Betty
25	Mendiondo, Dominique	Nederend, Hans
26	Meth. Hosp. - Sacramento	Norfolk, James
27	Metzger, R. S.	Norfolk, Martha
28	Metzger, Winifred	Notrica, Louis

EXHIBIT "C"

1	Nyberg, Lillian N.	Ormonde, Viva
2	Nyenhuis, Annie	Ortega, Adeline B.
3	Nyenhuis, Jim	Ortega, Bernard Dino
4	Occidental Land Research	Osterkamp, Joseph S.
5	Okumura, Marion	Osterkamp, Margaret A.
6	Okumura, Yuiche	P I E Water Co.
7	Oldengarm, Effie	Palmer, Eva E.
8	Oldengarm, Egbert	Palmer, Walter E.
9	Oldengarm, Henry	Parente, Luis S.
10	Oliviera, Manuel L.	Parente, Mary Borba
11	Oliviera, Mary M.	Parks, Jack B.
12	Olson, Albert	Parks, Laura M.
13	Oltmans Construction Co.	Patterson, Lawrence E. Estate of
14	Omlin, Anton	Payne, Clyde H.
15	Omlin, Elsie L.	Payne, Margo
16	Ontario Christian School Assn.	Pearson, Athelia K.
17	Oord, John	Pearson, William C.
18	Oostdam, Jacoba	Pearson, William G.
19	Oostdam, Pete	Pene, Robert
20	Oosten, Agnes	Perian, Miller
21	Oosten, Anthonia	Perian, Ona E.
22	Oosten, Caroline	Petrissans, Deanna
23	Oosten, John	Petrissans, George
24	Oosten, Marinus	Petrissans, Jean P.
25	Oosten, Ralph	Petrissans, Marie T.
26	Orange County Water District	Pickering, Dora M.
27	Ormonde, Manuel	(Mrs. A. L. Pickering)
28	Ormonde, Pete, Jr.	Pierce, John

EXHIBIT "C"

1	Pierce, Sadie	Righetti, A. T.
2	Pietszak, Sally	Riley, George A.
3	Pine, Joe	Riley, Helen C.
4	Pine, Virginia	Robbins, Jack K.
5	Pires, Frank	Rocha, John M.
6	Pires, Marie	Rocha, Jose C.
7	Plaa, Jeanne	Rodrigues, John
8	Plaa, Michel	Rodrigues, Manuel
9	Plantenga, Agnes	Rodrigues, Manuel, Jr.
10	Plantenga, George	Rodrigues, Mary L.
11	Poe, Arlo D.	Rodriguez, Daniel
12	Pomona Cemetery Assn.	Rogers, Jack D.
13	Porte, Cecelia, Estate of	Rohrer, John A.
14	Porte, Garritt, Estate of	Rohrer, Theresa D.
15	Portsmouth, Vera McCarty	Rohrs, Elizabeth H.
16	Ramella, Mary M.	Rossetti, M. S.
17	Ramirez, Concha	Roukema, Angeline
18	Rearick, Hildegard H.	Roukema, Ed.
19	Rearick, Richard R.	Roukema, Nancy
20	Reinalda, Clarence	Roukema, Siebren
21	Reitsma, Greta	Ruderian, Max J.
22	Reitsma, Louis	Russell, Fred J.
23	Rice, Bernice	Rusticus, Ann
24	Rice, Charlie E.	Rusticus, Charles
25	Richards, Karin	Rynsburger, Arie
26	(Mrs. Ronnie Richards)	Rynsburger, Berdena, Trust
27	Richards, Ronald L.	Rynsburger, Joan Adele
28	Ridder, Jennie Wassenaar	Rynsburger, Thomas

EXHIBIT "C"

1	S. P. Annex, Inc.	Scott, Frances M.
2	Salisbury, Elinor J.	Scott, Linda F.
3	Sanchez, Edmundo	Scott, Stanley A.
4	Sanchez, Margarita O.	Scritsmier, Lester J.
5	Santana, Joe Sr.	Serl, Charles A.
6	Santana, Palmira	Serl, Rosalie P.
7	Satragni, John B. Jr.	Shady Grove Dairy, Inc.
8	Scaramella, George P.	Shamel, Burt A.
9	Schaafsma Bros.	Shelby, Harold E.
10	Schaafsma, Jennie	Shelby, John A.
11	Schaafsma, Peter	Shelby, Velma M.
12	Schaafsma, Tom	Shelton, Alice A.
13	Schaap, Andy	Sherwood, Robert W.
14	Schaap, Ids	Sherwood, Sheila J.
15	Schaap, Maria	Shue, Eva
16	Schacht, Sharon C.	Shue, Gilbert
17	Schakel, Audrey	Sieperda, Anne
18	Schakel, Fred	Sieperda, James
19	Schmid, Olga	Sigrist, Hans
20	Schmidt, Madeleine	Sigrist, Rita
21	Schoneveld, Evert	Silveira, Arline L.
22	Schoneveld, Henrietta	Silveira, Frank
23	Schoneveld, John	Silveira, Jack
24	Schoneveld, John Allen	Silveira, Jack P. Jr.
25	Schug, Donald E.	Simas, Dolores
26	Schug, Shirley A.	Simas, Joe
27	Schuh, Bernatta M.	Singleton, Dean
28	Schuh, Harold H.	Singleton, Elsie R.

EXHIBIT "C"

1	Sinnott, Jim	Staal, John
2	Sinnott, Mildred B.	Stahl, Zippora P.
3	Slegers, Dorothy	Stampfl, Berta
4	Slegers, Hubert J.	Stampfl, William
5	Slegers, Jake	Stanley, Robert E.
6	Slegers, Jim	Stark, Everett
7	Slegers, Lenwood M.	Stellingwerf, Andrew
8	Slegers, Martha	Stellingwerf, Henry
9	Slegers, Tesse J.	Stellingwerf, Jenette
10	Smith, Edward S.	Stellingwerf, Shana
11	Smith, Helen D.	Stellingwerf, Stan
12	Smith, James E.	Stelzer, Mike C.
13	Smith, Keith J.	Sterk, Henry
14	Smith, Lester W.	Stiefel, Winifred
15	Smith, Lois Maxine	Stiefel, Jack D.
16	Smith, Marjorie W.	Stigall, Richard L.
17	Soares, Eva	Stigall, Vita
18	Sogioka, Mitsuyoshi	Stockman's Inn
19	Sogioka, Yoshimato	Stouder, Charlotte A.
20	Sousa, Sam	Stouder, William C.
21	Southern Pacific Land Co.	Struikmans, Barbara
22	Southfield, Eddie	Struikmans, Gertie
23	Souza, Frank M.	Struikmans, Henry Jr.
24	Souza, Mary T.	Struikmans, Henry Sr.
25	Spickerman, Alberta	Struikmans, Nellie
26	Spickerman, Florence	Swager, Edward
27	Spickerman, Rudolph	Swager, Gerben
28	Spyksma, John	Swager, Johanna

EXHIBIT "C"

1	Swager, Marion	Terpstra, Theodore G.
2	Swierstra, Donald	Teune, Tony
3	Swierstra, Fanny	Teunissen, Bernard
4	Sybrandy, Ida	Teunissen, Jane
5	Sybrandy, Simon	Thomas, Ethel M.
6	Sytsma, Albert	Thommen, Alice
7	Sytsma, Edith	Thommen, Fritz
8	Sytsma, Jennie	Tillema, Allie
9	Sytsma, Louie	Tillema, Harold
10	Te Velde, Agnes	Tillema, Klaas D.
11	Te Velde, Bay	Timmons, William R.
12	Te Velde, Bernard A.	Tollerup, Barbara
13	Te Velde, Bonnie	Tollerup, Harold
14	Te Velde, Bonnie G.	Trapani, Louis A.
15	Te Velde, George	Trimlett, Arlene R.
16	Te Velde, George, Jr.	Trimlett, George E.
17	Te Velde, Harm	Tristant, Pierre
18	Te Velde, Harriet	Tuinhout, Ale
19	Te Velde, Henry J.	Tuinhout, Harry
20	Te Velde, Jay	Tuinhout, Hilda
21	Te Velde, Johanna	Tuls, Elizabeth
22	Te Velde, John H.	Tuls, Jack S.
23	Te Velde, Ralph A.	Tuls, Jake
24	Te Velde, Zwaantina, Trustee	Union Oil Company of California
25	Ter Maaten, Case	United Dairyman's Co-op.
26	Ter Maaten, Cleone	Urquhart, James G.
27	Ter Maaten, Steve	Usle, Cathryn
28	Terpstra, Carol	Usle, Faustino

EXHIBIT "C"

1	V & Y Properties	Van Hofwegen, Clara
2	Vaile, Beryl M.	Van Hofwegen, Jessie
3	Valley Hay Co.	Van Klaveren, A.
4	Van Beek Dairy Inc.	Van Klaveren, Arie
5	Van Canneyt Dairy	Van Klaveren, Wilhelmina
6	Van Canneyt, Maurice	Van Klaveren, William
7	Van Canneyt, Wilmer	Van Leeuwen, Arie C.
8	Van Dam, Bas	Van Leeuwen, Arie C.
9	Van Dam, Isabelle	Van Leeuwen, Arlan
10	Van Dam, Nellie	Van Leeuwen, Clara G.
11	Van Den Berg, Gertrude	Van Leeuwen, Cornelia L.
12	Van Den Berg, Joyce	Van Leeuwen, Harriet
13	Van Den Berg, Marinus	Van Leeuwen, Jack
14	Van Den Berg, Marvin	Van Leeuwen, John
15	Van Der Linden, Ardith	Van Leeuwen, Letie
16	Van Der Linden, John	Van Leeuwen, Margie
17	Van Der Linden, Stanley	Van Leeuwen, Paul
18	Van Der Veen, Kenneth	Van Leeuwen, William A.
19	Van Diest, Anna T.	Van Ravenswaay, Donald
20	Van Diest, Cornelius	Van Ryn Dairy
21	Van Diest, Ernest	Van Ryn, Dick
22	Van Diest, Rena	Van Surksum, Anthonetta
23	Van Dyk, Bart	Van Surksum, John
24	Van Dyk, Jeanette	Van Veen, John
25	Van Foeken, Martha	Van Vliet, Effie
26	Van Foeken, William	Van Vliet, Hendrika
27	Van Hofwegen, Steve	Van Vliet, Hugo
28	Van Hofwegen, Adrian A.	Van Vliet, Klaas

EXHIBIT "C"

1	Vande Witte, George	Vander Laan, Katie
2	Vanden Berge, Gertie	Vander Laan, Martin Jr.
3	Vanden Berge, Gertie	Vander Laan, Tillie
4	Vanden Berge, Jack	Vander Leest, Anna
5	Vanden Berge, Jake	Vander Leest, Ann
6	Vanden Brink, Stanley	Vander Meer, Alice
7	Vander Dussen, Agnes	Vander Meer, Dick
8	Vander Dussen, Cor	Vander Poel, Hank
9	Vander Dussen, Cornelius	Vander Poel, Pete
10	Vander Dussen, Edward	Vander Pol, Irene
11	Vander Dussen, Geraldine Marie	Vander Pol, Margie
12	Vander Dussen, James	Vander Pol, Marines
13	Vander Dussen, John	Vander Pol, William P.
14	Vander Dussen, Nelvina	Vander Schaaf, Earl
15	Vander Dussen, Rene	Vander Schaaf, Elizabeth
16	Vander Dussen, Sybrand Jr.	Vander Schaaf, Henrietta
17	Vander Dussen, Sybrand Sr.	Vander Schaaf, John
18	Vander Dussen Trustees	Vander Schaaf, Ted
19	Vander Eyk, Case Jr.	Vander Stelt, Catherine
20	Vander Eyk, Case Sr.	Vander Stelt, Clarence
21	Vander Feer, Peter	Vander Tuig, Arlene
22	Vander Feer, Rieka	Vander Tuig, Sylvester
23	Vander Laan, Ann	Vander Veen, Joe A.
24	Vander Laan, Ben	Vandervlag, Robert
25	Vander Laan, Bill	Vander Zwan, Peter
26	Vander Laan, Corrie	Vanderford, Betty W.
27	Vander Laan, Henry	Vanderford, Claud R.
28	Vander Laan, James	Vanderham, Adrian

EXHIBIT "C"

1	Vanderham, Cornelius	Vestal, J. Howard
2	Vanderham, Cornelius P.	Visser, Gerrit
3	Vanderham, Cory	Visser, Grace
4	Vanderham, E. Jane	Visser, Henry
5	Vanderham, Marian	Visser, Jess
6	Vanderham, Martin	Visser, Louie
7	Vanderham, Pete C.	Visser, Neil
8	Vanderham, Wilma	Visser, Sam
9	Vasquez, Eleanor	Visser, Stanley
10	Veenendaal, Evert	Visser, Tony D.
11	Veenendaal, John H.	Visser, Walter G.
12	Veiga, Dominick, Sr.	Von Der Ahe, Fredric T.
13	Verbree, Jack	Von Euw, George
14	Verbree, Tillie	Von Euw, Majorie
15	Verger, Bert	Von Lusk, a limited partnership
16	Verger, Betty	Voortman, Anna Marie
17	Verhoeven, Leona	Voortman, Edward
18	Verhoeven, Martin	Voortman, Edwin J.
19	Verhoeven, Wesley	Voortman, Gertrude Dena
20	Vermeer, Dick	Wagner, Richard H.
21	Vermeer, Jantina	Walker, Carole R.
22	Vernola Ranch	Walker, Donald E.
23	Vernola, Anthonietta	Walker, Wallace W.
24	Vernola, Anthony	Wardle, Donald M.
25	Vernola, Frank	Warner, Dillon B.
26	Vernola, Mary Ann	Warner, Minnie
27	Vernola, Pat F.	Wassenaar, Peter W.
28	Vestal, Frances Lorraine	Waters, Michael

EXHIBIT "C"

1	Weeda, Adriana	Wiersma, Jake
2	Weeda, Daniel	Wiersma, Otto
3	Weeks, O. L.	Wiersma, Pete
4	Weeks, Verona E.	Winchell, Verne H., Trustee
5	Weidman, Maurice	Wind, Frank
6	Weidman, Virginia	Wind, Fred
7	Weiland, Adaline I.	Wind, Hilda
8	Weiland, Peter J.	Wind, Johanna
9	Wesselink, Jules	Woo, Frank
10	West, Katharine R.	Woo, Sem Gee
11	West, Russel	Wybenga, Clarence
12	West, Sharon Ann	Wybenga, Gus
13	Western Horse Property	Wybenga, Gus K.
14	Westra, Alice	Wybenga, Sylvia
15	Westra, Henry	Wynja, Andy
16	Westra, Hilda	Wynja, Iona F.
17	Westra, Jake J.	Yellis, Mildred
18	Weststeyn, Freida	Yellis, Thomas E.
19	Weststeyn, Pete	Ykema-Harmsen Dairy
20	Whitehurst, Louis G.	Ykema, Floris
21	Whitehurst, Pearl L.	Ykema, Harriet
22	Whitmore, David L.	Yokley, Betty Jo
23	Whitmore, Mary A.	Yokley, Darrell A.
24	Whitney, Adolph M.	Zak, Zan
25	Wiersema, Harm	Zivelonghi, George
26	Wiersema, Harry	Zivelonghi, Margaret
27	Wiersma, Ellen H.	Zwaagstra, Jake
28	Wiersma, Gladys J.	Zwaagstra, Jessie M.
		Zwart, Case

EXHIBIT "C"

NON-PRODUCER WATER DISTRICTS

Chino Basin Municipal Water District

Chino Basin Water Conservation District

Pomona Valley Municipal Water District

Western Municipal Water District of Riverside County

EXHIBIT "C"

DEFAULTING OVERLYING AGRICULTURAL PRODUCERS

Cheryl L. Bain	Roy W. Lantis
Warren Bain	Sharon I. Lantis
John M. Barcelona	Frank Lorenz
Letty Bassler	Dagney H. MacDonald
John Brazil	Frank E. Martin
John S. Briano	Ruth C. Martin
Lupe Briano	Connie S. Mello
Paul A. Briano	Nalديو J. Mello
Tillie Briano	Felice Miller
Arnie B. Carlson	Ted Miller
John Henry Fikse	Masao Nerio
Phyllis S. Fikse	Tom K. Nerio
Lewellyn Flory	Toyo Nerio
Mary I. Flory	Yuriko Nerio
L. H. Glazer	Harold L. Rees
Dorothy Goodman	Alden G. Rose
Sidney D. Goodman	Claude Rouleau, Jr.
Frank Grossi	Patricia M. Rouleau
Harada Brothers	Schultz Enterprises
Ellen Hettinga	Albert Shaw
Hein Hettinga	Lila Shaw
Dick Hofstra, Jr.	Cathy M. Stewart
Benjamin M. Hughey	Marvin C. Stewart
Frieda L. Hughey	Betty Ann Stone
Guillaume Indart	John B. Stone
Ellwood B. Johnston, Trustee	Vantoll Cattle Co., Inc.
Perry Kruckenberg, Jr.	Catherine Verburg

EXHIBIT "C"

1 Martin Verburg
2 Donna Vincent
3 Larry Vincent
4 Cliff Wolfe & Associates
5 Ada M. Woll
6 Zarubica Co.

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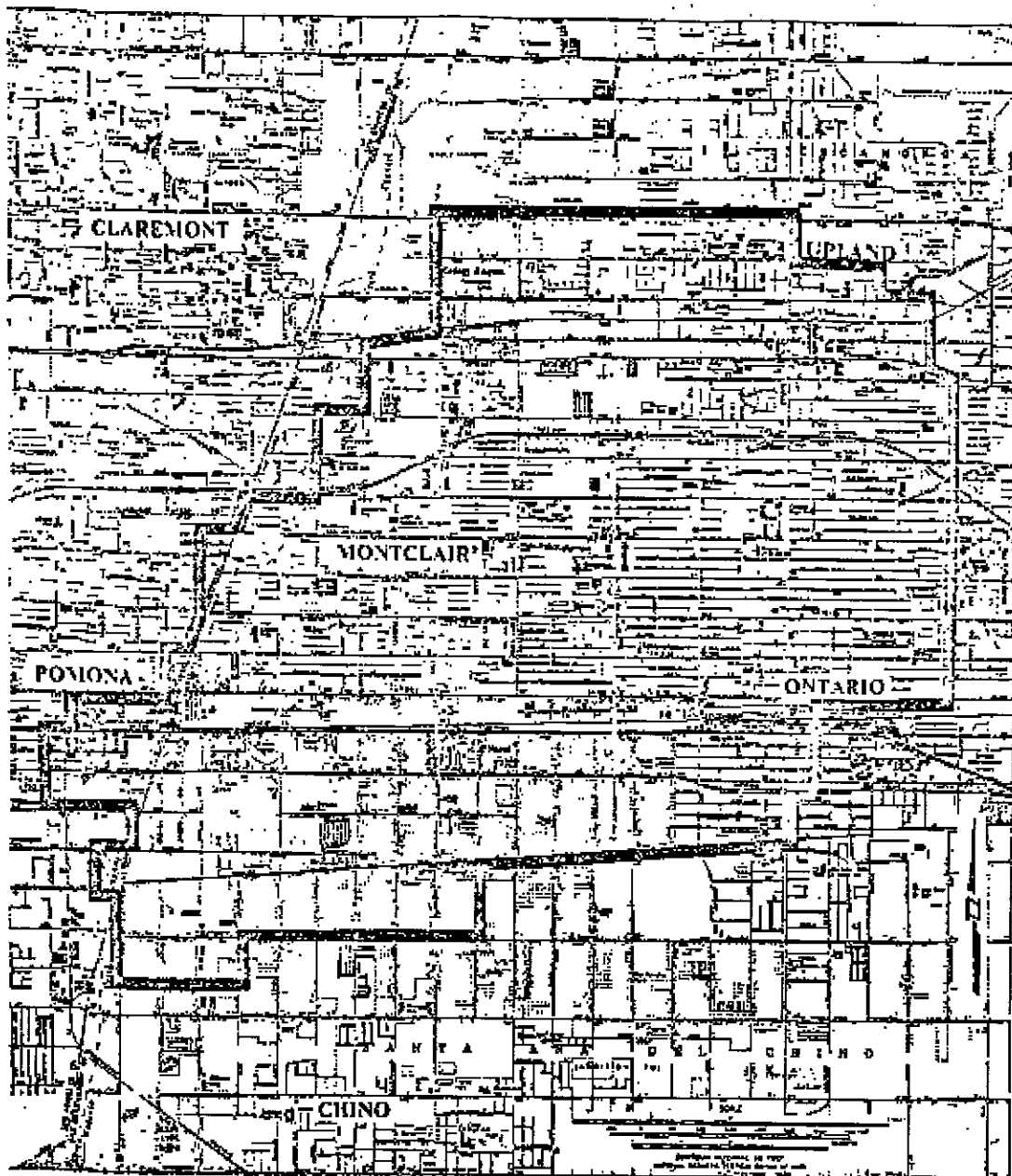
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EXHIBIT "C"



**CHINO BASIN
IN LIEU AREA NO. 1**

EXHIBIT "J"
-82-

EXHIBIT "D"

OVERLYING NON-AGRICULTURAL RIGHTS

Party	Total Overlying Non-Agricultural Rights (Acre Feet)	Share of Safe Yield (Acre Feet)
Ameron Steel Producers	125	97.858
County Of San Bernardino	171	133.870
Conrock Company	406	317.844
Kaiser Steel Corporation	3,743	2,930.274
Red Star Fertilizer	20	15.657
Southern California Edison Co.	1,255	982.499
Space Center, Mira Loma	133	104.121
Southern Service Co., dba		
Blue Seal Linen	24	18.789
Sunkist, Orange Products Division	2,393	1,873.402
Carlsberg Mobile Home Properties,		
Ltd. '73	593	464.240
Union Carbide Corporation	546	427.446
Quaker Chemical Co.	0	0
Totals	9,409	7,366.00

EXHIBIT "E"
APPROPRIATIVE RIGHTS

<u>Party</u>	<u>Appropriative Right (Acre Feet)</u>	<u>Share of Initial Operating Safe Yield (Acre Feet)</u>	<u>Share of Operating Safe Yield (Percent)</u>
City of Chino	5,271.7	3,670.067	6.693
City of Norco	289.5	201.545	0.368
City of Ontario	16,337.4	11,373.816	20.742
City of Pomona	16,110.5	11,215.852	20.454
City of Upland	4,097.2	2,852.401	5.202
Cucamonga County Water District	4,431.0	3,084.786	5.626
Jurupa Community Services District	1,104.1	768.655	1.402
Monte Vista County Water District	5,958.7	4,148.344	7.565
West San Bernardino County Water District	925.5	644.317	1.175
Etiwanda Water Company	768.0	534.668	0.975
Felspar Gardens Mutual Water Company	68.3	47.549	0.087
Fontana Union Water Co.	9,188.3	6,396.736	11.666
Marygold Mutual Water Co.	941.3	655.317	1.195
Mira Loma Water Co.	1,116.0	776.940	1.417
Monte Vista Irr. Co.	972.1	676.759	1.234
Mutual Water Company of Glen Avon Heights	672.2	467.974	0.853
Park Water Company	236.1	164.369	0.300
Pomona Valley Water Co.	3,106.3	2,162.553	3.944
San Antonio Water Co.	2,164.5	2,506.888	2.748
Santa Ana River Water Company	1,869.3	1,301.374	2.373
Southern California Water Company	1,774.5	1,235.376	2.253
West End Consolidated Water Company	1,361.3	947.714	1.728
TOTAL	78,763.8	54,834.000	100.000

EXHIBIT 'E'

EXHIBIT "F"
OVERLYING (AGRICULTURAL) POOL
POOLING PLAN

1. Membership in Pool. The State of California and all producers listed in Exhibit "C" shall be the initial members of this pool, which shall include all producers of water for overlying uses other than industrial or commercial purposes.

2. Pool Meetings. The members of the pool shall meet annually, in person or by proxy, at a place and time to be designated by Watermaster for purposes of electing members of the Pool Committee and conducting any other business of the pool. Special meetings of the membership of the pool may be called and held as provided in the rules of the pool.

3. Voting. All voting at meetings of pool members shall be on the basis of one vote for each 100 acre feet or any portion thereof of production from Chino Basin during the preceding year, as shown by the records of Watermaster.

4. Pool Committee. The Pool Committee for this pool shall consist of not less than nine (9) representatives selected at large by members of the pool. The exact number of members of the Pool Committee in any year shall be as determined by majority vote of the voting power of members of the pool in attendance at the annual pool meeting. Each member of the Pool Committee shall have one vote and shall serve for a two-year term. The members first elected shall classify themselves by lot so that approximately one-half serve an initial one-year term. Vacancies during any term shall be filled by a majority of the remaining members of the Pool Committee.

5. Advisory Committee Representatives. The number of

1 representatives of the Pool Committee on the Advisory Committee
2 shall be as provided in the rules of the pool from time to time
3 but not exceeding ten (10). The voting power of the pool on the
4 Advisory Committee shall be apportioned and exercised as deter-
5 mined from time to time by the Pool Committee.

6 6. Replenishment Obligation. The pool shall provide funds
7 for replenishment of any production by persons other than members
8 of the Overlying (Non-agricultural) Pool or Appropriator Pool, in
9 excess of the pool's share of Safe Yield. During the first five
10 (5) years of operations of the Physical Solution, reasonable
11 efforts shall be made by the Pool Committee to equalize annual
12 assessments.

13 7. Assessments. All assessments in this pool (whether for
14 replenishment water cost or for pool administration or the allo-
15 cated share of Watermaster administration) shall be in an amount
16 uniformly applicable to all production in the pool during the
17 preceding year or calendar quarter. Provided, however, that the
18 Agricultural Pool Committee, may recommend to the Court modifica-
19 tion of the method of assessing pool members, inter se, if the
20 same is necessary to attain legitimate basin management objectives,
21 including water conservation and avoidance of undesirable socio-
22 economic consequences. Any such modification shall be initiated
23 and ratified by one of the following methods:

24 (a) Excess Production. - In the event total pool
25 production exceeds 100,000 acre feet in any year, the Pool
26 Committee shall call and hold a meeting, after notice to all
27 pool members, to consider remedial modification of the
28 assessment formula.

1 (b) Producer Petition. - At any time after the fifth
2 full year of operation under the Physical Solution, a peti-
3 tion by ten percent (10%) of the voting power or membership
4 of the Pool shall compel the holding of a noticed meeting
5 to consider revision of said formula of assessment for re-
6 plenishment water.

7 In either event, a majority action of the voting power in attend-
8 ance at such pool members' meeting shall be binding on the Pool
9 Committee.

10 8. Rules. The Pool Committee shall adopt rules for con-
11 ducting meetings and affairs of the committee and for adminis-
12 tering its program and in amplification of the provisions, but not
13 inconsistent with, this pooling plan.

EXHIBIT "G"
OVERLYING (NON-AGRICULTURAL) POOL
POOLING PLAN

1. Membership in Pool. The initial members of the pool, together with the decreed share of the Safe Yield of each, are listed in Exhibit "D". Said pool includes producers of water for overlying industrial or commercial (non-agricultural) purposes, or such producers within the Pool who may hereafter take water pursuant to Paragraph 8 hereof.

2. Pool Committee. The Pool Committee for this pool shall consist of one representative designated by each member of the pool. Voting on the committee shall be on the basis of one vote for each member, unless a volume vote is demanded, in which case votes shall be allocated as follows:

The volume voting power on the Pool Committee shall be 1,484 votes. Of these, 742 votes shall be allocated on the basis of one vote for each ten (10) acre feet or fraction thereof of decreed shares in Safe Yield. (See Exhibit "D") The remaining 742 votes shall be allocated proportionally on the basis of assessments paid to Watermaster during the preceding year.*

3. Advisory Committee Representatives. At least three (3) members of the Pool Committee shall be designated by said committee to serve on the Advisory Committee. The exact number of such representatives at any time shall be as determined by the Pool Committee. The voting power of the pool shall be exercised in the

*Or production assessments paid under Water Code Section 72140 et seq., as to years prior to the second year of operation under the Physical Solution hereunder.

1 Advisory Committee as a unit, based upon the vote of a majority of
2 said representatives.

3 4. Replenishment Obligation. The pool shall provide funds
4 for replenishment of any production in excess of the pool's share
5 of Safe Yield in the preceding year.

6 5. Assessment. Each member of this pool shall pay an assess-
7 ment equal to the cost of replenishment water times the number of
8 acre feet of production by such producer during the preceding year
9 in excess of (a) his decreed share of the Safe Yield, plus (b) any
10 carry-over credit under Paragraph 7 hereof. In addition, the cost
11 of the allocated share of Watermaster administration expense shall
12 be recovered on an equal assessment against each acre foot of
13 production in the pool during such preceding fiscal year or calen-
14 dar quarter; and in the case of Pool members who take substitute
15 ground water as set forth in Paragraph 8 hereof, such producer
16 shall be liable for its share of administration assessment, as if
17 the water so taken were produced, up to the limit of its decreed
18 share of Safe Yield.

19 6. Assignment. Rights herein decreed are appurtenant to the
20 land and are only assignable with the land for overlying use
21 thereon; provided, however, that any appropriator who may, directly
22 or indirectly, undertake to provide water service to such overlying
23 lands may, by an appropriate agency agreement on a form approved by
24 Watermaster, exercise said overlying right to the extent, but only
25 to the extent necessary to provide water service to said overlying
26 lands.

27 7. Carry-over. Any member of the pool who produces less
28 than its assigned water share of Safe Yield may carry such unexercised

1 right forward for exercise in subsequent years. The first water
2 produced during any such subsequent year shall be deemed to be an
3 exercise of such carry-over right. In the event the aggregate
4 carry-over by any pool member exceeds its share of Safe Yield, such
5 member shall, as a condition of preserving such surplus carry-over,
6 execute a storage agreement with Watermaster.

7 8. Substitute Supplies. To the extent that any Pool member,
8 at the request of Watermaster and with the consent of the Advisory
9 Committee, takes substitute surface water in lieu of producing
10 ground water otherwise subject to production as an allocated share
11 of Safe Yield, said party shall nonetheless remain a member of this
12 Pool.

13 9. Rules. The Pool Committee shall adopt rules for adminis-
14 tering its program and in amplification of the provisions, but not
15 inconsistent with, this pooling plan.

EXHIBIT "H"
APPROPRIATIVE POOL
POOLING PLAN

1. Qualification for Pool. Any city, district or other public entity and public utility -- either regulated under Public Utilities Commission jurisdiction, or exempt therefrom as a non-profit mutual water company (other than those assigned to the Overlying (Agricultural) Pool) -- shall be a member of this pool. All initial members of the pool are listed in Exhibit "E", together with their respective appropriative rights and acre foot allocation and percentage shares of the initial and subsequent Operating Safe Yield.

2. Pool Committee. The Pool Committee shall consist of one (1) representative appointed by each member of the Pool.

3. Voting. The total voting power on the Pool Committee shall be 1,000 votes. Of these, 500 votes shall be allocated in proportion to decreed percentage shares in Operating Safe Yield. The remaining 500 votes shall be allocated proportionally on the basis of assessments paid to Watermaster during the preceding year.* Routine business of the Pool Committee may be conducted on the basis of one vote per member, but upon demand of any member a weighted vote shall be taken. Affirmative action of the Committee shall require a majority of the voting power of members in attendance, provided that it includes concurrence by at least one-third of its total members.

4. Advisory Committee Representatives. Ten (10) members of

*Or production assessments paid under Water Code Section 72140 et seq., as to years prior to the second year of operation under the Physical Solution hereunder.

1 the Pool Committee shall be designated to represent this pool on
2 the Advisory Committee. Each major appropriator, i.e., the owner
3 of an adjudicated appropriative right in excess of 3,000 acre feet,
4 shall be entitled to one representative. The remaining members
5 representing the Appropriative Pool on the Advisory Committee shall
6 be elected at large by the remaining members of the pool. The
7 voting power of the Appropriative Pool on the Advisory Committee
8 shall be apportioned between the major appropriator representatives
9 in proportion to their respective voting power in the Pool Comm-
10 ittee. The remaining two representatives shall exercise equally
11 the voting power proportional to the Pool Committee voting power
12 of all remaining appropriators; provided, however, that if any
13 representative fails to attend an Advisory Committee meeting, the
14 voting power of that representative shall be allocated among the
15 representatives of the Appropriator Pool in attendance in the same
16 proportion as their own respective voting powers.

17 5. Replenishment Obligation. The pool shall provide funds
18 for purchase of replenishment water to replace any production by
19 the pool in excess of Operating Safe Yield during the preceding
20 year.

21 6. Administrative Assessment. Costs of administration of
22 this pool and its share of general Watermaster expense shall be
23 recovered by a uniform assessment applicable to all production
24 during the preceding year.

25 7. Replenishment Assessment. The cost of replenishment water
26 required to replace production from Chino Basin in excess of
27 Operating Safe Yield in the preceding year shall be allocated and recovered
28 as follows:

1 (a) For production, other than for increased export,
2 within CBMWD or WMWD:

3 (1) Gross Assessment. 15% of such replenishment
4 water costs shall be recovered by a uniform assessment
5 against all production of each appropriator producing in
6 said area during the preceding year.

7 (2) Net Assessment. The remaining 85% of said
8 costs shall be recovered by a uniform assessment on each
9 acre foot of production from said area by each such
10 appropriator in excess of his allocated share of Oper-
11 ating Safe Yield during said preceding year.

12 (b) For production which is exported for use outside
13 Chino Basin in excess of maximum export in any year through
14 1976, such increased export production shall be assessed
15 against the exporting appropriator in an amount sufficient to
16 purchase replenishment water from CBMWD or WMWD in the amount
17 of such excess.

18 (c) For production within SBVMWD or PVMWD:

19 By an assessment on all production in excess of
20 an appropriator's share of Operating Safe Yield in an
21 amount sufficient to purchase replenishment water through
22 SBVMWD or MWD in the amount of such excess.

23 8. Socio-Economic Impact Review. The parties have conducted
24 certain preliminary socio-economic impact studies. Further and
25 more detailed socio-economic impact studies of the assessment
26 formula and its possible modification shall be undertaken for the
27 Appropriator Pool by Watermaster no later than ten (10) years from
28 the effective date of this Physical Solution, or whenever total

1 production by this pool has increased by 30% or more over the
2 decreed appropriative rights, whichever is first.

3 9. Facilities Equity Assessment. Watermaster may, upon
4 recommendation of the Pool Committee, institute proceedings for
5 levy and collection of a Facilities Equity Assessment for the
6 purposes and in accordance with the procedures which follow:

7 (a) Implementing Circumstances. - There exist several
8 sources of supplemental water available to Chino Basin, each
9 of which has a differential cost and quantity available. The
10 optimum management of the entire Chino Basin water resource
11 favors the maximum use of the lowest cost supplemental water
12 to balance the supplies of the Basin, in accordance with the
13 Physical Solution. The varying sources of supplemental water
14 include importations from MWD and SBVMWD, importation of
15 surface and ground water supplies from other basins in the
16 immediate vicinity of Chino Basin, and utilization of re-
17 claimed water. In order to fully utilize any of such alter-
18 nate sources of supply, it will be essential for particular
19 appropriators having access to one or more of such supplies to
20 have invested, or in the future to invest, directly or in-
21 directly, substantial funds in facilities to obtain and
22 deliver such water to an appropriate point of use. To the
23 extent that the use of less expensive alternative sources of
24 supplemental water can be maximized by the inducement of a
25 Facilities Equity Assessment, as herein provided, it is to the
26 long-term benefit of the entire basin that such assessment be
27 authorized and levied by Watermaster.

28 (b) Study and Report. - At the request of the Pool

EXHIBIT "H"

1 Committee, Watermaster shall undertake a survey study of the
2 utilization of alternate supplemental supplies by members of
3 the Appropriative Pool which would not otherwise be utilized
4 and shall prepare a report setting forth the amount of such
5 alternative supplies being currently utilized, the amount of
6 such supplies which could be generated by activity within the
7 pool, and the level of cost required to increase such uses and
8 to optimize the total supplies available to the basin. Said
9 report shall contain an analysis and recommendation for the
10 levy of a necessary Facilities Equity Assessment to accomplish
11 said purpose.

12 (c) Hearing. - If the said report by Watermaster contains
13 a recommendation for imposition of a Facilities Equity Assess-
14 ment, and the Pool Committee so requests, Watermaster shall
15 notice and hold a hearing not less than 60 days after dis-
16 tribution of a copy of said report to each member of the pool,
17 together with a notice of the hearing date. At such hearing,
18 evidence shall be taken with regard to the necessity and
19 propriety of the levy of a Facilities Equity Assessment and
20 full findings and decision shall be issued by Watermaster.

21 (d) Operation of Assessment. - If Watermaster determines
22 that it is appropriate that a Facilities Equity Assessment be
23 levied in a particular year, the amount of additional supple-
24 mental supplies which should be generated by such assessment
25 shall be estimated. The cost of obtaining such supplies,
26 taking into consideration the investment in necessary
27 facilities shall then be determined and spread equitably among
28 the producers within the pool in a manner so that those

1 producers not providing such additional lower cost supple-
2 mental water, and to whom a financial benefit will result, may
3 bear a proportionate share of said costs, not exceeding said
4 benefit; provided that any producer furnishing such supple-
5 mental water shall not thereby have its average cost of water
6 in such year reduced below such producer's average cost of
7 pumping from the Basin. In so doing, Watermaster shall
8 establish a percentage of the total production by each party
9 which may be produced without imposition of a Facilities
10 Equity Assessment. Any member of the pool producing more
11 water than said percentage shall pay such Facilities Equity
12 Assessment on any such excess production. Watermaster is
13 authorized to transmit and pay the proceeds of such Facilities
14 Equity Assessment to those producers who take less than their
15 share of Basin water by reason of furnishing a higher per-
16 centage of their requirements through use of supplemental
17 water.

18 10. Unallocated Safe Yield Water. To the extent that, in any
19 five years, any portion of the share of Safe Yield allocated to
20 the Overlying (Agricultural) Pool is not produced, such water shall
21 be available for reallocation to members of the Appropriative Pool,
22 as follows:

23 (a) Priorities. - Such allocation shall be made in the
24 following sequence:

25 (1) to supplement, in the particular year, water
26 available from Operating Safe Yield to compensate for any
27 reduction in the Safe Yield by reason of recalculation
28 thereof after the tenth year of operation hereunder.

1 (2) pursuant to conversion claims as defined in
2 Subparagraph (b) hereof.

3 (3) as a supplement to Operating Safe Yield,
4 without regard to reductions in Safe Yield.

5 (b) Conversion Claims. - The following procedures may be
6 utilized by any appropriator:

7 (1) Record of Land Use Conversion. Any appro-
8 priator who undertakes, directly or indirectly, dur-
9 ing any year, to permanently provide water service to
10 lands which during the immediate preceding five (5)
11 consecutive years was devoted to irrigated agriculture
12 may report such change in land use or water service to
13 Watermaster. Watermaster shall thereupon verify such
14 change in water service and shall maintain a record and
15 account for each appropriator of the total acreage
16 involved and the average annual water use during said
17 five-year period.

18 (2) Establishment of Allocation Percentage. In
19 any year in which unallocated Safe Yield water from
20 the Overlying (Agricultural) Pool is available for such
21 conversion claims, Watermaster shall establish allocable
22 percentages for each appropriator based upon the total
23 of such converted acreage recorded to each such appro-
24 priator's account.

25 (3) Allocation and Notice. Watermaster shall
26 thereafter apply the allocated percentage to the total
27 unallocated Safe Yield water available for special
28 allocation to derive the amount thereof allocable to

1 each appropriator; provided that in no event shall the
2 allocation to any appropriator as a result of such
3 conversion claim exceed 50% of the average annual amount
4 of water actually applied to the areas converted by such
5 appropriator prior to such conversion. Any excess water
6 by reason of such limitation on any appropriator's right
7 shall be added to Operating Safe Yield. Notice of such
8 special allocation shall be given to each appropriator
9 and shall be treated for purposes of this Physical
10 Solution as an addition to such appropriator's share of
11 the Operating Safe Yield for the particular year only.

12 (4) Administrative Costs. Any costs of Water-
13 master attributable to administration of such special
14 allocations and conversion claims shall be assessed
15 against appropriators participating in such reporting.

16 11. In Lieu Procedures. There are, or any develop, certain
17 areas within Chino Basin where good management practices dictate
18 that recharge of the basin be accomplished, to the extent prac-
19 tical, by taking surface supplies of supplemental water in lieu of
20 ground water otherwise subject to production as an allocated share
21 of Operating Safe Yield.

22 (a) Method of Operation. - An appropriator producing
23 water within such designated in lieu area who is willing to
24 abstain for any reason from producing any portion of such
25 producer's share of Operating Safe Yield in any year may
26 offer such unpumped water to Watermaster. In such event,
27 Watermaster shall purchase said water in place, in lieu of
28 spreading replenishment water, which is otherwise required to

1 make up for over production. The purchase price for in lieu
2 water shall be the lesser of:

3 (1) Watermaster's current cost of replenishment
4 water, whether or not replenishment water is currently
5 then obtainable, plus the cost of spreading; or

6 (2) The cost of supplemental surface supplies to
7 the appropriator, less

8 a. said appropriator's average cost of
9 ground water production, and

10 b. the applicable production assessment
11 were the water produced.

12 Where supplemental surface supplies consist of MWD or
13 SBVMWD supplies, the cost of treated, filtered State
14 water from such source shall be deemed the cost of
15 supplemental surface supplies to the appropriator for
16 purposes of such calculation.

17 In any given year in which payments may be made pursuant to
18 a Facilities Equity Assessment, as to any given quantity of
19 water the party will be entitled to payment under this
20 section or pursuant to the Facilities Equity Assessment, as
21 the party elects, but not under both.

22 (b) Designation of In Lieu Areas. - The first in lieu
23 area is designated as the "In Lieu Area No. 1" and consists
24 of an area wherein nitrate levels in the ground water gen-
25 erally exceed 45 mg/l, and is shown on Exhibit "J" hereto.
26 Other in lieu areas may be designated by subsequent order of
27 Watermaster upon recommendation or approval by Advisory
28 Committee. Said in lieu areas may be enlarged, reduced or

1 eliminated by subsequent orders; provided, however, that
2 designation of In Lieu Areas shall be for a minimum fixed
3 term sufficient to justify necessary capital investment. In
4 Lieu Area No. 1 may be enlarged, reduced or eliminated in
5 the same manner, except that any reduction of its original
6 size or elimination thereof shall require the prior order of
7 Court.

8 12. Carry-over. Any appropriator who produces less than his
9 assigned share of Operating Safe Yield may carry such unexercised
10 right forward for exercise in subsequent years. The first water
11 produced during any such subsequent year shall be deemed to be an
12 exercise of such carry-over right. In the event the aggregate
13 carry-over by any appropriator exceeds its share of Operating Safe
14 Yield, such appropriator shall, as a condition of preserving such
15 surplus carry-over, execute a storage agreement with Watermaster.
16 Such appropriator shall have the option to pay the gross assess-
17 ment applicable to such carry-over in the year in which it accrued.

18 13. Assignment, Transfer and Lease. Appropriative rights,
19 and corresponding shares of Operating Safe Yield, may be assigned
20 or may be leased or licensed to another appropriator for exercise
21 in a given year. Any transfer, lease or license shall be ineffec-
22 tive until written notice thereof is furnished to and approved as
23 to form by Watermaster, in compliance with applicable Watermaster
24 rules. Watermaster shall not approve transfer, lease or license of
25 a right for exercise in an area or under conditions where such
26 production would be contrary to sound basin management or detri-
27 mental to the rights or operations of other producers.

28 14. Rules. The Pool Committee shall adopt rules for

1 administering its program and in amplification of the provisions,
2 but not inconsistent with, this pooling plan.

EXHIBIT "I"

ENGINEERING APPENDIX

1. Basin Management Parameters. In the process of implementing the physical solution for Chino Basin, Watermaster shall consider the following parameters:

(a) Pumping Patterns. - Chino Basin is a common supply for all persons and agencies utilizing its waters. It is an objective in management of the Basin's waters that no producer be deprived of access to said waters by reason of unreasonable pumping patterns, nor by regional or localized recharge of replenishment water, insofar as such result may be practically avoided.

(b) Water Quality. - Maintenance and improvement of water quality is a prime consideration and function of management decisions by Watermaster.

(c) Economic Considerations. - Financial feasibility, economic impact and the cost and optimum utilization of the Basin's resources and the physical facilities of the parties are objectives and concerns equal in importance to water quantity and quality parameters.

2. Operating Safe Yield. Operating Safe Yield in any year shall consist of the Appropriative Pool's share of Safe Yield of the Basin, plus any controlled overdraft of the Basin which Watermaster may authorize. In adopting the Operating Safe Yield for any year, Watermaster shall be limited as follows:

(a) Accumulated Overdraft. - During the operation of this Judgment and Physical Solution, the overdraft accumulated from and after the effective date of the Physical

1 Solution and resulting from an excess of Operating Safe Yield
2 over Safe Yield shall not exceed 200,000 acre feet.

3 (b) Quantitative Limits. - In no event shall Operating
4 Safe Yield in any year be less than the Appropriative Pool's
5 share of Safe Yield, nor shall it exceed such share of Safe
6 Yield by more than 10,00 acre feet. The initial Operating
7 Safe Yield is hereby set at 54,834 acre feet per year.
8 Operating Safe Yield shall not be changed upon less than five
9 (5) years' notice by Watermaster.

10 Nothing contained in this paragraph shall be deemed to authorize,
11 directly or indirectly, any modification of the allocation of
12 shares in Safe Yield to the overlying pools, as set forth in
13 Paragraph 44 of the Judgment.

14 3. Ground Water Storage Agreements. Any agreements author-
15 ized by Watermaster for storage of supplemental water in the
16 available ground water storage capacity of Chino Basin shall
17 include, but not be limited to:

18 (a) The quantities and term of the storage right.

19 (b) A statement of the priority or relation of said
20 right, as against overlying or Safe Yield uses, and other
21 storage rights.

22 (c) The procedure for establishing delivery rates,
23 schedules and procedures which may include:

24 [1] spreading or injection, or

25 [2] in lieu deliveries of supplemental water for
26 direct use.

27 (d) The procedures for calculation of losses and annual
28 accounting for water in storage by Watermaster.

1 (e) The procedures for establishment and adminis-
2 tration of withdrawal schedules, locations and methods.
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EXHIBIT "I"

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2

CHINO BASIN

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IN LIEU ARE NO. 1 (MAP)

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EXHIBIT "J"

1 LEGAL DESCRIPTION
2 OF CHINO BASIN
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4

5 Preamble
6
7

8 All of the townships and ranges referred to in the following legal
9 description are the San Bernardino Base and Meridian. Certain designated
10 sections are implied as the System of Government Surveys may be extended
11 where not established. Said sections are identified as follows:

12 Section 20, T1N, R8W is extended across
13 Rancho Cucamonga;

14 Section 36, T1N, R8W is extended across the City
15 of Upland;

16 Sections 2,3, and 4, T1S, R7W are extended
17 across Rancho Cucamonga;

18 Section 10, T1S, R8W is extended across the City
19 of Claremont;

20 Sections 19, 20, 21, 30, 31 and 32, T1S, R8W are
21 extended across the City of Pomona;

22 Sections 4, 5, and 28, T2S, R8W are extended
23 across Rancho Santa Ana Del Chino;

24 Sections 15 and 16, T3S, R7W are extended across
25 Rancho La Sierra; and

26 Sections 17 and 20, T3S, R7W are extended across
27 Rancho El Rincon.

28 Description

Chino Basin is included within portions of the Counties
of San Bernardino, Riverside and Los Angeles, State of
California, bounded by a continuous line described as follows:

BEGINNING at the Southwest corner of Lot 241 as shown
on Map of Ontario Colony Lands, recorded in Map Book 11,
page 6, Office of the County Recorder of San Bernardino
County, said corner being the Point of Beginning;

1. Thence Southeasterly to the Southeast corner

EXHIBIT "K"

1 of Lot 419 of said Ontario Colony Lands;

2 2. Thence Southeasterly to a point 1300 feet
3 North of the South line and 1300 feet East of the West
4 line of Section 4, T1S, R7W;

5 3. Thence Easterly to a point on the East line of
6 Section 4, 1800 feet North of the Southeast corner of
7 said Section 4;

8 4. Thence Easterly to the Southeast corner of the
9 Southwest quarter of the Northeast quarter of Section
10 3, T1S, R7W;

11 5. Thence Northeasterly to a point on the North
12 line of Section 2, T1S, R7W, 1400 feet East of the West
13 line of said Section 2;

14 6. Thence Northeasterly to the Southwest corner
15 of Section 18, T1N, R6W;

16 7. Thence Northerly to the Northwest corner of
17 said Section 18;

18 8. Thence Easterly to the Northeast corner of
19 said Section 18;

20 9. Thence Northerly to the Northwest corner of
21 the Southwest Quarter of Section 8, T1N, R6W;

22 10. Thence Easterly to the Northeast corner of
23 said Southwest quarter of said Section 8;

24 11. Thence Southerly to the Southeast corner of
25 said Southwest Quarter of said Section 8;

26 12. Thence Easterly to the Northeast corner of
27 Section 17, T1N, R6W;

28 13. Thence Easterly to the Northeast corner of
Section 16, T1N, R6W;

14. Thence Southeasterly to the Northwest corner
of the Southeast quarter of Section 15, T1N, R6W;

15. Thence Easterly to the Northeast corner of
said Southeast quarter of said Section 15;

16. Thence Southeasterly to the Northwest corner
of the Northeast quarter of Section 23, T1N, R6W;

17. Thence Southeasterly to the Northwest corner
of Section 25, T1N, R6W;

EXHIBIT "K"

- 1 18. Thence Southeasterly to the Northwest corner
2 of the Northeast quarter of Section 31, T1N, R5W;
- 3 19. Thence Southeasterly to the Northeast corner
4 of the Northwest quarter of Section 5, T1S, R5W;
- 5 20. Thence Southeasterly to the Southeast corner
6 of Section 4, T1S, R5W;
- 7 21. Thence Southeasterly to the Southeast corner
8 of the Southwest quarter of Section 11, T1S, R5W;
- 9 22. Thence Southwesterly to the Southwest corner
10 of Section 14, T1S, R5W;
- 11 23. Thence Southwest to the Southwest corner of
12 Section 22, T1S, R5W;
- 13 24. Thence Southwesterly to the Southwest
14 corner of the Northeast quarter of Section 6, T2S,
15 R5W;
- 16 25. Thence Southeasterly to the Northeast corner
17 of Section 18, T2S, R5W;
- 18 26. Thence Southwesterly to the Southwest corner
19 of the Southeast quarter of Section 13, T2S, R6W;
- 20 27. Thence Southwesterly to the Southwest corner
21 of the Northeast quarter of Section 26, T2S, R6W;
- 22 28. Thence Westerly to the Southwest corner of
23 the Northwest quarter of said Section 26;
- 24 29. Thence Northerly to the Northwest corner of
25 said Section 26;
- 26 30. Thence Westerly to the Southwest corner of
27 Section 21, T2S, R6W;
- 28 31. Thence Southerly to the Southeast corner of
Section 29, T2S, R6W;
32. Thence Westerly to the Southeast corner of
Section 30, T2S, R6W;
33. Thence Southwesterly to the Southwest corner
of Section 36, T2S, R7W;
34. Thence Southwesterly to the Southeast corner
of Section 3, T3S, R7W;
35. Thence Southwesterly to the Southwest corner
of the Northeast quarter of Section 10, T3S, R7W;

- 1 36. Thence Southerly to the Northeast corner of
2 the Northwest quarter of Section 15, T3S, R7W;
- 3 37. Thence Southwesterly to the Southeast corner
4 of the Northeast quarter of Section 16, T3S, R7W;
- 5 38. Thence Southwesterly to the Southwest corner
6 of said Section 16;
- 7 39. Thence Southwesterly to the Southwest corner
8 of the Northeast quarter of Section 20, T3S, R7W;
- 9 40. Thence Westerly to the Southwest corner of
10 the Northwest quarter of said Section 20;
- 11 41. Thence Northerly to the Northwest corner of
12 Section 17, T3S, R7W;
- 13 42. Thence Westerly to the Southwest corner of
14 Section 7, T3S, R7W;
- 15 43. Thence Northerly to the Southwest corner of
16 Section 6, T3S, R7W;
- 17 44. Thence Westerly to the Southwest corner of
18 Section 1, T3S, R8W;
- 19 45. Thence Northerly to the Southeast corner of
20 Section 35, T2S, R8W;
- 21 46. Thence Northwesterly to the Northwest corner
22 of said Section 35;
- 23 47. Thence Northerly to the Southeast corner of
24 Lot 33, as shown on Map of Tract 3193, recorded in Map
25 Book 43, pages 46 and 47, Office of the County Recorder
26 of San Bernardino County;
- 27 48. Thence Westerly to the Northwest corner of
28 the Southwest quarter of Section 28, T2S, R8W;
49. Thence Northerly to the Southwest corner of
Section 4, T2S, R8W;
50. Thence Westerly to the Southwest corner of
Section 5, T2S, R8W;
51. Thence Northerly to the Southwest corner of
Section 32, T1S, R8W;
52. Thence Westerly to the Southwest corner of
Section 31, T1S, R8W;
53. Thence Northerly to the Southwest corner of
Section 30, T1S, R8W;

1 54. Thence Northeasterly to the Southwest corner
2 of Section 20, T1S, R8W;

3 55. Thence Northerly to the Northwest corner of
4 the Southwest quarter of the Southwest quarter of said
5 Section 20;

6 56. Thence Northwesterly to the Northeast corner
7 of the Southeast quarter of the Southeast quarter of
8 the Northwest quarter of Section 19, T1S, R8W;

9 57. Thence Easterly to the Northwest corner of
10 Section 21, T1S, R8W;

11 58. Thence Northeasterly to the Southeast corner
12 of the Southwest quarter of the Southwest quarter of
13 Section 10, T1S, R8W;

14 59. Thence Northeasterly to the Southwest corner
15 of Section 2, T1S, R8W;

16 60. Thence Northeasterly to the Southeast corner
17 of the Northwest quarter of the Northwest quarter of
18 Section 1, T1S, R8W;

19 61. Thence Northerly to the Northeast corner of
20 the Northwest quarter of the Northeast quarter of
21 Section 36, T1N, R8W;

22 62. Thence Northerly to the Southeast corner of
23 Section 24, T1N, R8W;

24 63. Thence Northeasterly to the Southeast corner
25 of the Northwest quarter of the Northwest quarter of
26 Section 20, T1N, R7W; and

27 64. Thence Southerly to the Point of Beginning.
28

EXHIBIT "K"

Sections Included

Said perimeter description includes all or portions of the following Townships, Ranges and Sections of San Bernardino Base and Meridian:

T1N, R5W - Sections:	30, 31 and 32
T1N, R6W - Sections:	8, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 and 36
T1N, R7W - Sections:	19, 20, 24, 25, 26, 29, 30, 31, 32, 35 and 36
T1N, R8W - Sections:	25 and 36
T1S, R5W - Sections:	4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 19, 20, 21, 22, 28, 29, 30, 31 and 32
T1S, R6W - Sections:	1 through 36, inclusive
T1S, R7W - Sections:	1 through 36, inclusive
T1S, R8W - Sections:	1, 2, 10, 11, 12, 13, 14, 15, 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 and 36
T2S, R5W - Sections:	6, 7 and 18
T2S, R6W - Sections:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 29, 30 and 31
T2S, R7W - Sections:	1 through 36, inclusive
T2S, R8W - Sections:	1, 2, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 16, 21, 22, 23, 24, 25, 26, 27, . 28, 35 and 36
T3S, R7W - Sections:	2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17 and 20
T3S, R8W - Sections:	1.

EXHIBIT "K"

NOSSAMAN, GUTHNER, KNOX & ELLIOT
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Attorneys for
CHINO BASIN WATERMASTER

SUPERIOR COURT OF THE STATE OF CALIFORNIA
FOR THE COUNTY OF SAN BERNARDINO - WEST DISTRICT

CHINO BASIN MUNICIPAL WATER DISTRICT,

Plaintiff,

v.

CITY OF CHINO,

Defendant.

Case No.: RCV 51010

ORDER APPROVING AMENDMENTS TO JUDGMENT

DATE: November 17, 1995
TIME: 2:00 p.m.
DEPT: WD-2

Specially assigned to the
Honorable Judge
Ben T. Kayashima

1 On November 17, 1995, at 2:00 p.m., the petition and motion of the Chino
2 Basin Watermaster for an order approving amendments to the judgment to simplify
3 conversion claim procedures came on regularly for hearing, the Honorable Judge Ben
4 T. Kayashima presiding.

5 Frederic A. Fudacz and John Ossiff, of Nossaman, Guthner, Knox &
6 Elliot, appeared on behalf of Chino Basin Watermaster. No other appearances were
7 made.

8 No opposition having been received and good cause appearing therefore
9 IT IS HEREBY ORDERED:

- 10 1. That the petition and motion of Watermaster is granted.
11 2. Paragraph 10(b), "Conversion Claims" of Exhibit "H" of the
12 Judgment is hereby deleted and replaced with a new Paragraph 10(b), attached hereto
13 as Exhibit 1.

14
15 Date: _____

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17 _____
18 Ben T. Kayashima
19 Judge, San Bernardino County Superior Court
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EXHIBIT "1"

AMENDMENT TO JUDGMENT
NEW PARAGRAPH 10(B) OF EXHIBIT "H"

(b) Conversion Claims. The following procedures may be utilized by any appropriator:

(1) Record of Uncovered Agricultural Acreage.

Watermaster shall maintain on an ongoing basis a record, with appropriate related maps, of all agricultural acreage within the Chino Basin subject to being converted to appropriative water use pursuant to the provisions of this subparagraph. An initial identification of such acreage as of June 30, 1995 is attached hereto as Appendix 1.

(2) Record of Water Service Conversion. Any appropriator who undertakes to permanently provide water service to lands subject to conversion may report such intent to change water service to Watermaster. Watermaster should thereupon verify such change in water service and shall maintain a record and account for each appropriator of the total acreage involved. Should, at any time, converted acreage return to water service from the Overlying (Agricultural) Pool, Watermaster shall return such acreage to uncovered status and correspondingly reduce or eliminate any allocation accorded to the appropriator involved.

(3) Allocation of Safe Yield Rights.

(i) In any year in which sufficient unallocated Safe Yield from the Overlying (Agricultural) Pool is available for such conversion claims, Watermaster shall allocate to each appropriator with a conversion claim 1.3 acre-

feet of unallocated Safe Yield water for each converted acre for which conversion has been approved and recorded by the Watermaster.

(ii) In any year in which the unallocated Safe Yield water from the Overlying (Agricultural) Pool is not sufficient to satisfy all outstanding conversion claims pursuant to subparagraph (i) herein above, Watermaster shall establish allocation percentages for each appropriator with conversion claims. The percentages shall be based upon the ratio of the total of such converted average approved and recorded for each appropriator's account in comparison to the total of converted acreage approved and recorded for all appropriators. Watermaster shall apply such allocation percentage for each appropriator to the total unallocated Safe Yield water available for conversion claims to derive the amount allocable to each appropriator.

(4) Notice and Allocation. Notice of the special allocation of Safe Yield water pursuant to conversion claims shall be given to each appropriator and shall be treated for purposes of this physical solution as an addition to such appropriator's share of the operating Safe Yield for the particular year only.

(5) Administrative Costs. Any costs of Watermaster attributable to the administration of such special allocations and conversion claims shall be assessed against the appropriators participating in such reporting, apportioned in accordance with the total amount of converted acreage held by each appropriator participating in the conversion program.

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7 Telephone: (213) 612-7800
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9 Attorneys for
10 CHINO BASIN WATERMASTER

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SUPERIOR COURT OF THE STATE OF CALIFORNIA
FOR THE COUNTY OF SAN BERNARDINO - WEST DISTRICT

CHINO BASIN MUNICIPAL WATER
DISTRICT,

Plaintiff,

v.

CITY OF CHINO,

Defendant.

) Case No.: RCV 51010

)

) ~~(Amended Proposed)~~

)

)

) ORDER FOR AMENDMENTS TO

) THE JUDGMENT REGARDING

) CHANGES IN POOLING PLANS

) AND APPROPRIATIVE POOL

) REPRESENTATION OF THE

) ADVISORY COMMITTEE

)

)

)

) DATE: September 18, 1996

) TIME: 10:00 a.m.

) DEPT: H

)

)

) Specially assigned to the Honorable

) Judge J. Michael Gunn

On September 18, 1996, the motion for amendments to the Judgment to
change Appropriative Pool representation on the Advisory Committee came on
regularly for hearing in this matter, the Honorable J. Michael Gunn, Judge, Presiding.

The matter having been duly presented, all arguments having been heard

1
2 and good cause appearing therefore,

3 IT IS HEREBY ORDERED:

4 1. That the petition and motion of Watermaster is granted.

5 2. That Paragraph 4, "Advisory Committee Representatives," of
6 Exhibit "H" to the Judgment is hereby deleted and replaced with a new Paragraph 4,
7 attached hereto as Exhibit 1.

8 3. That Paragraph 32, "Authorization," to the Judgment is hereby
9 deleted and replaced with a new Paragraph 32, attached hereto as Exhibit 1.

10
11 Date: _____

12 J. Michael Gunn
13 Judge, San Bernardino County Superior Court
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AMENDMENT TO JUDGMENT

New Exhibit "H" Paragraph 4 to Judgment

4. Advisory Committee Representatives. Members of the Pool Committee shall be designated to represent this pool on the Advisory Committee on the following basis: Each major appropriator, i.e. the owner of an adjudicated appropriative right in excess of 3,000 acre feet, or each appropriator that produces in excess of 3,000 acre feet based upon the prior year's production, shall be entitled to one representative. Two additional representatives of the Appropriative Pool on the Advisory Committee shall be elected at large by the remaining members of the pool. The voting power of the Appropriative Pool on the Advisory Committee shall be apportioned between the major appropriator representatives in proportion to their respective voting power in the Pool Committee. The two representatives of the remaining appropriators shall exercise equally the voting power proportional to the Pool Committee voting power of said remaining appropriators; provided, however, that if any representative fails to attend an Advisory Committee meeting, the voting power of that representative shall be allocated among the representatives of the Appropriative Pool in attendance in the same proportion as their own

1 respective voting powers.
2

3 **New Paragraph 32 to the Judgment:**
4

5 32. Authorization. Watermaster is authorized and
6 directed to cause committees of producer
7 representatives to be organized to act as Pool
8 Committees for each of the several pools created
9 under the Physical Solution. Said Pool Committees
10 shall, in turn, jointly form an Advisory Committee to
11 assist Watermaster in performance of its functions
12 under this judgment. Pool Committees shall be
13 composed as specified in the respective pooling
14 plans, and the Advisory Committee shall be
15 composed of voting representatives from each pool,
16 as designated by the repective Pool Committee in
17 accordance with each pool's pooling plan. WMWD,
18 Three Valleys Municipal Water District (Successor to
19 PVMWD) and SBVMWD shall each be entitled to one
20 non-voting representative on said Advisory
21 Committee.
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SCOTT SLATER (State Bar No. 117317)

MICHAEL FIFE (State Bar No. 203025)

HATCH AND PARENT

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SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SAN BERNARDINO
~~Attorneys for Chino Basin Water Master~~

CHINO BASIN MUNICIPAL

WATER DISTRICT,

Plaintiff,

vs.

CITY OF CHINO, et al.,

Defendants.

) CASE NO. RCV 51010

)

) Judge: Honorable J. MICHAEL GUNN

)

)

) MOTION TO AMEND JUDGMENT

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) Date: September 28, 2000

) Time: 2:00 pm.

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I.

BACKGROUND

In 1978, judgment was entered in *Chino Basin Municipal Water District v. City of Chino*, a groundwater adjudication of the Chino Basin. This Judgment imposed a physical solution in order to halt the decline of the groundwater levels in the Basin. The Judgment also required the parties to develop an Optimum Basin Management Program ("OBMP") in order to provide a comprehensive program that would offer a long-term solution to the many issues facing the Basin. On June 29, 2000 a final OBMP for the Chino basin was submitted to the Court, and on

July 13, 2000 the Court approved the OBMP and ordered Watermaster to proceed in accordance with its terms.

In the final months prior to completion of the OBMP, the parties negotiated a Peace Agreement that resolved the issues inhibiting finalization of the OBMP. During these negotiations it was recognized that certain minor but necessary amendments would need to be made to the Judgment so that the final OBMP would be fully consistent with the Judgment. The negotiating parties consented to these modifications and they became a part of the Peace Agreement (Article IV, section 4).

In its July 13, Order approving the OBMP, the Court ordered that a hearing would be held on September 28, 2000 to, in part, hear arguments on proposed amendments to the Judgment. Part II of this brief describes Watermaster's recommended amendments to the Judgment in conformance with the Peace Agreement.

II

Proposed Amendments to the Judgment

Watermaster recommends the following amendments to the Judgment:

- (a) The Judgment shall be amended so that the last sentence of Paragraph 8 of the Judgment reads:

All overlying rights are appurtenant to the land and cannot be assigned or conveyed separate of apart therefrom for the term of the Peace Agreement except that the members of the Overlying (Non-Agricultural) Pool shall have the right to Transfer or lease their quantified production rights within the Overlying (Non-Agricultural) Pool or to Watermaster in conformance with the procedures described in the Peace Agreement between the Parties therein, dated June 29, 2000.

- (b) Paragraph 6 of Exhibit "G" to the Judgment regarding the Overlying Non- Agricultural Pool shall be amended to read:

Assignment. Rights herein decreed are appurtenant to that land and are

Only assignable with the land for overlying use thereon; provided, however, (a) that any appropriator who may, directly or indirectly, undertake to provide water service to such overlying lands may, by an appropriate agency agreement on a form approved by Watermaster, exercise said overlying right to the extent, but only to the extent necessary to provide water service to said overlying lands, and (b) the members of the pool shall have the right to Transfer or lease their quantified production rights within the pool or to Watermaster in conformance with the procedures described in the Peace Agreement between the Parties therein, dated June 29, 2000 for the term of the Peace Agreement.

(c) The 1995 Amendment to the Judgment shall be amended as follows: Section 10(b)(3)(i) shall now read:

“For the term of the Peace Agreement, in any year in which sufficient unallocated Safe Yield from the Overlying (Agricultural) Pool is available for such conversions claims, Watermaster shall allocate to each appropriator with a conversion claim, 2.0 acre-feet of unallocated Safe Yield water for each converted acre for which conversion has been approved and recorded by the Watermaster.”

Appendix 1 to the Judgment shall be construed to be consistent with this amendment. All other parts of the 1995 Amendment shall remain the same.

III

Conclusion

The Peace Agreement is a carefully constructed balance of the various interests in the Basin that has enabled the OBMP to be finalized. One part of the negotiation of the Peace Agreement was an agreement on the necessary amendments to the Judgment in order to make the Peace Agreement and the Judgment fully consistent with one another. The signatories have agreed that the amendments described above are the only *necessary* amendments in order to

achieve consistency.

Neither the signatories to the Peace Agreement nor Watermaster believe any other proposed amendments are necessary at this time and accordingly urge this Court to make only those changes necessary so that the final OBMP is consistent with the Judgment. The Judgment has created a stable institutional framework in the Chino Basin that has made the development of the OBMP possible. Changes to this framework should be made only where absolutely necessary so as to cause minimal disruption to this stability. Watermaster has determined that the amendments proposed above are the only necessary changes that need to be made consistent with the Peace Agreement.

The parties have made a monumental effort to craft a solution that will fulfill the overriding goal of managing the Chino Basin on a sustainable basis for the benefit of all. Watermaster respectfully request that the Court approve the above referenced amendments in furtherance of the physical solution.

Dated: August __, 2000.

HATCH & PARENT

By: _____

Scott S. Slater

Michael Fife

Attorneys for Chino Basin Watermaster

SUPERIOR COURT FOR THE STATE OF CALIFORNIA
FOR THE COUNTY OF SAN BERNARDINO

) CASE NO. RCV 51010
CHINO BASIN MUNICIPAL WATER)
DISTRICT,) ORDER CONCERNING
Plaintiff,) MOTION TO AMEND JUDGMENT
vs.)
CITY OF CHINO, et al.,)
Defendants.) Date: September 28, 2000
) Dept: 8
) Time: 2:00 p.m.
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V of the Peace Agreement satisfied Watermaster's obligation to prepare an OBMP. One of the conditions precedent to that finding is Court approval of all Judgment modifications in furtherance of the OBMP.

Discussion

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analysis of various provisions in the Peace Agreement that appear to be in conflict with the Judgment. Watermaster's motion recognizes some of these conflicts. However, the Special Referee's Report and Recommendation Regarding Watermaster's Motion to Amend Judgment notes several provisions in the Peace Agreement which appear to conflict with the Judgment, for which no modification is proposed. For example, Watermaster proposes to modify the amended Judgment Exhibit H conversion provisions to allow 2.0 acre-feet of unallocated Safe Yield water for each converted acre. However, no revision is proposed with respect to Appendix 1, which explains the basis for the existing 1.3 acre-feet per acre provision. Another example is the Peace Agreement provision which permits "Early Transfer" allocations of 32,800 acre-feet of water to occur annually, yet the Overlying (Agricultural) Pool is still entitled to pump 82,800 acre-feet per year without reduction. There are several other provisions of the Peace Agreement noted by the Special Referee which appear to conflict with the Judgment, for which no Judgment amendment is sought.

Order

The Court has considered the Special Referee's Report and Recommendation Regarding Motion to Amend Judgment and hereby issues its ruling accepting the Report and adopting the Recommendation of Anne Schneider.

The Court incorporates herein by reference the entirety of the Special Referee's Report and Recommendation Regarding Motion to Amend Judgment. Watermaster's Motion to Amend the Judgment is granted subject to the following: the parties are directed to file a post-hearing brief (s) clarifying their intent with respect to the Peace Agreement provisions discussed in Sections IIB through IIF in the Special Referee's Report and Recommendation Regarding Watermaster's Motion to Amend Judgment. The post-hearing brief(s) shall be submitted no later than October 26, 2000.

Dated: September 28, 2000.

s/s J. Michael Gunn

J. MICHAEL GUNN, Judge

SUPERIOR COURT FOR THE STATE OF CALIFORNIA

FOR THE COUNTY OF SAN BERNARDINO

CHINO BASIN MUNICIPAL WATER
DISTRICT,

Plaintiff,

vs.

CITY OF CHINO, et al.,

Defendants.

) CASE NO. RCV 51010

)

) ORDER CONCERNING

) MOTION TO EXTEND NINE-MEMBER

) BOARD

)

) Date: September 28, 2000

) Dept: 8

) Time: 2:00 p.m.

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Background

On February 19, 1998, the Court appointed a nine-member board consisting of representatives from the Overlying (Agricultural) Pool, the Overlying (Non-agricultural) Pool, the Appropriative Pool, and three municipal water districts to serve as Interim Watermaster for the Chino Groundwater Basin (hereinafter sometimes referred to as "Basin"). Watermaster was directed to notice a hearing on or before October 28, 1999, to consider all parties' input as to the continuance of the nine-member board. The Court informed the parties that one of the measures that would be used in determining the effectiveness of the nine-member board, in functioning as a steward of the Basin,

would be the progress made on the adoption of an optimum basin management program ("OBMP") for the Basin. The OBMP was to be submitted to the Court no later than September 30, 1999, and a hearing was set on October 28, 1999, to consider whether to approve and order full implementation of the

program. The deadline for approval of the OBMP was continued several times. The Court finally approved the OBMP, consisting of the Phase I Report and Implementation Plan, subject to certain conditions precedent, on July 13, 2000.

Discussion

Extension of Appointment of Nine-member Board

On August 30, 2000, Watermaster filed a Motion to Extend the Nine-Member Board for a Full Five-Year Term. The motion requests the Court to order that the current nine-member structure of the Watermaster board continue in effect for a full five-year term. Watermaster asserts that all of the conditions precedent set forth in the Court's July 13, 2000, Order have been satisfied. However, as noted in Special Referee Anne Schneider's Report and Recommendation Concerning Motion to Extend Nine-Member Board, there are several outstanding issues that must be resolved before it can be said that all of the conditions have been satisfied. First, it is not clear that unanimous approval of the Peace Agreement regarding the Chino Groundwater Basin, dated June 29, 2000, hereinafter "Peace Agreement," has been obtained. Western Municipal Water District's "ratification" of the Peace Agreement was conditional. Watermaster reports the need for further negotiations related to the purchase of desalted water. Second, Watermaster states that the California Legislature has appropriated \$235,000,000 for the benefit of the Santa Ana Watershed Project Authority ("SAWPA") and allocated this sum to the state Water Resources Control Board ("SWRCB") for distribution. Watermaster further states that SAWPA has submitted an application to SWRCB for distribution of these funds, including \$56,000,000 to be used to fund the Chino II desalter and an expansion of the Chino I desalter. However, Watermaster has not explained how the \$121,000,000 condition precedent is satisfied when only \$56,000,000 of the funds allocated to SAWPA are to be used for the Chino Basin desalter project. Third, while Watermaster has submitted a schedule and process for submission to the Court of detailed periodic reports regarding compliance with the Implementation Plan for the OBMP, the schedule has

some omissions. For example, Program Elements 3 and 5, which encompass the desalter project, are not included in the schedule.

It must be noted that the City of Chino has filed an Opposition to Motion to Extend the Nine-Member Board for a Full Five-Year Term. Although it supports the continuation of the current nine-member board structure, the City of Chino asserts that Court guidance is needed with respect to the establishment of "criteria, procedures and schedules for the rotation of Appropriative Pool members" serving on the nine-member board. Watermaster responds that several groups must determine a procedure for rotation: Overlying (Agricultural) Pool, Overlying (Non-agricultural) Pool, and the three municipal districts that hold seats on the board and the Appropriative Pool. Watermaster is hopeful that a complete consensus will emerge prior to October 31, 2000, and requests the Court to allow the consensus-building process to continue and give the parties until October 31, 2000, to resolve their differences. An inability to reach consensus on the rotation issue is of considerable concern to the Court. The Court is unwilling to extend the appointment of the board unless and until the rotation Issue is resolved.

Periodic Reporting Requirements

In the exercise of its continuing jurisdiction, the Court shall require periodic progress reports regarding implementation of the OBMP to ensure that the Watermaster is performing its independent function and keeping to the schedule adopted for OBMP implementation. The Court adopts the following schedule for

OBMP reporting:

Report No. 1 March 31, 2001

Report No. 2 September 30, 2001

Report No. 3 March 31, 2002

Report No. 4	September 30, 2002
Report No. 5	March 31, 2003
Report No. 6	September 30, 2003
Report No. 7	March 31, 2004
Report No. 8	September 30, 2004
Report No. 9	March 31, 2005
Report No. 10	September 30, 2005

Report No. 10 coincides with the end of the appointment of the Nine-Member Board. The OBMP progress reports, together with independent assessment of OBMP implementation status, including verification of data to be provided by the Special Referee and her technical expert, will be the basis for consideration of continuing the appointment. The Court may schedule hearings to coincide with some or all of these reports. Alternatively, the Court may, from time to time, direct the Special Referee to conduct a workshop in lieu of a court hearing. The reports should follow the format prescribed in Special Referee Anne Schneider's Report and Recommendation Concerning Motion to Extend Nine Member Board.

Future Desalters

The Court wants to particularly note that the Peace Agreement predicates any future desalting capacity on a reevaluation of the need for additional desalting after the earlier of ten years or the conversion of 20,000 acres of agricultural land. The Court is mindful that while the parties to the Peace Agreement contemplate the construction of future desalters and/or expansion of Chino I and/or Chino II

Desalters, there are no provisions in the Peace Agreement that effectively ensure that they will be built. In effect, future desalters (and any expansions of the Chino I and II Desalters) will be built "if and only if" funding from sources other than the Parties can be secured. The OBMP (Phase I Report and Phase II Implementation Plan) calls for some 40,000 acre-feet per year of desalting capacity to be installed in the southern part of the Basin by 2020. The Court hereby gives notice to the parties that a primary concern of the Court in any future application for reappointment of the nine-member board will be the parties' continued commitment to provide for future desalters and preserve safe yield in accordance with the OBMP.

Order

Watermaster seeks an order continuing the current nine-member structure of the Watermaster Board in effect for a full five-year term and authorizing it to perform all managerial and administrative functions as specified in the Judgment, including the execution of all administrative and employment contracts. Watermaster states that it will propose a schedule for rotation of its board members no later than October 31, 2000.

The Court is not inclined to extend unconditionally the reappointment of the nine-member board until both the rotation and the Western Municipal Water District issues have been resolved. Therefore, the appointment shall be made subject to certain conditions. The failure of any one of these conditions shall be considered by the Court as a compelling reason to reconsider the appointment of the nine member board. Therefore, subject to the continuing jurisdiction of the Court and satisfaction of conditions numbers 1 - 5 below, the Court hereby issues its order:

The Court has considered the Special Referee's Report and Recommendation Concerning Motion to Extend Nine-Member Board and hereby issues its ruling accepting the Report and adopting the Recommendation of Anne Schneider, except to the extent that it recommends continuation of the appointment for only three years. The Court incorporates herein by reference the entirety of the Special Referee's Report and Recommendation Concerning the Motion to Extend Nine-Member Board. The nine-member board is hereby appointed for an additional five-year term, until September 30, 2005, subject to the continuing jurisdiction of the Court to reconsider the appointment in the event Watermaster fails to timely comply with the following conditions:

1. Watermaster's report on the status of its efforts to resolve the terms and conditions applicable to the purchase of desalted water and to secure a rescission of Western Municipal Water District's conditional execution of the Peace Agreement no later than December 31, 2000; and
2. Watermaster adoption and Court approval of Revised Rules and Regulations for Chino Basin by February 1, 2001; and
3. Submission of Reports Nos. 1 through 10 in accordance with the schedule set forth in the discussion above; and
4. Inclusion in such reports of schedule and budget information essentially in a form equivalent to Exhibit "E" and Table 4-14 of the Phase I Report; and
5. Watermaster cooperation in the independent assessment and verification of the data

included in Reports No. 1 through 10 to be provided to the Court by the Special Referee and her technical expert.

The parties are forewarned that any future application for reappointment of the nine-member board may be conditioned on the development of a detailed plan to reach the OBMP goal of 40,000 acre-feet per year of desalting capacity to be installed in southern part of the Basin by 2020.

Dated: September 28, 2000.

s/s J. Michael Gunn

J. MICHAEL GUNN, Judge

SCOTT SLATER (State Bar No. 117317)

MICHAEL FIFE (State Bar No. 203025)

HATCH AND PARENT

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SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SAN BERNARDINO
~~Attorney's for Chino Basin Watermaster~~

) CASE NO. RCV 51010
CHINO BASIN MUNICIPAL)
WATER DISTRICT,)
Plaintiff,)
vs.)
CITY OF CHINO, et al.,) NOTICE OF ENTRY OF ORDER
Defendants.) CONCERNING MOTION TO
) EXTEND NINE-MEMBER BOARD
) AND ORDER CONCERNING
) MOTION TO AMEND JUDGMENT
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TO ALL PARTIES AND THEIR ATTORNEYS OF RECORD;

Please take notice that on September 28, 2000, the Court entered its Order Concerning Motion to Extend Nine-Member Board and Order Concerning Motion to Amend Judgment. A true and correct copy of these Orders are attached hereto and made a part hereof by this reference.

The Court also provided guidance on the factors that it will consider when deciding to reappoint the Nine-Member Watermaster Board in 2005. These factors are:

- (1) All production meters will be installed;
- (2) Basin Monitoring will be completely in place and will have been the basis for semi-annual reports specified in the Order;

- (3) The Recharge Master Plan will be complete and appropriate recharge facilities will have been installed;
- (4) The OBMP Desalter I Expansion and Desalter II will be installed and operational, with demonstrated delivery of desalter water for municipal use in the Basin.

In addition, the Court wishes to schedule a hearing on February 1, 2001 at 2:00 pm. The purpose of the hearing will be to:

- (1) Approve the Revised Rules and Regulations for the Chino Basin;
- (2) Approve the post-Order memorandum which will be filed on October 26, 2000;
- (3) Receive a report on the status Western Municipal Water District's rescission of its conditional execution of the Peace Agreement; and
- (4) Receive Watermaster's Annual Report.

The Revised Rules and Regulations for the Chino Basin should be submitted to the Court by December 31, 2000.

Dated: September 28, 2000

HATCH & PARENT

By: s/s Michael Fife

Michael Fife

Attorneys for Chino Basin Watermaster

APPENDIX 1

To Chino Basin Watermaster Amendment Regarding Land Use Conversions

The purpose of the amendment is to simplify the methodology and procedure for land use conversions under the 1978 Judgment. The basic nature of the commitment undertaken by the parties who negotiated the Judgment is not intended to be changed. The methodology used to develop the recommended 2.0¹ per acre (af/ac) conversion factor can best be described as a gross water duty method. Essentially, the total water use was divided by the total acreage remaining to be converted to develop the gross average water use per acre.

At the Land Use Conversion Workshop held on January 10, 1995, there was a consensus among the parties to the Judgment that the large agricultural acreage within the purveyor service areas must still be converted. To depict the large southern area remaining to be converted, Watermaster staff proposed the establishment of Conversion Area No. 1 (see attached map). This area can generally be described as the area that is south of the 60 Freeway, outside the current city boundaries of Chino, Chino Hills and Ontario and for the most part, the portion of Jurupa Community Services District (JCSD) that is west of Etiwanda. The southernmost boundary of the area is taken as the Army Corps of Engineers' Prado Basin take line, unless a specific agricultural well exists inside the take line. To obtain the acreage for Conversion Area No. 1, the Santa Ana Watershed Project Authority (SAWPA), used its Geographic Information System (GIS) and determined the total acreage shown in Conversion Area No. 1 to be approximately 27,133 acres.

Also at the January 10 Land Use Conversion Workshop, the appropriators were asked to submit the proposed remaining convertible acreage inside their established service areas. Submissions of the parcels proposed as eligible for conversion, both inside and outside Conversion area No. 1 began arriving in early March 1995, and were received as late as June 29, 1995. Watermaster staff worked with each appropriator to identify the proposed acreage by assessor's parcel number. The lists of parcels and the approximate acreage of each parcel, by appropriator, are included with Appendix 1 as Tables 2A - 2G for reference. The maps corresponding to these lists are on file with the Watermaster. The eligibility of most of the parcels submitted has been determined; however, the specific eligibility of some parcels is still in question. The eligibility criteria utilized by staff requires that the land:

1. has not been receiving water provided by an appropriator;
2. was not already included in the establishment of the appropriator's production rights; and
3. has been used for irrigated agriculture within the last five years if it is located outside Conversion Area No. 1

¹ Amended from 1.3 af/ac by Order dated September 28, 2000.

The appropriators were also asked which parcels they were proposing to convert for the production year 1994/95. The parcels proposed for conversion in FY 94/95 are included with Appendix 1 as Tables 3A - 3C. Any parcels converted for production year 1994/95 will affect the assessments and available unallocated safe yield from that production year in fiscal year 1995/96. Table 1 is a summary of the total acreage submitted by each appropriator as being eligible for conversion and of the acreage requested by that appropriator for conversion in FY 94/95, if any. Staff has evaluated the parcels requested for conversion in FY 94/95 and finds that all of those requested, or a total of 2, 185 acres, are eligible for conversion based on the above criteria.

When the 27,133 acres in Conversion Area No. 1 is added to the 5,209 acres (Table 1) proposed for conversion that is outside Conversion Area No. 1, there is a total of 32,343 acres remaining to be converted in the Chino Basin.

The 1978 agricultural water use was 84,095 acre-feet. When this is divided by the 32,343 acres, it results in a use of 2.6 af/ac. The value is still approximately 2.6 af/ac if the average annual post-judgment allocation of 82,800 af is divided and all acres were able to be converted as currently prescribed in the judgment, 50% of this per acre use would be allocated to an appropriator, and the appropriator would receive 1.3 acre-feet per acre. This would be a maximum use per acre. In 1994, the agricultural water use was reported as 44,092 acre-feet per acre. If this use is divided by the 32, 343 acres, it results in a present average use of 1.36 acre-feet per acre.

There was a consensus at the workshops and at the pool committee meetings that many of the conversions that potentially could have taken place since 1978, were not submitted by the appropriators. This is probably because of a lack of the right type of information to make the appropriate use-per-parcel determinations and because of the time and money that would be required if they were pursued extensively. Because of this, there was a consensus that the 1.3 af/ac conversion water use determinations were based only on 50% of the current average use.

Watermaster staff anticipates that each appropriator with remaining convertible acreage will request conversion on that acreage each year that they undertake to serve the land. If the service is anticipated to be permanent, they can request permanent conversion. For the acreage outside Conversion Area No. 1, the above criteria will be applied annually to make an eligibility determination. Also, an appropriator will be required to certify that the land is not currently using water that is being reported as agricultural pool production and Watermaster staff will field verify that agricultural activities have ceased, or that the appropriator is actually satisfying the agricultural use.

Chino Basin Watermaster

Unconverted Acreage

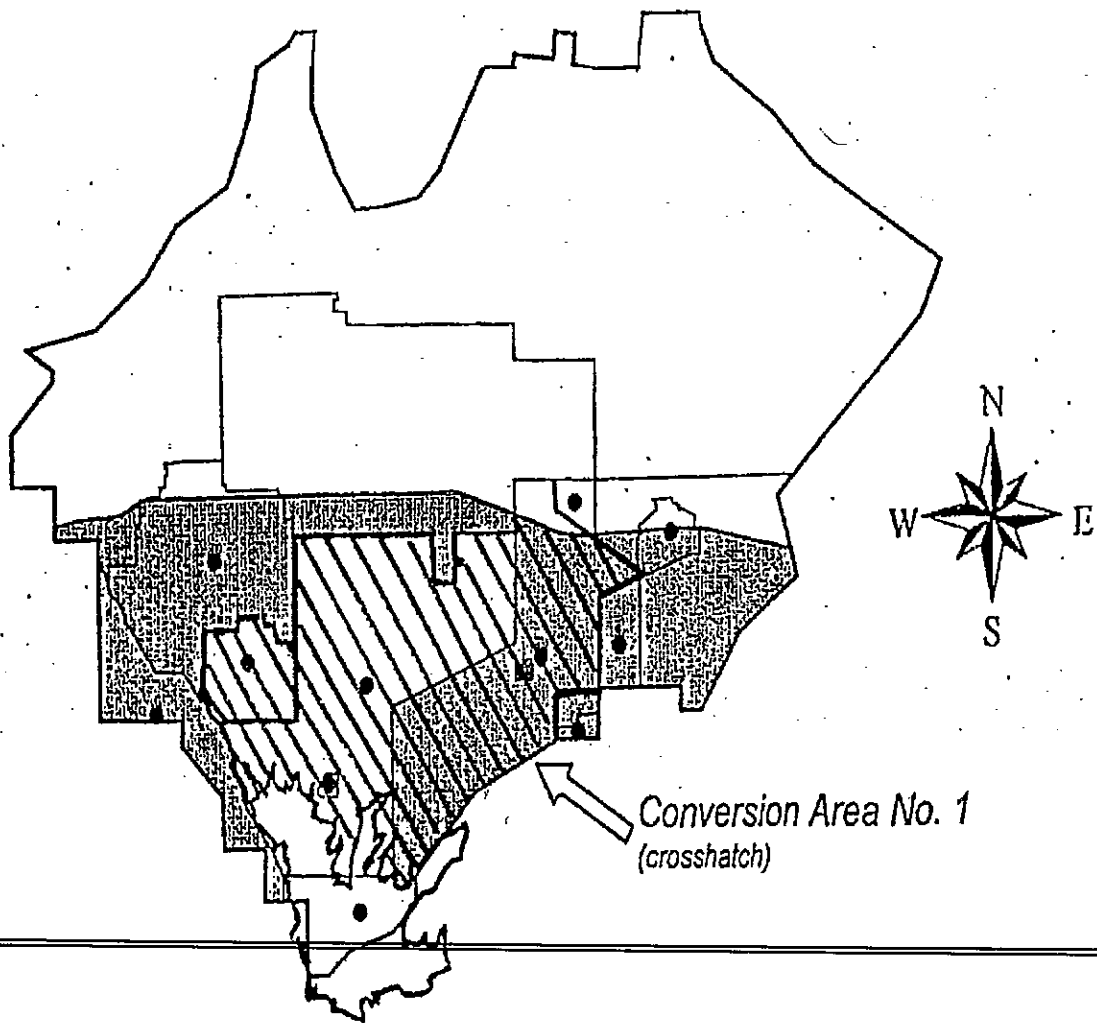


TABLE 1				
Chino Basin Watermaster Proposed Conversion Acres Revised August 3, 1995				
Appropriator	Outside Conversion Area #1		Inside Conversion Area #1	Total FY 94/95 Acres Proposed
	<i>Total Acres Submitted</i>	<i>Acres Proposed FY 94/95</i>	<i>Acres Proposed FY 94/95</i>	
Chino, City of	1923	519	0	519
Chino Hills, City of	1053	0	0	0
Cucamonga CWD	460	0	0	0
Fontana WC	417	0	0	0
Jurupa CSD	835	327	758	1085
Monte Vista WD	43	0	0	0
Ontario, City of	544	544	37	581
Total	5209	1390	795	2185

Chino
AGRICULTURAL LAND - WATER SUPPLY STUDY
OUTSIDE CONVERSION AREA NO. 1 LIST B

Property No.	Acreage	ADDRESS N/S - E/W	APN	GENERAL NOTES
1	11	4800/12150	1016-121-4,5,6,7,8	ROSES RESIDENCE ON CITY WATER
2	16	4700/12200	1016-131-1,2,3	ROSES CROP ACREAGE SUPPLIED BY PVT.WELL ON No.2
3	10	5350/11750	1014-381-1,2,3,4	BERRY
4	21	5600/12400	1015-261-2,3	TRUCK FARMING MISCELLANEOUS VEGETABLES
			1015-253-9	
5	6	5400/12450	1015-281-21	BERRY
6	7	4000/13000	1019-071-20,21	CHRISTMAS TREE GROWER
			1019-081-2,11	
7	38	4800/13250	1019-191-1,2,5	RANCHING DOMESTIC SERVICE ONLY - OTHER USES WELL
			1019-201-1,3	
8	10	3600/13650	1019-611-28,39,40	RANCHING DOMESTIC SERVICE ONLY UNDER DEVELOPMENT
			1019-611-41,42,43,49	
9	21	3700/13750	1022-041-4	LANDSCAPE NURSERY
			1022-05-3,4	
10	31	3900/14000	1022-031-2	GREEN FEED
			1022-26-4	
			1022-27-4	
			1022-082-1,2,8,9,10	
11	58	4000/14200	1022-38-3	GREEN FEED
			1022-39-4	
			1022-40-3	
			1022-58-2	
12	54	4150/13900	1022-10-5,6,7,8	DAIRY
			1022-24-3	
13	142	4300/14300	1022-42-6,7,8	GREEN FEED
			1022-41-5	
			1022-58-2	
			1022-53-11,12,13	
			1022-431-8	
			1022-441-8	
			1022-541-3	
14	18	4200/14550	1022-55-3	GREEN FEED
			1025-10-5,7,8,9	
15	51	4350/14700	1025-09-1	GREEN FEED
			1025-12-1,2,5,6,7	
			1025-21-8,9,12 thru 23	
16	40	4800/14400	1022-50-1,2,3	DAIRY DOMESTIC SERVICE ONLY
			1022-49-1,3,4	
17	320	4900/14700	1025-13-1 thru 6	DAIRY & FARMING GREEN FEED
			1025-20-5,6	
			1025-19-6,7	
			1025-15-1 thru 8	
			1021-471-3,4,6,8	
			1021-461-2,3,4,6,7,8	
			1021-481-1,2,3	
			1024-491-1,2	
			1021-511-1,2,3	
			1021-501-1,2	
			1021-521-1,2,3,4	
			1021-531-1,2	
18	70	5300/15400	1028-201-13,17	DOMESTIC SERVICE ONLY
			1028-511-1 thru 20	
			1028-501-1 thru 25	
			1028-491-1 thru 9	
19	10	6200/12800	1015-511-27	BERRY
20	29	6200/13000	1020-131-1,2	BERRY
			1020-121-21,24	
21	18	6000/14050	1021-291-1,2	GREEN FEED
22	38	6200/14000	1021-281-1,2,3,4	RANCHING DOMESTIC SERVICE ONLY
			1021-231-2	
			1021-101-2,3,4	
23	26	6400/13900	1021-251-1,20	DAIRY
			1021-241-2,3	
24	17	6850/12850	1051-502-31	CORN/BERRY
			1051-631-2	

Chino
AGRICULTURAL LAND - WATER SUPPLY STUDY
OUTSIDE CONVERSION AREA NO. 1 - LIST B

Property No.	Acreage	ADDRESS N/S - E/W	APN	GENERAL NOTES
25	11	6800/13200	1052-301-1,3,4	DAIRY
26	64	6600/13500	1052-331-1,2,3	DAIRY
			1052-341-1,2,3,4	
			1052-631-1,2,3	
27	28	6800/13500	1052-611-1,2	GREEN FEED
			1052-601-2	
28	15	6800/13900	1053-261-3,4,41,71	GREEN FEED
			1053-231-4,31	
29	39.5	6600/13900	1053-251-1,2,3,4	NURSERY
			1053-241-68	
			1053-011-2 thru 5	
30	99	5700/14150	1021-351-1,2	AYALA PARK
			1021-321-1,2	
			1021-311-1,2	
			1021-281-1	
			1028-011-1	
31	80	6800/14300	1053-621-1,2	DAIRY
			1053-491-1 thru 11,13,14,17	
			1053-461-1,2,3	
			1053-451-1,2	
32	61	6950/13100	1052-051-1 thru 18	DOMESTIC SERVICE ONLY
			1052-051-20 thru 25	
33	61	6950/13500	1052-361-1,2,3,4	DAIRY
			1052-371-1,2,3	
			1052-591-1,2	
			1052-581-1,2	
34	61	6950/13900	1053-051-3,4	DAIRY
			1053-061-3,4	
			1053-221-1,2	
			1053-271-1 thru 8	
35	61	6950/14300	1053-441-1 thru 9,12,13	DAIRY
			1053-431-1,2	
			1053-501-1,2,3,4	
			1053-611-1,2,3	
36	10	5250/11550	1014-301-3,4,5	NURSERY & CHRISTMAS TREES
37	20	5350/11600	1014-271-1	NURSERY & CHRISTMAS TREES
			1014-281-4	
40	32	4400/13000	1019-111-27 thru 73	RECENTLY CONVERTED BERRY FARMING TO RESIDENTIAL
			1019-122-1 thru 48	
			1019-123-1 thru 54	
41	30	4600/13500	1019-441-3,4	RANCHING
			1019-511-6,7	
			1019-501-1	
42	10	5250/14150	1021-361-21,22	NURSERY
43	18	5350/13600	1020-571-3,4,6	BERRY
			1020-461-1,2,3	
44	80	5600/13900	1021-041-1 thru 4,6,9	DAIRY DOMESTIC SERVICE ONLY - OTHER USES WELL
			1021-131-1,2	
			1021-201-1,2	
			1021-331-1	
			1021-301-1	
45	10	5950/13750	1021-061-1,2	DAIRY
46	5	6450-13350	1021-381-5	BERRY
TOTAL	1857.5			

Table 2B

THE CITY OF CHINO HILLS
PROPOSED PARCELS FOR
LAND USE CONVERSION

THE CITY OF CHINO HILLS
PUBLIC WORKS DEPARTMENT
GEOGRAPHIC INFORMATION SYSTEM
101 GRAND AVENUE
CHINO HILLS CA 91711
(909)

ID	APN	OWNER	ACREAGE
1	1022-291-09	Boys Republic	4.63
2	1022-291-10	Boys Republic	44.49
3	1022-291-05	Boys Republic	2.32
4	1022-591-02	Boys Republic	28.46
5	1022-291-08	Boys Republic	118.04
6	1025-461-01	De Groot	8.92
7	1025-461-02	De Groot	2.01
8	1025-461-03	De Groot	7.12
9	1025-481-02	De Groot	8.23
10	1025-471-04	De Groot	4.12
11	1025-471-03	De Groot	1.72
12	1025-481-01	De Groot	9.62
13	1025-511-01	De Groot	6.66
14	1025-471-01	City of Chino Hills	6.38
15	1025-471-02	Greening	1.00
16	1025-561-04	Greening	47.24
17	1028-471-01	Greening	66.82
18	1028-351-01	Kramer	1.54
20	1028-351-13	Higgins	4.04
21	1028-351-23	Higgins	38.24
22	1028-351-11	Higgins	7.64
23	1028-201-03	Von Lusk	1.91
24	1028-201-02	Von Lusk	77.57
25	1028-201-74	Von Lusk	54.77
26	1028-201-75	Von Lusk	37.57
27	1028-351-07	Bahan	28.27
28	1017-231-21	Amato	1.79
29	1017-231-22	Trapani	5.65
30	1017-241-14	Richland Pinehurst LP	82.37
31	1017-491-01	Richland Pinehurst LP	78.63
32	1027-492-01	Richland Pinehurst LP	43.31
33	1027-121-07	Richland Pinehurst LP	15.94
34	1057-261-06	Abacherli	128.26
35	1057-261-05	Abercherli	10.00
36	1021-561-01	Van Klavern	13.62
	1021-591-01	Van Klavern	9.50
	1021-591-03	Van Klavern	11.60
	1021-601-04	Van Klavern	8.28
	1021-601-01	Van Klavern	9.16
37	1028-351-16	Higgins	2.60
38	1028-351-14	Higgins	11.21
39	1028-351-18	Weeda	12.16
TOTAL:			1053.40

CONVERSION

CUCAMONGA COUNTY WATER DISTRICT
West gate specific plan property west of Cherry

APN	Acreage
226-112-08	7.07
228-012-05	108.62
06	7.54
00 (adjacent to Cherry)	110.00 (estimated)
228-092-03	37.36
14	9.61
15	9.61
16	9.61
17	7.57
20	11.54
19	9.73
22	25.40
228-091-12	18.68
24	5.43
25	9.00
28	35.51
07	38.00 (estimated)
Totals	460.28

APN maps attached

CONVERSION**FONTANA WATER COMPANY****West gate specific plan property east of Cherry**

APN	Acreage
228-021-28	142.35
27	8.50
226-121-21	12.50
18	137.83
226-091-46	45.78
62	70.04
Total	417.00

Jurupa Community Services District
LAND CONVERSION REQUESTS FY 94-95
OUTSIDE OF CONVERSION AREA NO. 1

PARCEL NUMBER	PARCEL ADDRESS	NUMBER OF ACRES	MAP NO	LOT NO
156020026	12400 PHILADELPHIA	10.25	A	1
156020027	12350 PHILADELPHIA	15.41	A	2
156020030		8.79	A	3
156160018	3791 DE FOREST	10.75	B	1
156160035	3065 DULLES	5.21	B	2
156160036	3058 DULLES	9.42	B	3
156160037		7.31	B	4
156160038		5.03	B	5
156160039	3178 DULLES	5.11	B	6
156160046	3431 DE FOREST	5.10	B	7
156160058		2.45	B	8
156160059		1.60	B	9
156160060		0.19	B	10
156160061		0.22	B	11
156160065	3450 DULLES	5.50	B	12
156160066	3204 DE FOREST	5.20	B	13
156160067		5.37	B	14
156160068		5.00	B	15
156160069	3384 DE FOREST	5.00	B	16
156160070		5.21	B	17
156160071	3725 NOBEL	7.88	B	18
156160072		3.55	B	19
156160073	3444 DE FOREST	1.20	B	20
156160074	3590 DE FOREST	10.66	B	21
156160080		5.16	B	22
156160081		6.25	B	23
156160082	10885 INLAND	11.43	B	24
156160084	10980 INLAND	2.51	B	25
156160087	3305 DULLES	20.47	B	26
156160088	3305 DULLES	44.37	B	27
156160089	3305 DULLES	8.40	B	28
156160095	3038 DEERE	12.94	B	29
156160096	3371 DE FOREST	25.03	B	30
156160097		23.97	B	31
183030007	7545 JURUPA	9.90	C	3
183030008	7585 JURUPA	1.99	C	2
183030033	7491 JURUPA	5.69	C	1
183080010	7371 JURUPA	7.55	D	1
	TOTAL ACRES	327.07		

Jurupa Community Services District
LAND CONVERSION REQUESTS FY 95-96
AFTER WATERMASTER VERIFICATION

PARCEL NUMBER	PARCEL ADDRESS	NUMBER OF ACRES	MAP NO	LOT NO
162200006	9894 60TH	5.00	A	1
162200007	60TH	5.00	A	2
162200008	LIMONITE	5.00	A	3
162200009	LIMONITE	4.95	A	4
162200010	9951 LIMONITE	9.65	A	5
162210011	10001 LIMONITE	9.76	A	6
162210001	9709 60TH	5.00	B	1
162210002	6067 BEACH	5.00	B	2
162210003	LIMONITE	5.00	B	3
162210004	LIMONITE	5.00	B	4
165050001	8618 54TH	2.50	C	1
165050002	8646 54TH	2.50	C	2
165050005	5424 PEDLEY	5.00	C	3
165050006	5494 PEDLEY	5.00	C	4
165060001	5419 PEDLEY	5.00	D	1
165060002	5455 PEDLEY	2.86	D	2
165060003	5489 PEDLEY	2.86	D	3
165060013	5511 PEDLEY	3.01	D	4
165080003	5723 PEDLEY	3.25	E	1
165080004	5733 PEDLEY	3.25	E	2
165080005	5793 PEDLEY	7.00	E	3
165080007	5760 PEDLEY	3.00	E	4
165080009	8705 58TH	5.00	E	5
165080010	8695 58TH	2.39	E	6
165080012	8696 56TH	5.00	E	7
165091015	5685 PEDLEY	3.85	F	1
165092004	5690 5685	1.82	F	2
165140008	5935 5685	5.89	G	1
165140029	5831 5685	4.50	G	2
165140030	5853 5685	2.16	G	3
165160001	8626 58TH	3.82	H	1
165160002	8662 58TH	2.50	H	2
165160003	8710 58TH	2.50	H	3
166030025	8238 JURUPA	9.22	I	1
166030023	4800 STONE	14.52	I	2
166030011	4992 STONE	4.63	I	3
166050008	4695 TYROLITE	3.36	J	1
166060005	4911 TYROLITE	8.93	K	1
166060006	4799 TYROLITE	6.19	K	2
166070001	5040 AGATE	4.85	L	1
166070030	5070 AGATE	2.33	L	2
166070009	5025 STONE	2.69	L	3
166070011	5065 STONE	3.63	L	4
166090001	5289 STONE	9.82	M	1
166090002	5250 STONE	5.28	M	2
166090004	5256 AGATE	12.88	M	3
166090023	8440 54TH	2.26	M	4
166090026	5340 AGATE	4.67	M	5
166190017	8600 58TH	10.00	N	1
167020002	GALENA	33.71	O	1

Jurupa Community Services District
LAND USE CONVERSION REQUESTS FY 95-96
AFTER WATERMASTER VERIFICATION

PARCEL NUMBER	PARCEL ADDRESS	NUMBER OF ACRES	MAP NO	LOT NO
167020006	GALENA	9.70	O	2
167020007	GALENA	29.20	O	3
167020008	GALENA	33.70	O	4
167110008	9440 GALENA	10.93	P	1
167160042	4777 FELSPAR	9.37	Q	1
169070006	8705 MISSION	2.57	R	1
169210008	8721 GALENA	1.40	S	1
169270018	4930 AGATE	4.71	T	1
169280020	4945 PEDLEY	2.45	U	1
169280022	8864 PEDLEY	2.71	U	2
169290011	5015 PEDLEY	5.00	V	1
169290020	5071 PEDLEY	4.77	V	2
169290021	5151 PEDLEY	4.77	V	3
169300003	5339 PEDLEY	7.50	W	1
169300005	5355 PEDLEY	8.35	W	2
169300007	5335 PEDLEY	2.39	W	3
169300008	5261 PEDLEY	2.39	W	4
169300009	5235 PEDLEY	2.39	W	5
169300010	5205 PEDLEY	2.38	W	6
169310002	5074 PEDLEY	3.01	X	1
169310003	5071 AGATE	2.72	X	2
169310026	5329 AGATE	2.48	X	3
169310028	5271 AGATE	2.48	X	4
170310041	9200 MISSION	4.14	X	1
171040027	3851 PYRITE	15.41	Y	1
171050013	4100 AGATE	7.69	Z	1
171090011	8531 MISSION	3.22	AA	1
171190004	7868 MISSION	10.96	BB	1
171220002	7837 GALENA	9.64	CC	1
173160020	9150 GRANITE HILL	4.03	DD	1
173160024	8931 GRANITE HILL	2.06	DD	2
173160032	8951 HIGHWAY	4.13	DD	3
183030014	7586 JURUPA	6.92	EE	1
TOTAL ACRES		508.56		

Monte Vista Water District
P.O. Box 71
Montclair, CA 91763-0071

Proposed Conversion Acres
Submitted by Gil Martinez, August 2, 1995

Property No.	Approximate Acreage	APN (Lot No.)
A	4.3	1013-131-15,17,19
A1	2.4	1013-131-15,17,19 (Lot 1 & 6)
C	8.0	1013-171-1 thru 5
E	9.6	1013-271-1
		1013-531-5
G	9.0	1013-291- 6 & 7
I	10.0	1013-521-4 (Lot 1)
N	.5	1016-101-1
	<hr/> 43.66	

Prepared by J.R. Theirl
August 14, 1995

Based on information provided by Gil Martinez of MVWD on August 2, 1995.

City of Ontario
Existing Agricultural Uses
Exhibit A

Identification	APN	Address	Acreage
1	11335102	1348 S GROVE AV	11.500
2	11336103	1550 S PARCO AV	7.231
3	11336104	1460 S PARCO AV	0.904
4	11336105	1442 S PARCO AV	0.454
5	11336106	1436 S PARCO AV	0.232
6	11336107	1410 S PARCO AV	5.518
7	11336116	1551 S GROVE AV	12.255
8	11336118	1405 S GROVE AV	11.642
9	11341421	1704 S VINEYARD AV	3.677
10	11343105	1160 S MILDRED AV	51.026
11	11351208	O E AIRPORT--OIA	8.524
12	11351210	O E AIRPORT --OIA	7.400
13	21019210	572 N TURNER AV	22.343
14	21121104	3000 E JURUPA ST	20.039
15	21121109	1200 S ARCHIBALD AV	19.395
16	21121111	2900 E JURUPA ST	65.765
17	21131203	O E MISSION BL	4.020
18	21131204	O E MISSION BL	2.022
19	21134101	O S SEAGULL AV	0.615
20	21134102	O E JURUPA ST	0.782
21	21134103	O E JURUPA ST	0.534
22	21134104	O E JURUPA ST	0.530
23	21134105	O E JURUPA ST	0.532
24	21134106	O S AVIATION DR	0.786
25	21134107	O S AVIATION DR	1.016
26	21808103	2300 S MILLIKEN AV	46.266
27	21808105	O E MISSION BL	0.263
28	21808108	O E MISSION BL	49.657
61	21809124	O S MILLIKEN AV	15.280
29	23801131	1000 N ROCHESTER AV	2.270
30	23801219	O E INLAND EMPIRE BL	10.664
31	23801223	O E FOURTH ST	13.856
32	23808140	O S WINEVILLE AV	2.655
33	23824110	5010 E AIRPORT DR	0.000
34	101120109	1241 W STATE ST	0.000
35	101120110	1211 W STATE ST	2.434
36	101120111	520 S MAGNOLIA AV	2.409
37	101122102	616 OAKS AV	0.000
38	101142109	O S ELDERBERRY AV	0.942
39	101142111	O S ELDERBERRY AV	1.942
40	101152112	O S ELDERBERRY AV	1.005
41	101153103	O S BENSON AV	2.566
42	101153104	O S BENSON AV	1.860
43	101143105	O S BENSON AV	4.781
44	101412103	O S OAKS AV	0.063
45	101412104	O S OAKS AV	1.705
46	101421112	1320 W FRANCIS ST	7.281
47	104921105	720 E SUNKIST ST	0.000
48	104930105	752 W PARK ST	2.668
49	104930106	720 W PARKS ST	2.685
50	104942104	1310 S CUCAMONGA AV	4.694
51	104950102	1125 S SULTANA AV	0.207

City of Ontario
Existing Agricultural Uses
Exhibit A

Identification	APN	Address	Acreage
52	105013102	1518 S CUCAMONGA AV	0.000
53	105013103	1558 S CUCAMONGA AV	6.028
53	105016103	1556 S GRPVE AV	0.000
55	105017102	1642 S GROVE AV	9.563
56	105018103	1743 S CUCAMONGA AV	8.970
57	105020101	1687 S BON VIEW AV	9.547
58	105036108	1844 S FERN AV	0.000
59	105045104	1921 S BON VIEW AV	4.740
60	105046109	1056 E FRANCIS ST	9.064
61	011340102	1533 S PARCO AVE	29.000
62	101121106	1300 W MISSION BLVD	1.000
63	101138204	1055 W MISSION BLVD	1.000
64	101446205	1951 S PALMETTO AVE	1.000
65	105115103	1256 E PHILADELPHIA ST	6.000
66	105157177	NW CORNER GROVE AVE & RIVERSIDE DR	1.000
67	104947204	CAMPUS (N OF FRANCIS, S OF PHILLIPS)	6.000
68	011008107	1633 E HOLT BLVD	5.000
69	105144103	NW CORNER EUCLID AVE & RIVERSIDE DR	10.000
Total			544 Acres

Table 3A

City of Chino
CHINO BASIN LAND USE CONVERSION
PARCELS TO BE CONVERTED IN FY 94/95

PROPERTY No.	ACREAGE	ADDRESS N/S - E/S	APN	GENERAL NOTES
8	10	3600/13650	1019-611-28,39,40	IRRIGATED LANDSCAPE/UNDER DEVELOPMENT
			1019-611-41,42,43,49	
10	31	3900/14000	1022-031-2	ENTERTAINMENT COMPLEX
			1022-26-4	
			1022-27-4	
			1022-082-1,2,8,9,10	
13	142	4300/14300	1022-42-6,7,8	COMM/IND - WAREHOUSE
			1022-41-5	
			1022-56-2	
			1022-53-11,12,13	
			1022-431-8	
			1022-441-8	
			1022-541-3	
18	70	5300-15400	1028-201-13,17	COMM/IND (MISSION LAUNDRY)
			1028-511-1 thru 20	
			1028-501-1 thru 25	
			1028-491-1 thru 9	
23	26	6400/13900	1021-251-1,20	RESIDENTIAL DEVELOPMENT/COMMERCIAL PARK
			1021-241-2,3	
29	39.5	6600/13900	1053-251-1,2,3,4	RESIDENTIAL DEVELOPMENT
			1053-241-68	
			1053-011-2 thru 5	
30	99	5700/14150	1021-351-1,2	AYALA PARK
			1021-321-1,2	
			1021-311-1,2	
			1021-281-1	
			1026-011-1	
32	61	6950/13100	1052-051-1 thru 18	DOMESTIC SERVICE ONLY/RESIDENTIAL
			1052-051-20 thru 25	
*	41	3950/13900	1022-082-1 thru 11	COMMERCIAL DEVELOPMENT
			1022-251-3 thru 14	
TOTAL	519.5			

* acreage above property number 11 (MAJESTIC SPECTRUM POWER CENTER)

Jurupa Community Services District
LAND CONVERSION REQUESTS FY 94-95
OUTSIDE OF CONVERSION AREA NO. 1

PARCEL NUMBER	PARCEL ADDRESS	NUMBER OF ACRES	MAP NO	LOT NO
156020026	12400 PHILADELPHIA	10.25	A	1
156020027	12350 PHILADELPHIA	15.41	A	2
156020030		8.79	A	3
156160018	3791 DE FOREST	10.75	B	1
156160035	3065 DULLES	5.21	B	2
156160036	3058 DULLES	9.42	B	3
156160037		7.31	B	4
156160038		5.03	B	5
156160039	3178 DULLES	5.11	B	6
156160046	3431 DE FOREST	5.10	B	7
156160058		2.45	B	8
156160059		1.60	B	9
156160060		0.19	B	10
156160061		0.22	B	11
156160065	3450 DULLES	5.50	B	12
156160066	3204 DE FOREST	5.20	B	13
156160067		5.37	B	14
156160068		5.00	B	15
156160069	3384 DE FOREST	5.00	B	16
156160070		5.21	B	17
156160071	3725 NOBEL	7.88	B	18
156160072		3.55	B	19
156160073	3444 DE FOREST	1.20	B	20
156160074	3590 DE FOREST	10.66	B	21
156160080		5.16	B	22
156160081		6.25	B	23
156160082	10885 INLAND	11.43	B	24
156160084	10980 INLAND	2.51	B	25
156160087	3305 DULLES	20.47	B	26
156160088	3305 DULLES	44.37	B	27
156160089	3305 DULLES	8.40	B	28
156160095	3038 DEERE	12.94	B	29
156160096	3371 DE FOREST	25.03	B	30
156160097		23.97	B	31
183030007	7545 JURUPA	9.90	C	3
183030008	7585 JURUPA	1.99	C	2
183030033	7491 JURUPA	5.69	C	1
183080010	7371 JURUPA	7.55	D	1
TOTAL ACRES		327.07		

City of Ontario
Existing Agricultural Uses
Exhibit A

Identification	APN	Address	Acreage
1	11335102	1348 S GROVE AV	11.500
2	11336103	1550 S PARCO AV	7.231
3	11336104	1460 S PARCO AV	0.904
4	11336105	1442 S PARCO AV	0.454
5	11336106	1436 S PARCO AV	0.232
6	11336107	1410 S PARCO AV	5.518
7	11336116	1551 S GROVE AV	12.255
8	11336118	1405 S GROVE AV	11.642
9	11341421	1704 S VINEYARD AV	3.677
10	11343105	1160 S MILDRED AV	51.026
11	11351208	O E AIRPORT--OIA	8.524
12	11351210	O E AIRPORT --OIA	7.400
13	21019210	572 N TURNER AV	22.343
14	21121104	3000 E JURUPA ST	20.039
15	21121109	1200 S ARCHIBALD AV	19.395
16	21121111	2900 E JURUPA ST	65.765
17	21131203	O E MISSION BL	4.020
18	21131204	O E MISSION BL	2.022
19	21134101	O S SEAGULL AV	0.615
20	21134102	O E JURUPA ST	0.782
21	21134103	O E JURUPA ST	0.534
22	21134104	O E JURUPA ST	0.530
23	21134105	O E JURUPA ST	0.532
24	21134106	O S AVIATION DR	0.786
25	21134107	O S AVIATION DR	1.016
26	21808103	2300 S MILLIKEN AV	46.266
27	21808105	O E MISSION BL	0.263
28	21808108	O E MISSION BL	49.657
61	21809124	O S MILLIKEN AV	15.280
29	23801131	1000 N ROCHESTER AV	2.270
30	23801219	O E INLAND EMPIRE BL	10.664
31	23801223	O E FOURTH ST	13.856
32	23808140	O S WINEVILLE AV	2.655
33	23824110	5010 E AIRPORT DR	0.000
34	101120109	1241 W STATE ST	0.000
35	101120110	1211 W STATE ST	2.434
36	101120111	520 S MAGNOLIA AV	2.409
37	101122102	616 OAKS AV	0.000
38	101142109	O S ELDERBERRY AV	0.942
39	101142111	O S ELDERBERRY AV	1.942
40	101152112	O S ELDERBERRY AV	1.005
41	101153103	O S BENSON AV	2.566
42	101153104	O S BENSON AV	1.860
43	101143105	O S BENSON AV	4.781
44	101412103	O S OAKS AV	0.063
45	101412104	O S OAKS AV	1.705
46	101421112	1320 W FRANCIS ST	7.281
47	104921105	720 E SUNKIST ST	0.000
48	104930105	752 W PARK ST	2.668
49	104930106	720 W PARKS ST	2.685
50	104942104	1310 S CUCAMONGA AV	4.694
51	104950102	1125 S SULTANA AV	0.207

City of Ontario
Existing Agricultural Uses
Exhibit A

Identification	APN	Address	Acreage
52	105013102	1518 S CUCAMONGA AV	0.000
53	105013103	1558 S CUCAMONGA AV	6.028
53	105016103	1556 S GRPVE AV	0.000
55	105017102	1642 S GROVE AV	9.563
56	105018103	1743 S CUCAMONGA AV	8.970
57	105020101	1687 S BON VIEW AV	9.547
58	105036108	1844 S FERN AV	0.000
59	105045104	1921 S BON VIEW AV	4.740
60	105046109	1056 E FRANCIS ST	9.064
61	011340102	1533 S PARCO AVE	29.000
62	101121106	1300 W MISSION BLVD	1.000
63	101138204	1055 W MISSION BLVD	1.000
64	101446205	1951 S PALMETTO AVE	1.000
65	105115103	1256 E PHILADELPHIA ST	6.000
66	105157177	NW CORNER GROVE AVE & RIVERSIDE DR	1.000
67	104947204	CAMPUS (N OF FRANCIS, S OF PHILLIPS)	6.000
68	011008107	1633 E HOLT BLVD	5.000
69	105144103	NW CORNER EUCLID AVE & RIVERSIDE DR	10.000
Total			544 Acres

***** NOTICE OF HEARING *****

TO - ALL ACTIVE CHINO BASIN PARTIES, CASE NO. 164327

WHEN - JANUARY 5, 1979, 1:30 P.M.

WHERE - SAN BERNARDINO SUPERIOR COURT, DEPARTMENT 2
351 NORTH ARROWHEAD AVENUE, SAN BERNARDINO, CALIF.

WHAT - THE FOLLOWING ITEMS ARE FOR APPROVAL.

1. FIRST ANNUAL WATERMASTER REPORT.
2. 1977/78 PRODUCTION SUMMARY.
3. FORM OF LOCAL STORAGE AGREEMENT.
4. M.W.D. CYCLIC STORAGE AGREEMENT.
5. INTERVENTIONS AND ASSIGNMENTS.

YOUR PRESENCE AT THIS HEARING IS NOT REQUIRED, BUT YOUR ATTENDANCE IS WELCOME.

NOTE - FILING WITH THE DIVISION OF WATERRIGHTS IS NO LONGER NECESSARY, JUST RETURN THEIR FORMS INDICATING YOU REPORT TO THE CHINO BASIN WATERMASTER.

FRAN BROMMENSCHENKEL
987-1712

APPENDIX H

ORANGE COUNTY ADJUDICATION

JUDGMENT No. 117628, April 17, 1969

JUDGMENT

FILED
APR 17 1969

W. E. ST JOHN, County Clerk
CB
Clerk of the Superior Court of Orange County

ENTERED IN
JUDGMENT BOOK

No. 262 Page 303
Date APR 17 1969

SUPERIOR COURT FOR THE STATE OF CALIFORNIA
FOR THE COUNTY OF ORANGE

ORANGE COUNTY WATER DISTRICT,

Plaintiff,

v.

CITY OF CHINO, et al.,

Defendants.

CITY OF CHINO, et al.,

Cross-Complainants,

v.

CITY OF ANAHEIM, et al.,

Cross-Defendants.

CORONA FOOTHILL LEMON COMPANY, et al.,

Cross-Complainants,

v.

CITY OF ANAHEIM, et al.,

Cross-Defendants.

CITY OF POMONA, a municipal corporation,

Cross-Complainant,

v.

CITY OF ANAHEIM, et al.,

Cross-Defendants.

No. 117628

JUDGMENT

1 CITY OF RIVERSIDE, et al.,)
2 Cross-Complainants,)
3 v.)
4 CITY OF ANAHEIM, et al.,)
5 Cross-Defendants.)
6 _____)
7 BEAR VALLEY MUTUAL WATER COMPANY, et al.,)
8 Cross-Complainants,)
9 v.)
10 CITY OF ANAHEIM, et al.,)
11 Cross-Defendants.)
12 _____)
13 SAN BERNARDINO VALLEY MUNICIPAL WATER)
14 DISTRICT, a municipal water district,)
15 Cross-Complainant,)
16 v.)
17 CITY OF ANAHEIM, et al.,)
18 Cross-Defendants.)
19 _____)
20 EAST SAN BERNARDINO COUNTY WATER)
21 DISTRICT, a county water district,)
22 Cross-Complainant,)
23 v.)
24 CITY OF ANAHEIM, et al.,)
25 Cross-Defendants.)
26 _____)
27 CITY OF SAN BERNARDINO, a municipal)
28 corporation,)
29 Cross-Complainant,)
30 v.)
31 CITY OF ANAHEIM, et al.,)
32 Cross-Defendants.)

1 CITY OF REDLANDS, a municipal corporation,)
2 Cross-Complainant,)
3 v.)
4 CITY OF ANAHEIM, et al.,)
5 Cross-Defendants.)
6 _____)
7 CITY OF COLTON, a municipal corporation,)
8 Cross-Complainant,)
9 v.)
10 CITY OF ANAHEIM, et al.,)
11 Cross-Defendants.)
12 _____)
13 SAN BERNARDINO VALLEY WATER CONSERVATION)
14 DISTRICT, a water conservation district,)
15 Cross-Complainant,)
16 v.)
17 CITY OF ANAHEIM, et al.,)
18 Cross-Defendants.)
19 _____)
20 CITY OF RIALTO, a municipal corporation,)
21 Cross-Complainant,)
22 v.)
23 CITY OF ANAHEIM, et al.,)
24 Cross-Defendants.)
25 _____)
26 BIG BEAR MUNICIPAL WATER DISTRICT, a)
27 municipal water district,)
28 Cross-Complainant,)
29 v.)
30 CITY OF ANAHEIM, et al.,)
31 Cross-Defendants.)
32 _____)

TABLE OF CONTENTS

JUDGMENT

		<u>Page</u>
6	RECITALS	6
7	a. Complaint	6
	b. Cross-complaints	6
8	c. Physical and Legal Complexities	6
	d. Need for Physical Solution	6
9	e. Parties	7
	f. Cooperation by Dismissed Parties	7
10	DECREE	7
11	1. Jurisdiction	7
12	2. Exhibits	7
	3. Definitions	7
13	4. Declaration of Rights	10
	5. Physical Solution	10
14	(a) General Format	11
15	(b) Obligation of SBVMWD	11
16	(1) Minimum Annual Quantities	11
	(2) Adjustment for Quality	12
17	(3) Periodic Reduction of Cumulative Debit	12
18	(c) Obligation of CBMWD and WMWD	12
19	(1) Minimum Annual Quantities	13
20	(2) Adjustment for Quality	13
21	(3) Periodic Reduction of Cumulative Debit	13
22	(d) Inter-basin Export	14
	(e) Inter-basin Acquisition of Rights	14
23	(f) Effective Date	14
24	6. Prior Adjudications	14
25	7. Watermaster	15
	(a) Composition, Nomination and Appointment	15
26	(b) Watermaster Determinations	16
	(c) Annual Report	16
27	(d) Watermaster Service Expenses	16
28	8. Continuing Jurisdiction of the Court	17
	9. Notices	17
29	10. Successors	18
	11. Future Actions	18
30	12. Costs	19

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EXHIBITS

Page

"A" -- Map entitled "Santa Ana River Watershed"

"B" -- Engineering Appendix

1. <u>Measurements</u>	20
a. Change in Measuring Device or Location . .	20
b. Erroneous Measurement	20
c. Preliminary Records	20
2. <u>Determination of Flow Components</u>	20
3. <u>Water Quality Determinations</u>	21
a. Procedure at Prado	21
b. Procedure at Riverside Narrows	22
4. <u>Accounting</u>	22
a. Prado Accounting	22
b. Riverside Narrows Accounting	23

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1 supply of the Santa Ana River system. Sufficient information and
2 data of a general nature are known to formulate a reasonable and
3 just allocation as between the major hydrologic sub-areas within
4 the watershed, and such a physical solution will allow the public
5 agencies and water users within each such major hydrologic sub-
6 area to proceed with orderly water resource planning and develop-
7 ment.

8 e. Parties. Orange County Water District, Chino Basin
9 Municipal Water District, Western Municipal Water District of
10 Riverside County and San Bernardino Valley Municipal Water District
11 are public districts overlying, in the aggregate, substantially all
12 of the major areas of water use within the watershed. Said dis-
13 tricts have the statutory power and financial resources to imple-
14 ment a physical solution. Accordingly, dismissals have been entered
15 as to all defendants and cross-defendants other than said four pub-
16 lic districts.

17 f. Cooperation by Dismissed Parties. As a condition of
18 dismissal of said defendants and cross-defendants, certain of said
19 parties have stipulated to cooperate and support the inter-basin
20 water quality and water management objectives of the physical solu-
21 tion and this Judgment.

22 DECREE

23 NOW, THEREFORE, IT IS HEREBY ORDERED, ADJUDGED AND DECREED:

24 1. Jurisdiction. The Court has jurisdiction of the subject
25 matter of this action and of the parties herein.

26 2. Exhibits. The following exhibits are attached to this
27 Judgment and made a part hereof.

28 (a) Exhibit A -- map entitled "Santa Ana River
29 Watershed", showing boundaries and other relevant
30 features of the area subject to this Judgment.

31 (b) Exhibit B -- Engineering Appendix.

32 3. Definitions. As used in this Judgment, the following

1 terms shall have the meanings herein set forth:

2 (a) OCWD -- Orange County Water District,
3 appearing and acting individually and in a represen-
4 tative capacity for and on behalf of all riparian,
5 overlying and other landowners, water users and in-
6 habitants within said District pursuant to Subdivision
7 7 of Section 2 of the Orange County Water District Act,
8 as amended.

9 (b) CBMWD -- Chino Basin Municipal Water District,
10 appearing and acting pursuant to Section 71751 of the
11 California Water Code.

12 (c) WMWD -- Western Municipal Water District of
13 Riverside County, appearing and acting pursuant to
14 said Section 71751.

15 (d) SBVMWD -- San Bernardino Valley Municipal Water
16 District, appearing and acting pursuant to said Section
17 71751.

18 (e) Upper Districts -- CBMWD, WMWD and SBVMWD.

19 (f) Upper Area -- The area on Exhibit A which lies
20 upstream from Prado.

21 (g) Lower Area -- The area on Exhibit A which lies
22 downstream from Prado.

23 (h) Prado -- Said term shall be synonymous with
24 Prado Dam, a facility constructed and maintained by the
25 United States Corps of Engineers, as shown on Exhibit A.

26 (i) Riverside Narrows -- That bedrock narrows
27 in the Santa Ana River indicated as such on Exhibit A.

28 (j) Storm Flow -- That portion of the total sur-
29 face flow passing a point of measurement, which orig-
30 inates from precipitation and runoff without having
31 first percolated to ground water storage in the zone
32 of saturation, calculated in accordance with procedures

referred to in Exhibit B.

(k) Base Flow -- That portion of the total surface flow passing a point of measurement, which remains after deduction of Storm Flow, and modified as follows:

(1) At Prado. Base Flow shall:

(i) include any water caused to be delivered by CBMWD or WMWD directly to OCWD, pursuant to its direction and control and not measured at the gages at Prado;

(ii) exclude any nontributary water or reclaimed sewage water purchased by OCWD and delivered into the river upstream and which subsequently passes Prado, and

(iii) exclude water salvaged from evapo-transpiration losses by OCWD on lands presently owned by it above Prado.

(2) At Riverside Narrows. Base Flow shall:

(i) include any water caused to be delivered by SBVMWD directly to CBMWD or WMWD pursuant to their direction and control, or directly to OCWD with the consent of CBMWD and WMWD and pursuant to the direction and control of OCWD, and not measured at the gage at Riverside Narrows;

(ii) exclude any nontributary water purchased by CBMWD, WMWD or OCWD and delivered into the river upstream and which subsequently passes Riverside Narrows; and

(iii) exclude any effluent discharged from the City of Riverside sewage treatment plant.

1 (l) TDS -- Total dissolved solids determined as
2 set forth in Exhibit B.

3 (m) Water Year -- The period from October 1 to
4 the following September 30. Where reference is made
5 herein to "year" or "annual", such terms shall be con-
6 strued as referring to Water Year, unless the context
7 indicates otherwise.

8 (n) Adjusted Base Flow -- Actual Base Flow in
9 each year adjusted for quality as provided herein-
10 below. Compliance with the respective obligations
11 under Paragraph 5 shall be measured by the Adjusted
12 Base Flow.

13 4. Declaration of Rights. Substantially all of the parties
14 to this action, whether situate in Upper Area or Lower Area have or
15 claim rights to the use of a portion of the water supply of the
16 Santa Ana River system. In the aggregate, water users and other
17 entities in Lower Area have rights, as against all Upper Area
18 claimants, to receive an average annual supply of 42,000 acre feet
19 of Base Flow at Prado, together with the right to all Storm Flow
20 reaching Prado Reservoir. Water users and other entities in Upper
21 Area have rights in the aggregate, as against all Lower Area claim-
22 ants, to divert, pump, extract, conserve, store and use all surface
23 and ground water supplies originating within Upper Area without
24 interference or restraint by Lower Area claimants, so long as Lower
25 Area receives the water to which it is entitled under this Judgment,
26 and there is compliance with all of its provisions.

27 5. Physical Solution. The Court hereby declares the
28 following physical solution to be a fair and equitable basis for
29 satisfaction of all said rights in the aggregate between Lower Area
30 and Upper Area. The parties are hereby ordered and directed to
31 comply with this Physical Solution and such compliance shall con-
32 stitute full and complete satisfaction of the rights declared in

Paragraph 4 hereof.

(a) General Format. In general outline, SBVMWD shall be responsible for the delivery of an average annual amount of Base Flow at Riverside Narrows. CBMWD and WMWD shall jointly be responsible for an average annual amount of Base Flow at Prado. Insofar as Lower Area claimants are concerned, Upper Area water users and other entities may engage in unlimited water conservation activities, including spreading, impounding and other methods, in the area above Prado Reservoir, so long as Lower Area receives the water to which it is entitled under the Judgment and there is compliance with all of its provisions. Lower Area water users and other entities may make full conservation use of Prado Dam and reservoir, subject only to flood control use.

(b) Obligation of SBVMWD. SBVMWD shall be responsible for an average annual Adjusted Base Flow of 15,250 acre feet at Riverside Narrows. A continuing account, as described in Exhibit B, shall be maintained of actual Base Flow at Riverside Narrows, with all adjustments thereof and any cumulative debit or credit. Each year the obligation to provide Base Flow shall be subject to the following:

(1) Minimum Annual Quantities. Without regard to any cumulative credits, or any adjustment for quality for the current Water Year under subparagraph (2) hereof, SBVMWD each year shall be responsible at Riverside Narrows for not less than 13,420 acre feet of Base Flow plus one-third of any cumulative debit; provided, however, that for any year

commencing on or after October 1, 1986, when there is no cumulative debit, or for any year prior to 1986 whenever the cumulative credit exceeds 10,000 acre feet, said minimum shall be 12,420 acre feet.

(2) Adjustment for Quality. The amount of Base Flow at Riverside Narrows received during any year shall be subject to adjustment based upon the weighted average annual TDS in such Base Flow, as follows:

If the Weighted Average TDS in Base Flow at Riverside Narrows is:	Then the Adjusted Base Flow shall be determined by the formula:
Greater than 700 ppm	$Q - \frac{11}{15,250} Q (\text{TDS}-700)$
600 ppm - 700 ppm	Q
Less than 600 ppm	$Q + \frac{11}{15,250} Q (600-\text{TDS})$

Where: Q = Base Flow actually received.

(3) Periodic Reduction of Cumulative Debit.

At least once in any ten (10) consecutive years subsequent to October 1, 1976, SBVMWD shall provide sufficient quantities of Base Flow at Riverside Narrows to discharge completely any cumulative debits. Any cumulative credits shall remain on the books of account until used to offset any subsequent debits, or until otherwise disposed of by SBVMWD.

(c) Obligation of CBMWD and WMWD. CBMWD and WMWD shall be responsible for an average annual Adjusted Base Flow of 42,000 acre feet at Prado. A continuing account, as described in Exhibit B, shall

1 be maintained of actual Base Flow at Prado, with all
2 adjustments thereof and any cumulative debit or
3 credit. Each year the obligation to provide Base
4 Flow shall be subject to the following:

5 (1) Minimum Annual Quantities. Without
6 regard to any cumulative credits, or any adjust-
7 ments for quality for the current Water Year
8 under subparagraph (2) hereof, CBMWD and WMWD
9 each year shall be responsible for not less than
10 37,000 acre feet of Base Flow at Prado, plus one-
11 third of any cumulative debit; provided, however,
12 that for any year commencing on or after October 1,
13 1986, when there is no cumulative debit, or for
14 any year prior to 1986 whenever the cumulative
15 credit exceeds 30,000 acre feet, said minimum
16 shall be 34,000 acre feet.

17 (2) Adjustment for Quality. The amount of
18 Base Flow at Prado received during any year
19 shall be subject to adjustment based upon the
20 weighted average annual TDS in Base Flow and
21 Storm Flow at Prado as follows:

22 If the Weighted Average 23 TDS in Base Flow and Storm Flow at Prado is:	Then the Adjusted Base Flow shall be deter- mined by the formula:
24 Greater than 800 ppm	$Q - \frac{35}{42,000} Q \text{ (TDS-800)}$
25 <hr/> 26 700 ppm - 800 ppm	Q
27 <hr/> 28 Less than 700 ppm	$Q + \frac{35}{42,000} Q \text{ (700-TDS)}$

29 Where: Q = Base Flow actually received.

30 (3) Periodic Reduction of Cumulative Debit.
31 At least once in ten (10) consecutive years sub-
32 sequent to October 1, 1976, CBMWD and WMWD shall

1 provide sufficient quantities of Base Flow at
2 Prado to discharge completely any cumulative
3 debits. Any cumulative credits shall remain
4 on the books of account until used to offset
5 any subsequent debits, or until otherwise dis-
6 posed of by CBMWD and WMWD.

7 (d) Inter-basin Export. Upper Districts are
8 hereby restrained and enjoined from exporting water
9 from Lower Area to Upper Area, directly or indirectly.
10 OCWD is enjoined and restrained from pumping, produc-
11 ing and exporting or directly or indirectly causing
12 water to flow from Upper to Lower Area, except as to
13 salvage of evapo-transpiration losses, as follows:
14 OCWD owns certain lands within and above Prado Reser-
15 voir on which it has or claims certain rights to sal-
16 vage evapo-transpiration losses by pumping or otherwise.
17 Pumping for said salvage purposes shall not exceed
18 5,000 acre feet of ground water in any water year.
19 Only the actual net salvage, as determined by the
20 Watermaster, shall be excluded from Base Flow.

21 (e) Inter-basin Acquisition of Rights. The
22 acquisition by Upper Districts or other Upper Area
23 entities of Lower Area water rights shall in no way
24 affect or reduce Lower Area's entitlement; and the
25 acquisition of Upper Area water rights by OCWD or
26 other Lower Area entities shall be deemed to be in-
27 cluded within the aggregate entitlement of Lower Area
28 and shall not increase said entitlement.

29 (f) Effective Date. Obligations under this
30 physical solution shall accrue from and after
31 October 1, 1970.

32 6. Prior Adjudications. So long as SBVMWD is in

1 compliance with the terms of the physical solution herein, OCWD is
2 enjoined and restrained from enforcing the judgments listed below
3 against SBVMWD or any entities within or partially within SBVMWD
4 which have stipulated to accept and adopt such physical solution.
5 So long as WMWD and CBMWD are in compliance with the terms of the
6 physical solution, OCWD is enjoined and restrained from enforcing
7 the judgments listed below against WMWD and CBMWD or any entities
8 within or partially within WMWD or CBMWD which have stipulated to
9 accept and adopt such physical solution.

10 (a) The Irvine Company, plaintiff, Orange County
11 Water District, intervenor, vs. San Bernardino Valley
12 Water Conservation District, et al., defendants,
13 U. S. Dist. Ct., S.D. Cal. Civ. No. Y-36-M, judgments
14 entered September 11, 1942 (Judgment Book 11 page 134),
15 and recorded Book 1540 page 251 and Book 1541 page 85,
16 Official Records of San Bernardino County.

17 (b) Orange County Water District vs. City of
18 Riverside, et al., San Bernardino Superior Court
19 No. 84671.

20 7. Watermaster. The Watermaster, when appointed by the
21 Court, shall administer and enforce the provisions of this Judg-
22 ment and the instructions and subsequent orders of this Court.

23 (a) Composition, Nomination and Appointment.

24 The Watermaster shall consist of a committee com-
25 posed of five (5) persons. CBMWD, WMWD and SBVMWD
26 shall each have the right to nominate one represen-
27 tative and OCWD shall have the right to nominate
28 two (2) representatives to the Watermaster committee.
29 Each such nomination shall be made in writing, served
30 upon the other parties to the Stipulation for this
31 Judgment and filed with the Court. Said Watermaster
32 representatives shall be appointed by and serve at

1 the pleasure of and until further order of this Court.

2 (b) Watermaster Determinations. Each and every
3 finding and determination of the Watermaster shall be
4 made in writing certified to be by unanimous action
5 of all members of the Watermaster Committee. In the
6 event of failure or inability of said Watermaster
7 Committee to reach unanimous agreement, the fact,
8 issue, or determination in question shall forthwith
9 be certified to this Court by the Watermaster, and
10 after due notice to the parties and opportunity for
11 hearing, said matter shall be determined by order of
12 this Court.

13 (c) Annual Report. The Watermaster shall report
14 to the Court and to each party in writing not more
15 than five (5) months after the end of each Water
16 Year, each of the items required by Paragraph 4 of
17 the Engineering Appendix, Exhibit B hereto, and such
18 other items as the parties may mutually request or
19 the Watermaster may deem to be appropriate. All of
20 the books and records of the Watermaster which are
21 used in the preparation of, or are relevant to, such
22 reported data, determinations and reports shall be
23 open to inspection by the parties to the Stipulation
24 for Judgment herein.

25 (d) Watermaster Service Expenses. The fees,
26 compensation and expenses of each representative
27 on the Watermaster shall be borne by the district
28 which nominated such person. All other Watermaster
29 service costs and expenses shall be borne by the
30 parties in the following proportions:

31 OCWD - 40%

32 CBMWD - 20%

1 SBVMWD - 20%

2 WMWD - 20%

3 The Watermaster may from time to time in its discre-
4 tion require advances of operating capital from the
5 parties in said proportions.

6 8. Continuing Jurisdiction of the Court. Full jurisdic-
7 tion, power and authority are retained and reserved by the Court
8 for the purpose of enabling the Court, upon application of any
9 party or of the Watermaster by motion and upon at least 30 days'
10 notice thereof, and after hearing thereon:

11 (a) To make such further or supplemental orders
12 or directions as may be necessary or appropriate for
13 the construction, enforcement or carrying out of
14 this Judgment, and

15 (b) To modify, amend or amplify any of the pro-
16 visions of this Judgment whenever substantial changes
17 or developments affecting the physical, hydrological
18 or other conditions dealt with herein may, in the
19 Court's opinion, justify or require such modification,
20 amendment or amplification; provided, however, that
21 no such modification, amendment or amplification shall
22 change or alter (1) the average annual obligation of
23 CBMWD and WMWD for delivery of 42,000 acre feet of
24 Base Flow per year at Prado, (2) the average annual
25 obligation of SBVMWD for delivery of 15,250 acre feet
26 of Base Flow per year at Riverside Narrows, (3) the
27 respective minimum Base Flows at Riverside Narrows and
28 Prado, nor (4) the right of the parties to this Judg-
29 ment or of those who stipulate to accept and adopt the
30 physical solution herein to conserve or store flows.

31 9. Notices. All notices, requests, objections, reports
32 and other papers permitted or required by the terms of this

1 Judgment shall be given or made by written document and shall be
2 served by mail on each party and its attorney entitled to notice
3 and where required or appropriate, on the Watermaster. For all
4 purposes of this paragraph, the mailing address of each party and
5 attorney entitled to notice shall be that set forth below its sig-
6 nature in the Stipulation for Judgment, until changed as provided
7 below. If any party or attorney for a party desires to change its
8 designation of mailing address, it shall file a written notice of
9 such change with the Clerk of this Court and shall serve a copy
10 thereof by mail on the Watermaster. Upon receipt of any such
11 notice, the Watermaster shall promptly give written notice there-
12 of. Watermaster addresses for notice purposes shall be as speci-
13 fied in the orders appointing each representative on the Water-
14 master.

15 10. Successors. No party shall dissolve, nor shall it
16 abandon or transfer all or substantially all of its powers or
17 property, without first providing for its obligations under this
18 Judgment to be assumed by a successor public agency, with the
19 powers and resources to perform hereunder. Any such successor
20 shall be approved by the Court after notice to all parties and an
21 opportunity for hearing.

22 11. Future Actions. In the event that any Lower Area
23 claimant shall in the future obtain from any court of competent
24 jurisdiction a decree awarding to such claimant a right to receive
25 a stated amount of water from the Upper Area for use in the Lower
26 Area, any water delivered pursuant to such decree shall be consid-
27 ered as part of Base Flow. In the event that the relief obtained
28 by any such claimant is in the form of a restriction imposed upon
29 production and the use of water in Upper Area, rather than a right
30 to receive a stated amount of water, then notwithstanding the
31 proviso in Paragraph 8, any Upper District may apply to the Court
32 to modify the physical solution herein.

12. Costs. None of the parties shall recover any costs from any other party.

Dated: April 17, 1969

John P. Dinnery
Judge

APPENDIX I

WESTERN-SAN BERNARDINO ADJUDICATION

JUDGMENT No. 78426, April 17, 1969

JUDGMENT

FILED
RIV. RIFE COUNTY

APR 17 1969

DONALD D. SULLIVAN, Clerk
By *[Signature]* Deputy

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA
IN AND FOR THE COUNTY OF RIVERSIDE

WESTERN MUNICIPAL WATER DISTRICT OF
RIVERSIDE COUNTY, a municipal water
district; CITY OF RIVERSIDE, a
municipal corporation; THE GAGE
CANAL COMPANY, a corporation; AGUA
MANSA WATER COMPANY, a corporation,
MEEKS & DALEY WATER COMPANY, a
corporation; RIVERSIDE HIGHLAND
WATER COMPANY, a corporation, and
THE REGENTS OF THE UNIVERSITY OF
CALIFORNIA,

Plaintiffs,

-vs-

(A) EAST SAN BERNARDINO COUNTY
WATER DISTRICT, et al.,

Defendants

78426
No. 784726 *[Signature]*
4/17/69

JUDGMENT

TABLE OF CONTENTS

RECITALS

		<u>Page</u>
I	Active Parties	5
II	Dismissed Parties	5
III	Prior Judgments	6
IV	Definitions	7
V	Extractions from the San Bernardino Basin Area	10
VI	San Bernardino Basin Area Rights and Replenishment	10
VII	Water Discharged Across the Bunker Hill Dike	16
VIII	Extractions from Colton Basin Area and Riverside Basin Area in San Bernardino County	16
IX	Extractions from the Portion of Riverside Basin Area in Riverside County which is tributary to Riverside Narrows.	20
X	Replenishment to Offset New Exports of Water to Areas not Tributary to Riverside Narrows.	21
XI	Replenishment Credits and Adjustment for Quality	22
XII	Conveyance of Water by San Bernardino Valley to Riverside Narrows.	24
XIII	Watermaster	25
XIV	Continuing Jurisdiction of the Court	27
XV	Saving Clauses	29
XVI	Effective Date	31
XVII	Costs	31

APPENDIX A -- Map showing San Bernardino Basin Area, Colton Basin Area, and Riverside Basin Area situated within San Bernardino County; Riverside Basin Area within Riverside County; Bunker Hill Dike; Riverside Narrows; and

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Boundaries of San Bernardino
Valley Municipal Water
District & Western Municipal
Water District of Riverside
County

APPENDIX B --

Extractions by Plaintiffs from San
Bernardino Basin Area.

APPENDIX C --

Exports for Use on Lands not
Tributary to Riverside Narrows

APPENDIX D --

Miscellaneous Data

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1 therefor,

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3 IT IS HEREBY ORDERED, ADJUDGED AND DECREED as follows:

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5 I

6 ACTIVE PARTIES

7
8 (a) The parties to this Judgment are as follows:

9 (1) Plaintiff Western Municipal Water District
10 of Riverside County, a California municipal water district,
11 herein often called "Western", appearing and acting pursuant to
12 Section 71751 of the Water Code;

13 (2) Plaintiff City of Riverside, a municipal
14 corporation;

15 (3) Plaintiffs Riverside Highland Water
16 Company, Agua Mansa Water Company and Meeks & Daley Water
17 Company, each of which is a mutual water company and a
18 California corporation;

19 (4) Plaintiff The Regents of the University
20 of California, a California public corporation;

21 (5) Defendant San Bernardino Valley
22 Municipal Water District, a California municipal water district,
23 herein often called "San Bernardino Valley", appearing and
24 acting pursuant to Section 71751 of the Water Code;

25 (b) This Judgment shall inure to the benefit of, and
26 be binding upon, the successors and assigns of the parties.

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28 II

29 DISMISSED PARTIES

30 All parties other than those named in the preceding
31 Paragraph I are dismissed without prejudice.

III
PRIOR JUDGMENTS

(a) The Judgment dated and entered on May 13, 1959, in that certain action filed in the Superior Court of the State of California in and for the County of San Bernardino, entitled and numbered "San Bernardino Valley Water Conservation District, a State Agency, Plaintiff v. Riverside Water Company, a corporation, et al., Defendants", No. 97031, is superseded effective January 1, 1971, and for so long as this Judgment remains in effect as to any party hereto that was a party to that action, and as to any party hereto that is a successor in interest to the rights determined in that action.

(b) The Judgment dated June 23, 1965, and entered on April 21, 1966, in that certain action filed in the Superior Court of the State of California in and for the County of San Bernardino entitled and numbered "San Bernardino Valley Water Conservation District, a State Agency, Plaintiff, v. Riverside Water Company, a corporation, et al., Defendants," No. 111614, is superseded effective January 1, 1971, and for so long as this Judgment remains in effect as to any party hereto that was a party to that action, and as to any party hereto that is a successor in interest to any rights determined in that action.

(c) As used in this Paragraph III only, "party" includes any person or entity which stipulates with the parties hereto to accept this Judgment.

IV

DEFINITIONS

The following ground water basins and tributary areas are situated within the Santa Ana River watershed upstream from Riverside Narrows and are tributary thereto, and their approximate locations and boundaries for purposes of this Judgment are shown upon the map attached hereto as Appendix "A"; San Bernardino Basin Area (the area above Bunker Hill Dike, but excluding certain mountainous regions and the Yucaipa, San Timoteo, Oak Glen and Beaumont Basins); Colton Basin Area, Riverside Basin Area within San Bernardino County, and Riverside Basin Area within Riverside County.

As used herein the following terms shall have the meanings herein set forth:

(a) Bunker Hill Dike - The San Jacinto Fault, located approximately as shown on Appendix "A", and forming the principal downstream boundary of the San Bernardino Basin Area.

(b) Riverside Narrows - That bedrock narrows in the Santa Ana River indicated on Appendix "A".

(c) Extractions - Any form of the verb or noun shall include pumping, diverting, taking or withdrawing water, either surface or subsurface, by any means whatsoever, except extractions for hydroelectric generation to the extent that such flows are returned to the stream, and except for diversions for replenishment.

(d) Natural Precipitation - Precipitation which falls naturally in the Santa Ana River watershed.

(e) Imported Water - Water brought into the Santa Ana River watershed from sources of origin outside such watershed.

1 (f) Replenishment - Artificial recharge of the
2 ground water body achieved through the spreading or retention of
3 water for the purpose of causing it to percolate and join the
4 underlying ground water body, or injection of water into the
5 ground water resources by means of wells; provided that as used
6 with reference to any obligation of Western to replenish the
7 Riverside Basin Area in Riverside County, the term replenishment
8 shall include any water caused to be delivered by Western for
9 which credit is received by San Bernardino Valley against its
10 obligation under the Orange County Judgment to provide base
11 flow at Riverside Narrows.

12 (g) Safe Yield - Safe yield is that maximum
13 average annual amount of water that could be extracted from the
14 surface and subsurface water resources of an area over a period
15 of time sufficiently long to represent or approximate long-time
16 mean climatological conditions, with a given areal pattern of
17 extractions, under a particular set of physical conditions or
18 structures as such affect the net recharge to the ground water
19 body, and with a given amount of usable underground storage
20 capacity, without resulting in long-term, progressive lowering
21 of ground water levels or other undesirable result. In
22 determining the operational criteria to avoid such adverse
23 results, consideration shall be given to maintenance of adequate
24 ground water quality, subsurface outflow, costs of pumping,
25 and other relevant factors.

26 The amount of safe yield is dependent in part upon
27 the amount of water which can be stored in and used from the
28 ground water reservoir over a period of normal water supply
29 under a given set of conditions. Safe yield is thus related to
30 factors which influence or control ground water recharge, and
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1 to the amount of storage space available to carry over recharge
2 occurring in years of above average supply to years of
3 deficient supply. Recharge, in turn, depends on the available
4 surface water supply and the factors influencing the
5 percolation of that supply to the water table.

6 Safe yield shall be determined in part through the
7 evaluation of the average net groundwater recharge which would
8 occur if the culture of the safe yield year had existed over
9 a period of normal native supply.

10 (h) Natural Safe Yield - That portion of the safe
11 yield of the San Bernardino Basin Area which could be derived
12 solely from natural precipitation in the absence of imported
13 water and the return flows therefrom, and without
14 contributions from new conservation. If in the future any
15 natural runoff tributary to the San Bernardino Basin Area is
16 diverted away from that Basin Area so that it is not included
17 in the calculation of natural safe yield, any replacement made
18 thereof by San Bernardino Valley or entities within it from
19 imported water shall be included in such calculation.

20 (i) New Conservation - Any increase in
21 replenishment from natural precipitation which results from
22 operation of works and facilities not now in existence, other
23 than those works installed and operations which may be
24 initiated to offset losses caused by increased flood control
25 channelization.

26 (j) Year - A calendar year from January 1 through
27 December 31. The term "annual" shall refer to the same period
28 of time.

29 (k) Orange County Judgment - The final judgment
30 in Orange County Water District v. City of Chino, et al.,
31 Orange County Superior Court No. 117628, as it may from time to
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time be modified.

(1) Return Flow - That portion of the water applied for use in any particular ground water basin which subsequently reaches the ground water body in that basin.

(m) Five Year Period - a period of five consecutive years.

V

EXTRACTIONS FROM THE SAN BERNARDINO BASIN AREA

(a) For Use by Plaintiffs. The average annual extractions from the San Bernardino Basin Area delivered for use in each service area by each Plaintiff for the five year period ending with 1963 are hereby determined to be as set forth in Table B-1 of Appendix "B". The amount for each such Plaintiff delivered for use in each service area as set forth in Table B-1 shall be designated, for purposes of this Judgment, as its "base right" for such service area.

(b) For Use by Others. The total actual average annual extractions from the San Bernardino Basin Area by entities other than Plaintiffs for use within San Bernardino County for the five year period ending with 1963 are assumed to be 165,407 acre feet; the correct figure shall be determined by the Watermaster as herein provided.

VI

SAN BERNARDINO BASIN AREA RIGHTS AND REPLENISHMENT

(a) Determination of Natural Safe Yield. The natural safe yield of the San Bernardino Basin Area shall be computed by the Watermaster, reported to and determined initially by supplemental order of this Court, and thereafter

1 shall be subject to the continuing jurisdiction thereof.

2 (b) Annual Adjusted Rights of Plaintiffs.

3 1. The annual "adjusted right" of each
4 Plaintiff to extract water from the San Bernardino
5 Basin Area for use in each service area designated
6 in Table B-1 shall be equal to the sum of the
7 following:

8 (a) its base right for such service area, until
9 the natural safe yield of the San Bernardino Basin
10 Area is determined, and thereafter its percentage
11 of such natural safe yield determined by the
12 methods used in Table B-2; and (b) an equal
13 percentage for each service area of any new
14 conservation, provided the conditions of the
15 subparagraph 2 below have been met.

16 2. In order that the annual adjusted
17 right of each such Plaintiff shall include its
18 same respective percentage of any new conservation,
19 such Plaintiff shall pay its proportionate share
20 of the costs thereof. Each Plaintiff shall have
21 the right to participate in new conservation projects,
22 under procedures to be determined by the Watermaster
23 for notice to Plaintiffs of the planned construction
24 of such projects. With respect to any new
25 conservation brought about by Federal installations,
26 the term "costs" as used herein shall refer to any
27 local share required to be paid in connection with
28 such project. Each Plaintiff shall make its
29 payment at times satisfactory to the constructing
30 agency, and new conservation shall be credited to
31 any participating Plaintiff as such conservation is
32 effected.

1 3. In any five year period, each
2 Plaintiff shall have the right to extract from the
3 San Bernardino Basin Area for use in each service
4 area designated in Table B-1 an amount of water
5 equal to five times its adjusted right for such
6 service area; provided, however, that extractions by
7 each Plaintiff in any year in any service area shall
8 not exceed such Plaintiff's adjusted right for that
9 service area by more than 30 percent.

10 4. If the natural safe yield of the
11 San Bernardino Basin Area has not been determined by
12 January 1, 1972, the initial determination thereof
13 shall be retroactive to that date and the rights
14 of the Plaintiffs, and the replenishment
15 obligation of San Bernardino Valley as hereinafter
16 set forth, shall be adjusted as of such date. Any
17 excess extractions by Plaintiffs shall be charged
18 against their respective adjusted rights over the
19 next five year period, or in the alternative,
20 Plaintiffs may pay to San Bernardino Valley the
21 full cost of any replenishment which it has pro-
22 vided as replenishment for such excess extractions.
23 Any obligation upon San Bernardino Valley to pro-
24 vide additional replenishment, by virtue of such
25 retroactive determination of natural safe yield,
26 may also be discharged over such next five year
27 period.

28 5. Plaintiffs and each of them and
29 their agents and assigns are enjoined from extracting
30 any more water from the San Bernardino Basin Area than
31 is permitted under this Judgment. Changes in place
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1 of use of any such water from one service area to
2 another shall not be made without the prior
3 approval of Court upon a finding of compliance
4 with Paragraph XV(b) of this Judgment. So long
5 as San Bernardino Valley is in compliance with all
6 its obligations hereunder, and Plaintiffs are
7 allowed to extract the water provided for in this
8 Judgment, Plaintiffs are further enjoined from
9 bringing any action to limit the water extracted
10 from the San Bernardino Basin Area for use within
11 San Bernardino Valley.

12 6. Nothing in this Judgment shall
13 prevent future agreements between San Bernardino
14 Valley and Western under which additional
15 extractions may be made from the San Bernardino Basin
16 Area, subject to the availability of imported water
17 not required by San Bernardino Valley, and subject
18 to payment satisfactory to San Bernardino Valley
19 for replenishment required to compensate for such
20 additional extractions.

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22 (c) San Bernardino Valley Replenishment. San
23 Bernardino Valley shall provide imported water for
24 replenishment of the San Bernardino Basin Area at least equal
25 to the amount by which extractions therefrom for use within
26 San Bernardino County exceed during any five year period the
27 sum of: (a) five times the total average annual extractions
28 determined under Paragraph V(b) hereof, adjusted as may be
29 required by the natural safe yield of the San Bernardino Basin
30 Area; and (b) any new conservation to which users within San
31 Bernardino Valley are entitled. Such replenishment shall be

1 supplied in the year following any five year period; provided
2 that during the first five year period, San Bernardino Valley
3 shall supply annual amounts on account of its obligations
4 hereunder, and such amounts shall be not less than fifty
5 percent of the gross amount of excess extractions in the
6 previous year.

7 1. Against its replenishment obligation
8 over any five year period San Bernardino Valley shall
9 receive credit for that portion of such excess
10 extractions that returns to the ground water of the
11 San Bernardino Basin Area.

12 2. San Bernardino Valley shall also
13 receive credit against any future replenishment
14 obligations for all replenishment which it provides
15 in excess of that required herein, and for any
16 amounts which may be extracted without replenishment
17 obligation, which in fact are not extracted.

18 (d) In this subparagraph (d), "person" and "entity"
19 mean only those persons and entities, and their successors
20 in interest, which have stipulated with the parties to this
21 Judgment within six months after its entry to accept this
22 Judgment.

23 San Bernardino Valley agrees that the base rights of
24 persons or entities other than Plaintiffs to extract water
25 from the San Bernardino Basin Area for use within San
26 Bernardino Valley will be determined by the average annual
27 quantity extracted by such person or entity during the five
28 year period ending with 1963. After the natural safe yield
29 of the San Bernardino Basin Area is determined hereunder, such
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1 base rights will be adjusted to such natural safe yield; the
2 adjusted right of each such person or entity shall be that
3 percentage of natural safe yield as determined hereunder from
4 time to time which the unadjusted right of such person or
5 entity is of the amount determined under Paragraph V(b).

6 San Bernardino Valley further agrees that in the
7 event the right to extract water of any of such persons or
8 entities in the San Bernardino Basin Area is adjudicated and
9 legal restrictions placed on such extractions which prevent
10 extracting of water by said persons or entities in an amount
11 equal to their base rights, or after natural safe yield is
12 determined, their adjusted rights, San Bernardino Valley will
13 furnish to such persons or entities or recharge the ground
14 water resources in the area of extraction for their benefit
15 with imported water, without direct charge to such persons or
16 entities therefor, so that the base rights, or adjusted
17 rights, as the case may be, may be taken by the person or
18 entity.

19 Under the provisions hereof relating to furnishing
20 of such water by San Bernardino Valley, such persons or
21 entities shall be entitled to extract in addition to their
22 base rights or adjusted rights any quantities of water spread
23 for repumping in their area of extractions, which has been
24 delivered to them by a mutual water company under base rights
25 or adjusted base rights included by the Watermaster under the
26 provisions of Paragraph V (b) hereof. Extractions must be
27 made within three years of spreading to so qualify.
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VII

WATER DISCHARGED ACROSS THE BUNKER HILL DIKE

San Bernardino Valley shall keep in force an agreement with the City of San Bernardino that the present annual quantity of municipal sewage effluent discharged across Bunker Hill Dike, assumed for all purposes herein to be 16,000 acre feet annually, shall be committed to the discharge of the downstream obligations imposed on San Bernardino Valley under this Judgment or under the Orange County Judgment, and that such effluent shall comply with the requirements of the Santa Ana River Basin Regional Water Quality Control Board in effect December 31, 1968.

VIII

EXTRACTIONS FROM COLTON BASIN AREA AND RIVERSIDE
BASIN AREA IN SAN BERNARDINO COUNTY.

(a) The average annual extractions from the Colton Basin Area and that portion of the Riverside Basin Area within San Bernardino County, for use outside San Bernardino Valley, for the five year period ending with 1963 are assumed to be 3,349 acre feet and 20,191 acre feet, respectively; the correct figures shall be determined by the Watermaster as herein provided.

(b) Over any five year period, there may be extracted from each such Basin Area for use outside San Bernardino Valley, without replenishment obligation, an amount equal to five times such annual average for the Basin Area; provided, however, that if extractions in any year exceed such average by more than 20 percent, Western shall provide replenishment in the following year equal to the excess

1 extractions over such 20 percent peaking allowance.

2 (c). To the extent that extractions from each such
3 Basin Area for use outside San Bernardino Valley exceed the
4 amounts specified in the next preceding Paragraph (b), Western
5 shall provide replenishment. Except for any extractions in
6 excess of the 20 percent peaking allowance, such replenishment
7 shall be supplied in the year following any five year period,
8 and shall not be from reclaimed water produced within San
9 Bernardino Valley. Such replenishment shall also be of a
10 quality at least equal to the water extracted from the Basin
11 Area being recharged; provided, that water from the State Water
12 Project shall be deemed to be of acceptable quality.

13 Replenishment shall be supplied to the Basin Area from which
14 any excess extractions have occurred and in the vicinity of
15 the place of the excess extractions to the extent required to
16 preclude influence on the water level in the three wells below
17 designated; provided that discharge of imported water into the
18 Santa Ana River or Warm Creek from a connection on the State
19 Aqueduct near the confluence thereof, if released in accordance
20 with a schedule approved by the Watermaster to achieve
21 compliance with the objectives of this Judgment, shall satisfy
22 any obligation of Western to provide replenishment in the Colton
23 Basin Area, or that portion of the Riverside Basin Area in San
24 Bernardino County, or the Riverside Basin Area in Riverside
25 County.

26 (d) Extractions from the Colton Basin Area and that
27 portion of the Riverside Basin Area within San Bernardino County,
28 for use within San Bernardino Valley, shall not be limited.
29 However, except for any required replenishment by Western,
30 San Bernardino Valley shall provide the water to maintain the
31 static water levels in the area, as determined by wells numbered
32

1 1S 4W 21 Q3, 1S 4W 29 H1, and 1S 4W 29 Q1 at an average level
2 no lower than that which existed in the Fall season of 1963.
3 Such 1963 average water level is hereby determined to be 822.04
4 feet above sea level. In future years, the level shall be
5 computed by averaging the lowest static water levels in each
6 of the three wells occurring at or about the same time of the
7 year, provided that no measurements will be used which reflect
8 the undue influence of pumping in nearby wells, or in the
9 three wells, or pumping from the Riverside Basin in Riverside
10 County in excess of that determined pursuant to Paragraph IX(a)
11 hereof.

12 (e) Extractions by Plaintiffs from the Colton Basin
13 Area and the portion of the Riverside Basin Area in San
14 Bernardino County may be transferred to the San Bernardino
15 Basin Area if the level specified in Paragraph (d) above is
16 not maintained, but only to the extent necessary to restore
17 such 1963 average water level, provided that Western is not
18 in default in any of its replenishment obligations. San
19 Bernardino Valley shall be required to replenish the San
20 Bernardino Basin Area in an amount equal to any extractions so
21 transferred. San Bernardino Valley shall be relieved of
22 responsibility toward the maintenance of such 1963 average water
23 level to the extent that Plaintiffs have physical facilities
24 available to accommodate such transfers of extractions, and
25 insofar as such transfers can be legally accomplished.

26 (f) The Colton Basin Area and the portion of the
27 Riverside Basin Area in San Bernardino County constitute a major
28 source of water supply for lands and inhabitants in both San
29 Bernardino Valley and Western, and the parties hereto have a
30 mutual interest in the maintenance of water quality in these
31 Basin Areas and in the preservation of such supply. If
32

1 the water quality in such Areas, as monitored by the City of
2 Riverside wells along the river, falls below the Objectives set
3 therefor by the Santa Ana River Basin Regional Water Quality
4 Control Board, the Court shall have jurisdiction to modify the
5 obligations of San Bernardino Valley to include, in addition
6 to its obligation to maintain the average 1963 water level,
7 reasonable provisions for the maintenance of such water quality.

8 (g) The primary objectives of Paragraph VIII and
9 related provisions are to allow maximum flexibility to San
10 Bernardino Valley in the operation of a coordinated
11 replenishment and management program, both above and below
12 Bunker Hill Dike; to protect San Bernardino Valley against
13 increased extractions in the area between Bunker Hill Dike and
14 Riverside Narrows, which without adequate provision for
15 replenishment might adversely affect base flow at Riverside
16 Narrows, for which it is responsible under the Orange County
17 Judgment; and to protect the area as a major source of ground
18 water supply available to satisfy the historic extractions
19 therefrom for use within Western, without regard to the method
20 of operation which may be adopted by San Bernardino Valley for
21 the San Bernardino Basin Area, and without regard to the effect
22 of such operation upon the historic supply to the area below
23 Bunker Hill Dike.

24 If these provisions should prove either inequitable or
25 unworkable, the Court upon the application of any party hereto
26 shall retain jurisdiction to modify this Judgment so as to
27 regulate the area between Bunker Hill Dike and Riverside Narrows
28 on a safe yield basis; provided that under such method of
29 operation, (1) base rights shall be determined on the basis of
30 total average annual extractions for use within San Bernardino
31 Valley and Western, respectively, for the five year period ending
32

1 with 1963; (2) such base rights for use in both Districts shall
2 be subject to whatever adjustment may be required by the safe
3 yield of the area, and in the aggregate shall not be exceeded
4 unless replenishment therefor is provided; (3) in calculating
5 safe yield, the outflow from the area at Riverside Narrows shall
6 be determined insofar as practical by the base flow obligations
7 imposed on San Bernardino Valley under the Orange County
8 Judgment; and (4) San Bernardino Valley shall be required to
9 provide replenishment for any deficiency between the actual
10 outflow and the outflow obligation across Bunker Hill Dike as
11 established by safe yield analysis using the base period of
12 1934 through 1960.

13
14 IX

15 EXTRactions FROM THE PORTION OF RIVERSIDE BASIN AREA
16 IN RIVERSIDE COUNTY WHICH IS TRIBUTARY TO RIVERSIDE NARROWS.

17 (a) The average annual extractions from the portion
18 of the Riverside Basin Area in Riverside County which is
19 tributary to Riverside Narrows, for use in Riverside County,
20 for the five year period ending with 1963 are assumed to be
21 30,044 acre feet; the correct figures shall be determined by
22 the Watermaster as herein provided.

23 (b) Over any five year period, there may be
24 extracted from such Basin Area, without replenishment
25 obligation, an amount equal to five times such annual average
26 for the Basin Area; provided, however, that if extractions in
27 any year exceed such average by more than 20 percent, Western
28 shall provide replenishment in the following year equal to the
29 excess extractions over such 20 percent peaking allowance.

30 (c) To the extent that extractions from such Basin
31 Area exceed the amounts specified in the next preceding
32

1 Paragraph (b), Western shall provide replenishment. Except
2 for any extractions in excess of the 20 percent peaking
3 allowance, such replenishment shall be supplied in the year
4 following any five year period, and shall be provided at or
5 above Riverside Narrows.

6 (d) Western shall also provide such replenishment
7 to offset any reduction in return flow now contributing to the
8 base flow at Riverside Narrows, which reduction in return
9 flow results from the conversion of agricultural uses of water
10 within Western to domestic or other uses connected to sewage
11 or waste disposal systems, the effluent from which is not
12 tributary to the rising water at Riverside Narrows.

13
14 X

15 REPLENISHMENT TO OFFSET NEW EXPORTS OF WATER TO AREAS
16 NOT TRIBUTARY TO RIVERSIDE NARROWS.

17 Certain average annual amounts of water extracted
18 from the San Bernardino Basin Area and the area downstream
19 therefrom to Riverside Narrows during the five year period
20 ending in 1963 have been exported for use outside of the area
21 tributary to Riverside Narrows and are assumed to be 50,667
22 acre feet annually as set forth in Table C-1 of Appendix "C";
23 the correct amount shall be determined by the Watermaster as
24 herein provided. Western shall be obligated to provide
25 replenishment at or above Riverside Narrows for any increase
26 over such exports by Western or entities within it from such
27 areas for use within areas not tributary to Riverside Narrows.
28 San Bernardino Valley shall be obligated to provide
29 replenishment for any increase over the exports from San
30 Bernardino Valley for use in any area not within Western nor
31 tributary to Riverside Narrows as set forth in Table C-2 of
32

1 Appendix. "C", such amounts being subject to correction by the
2 Watermaster, or for any exports from the San Bernardino Basin
3 Area for use in the Yucaipa, San Timoteo, Oak Glen and
4 Beaumont Basins.

5 XI

6 REPLENISHMENT CREDITS AND ADJUSTMENT FOR QUALITY

7
8 (a) All replenishment provided by Western under
9 Paragraph IX and all credits received against such
10 replenishment obligation shall be subject to the same adjustments
11 for water quality applicable to base flow at Riverside Narrows,
12 as set forth in the Orange County Judgment.

13 (b) Western shall receive credit against its
14 replenishment obligations incurred under this Judgment for the
15 following:

16 1. As against its replenishment obligation
17 under Paragraph VIII, any return flow to the Colton
18 Basin Area or the portion of the Riverside Basin Area
19 within San Bernardino County, respectively, resulting
20 from any excess extractions therefrom; and as
21 against its replenishment obligation under Paragraph
22 IX, any return flow to the portion of the Riverside
23 Basin Area in Riverside County, which contributes
24 to the base flow at Riverside Narrows, resulting
25 from any excess extractions therefrom, or from the
26 Riverside Basin Area in San Bernardino County, or
27 from the Colton Basin Area.

28 2. Subject to adjustment under
29 Paragraph (a) hereof, any increase over the present
30 amounts of sewage effluent discharged from
31

1 treatment plants within Riverside County which are
2 tributary to Riverside Narrows, and which results
3 from the use of imported water.

4 3. Any replenishment which may be pro-
5 vided in excess of that required; any amounts which
6 hereunder are allowed to be extracted from the
7 Colton and Riverside Basin Areas without
8 replenishment obligation by Western, and which in
9 fact are not extracted; any storm flows conserved
10 between Bunker Hill Dike and Riverside Narrows by
11 works financed solely by Western, or entities within
12 it, which would not otherwise contribute to base
13 flow at Riverside Narrows; and any return flow
14 from imported water used in Riverside County which
15 contributes to base flow at Riverside Narrows;
16 provided, however, that such use of the underground
17 storage capacity in each of the above situations
18 does not adversely affect San Bernardino Valley
19 in the discharge of its obligations at Riverside
20 Narrows under the Orange County Judgment, nor
21 interfere with the accomplishment by San Bernardino
22 Valley of the primary objectives of Paragraph VIII,
23 as stated in Subdivision (g).

24 (c) The replenishment obligations of Western under
25 this Judgment shall not apply during such times as amounts of
26 base flow at Riverside Narrows and the amounts of water stored
27 in the ground water resources below Bunker Hill Dike and
28 tributary to the maintenance of such flow are found by Order of
29 the Court to be sufficient to satisfy any obligation which
30 San Bernardino Valley may have under this Judgment, or under the
31

1 Orange County Judgment, and if the Court further finds by Order
2 that during such times any such increase in pumping, changes
3 in use or exports would not adversely affect San Bernardino
4 Valley in the future.

5 (d) The replenishment obligations of San Bernardino
6 Valley under Paragraph X of this Judgment for increase in
7 exports from the Colton and Riverside Basin Areas within San
8 Bernardino Valley below the Bunker Hill Dike shall not apply
9 during such times as the amounts of water in the ground water
10 resources of such area are found by Order of the Court to be
11 sufficient to satisfy the obligations which San Bernardino
12 Valley may have to Plaintiffs under this Judgment, and if the
13 Court further finds by Order that during such times any such
14 increases in exports would not adversely affect Plaintiffs in
15 the future.

16
17 XII

18 CONVEYANCE OF WATER BY SAN BERNARDINO VALLEY
19 TO RIVERSIDE NARROWS.

20 If San Bernardino Valley determines that it will
21 convey reclaimed sewage effluent, or other water, to or near
22 Riverside Narrows, to meet its obligations under this or the
23 Orange County Judgment, the City of Riverside shall make
24 available to San Bernardino Valley for that purpose any unused
25 capacity in the former Riverside Water Company canal, and the
26 Washington and Monroe Street storm drains, without cost except
27 for any alterations or capital improvements which may be
28 required, or any additional maintenance and operation costs which
29 may result. The use of those facilities shall be subject to the
30 requirements of the Santa Ana River Basin Regional Water Quality
31 Control Board and of the State Health Department, and compliance
32

1 therewith shall be San Bernardino Valley's responsibility.

2
3 XIII

4 WATERMASTER

5 (a) This Judgment and the instructions and
6 subsequent orders of this Court shall be administered and
7 enforced by a Watermaster. The parties hereto shall make such
8 measurements and furnish such information as the Watermaster
9 may reasonably require, and the Watermaster may verify such
10 measurements and information and obtain additional measurements
11 and information as the Watermaster may deem appropriate.

12 (b) The Watermaster shall consist of a committee
13 of two persons. San Bernardino Valley and Western shall each
14 have the right to nominate one of such persons. Each such
15 nomination shall be made in writing, served upon the other
16 parties to this Judgment, and filed in Court. Such person shall
17 be appointed by and serve at the pleasure of and until further
18 order of this Court. If either Western or San Bernardino Valley
19 shall at any time nominate a substitute appointee in place of
20 the last appointee to represent it, such appointee shall be
21 appointed by the Court in place of such last appointee.

22 (c) Appendix "D" to this Judgment contains some of
23 the data which have been used in preparation of this Judgment,
24 and shall be utilized by the Watermaster in connection with
25 any questions of interpretation.

26 (d) Each and every finding and determination of the
27 Watermaster shall be made in writing certified to be by
28 unanimous action of both members of the Watermaster committee.
29 In the event of failure or inability of such Watermaster
30 Committee to reach agreement, the Watermaster committee may
31 determine to submit the dispute to a third person to be selected
32

1 by them, or if they are unable to agree on a selection, to be
2 selected by the Court, in which case the decision of the third
3 person shall be binding on the parties; otherwise the fact,
4 issue, or determination in question shall forthwith be
5 certified to this Court by the Watermaster, and after due notice
6 to the parties and opportunity for hearing, said matter shall
7 be determined by order of this Court, which may refer the
8 matter for prior recommendation to the State Water Resources
9 Control Board. Such order of the Court shall be a determination
10 by the Watermaster within the meaning of this Judgment.

11 (e) The Watermaster shall report to the Court and
12 to each party hereto in writing not more than seven (7) months
13 after the end of each year, or within such other time as the
14 Court may fix, on each determination made by it pursuant to this
15 Judgment, and such other items as the parties may mutually
16 request or the Watermaster may deem to be appropriate. All of
17 the books and records of the Watermaster which are used in the
18 preparation of, or are relevant to, such reported data,
19 determinations and reports shall be open to inspection by the
20 parties hereto. At the request of any party this Court will
21 establish a procedure for the filing and hearing of objections
22 to the Watermaster's report.

23 (f) The fees, compensation and expenses of each
24 person on the Watermaster shall be borne by the District which
25 nominated such person. All other Watermaster service costs and
26 expenses shall be borne by San Bernardino Valley and Western
27 equally.

28 (g) The Watermaster shall initially compute and
29 report to the Court the natural safe yield of the San Bernardino
30 Basin Area, said computation to be based upon the cultural
31

1 conditions equivalent to those existing during the five
2 calendar year period ending with 1963.

3 (h) The Watermaster shall as soon as practical
4 determine the correct figures for Paragraphs V(b), VI(b)1,
5 VIII(a), IX(a) and X, as the basis for an appropriate
6 supplemental order of this Court.

7
8 XIV

9 CONTINUING JURISDICTION OF THE COURT

10 (a) The Court hereby reserves continuing
11 jurisdiction of the subject matter and parties to this Judgment,
12 and upon application of any party, or upon its own motion, may
13 review and redetermine, among other things, the following
14 matters and any matters incident thereto:

15 1. The hydrologic condition of any one or
16 all of the separate basins described in this Judgment in order
17 to determine from time to time the safe yield of the San
18 Bernardino Basin Area.

19 2. The desirability of appointing a
20 different Watermaster or a permanent neutral member of the
21 Watermaster, or of changing or more clearly defining the duties
22 of the Watermaster.

23 3. The desirability of providing for increases
24 or decreases in the extraction of any particular party because
25 of emergency requirements or in order that such party may
26 secure its proportionate share of its rights as determined
27 herein.

28 4. The adjusted rights of the Plaintiffs as
29 required to comply with the provisions hereof with respect to
30 changes in the natural safe yield of the San Bernardino Basin
31

1 Area. If such changes occur, the Court shall adjudge that the
2 adjusted rights and replenishment obligations of each party
3 shall be changed proportionately to the respective base rights.

4 5. Conforming the obligations of San
5 Bernardino Valley under this Judgment to the terms of any new
6 judgment hereafter entered adjudicating the water rights within
7 San Bernardino Valley, if inconsistencies of the two judgments
8 impose hardship on San Bernardino Valley.

9 6. Adjusting the figures in Paragraphs V(b),
10 VI(b) 1, VIII(a) IX(a), and X, to conform to determination
11 by the Watermaster.

12 7. Credit allowed for return flow in the San
13 Bernardino Basin Area if water levels therein drop to the point
14 of causing undue hardship upon any party.

15 8. Other matters not herein specifically set
16 forth which might occur in the future and which would be
17 of benefit to the parties in the utilization of the surface and
18 ground water supply described in this Judgment, and not
19 inconsistent with the respective rights of the parties as herein
20 established and determined.

21 (b) Any party may apply to the Court under its
22 continuing jurisdiction for any appropriate modification of
23 this Judgment if its presently available sources of imported
24 water are exhausted and it is unable to obtain additional
25 supplies of imported water at a reasonable cost, or if there is
26 any substantial delay in the delivery of imported water through
27 the State Water Project.

SAVING CLAUSES

(a) Nothing in this Judgment precludes San Bernardino Valley, Western, or any other party from exercising such rights as it may have or obtain under law to spread, store underground and recapture imported water, provided that any such use of the underground storage capacity of the San Bernardino Basin Area by Western or any entity within it shall not interfere with any replenishment program of the Basin Area.

(b) Changes in the place and kind of water use, and in the transfer of rights to the use of water, may be made in the absence of injury to others or prejudice to the obligations of either San Bernardino Valley or Western under Judgment or the Orange County Judgment.

(c) If any Plaintiff shall desire to transfer all or any of its water rights to extract water within San Bernardino Valley to a person, firm, or corporation, public or private, who or which is not then bound by this Judgment, such Plaintiff shall as a condition to being discharged as hereinafter provided cause such transferee to appear in this action and file a valid and effective express assumption of the obligations imposed upon such Plaintiff under this Judgment as to such transferred water rights. Such appearance and assumption of obligation shall include the filing of a designation of the address to which shall be mailed all notices, requests, objections, reports and other papers permitted or required by the terms of this Judgment.

If any Plaintiff shall have transferred all of its said water rights and each transferee not theretofore bound by this Judgment as a Plaintiff shall have appeared in this action

1 and filed a valid and effective express assumption of the
2 obligations imposed upon such Plaintiff under this Judgment as
3 to such transferred water rights, such transferring Plaintiff
4 shall thereupon be discharged from all obligations hereunder.
5 If any Plaintiff shall cease to own any rights in and to the water
6 supply declared herein and shall have caused the appearance and
7 assumption provided for in the third preceding sentence with
8 respect to each voluntary transfer, then upon application to
9 this Court and after notice and hearing such Plaintiff shall
10 thereupon be relieved and discharged from all further
11 obligations hereunder. Any such discharge of any Plaintiff
12 hereunder shall not impair the aggregate rights of defendant
13 San Bernardino Valley or the responsibility hereunder of the
14 remaining Plaintiffs or any of the successors.

15 (d) Non-use of any right to take water as provided
16 herein shall not result in any loss of the right. San
17 Bernardino Valley does not guarantee any of the rights set out
18 herein for Western and the other Plaintiffs as against the
19 claims of third parties not bound hereby. If Western or the
20 other Plaintiffs herein should be prevented by acts of third
21 parties within San Bernardino County from extracting the
22 amounts of water allowed them by this Judgment, they shall have
23 the right to apply to this Court for any appropriate relief,
24 including vacation of this Judgment, in which latter case all
25 parties shall be restored to their status prior to this
26 Judgment insofar as possible.

27 (e) Any replenishment obligation imposed hereunder
28 on San Bernardino Valley may be deferred until imported water
29 first is available to San Bernardino Valley under its contract
30 with the California Department of Water Resources and the
31

1 obligation so accumulated may be discharged in five
2 approximately equal annual installments thereafter.

3 (f) No agreement has been reached concerning the
4 method by which the cost of providing replenishment will be
5 financed, and no provision of this Judgment, nor its failure
6 to contain any provision, shall be construed to reflect any
7 agreement relating to the taxation or assessment of extractions.

8
9 XVI

10 EFFECTIVE DATE

11
12 The provisions of Paragraphs III and V to XII of this
13 Judgment shall be in effect from and after January 1, 1971;
14 the remaining provisions are in effect immediately.

15 XVII

16 COSTS

17
18 No party shall recover its costs herein as against
19 any other party.

20
21 THE CLERK WILL ENTER THIS JUDGMENT FORTHWITH.

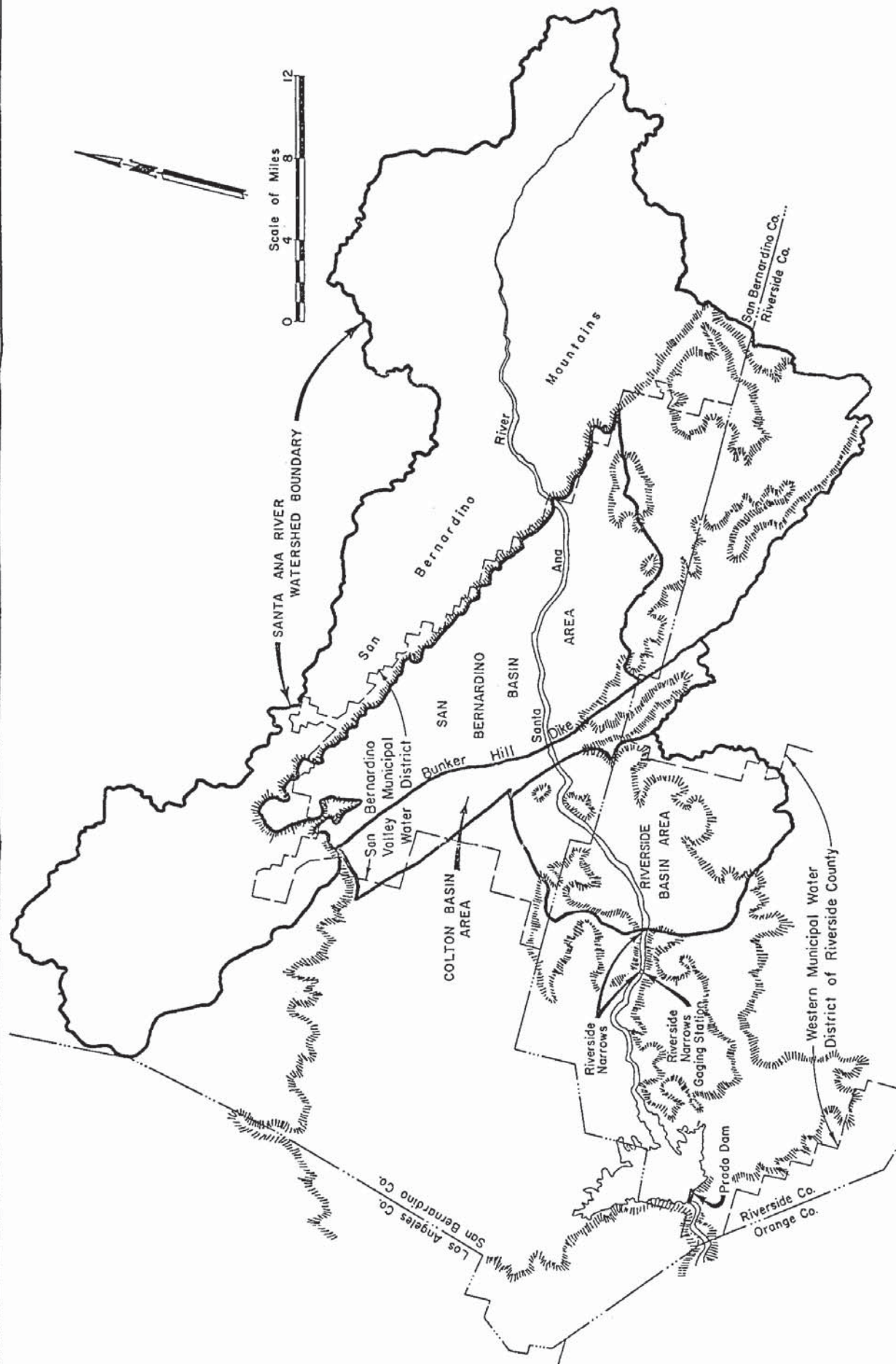
22 DATED: *April 17, 1969*

23
24
25 ENTERED

26 APR 17 1969

27
28 *[Signature]*
29 JUDGE OF THE SUPERIOR COURT

30 JUDGMENT BOOK *124* PG *42*



MAP SHOWING

SAN BERNARDINO BASIN AREA, COLTON BASIN AREA, AND
 RIVERSIDE BASIN AREA SITUATED WITHIN SAN BERNARDINO
 COUNTY; RIVERSIDE BASIN AREA WITHIN RIVERSIDE COUNTY;
 BUNKER HILL DIKE; RIVERSIDE NARROWS; AND BOUNDARIES OF
 SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT & WESTERN
 MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY.

APPENDIX B
TABLE B-1

EXTRACTIONS BY PLAINTIFFS FROM THE SAN
BERNARDINO BASIN AREA FOR AVERAGE OF 5-YEAR
PERIOD ENDING WITH 1963

(All Values in Acre Feet)
Classified According to Service Area

Plaintiff	Total Extractions in San Bernardino Basin Area	Delivery to San Bernardino Basin Area	Delivery to Colton Basin Area & Riverside Basin Area in San Bernardino County	Delivery to Areas Outside San Bernardino Valley
City of Riverside (including those rights acquired as successor to the Riverside Water Company and The Gage Canal Company)	53,448	1462	1260	50,726
Riverside High- Land Water Company	4,399	0	2509	1,890
Agua Mansa Water Company, and Meeks & Daley Water Company	8,026	0	326	7,700
The Regents of the University of California	581	0	0	581
Total	66,454	1,462	4,095	60,897

APPENDIX B
TABLE B-2

PLAINTIFFS' PERCENTAGES OF BASE RIGHT
TO TOTAL PRODUCTION FROM SAN BERNARDINO
VALLEY BASIN AREA,

231,861 Acre Feet Annually,
For 5-Year Average Ending With 1963
Classified According to Service Area

<u>Plaintiff</u>	<u>Delivery to San Bernardino Basin Area</u>	<u>Delivery to Colton Basin Area & Riverside Basin Area in San Bernardino County</u>	<u>Delivery to Areas Outside San Bernardino Valley</u>
City of Riverside (including those rights acquired as successor to the Riverside Water Company and The Gage Canal Company)	.630	.543	21,878
Riverside Highland Water Company		1.082	0.815
Aqua Mansa Water Company, and Meeks & Daley Water Company		.141	3.321
The Regents of the University of California			0.250
<u>Total</u>	<u>.630</u>	<u>1.766</u>	<u>26.264</u>

APPENDIX C
TABLE C-1

EXTRACTIONS FOR USE WITHIN WESTERN
FROM
THE SAN BERNARDINO BASIN AREA, COLTON BASIN AREA,
AND THE RIVERSIDE BASIN AREA
FOR USE ON LANDS THAT ARE NOT TRIBUTARY
TO THE RIVERSIDE NARROWS FOR
AVERAGE OF FIVE-YEAR PERIOD ENDING IN 1963

<u>Extractor</u>	<u>Five-Year Average Ac. Ft.</u>
City of Riverside, including Irrigation Division water extracted by Gage Canal Co. and former Riverside Water Co.	30,657
Meeks & Daley Water Co., Agua Mansa Water Co., and Temescal Water Co., including water received from City of Riverside	13,731
Extractions delivered by West Riverside Canal received from Twin Buttes Water Co., La Sierra Water Co., Agua Mansa Water Co., Salazar Water Co., West Riverside 350" Water Co., and Jurupa Water Co.	5,712
Rubidoux Community Services District	531
Jurupa Hills Water Co.	36
<u>TOTAL</u>	50,667

APPENDIX C
TABLE C-2

EXTRACTIONS FOR USE WITHIN SAN BERNARDINO COUNTY
FROM
SAN BERNARDINO BASIN AREA AND COLTON BASIN AREA
FOR USE ON LANDS NOT TRIBUTARY TO
DIVERSITY WATERS FOR AVERAGE OF
FIVE-YEAR PERIOD ENDING WITH 1983

(ALL VALUES IN ACRE FEET)

<u>Entity</u>	<u>San Bernardino Basin Area</u>	<u>Colton Basin Area</u>	<u>Total</u>
Fontana Union Water Co.	14,272	385	14,657
West San Bernardino County Water District	2,961	947	3,908
City of Rialto			700
<u>TOTAL</u>			19,245

APPENDIX D
TABLE D-1

EXTRACTIONS FROM SAN BERNARDINO BASIN AREA
FOR THE AVERAGE OF FIVE-YEAR PERIOD ENDING WITH 1963
FOR USE WITHIN SAN BERNARDINO COUNTY

(ALL VALUES IN ACRE FEET)

<u>Basin</u>	<u>Five Year Avg. 1959-63</u>
Beaumont	10,064
Big Bear	1,171
Borea Canyon	91
Bunker Hill	181,600
City Creek	337
Cook Canyon	197
Devil Canyon	3,326
Devil Creek	42
Lower Cajon	2,090
Little San Creek	15
Lytle	29,364
Mill Creek	11,084
Oak Glen	935
Plunge Creek	1,265
Santa Ana	1,790
Strawberry Creek	291
San Timoteo	2,272
Waterman Canyon	367
Yucaipa	<u>13,837</u>
Upper Basin Total	260,139
Less: Beaumont	
Oak Glen	
San Timoteo	27,107
Yucaipa	
Subtotal	<u>233,032</u>
Less Big Bear	<u>1,171</u>
Subtotal	231,861
Less extractions for use outside San Bernardino County	<u>60,897</u>
Extractions from San Bernardino for use in San Bernardino County	170,964

APPENDIX D
TABLE D-2

EXTRACTIONS FROM
COLTON BASIN AREA FOR AVERAGE OF
FIVE-YEAR PERIOD ENDING WITH 1963
BY SAN BERNARDINO AND RIVERSIDE COUNTY ENTITIES
FOR USE WITHIN EACH COUNTY

(VALUES IN ACRE FEET)

<u>Extractor</u>	<u>Place of Use</u>		<u>Total</u>
	<u>San Bernardino Co.</u>	<u>Riverside Co.</u>	
San Bernardino County Entities	8,480	0	8,480
Riverside County Entities	<u>147</u>	<u>3,349</u>	<u>3,496</u>
<u>TOTAL EXTRACTIONS</u>	8,627	3,349	11,976

APPENDIX D
TABLE D-3

EXTRACTIONS FROM
RIVERSIDE BASIN AREA IN SAN BERNARDINO COUNTY
FOR AVERAGE FIVE-YEAR PERIOD ENDING WITH 1963
BY SAN BERNARDINO AND RIVERSIDE COUNTY ENTITIES
FOR USE WITHIN EACH COUNTY

(VALUES IN ACRE FEET)

<u>Extractor</u>	<u>Place of Use</u>		<u>Total</u>
	<u>San Bernardino Co.</u>	<u>Riverside Co.</u>	
San Bernardino County Entities	9,582	0	9,582
Riverside County Entities	<u>3,929</u>	<u>20,191</u>	<u>24,120</u>
<u>TOTAL EXTRACTIONS</u>	13,511	20,191	33,702

APPENDIX D
TABLE D-4

EXTRACTIONS FROM
SAN BERNARDINO BASIN AREA, COLTON BASIN AREA
AND RIVERSIDE BASIN AREA USED WITHIN
RIVERSIDE COUNTY FOR THE AVERAGE
FIVE-YEAR PERIOD ENDING WITH 1963

(ALL VALUES IN ACRE FEET)

<u>Basin</u>	<u>Five-Year Average</u>
San Bernardino Basin Area	60,897
Colton Basin Area	3,349
Riverside Basin Area in San Bernardino County	20,191
Riverside Basin Area in Riverside County	<u>30,044</u>
<u>TOTAL</u>	114,481

APPENDIX D
TABLE D-5

IRRIGATED ACREAGE IN RIVERSIDE BASIN AREA
IN RIVERSIDE COUNTY PRESENTLY TRIBUTARY
TO RIVERSIDE NARROWS WHICH
UPON CONVERSION TO URBAN USES
REQUIRING SEWAGE DISPOSAL THROUGH
THE RIVERSIDE TREATMENT PLANT WILL
BE DISCHARGED TO THE RIVER BELOW
RIVERSIDE NARROWS

<u>Entity Serving Acreage</u>	<u>Acres</u>
Gage Canal	1,752
Alta Mesa Water Co.	65
East Riverside Water Co.	926
Riverside Highland Water Company	<u>1,173</u>
<u>TOTAL</u>	<u>3,916</u>

APPENDIX J
JCSD WATER SUPPLY OUTLOOK
June 7, 2016

Jurupa Community Services District

Water Supply Outlook

06-07-2016

Zone		Original Design (gpm)	Modified Design (gpm)	Current Production Rate (gpm)	Percent of Production	Operational (Yes/No)	Operating Potential (gpm)	Status (Idle/Run)	Current Operations (gpm)	Generator Power (Yes/No)	Generator Production Rate
870	R Well No 8	1,500	750	715	2%	No	-	Idle	-	Yes	715
	T Well No 11**	1,200	1,100	530	2%	Yes	530	Idle	-	No	-
	I Well No 12**	1,850	1,100	1,015	3%	Yes	1,015	Idle	-	Yes	1,015
	X Well No 14	2,000	2,000	2,090	6%	Yes	2,090	Idle	-	Yes	2,090
	P Well No 15	800	550	640	2%	Yes	640	Idle	-	No	-
	Well No 16**	2,000	1,875	2,000	6%	Yes	2,000	Run	2,000	Yes	2,000
	Well No 22	3,800	3,500	3,365	10%	Yes	3,365	Idle	-	Yes	3,365
	Sub Total	13,150	10,875	10,355	30%		9,640		2,000		9,185
	Well No 23	3,500	3,500	3,460	10%	Yes	3,460	Idle	-	Yes	3,460
	Well No 27	3,500	3,500	3,515	10%	Yes	3,515	Run	3,515	Yes	3,515
	Well No 28	4,000	3,500	3,635	10%	Yes	3,635	Idle	-	Yes	3,635
	Total	24,150	21,375	20,965	60%		20,250		5,515		19,795
980	Well No 6	2,000	1,800	1,780	5%	Yes	1,780	Idle	-	Yes	1,780
	Well No 13	2,800	2,800	2,475	7%	Yes	2,475	Run	2,475	No	-
	Well No 17	3,700	3,700	3,115	9%	Yes	3,115	Run	3,115	No	-
	Well No 18**	1,600	1,045	1,065	3%	Yes	1,065	Idle	-	No	-
	Well No 20**	1,000	845	920	3%	No	-	Idle	-	No	-
	Well No 24	450	400	200	1%	Yes	200	Idle	-	No	-
	Well No 25	3,500	3,450	3,350	10%	Yes	3,350	Run	3,350	Yes	3,350
	Total	15,050	14,040	12,905	37%		11,985		8,940		5,130
1110	Well No 19	1,100	1,130	1,060	3%	Yes	1,060	Run	1,060	No	-
	Total	1,100	1,130	1,060	3%		1,060		1,060		-
Grand Total		40,300	36,545	34,930	100%	95%	33,295	44%	15,515	71%	24,925

* Throttled

Round to nearest 5
- weekly average

Non-Potable (Irrigation)

Basin		Original Design (gpm)	Modified Design (gpm)	Current Production Rate (gpm)	Percent of Production	Operational (Yes/No)	Operating Potential (gpm)	Status (Idle/Run)	Current Operations (gpm)
Riverside	Well No 5		500	370	19%	Yes	370	Idle	-
	Well No 21**		1,100	705	36%	Yes	705	Run	705
	Total	-	1,600	1,075	54%		1,075		705
Chino	HS Well**		900	240	12%	Yes	240	Run	240
	Well No 40**		600	255	13%	Yes	255	Run	255
	Well No 41**		600	170	9%	Yes	170	Run	170
	Well No 42**		400	130	7%	Yes	130	Run	130
	Total	-	2,500	795	40%		795		795
Temescal	Van Leeuwen**		800	105	5%	Yes	105	Idle	-
	Total	-	800	105	5%		105		-
Grand Total		-	4,900	1,975	100%	100%	1,975	76%	1,500

Round to nearest 5
- weekly average

Rubidoux

1100	Hunter Street	800	800	450	20%	Yes	450	Idle	-
	Jewel Boosters**	5,400	5,400	1,775	80%	Yes	1,775	Run	1,775
	Total	6,200	6,200	2,225	100%		2,225		1,775
Grand Total		6,200	6,200	2,225	100%	100%	2,225	80%	1,775

** VFD = Generator backup power

Round to nearest 5
- weekly average

Well No. 20 - RFQ for Chemical Treatment Rehab. sent out 02/08/16, due back 02/24/16. Quotes were received and a request was submitted for 03/09/16 Water/Conservation Committee - recommending Best Drilling and Pump, Inc. in the not to exceed amount of \$71,824.00 to perform work. Committee approved to forward to Board on 03/28/16 for final approval. Best started work on 04/11/16. Well 20 start up testing began on 5/11/16, before returning to the system. Well 8 was taken out of service on 03/15/16 to replace discharge pipe. Parks Dept. switched from the Van Leeuwen Well connection to potable water on 05/04/16.

APPENDIX K

CASGEM PRIORITIES SPREADSHEET

CASGEM Groundwater Basin Prioritization Results Sorted by Basin Name									Data Component Ranking Value										Overall Ranking		Impact Comments	Other Information Comments
									Population	Population Growth	Public Supply Wells	Total Wells *	Irrigated Acreage	Groundwater Reliance			Impacts	Other Information	Overall Basin Ranking Score ***	Overall Basin Priority		
														GW Use **	Percent of Total Supply **	GW Reliance Total						
Basin count	Basin Number	Basin Name	Sub-Basin Name	Hydrologic Region	DWR Region Office	Basin Area		2010 Populati on														
						Acres	Sq. Mile															
218	8-2.01	UPPER SANTA ANA VALLEY	CHINO	South Coast	SRO	154,693	241.7	898,653	4	2	4	2.25	3	5	3	4	3	1	23.3	High	Locally high nitrates and TDS. Pub Com, to include subsidence, historic overdraft, ground fissuring,	Basin is adjudicated. Pub Com, program of controlled overdraft of 400,000 AF from the Chino Basin though 2030 to control the outflow of poor-quality rising GW
221	8-2.03	UPPER SANTA ANA VALLEY	RIVERSIDE-ARLINGTON	South Coast	SRO	58,903	92.0	336,884	4	2	4	3	2	5	4	4.5	5	0	24.5	High	Water quality degradation issues known in several public supply wells.	

APPENDIX L

JCSD CONSUMER CONFIDENCE REPORT

2014

Jurupa Community Services District (JCSD) tests the quality of drinking water for many constituents as required by State and Federal Regulations.

This report shows the results of our monitoring for the period of January 1, 2014 - December 31, 2014.

Last year, as in years past, your metered tap water met all U.S. Environmental Protection Agency (USEPA) and State Drinking Water Health Standards.

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien.

All water delivered in 2014 was produced from wells.

- JCSD wells are located near Interstate 15 and Highway 60
- Chino I Desalter wells are located in Chino near Chino Airport
- Rubidoux wells are located in Rubidoux
- Roger Teagarden Ion Exchange Treatment Plant is located near Interstate 15 and Highway 60
- Wells 17/18 Ion Exchange Treatment Facility located near Interstate 15 and Highway 60
- Chino II Desalter wells are located near Interstate 15 and Bellegrave Avenue

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Board) Division of Drinking Water prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5 and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board requires all water systems to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, are more than a year old.

Terms Used In This Report

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Regulatory Action Level (AL): The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

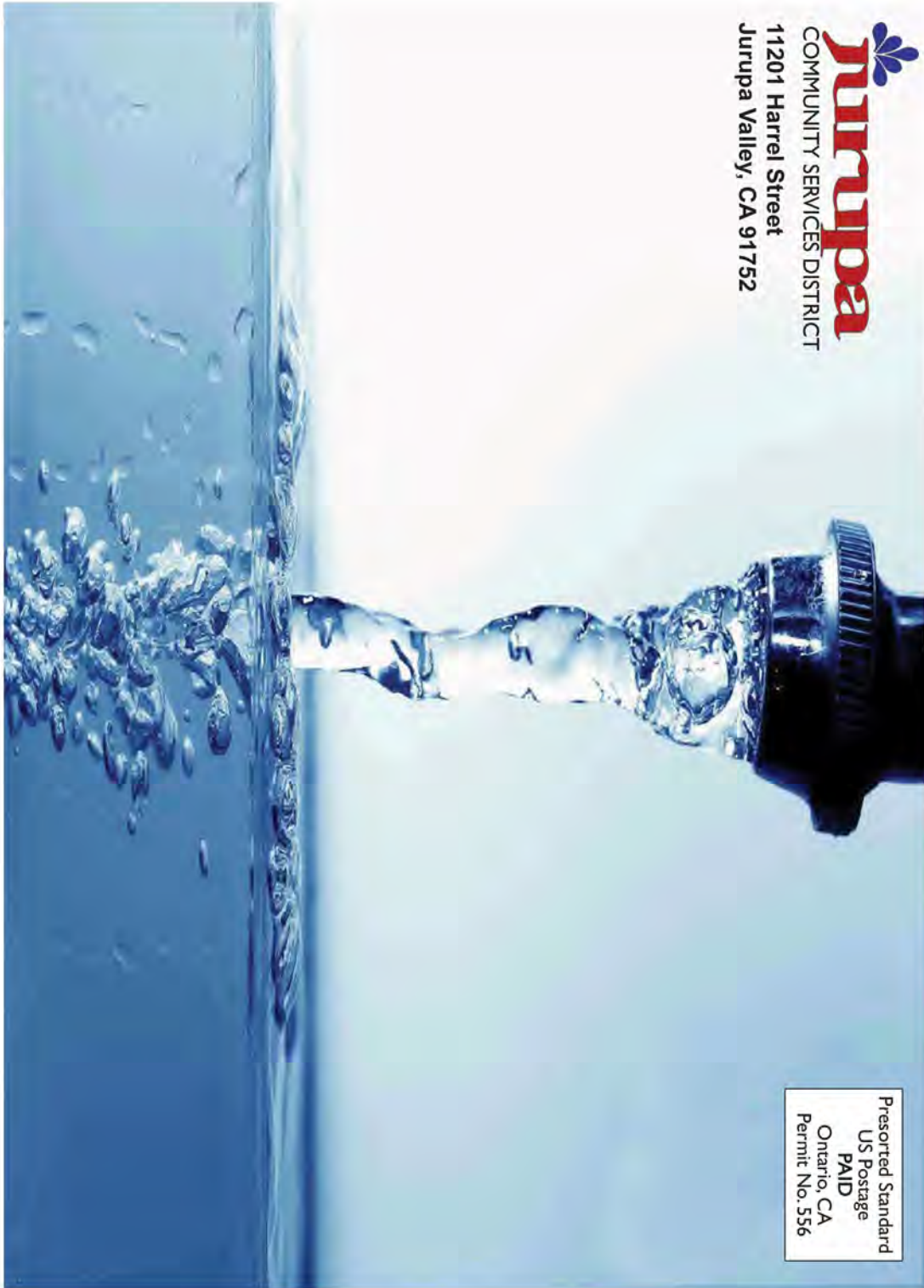
Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in a drinking water.

JURUPA COMMUNITY SERVICES DISTRICT – (951) 685-7434 – WWW.JCSD.US

INFORMATION ABOUT YOUR DRINKING WATER

2014 Consumer Confidence Report



Jurupa
COMMUNITY SERVICES DISTRICT
11201 Harrel Street
Jurupa Valley, CA 91752

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Additional General Information On Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of the skin (methemoglobinemia or Blue-Baby Syndrome). Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant or you are pregnant, you should ask advice from your health care provider.

If lead in drinking water is present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. JCSD is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at: <http://www.epa.gov/safewater/lead>.

State Water Resources Control Board (State Board) Division of Drinking Water Fluoridation website link: http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml



Contaminants that may be present in source water include:

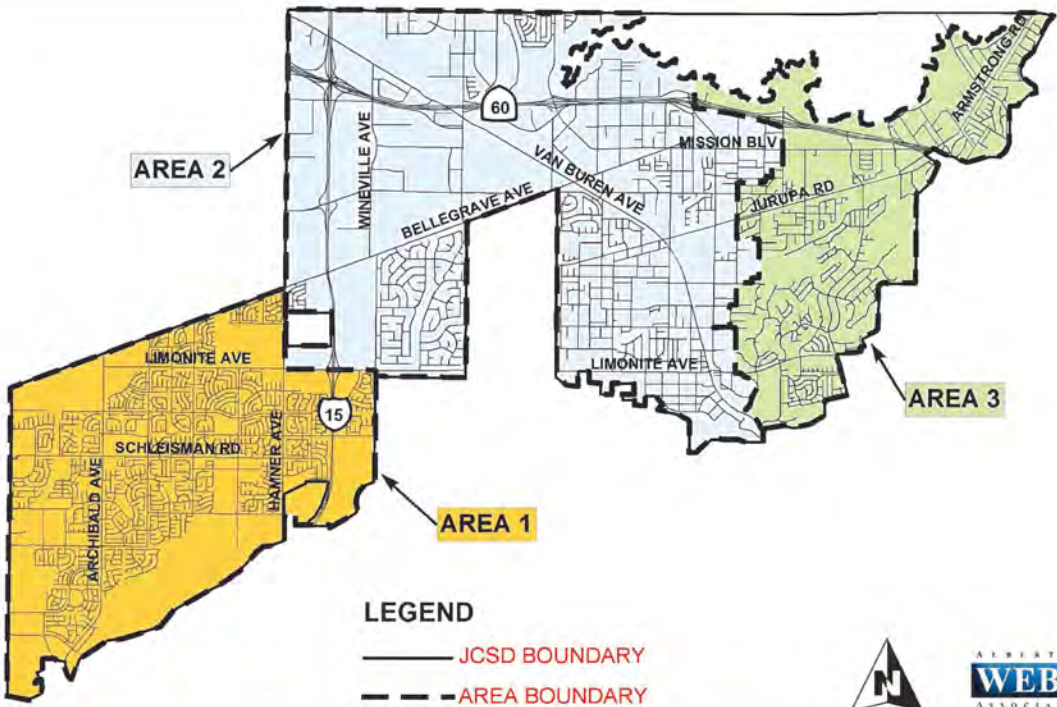
Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic contaminants, such as salts and metals that can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production and can also come from gas stations, urban storm-water runoff, agricultural application and septic systems.

Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.



AREA 1- (870 ZONE) IS SUPPLIED FROM CHINO I DESALTER & SUPPLEMENTED FROM AREA 2

AREA 2- IS SUPPLIED FROM ROGER TEAGARDEN IXP, 17/18 IXP, CHINO II DESALTER, & ADDITIONAL WELLS IN THE 870, 980 & 1110 ZONES

AREA 3 - (900, 1100, 1200, 1350 ZONES) IS SUPPLIED PRIMARILY FROM AREA 2, OCCASIONALLY FROM AREA 1 DURING LOW WATER DEMAND PERIODS & SUPPLEMENTED FROM RUBIDOUX COMMUNITY SERVICES DISTRICT

Abbreviations

mg/L milligrams per liter = parts per million (ppm)
(1 ppm is equivalent to 1 second in 11.5 days)

NA Not Applicable

ND Not Detectable at testing limit

ng/L nanograms per liter = parts per trillion (ppt)

NTU Nephelometric Turbidity Units

pCi/L pico Curies per liter (a measure of radiation)

µg/L micrograms per liter = parts per billion (ppb)

µS/cm microsiemens per centimeter, a unit of conductance
(1 µS/cm = 1 µmho/cm)

Jurupa Community Services District
Water Quality Report
2014

Primary Drinking Water Standards	Table 1 - Sampling Results Showing Detection of Coliform Bacteria															
	Microbiological Constituents		1110 Zone (Chino II)		980 Zone		870 Zone (IXP)		870 Zone (Chino I)		Rubidoux Inter-Tie		Drinking Water Standard Information			
			Highest % of Monthly Positives	No. of Months in Violation	Highest % of Monthly Positives	No. of Months in Violation	Highest % of Monthly Positives	No. of Months in Violation	Highest % of Monthly Positives	No. of Months in Violation	Highest % of Monthly Positives	No. of Months in Violation	MCL	PHG (MCLG)	Typical Source of Bacteria	
	Total Coliform Bacteria (Total Coliform Rule)		0%	0	0%	0	0%	0	0%	0	2.5%	0	More than 5% of monthly samples are positive		(0)	Naturally present in the environment
	Fecal Coliform or E. coli (Total Coliform Rule)		0	0	0	0	0	0	0	0	0	0	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or E. coli positive		(0)	Human and animal fecal waste
	Table 2 - Sampling Results Showing Detection of Lead and Copper															
	Lead and Copper	Reporting Unit	No. of Samples	90th % Level Detected	No. of Samples	90th % Level Detected	No. of Samples (Collected in 2013)	90th % Level Detected	No. of Samples	90th % Level Detected	No. of Samples	90th % Level Detected	Number of Sites Exceeding (AL)	Action Level (AL)	PHG (MCLG)	Typical Source of Contamination
	Lead (Pb)	µg/L	NA	NA	NA	NA	55	ND	NA	NA	NA	NA	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers: erosion of natural deposits
	Copper (Cu)	mg/L	NA	NA	NA	NA	55	0.21	NA	NA	NA	NA	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
	Table 3 - Sampling Results Showing Detection of Primary Constituents															
Constituents	Reporting Unit	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	MCL [MRDL]	PHG (MCLG) [MRDLG]	Major Sources in Drinking Water		
Chromium (Total Cr)	µg/L	2.6	ND - 4.2	3.5	2.4 - 4.6	2.0	1.8 - 2.2	ND	ND	1.6	ND - 6.4	50	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits		
(1) Hexavalent Chromium	µg/L	2.3	ND - 4.1	4.0	2.4 - 5.1	1.9	1.2 - 2.7	0.34	ND - 0.53	1.3	ND - 4.8	(1) 10	0.02	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposit		
Fluoride (F)	mg/L	ND	ND - 0.2	0.2	0.1 - 0.2	0.1	0.1	0.1	ND - 0.1	0.4	0.2 - 0.5	2.0	1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories		
Nitrate (as NO ₃)	mg/L	23	14 - 26	(2) 28	(2) 24 - 35	(2) 27	(2) 20 - 34	16	15 - 16	26	7 - 33	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits		
Gross Alpha Particle Activity	pCi/L	ND	ND	NA	NA	ND	ND - 4.0	ND	ND	4.7	3.2 - 5.8	15	(0)	Erosion of natural deposits		
Uranium	pCi/L	NA	NA	NA	NA	NA	NA	NA	NA	4.6	3.4 - 5.3	20	0.43	Erosion of natural deposits		
Perchlorate	µg/L	ND	ND	ND	ND	ND	(3) ND	ND	ND	ND	(3) ND - 5.4	6	6	Discharge from aerospace and other industrial facilities		
1, 1- Dichloroethylene (1, 1 DCE)	µg/L	ND	ND	ND	ND	ND	(4) ND - 0.57	ND	ND	NA	NA	6	10	Discharge from industrial chemical factories		
Tetrachloroethylene (PCE)	µg/L	ND	ND	ND	(5) ND - 0.50	ND	ND	ND	ND	NA	NA	5	0.06	Discharge from factories, dry cleaners, and auto shops (Metal degreaser)		
1, 1- Dichloroethane	µg/L	ND	ND	0.040	0.035 - 0.095	ND	ND - 0.030	ND	ND	ND	ND	5	3	Some People who use water containing 1,1dichloroethane in excess of the MCL over many years may experience nervous system or respiratory problems.		
Total THM's (Trihalomethanes)	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	22	5.8 - 24	80	NA	By-product of drinking water disinfection		
Haloacetic Acids (HAA5)	µg/L	14	11 - 17	2.7	2.2 - 3.1	5.0	4.8 - 5.2	ND	ND	7.8	ND - 9.6	60	NA	By-product of drinking water disinfection		
Chlorine	mg/L	1.5	0.8 - 1.8	1.4	1.0 - 1.7	1.4	0.5 - 1.9	0.8	0.5 - 1.8	0.9	0.4 - 2.0	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	Drinking water disinfectant added for treatment		
Secondary Drinking Water Standards	Table 4 - Sampling Results Showing Detection of Secondary Constituents															
	Constituents	Reporting Unit	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	MCL	PHG (MCLG)	Typical Source of Contamination	
	Chloride (Cl)	mg/L	68	11 - 84	73	35 - 110	97	44 - 150	98	96 - 100	61	23 - 71	500	NA	Runoff, leaching from natural deposits; seawater influence	
	Specific Conductance (E.C.)	µmho/cm	513	360 - 540	570	470 - 670	635	460 - 810	535	510 - 560	774	700 - 790	1600	NA	Substances that form ions when in water; seawater influence	
	Sulfate (SO ₄)	mg/L	11	9 - 14	23	20 - 25	16	13 - 18	8.0	7.8 - 8.1	79	75 - 86	500	NA	Runoff, leaching from natural deposits; industrial wastes	
	Total Dissolved Solids (TDS)	mg/L	312	160 - 450	370	300 - 440	415	280 - 550	360	350 - 370	486	450 - 540	1000	NA	Runoff/leaching from natural deposits	
	Turbidity	NTU	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND - 1.8	5	NA	Soil runoff	
	Calcium (Ca)	mg/L	60	42 - 67	71	62 - 80	78	56 - 100	55	54 - 55	205	200 - 210	NA	NA	One of the elements that make up the earths crust's as components of many rock-forming minerals	
	Magnesium (Mg)	mg/L	8.7	5.7 - 10	8.2	6.5 - 9.9	9.1	7.1 - 11	12	11 - 12	13	13	NA	NA	One of the elements that make up the earths crust's as components of many rock-forming minerals	
	Potassium (K)	mg/L	2.0	1.0 - 2.0	2.4	2.2 - 2.6	2.3	1.8 - 2.8	1.3	1.3	4.0	4.0 - 4.1	NA	NA	One of the elements that make up the earths crust's as components of many rock-forming minerals	
	pH	Standard Unit	7.7	7.3 - 8.0	7.8	7.8	7.8	7.7 - 7.9	7.5	7.4 - 7.5	7.6	7.6 - 7.7	NA	NA	Erosion of natural deposits	
	Iron	µg/L	140	ND - 180	ND	ND	ND	ND	ND	ND	ND	ND	300	NA	Leaching from natural deposits	
	Total Alkalinity	mg/L	112	98 - 140	130	120 - 240	125	120 - 130	90	85 - 95	205	200 - 210	NA	NA	Alkalinity is a measure of the buffering capacity of water, or the capacity of bases to neutralize acids	
	Table 5 - Sampling Results Showing Detection of Sodium and Hardness															
	Constituents	Reporting Unit	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	MCL	PHG (MCLG)	Typical Source of Contamination	
	Sodium (Na)	mg/L	27	24 - 31	30	26 - 33	32	24 - 39	32	31 - 32	62	31 - 70	NA	NA	Generally found in ground and surface water	
	Total Hardness (CaCO ₃)	mg/L	188	130 - 210	210	180 - 240	235	170 - 300	185	180 - 190	261	230 - 310	NA	NA	Generally found in ground and surface water	
	Table 6 - Sampling Results Showing Detection of Unregulated Constituents															
	Constituents	Reporting Unit	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Average Level Detected	Range of Detection	Notification Level	PHG (MCLG)	Health Effects	
	Boron	µg/L	ND	ND	ND	ND	ND	ND	110	110	180	ND - 250	1000	NA	The babies of some pregnant women who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.	
	1, 4 Dioxane	µg/L	0.21	0.17 - 0.24	0.42	0.34 - 0.63	0.19	0.09 - 0.31	ND	ND	0.65	0.61 - 0.68	1	NA	NA	
	Chlorate	µg/L	42	27 - 57	58	22 - 72	71	31 - 170	23	21 - 25	110	110	800	NA	NA	
	Molybdenum	µg/L	1.9	ND - 3.9	2.5	1.6 - 3.1	0.85	ND - 1.7	ND	ND	5.4	5.3 - 5.5	NA	NA	NA	
	Strontium	µg/L	351	270 - 440	513	380 - 590	515	360 - 680	370	360 - 380	515	490 - 540	NA	NA	NA	
	Vanadium	µg/L	1.5	1.0 - 1.9	5.4	4.7 - 6.1	3.3	2.1 - 4.4	1.4	1.3 - 1.4	3.7	3.4 - 3.9	50	NA	The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.	
	Total Silica	mg/L	9	ND - 18	25	24 - 26	24	22 - 25	12	12	25	24 - 25	NA	NA	NA	
	(6) Trichloropropane (1,2,3 - TCP)	ng/L	ND	ND	ND	ND	ND	ND	23	15 - 28	8	6 - 10	(6) 5	NA	Some People who use water containing Trichloropropane (1, 2, 3-TCP) in excess of the notification level over many years may have increased risk of getting cancer, based on studies in laboratory animals.	

(1) NOTE: For hexavalent chromium the values reported came from treated water samples taken at point of entries. The untreated water (raw water) samples at 980 Zone had the highest Range of Detection of 5.0 µg/L and 870 zone (IXP) had the highest Range of Detection of 4.6 µg/L. The Chino II Wells before treatment had the highest Range of Detection of 4.7 µg/L. The hexavalent chromium and total chromium utilize different extraction methods and use different instruments. The hexavalent chromium result may come back higher than total chromium result due to this process.

(2) NOTE: Under permit for State Water Resources Control Board (State Board), Division of Drinking Water, JCSD may blend higher nitrate water sources with lower sources, all under the MCL which were administrative in nature to achieve an acceptable blend. This water is to be blended with all wells within this zone to maintain a maximum blended limit below 36 mg/L (which is 80% of the maximum contaminant level of 45 mg/L).

(3) NOTE: For perchlorate at 870 Zone (IXP) the untreated water (raw water) samples taken from the 870 Zone IXP wells before treatment had the highest Range of Detection of 6.5 µg/L. At Rubidoux Interlie, the untreated (raw water) sample taken from a single well had the highest Range of Detection of 5.4 µg/L.

(4) NOTE: For 1, 1 dichloroethylene (DCE) at 870 Zone (IXP) the treated water samples taken at IXP Product had the highest Range of Detection of 0.57 µg/L. The untreated water (raw water) samples taken from the well before treatment had the highest Range of Detection of 3.1 µg/L.

(5) NOTE: For tetrachloroethylene (PCE) at 980 Zone the treated water samples taken at 980 blending point had highest sample result of 0.50 µg/L. The untreated water (raw water) samples taken from the well prior to blending at 980 Zone Blending Point had the highest Range of Detection of 0.79 µg/L.

(6) NOTE: Board notifications made in January 2008 and September 2010.

JCSD uses Sodium Hypochlorite (Chlorine) for disinfection. JCSD does not use Chloramines.

An assessment of the drinking water sources for Jurupa Community Services District was completed in July 2006. The sources are considered most vulnerable to the following activities not associated with contaminants detected in the water supply: Known Contaminant Plumes, Plastics/Synthetics Producers and Junk/Scrap/Salvage Yards. A copy of the complete assessment is available at 11201 Harrel Street. You may request a summary of the assessment to be sent to you by contacting the Water Quality Department at: (951) 685-7434 Ext. 198

For additional information regarding your water quality, please contact our Water Quality Department at: (951) 685-7434 Ext. 198.

APPENDIX M
JCSD ORDINANCE No. 389

ORDINANCE NO. 389

AN URGENCY ORDINANCE OF THE JURUPA COMMUNITY SERVICES DISTRICT REPEALING ORDINANCE NO. 387 AND REPLACING THE DISTRICT'S MANDATORY WATER CONSERVATION PROGRAM

WHEREAS, Jurupa Community Services District ("District") serves more than 3,000 customers, is an "urban water supplier" as defined in Water Code section 10617, and is subject to the Urban Water Management Planning Act; and

WHEREAS, pursuant to the Urban Water Management Planning Act, the District has prepared an Urban Water Management Plan ("UWMP"), which includes the District's Drought Contingency Plan; and

WHEREAS, California is currently in the fourth year of a significant drought resulting in severe impacts to California's water supplies and its ability to meet all of the demands for water in the state; and

WHEREAS, Governor Edmund G. Brown, Jr. declared a state of emergency on January 17, 2014, and due to continuing dry conditions, a continued state of emergency was declared on April 1, 2015; and

WHEREAS, Water Code section 1058.5 grants the State Water Resources Control Board ("SWRCB") the authority to adopt emergency regulations in years when the Governor has declared an emergency based upon drought conditions; and

WHEREAS, on July 15, 2014, the SWRCB formally adopted emergency rulemaking to enact emergency regulations for urban water suppliers; and

WHEREAS, in response to the emergency regulations adopted by the SWRCB on August 11, 2014, the Board of Directors adopted Ordinance No. 387 as an urgency ordinance to implement the regulations adopted by the SWRCB; and

WHEREAS, on March 17, 2015, and May 5, 2015, the SWRCB formally adopted additional emergency regulations for urban water suppliers due to continuing drought conditions; and

WHEREAS, the three sets of emergency regulations adopted by the SWRCB prohibit certain types of potable water use, order all urban water suppliers to implement mandatory conservation measures, and order water suppliers with 3,000 or more service connections to provide monthly data on water production; and

WHEREAS, the additional emergency regulations adopted by the SWRCB make it necessary to adopt a new ordinance to replace Ordinance No. 387 to implement the additional regulations; and

WHEREAS, the District may adopt an urgency ordinance where it is specifically required by law to take immediate effect; and

WHEREAS, pursuant to Water Code section 376, an ordinance adopting a water conservation program pursuant to Water Code section 375 takes effect immediately; and

WHEREAS, additional water conservation measures and restrictions, in addition to those set forth in this ordinance, may be required by the State of California or other agencies with jurisdiction over this District's service area.

NOW, THEREFORE, BE IT ORDAINED that the Board of Directors of Jurupa Community Services District does hereby adopt a water conservation program as follows:

ARTICLE 1.0 Declaration of Necessity and Intent.

A. The general welfare requires the District's water supplies to be put to their maximum beneficial use. Water conservation is required even in the best of times, and wasteful or unreasonable uses must be prevented. Water conservation must be practiced so that adequate water supplies will be available to serve the District and its customers, and for the public welfare.

B. This ordinance will apply during any type of water shortage including, but not limited to, drought and other natural disasters, water supply contamination, water system infrastructure failures or as ordered by other governmental agencies that have authority over the District.

C. This ordinance establishes the following five (5) Drought Response Levels to be implemented in response to worsening drought conditions or decreasing water supplies:

Level 1 – Drought Watch. Use restrictions are voluntary with a conservation target of up to 10%.

Level 2 – Drought Caution. Use restrictions are mandatory with a conservation target of up to 20%.

Level 3 – Drought Alert. Use restrictions are mandatory with a conservation target of up to 30%.

Level 4 – Drought Critical. Use restrictions are mandatory with a conservation target of up to 40%.

Level 5 – Drought Emergency. Use restrictions are mandatory with a conservation target of more than 40%.

D. During Drought Response Levels 2 – 5, violations of the water use restrictions cited and/or Water Allocation Targets established by this ordinance are subject to Penalties as provided in Article 10.0.

ARTICLE 1.1 Application.

This ordinance shall apply to all customers, water users, and premises receiving water service from the District, wherever situated, and shall also apply to all premises and facilities owned, maintained, operated, or under the jurisdiction of the District.

ARTICLE 2.0 Definitions.

The following words and phrases whenever used in this ordinance shall have the meaning hereinafter set forth:

A. “Applicant” means the person, association, corporation, developer, entity or governmental agency applying for water service.

B. “Billing unit” equals 748 gallons of water and is the unit amount of water used to calculate commodity charges for a customer’s water usage.

C. “Board” means the Board of Directors of Jurupa Community Services District.

D. “Commercial and Industrial” means any business facility that receives water service from the District and that is not a single-family residence, multi-family residence, institutional user or dedicated irrigation meter account.

E. “Customer” means water customer or water user.

F. “District” means the Jurupa Community Services District, including its staff.

G. "Flow restricting device" or "flow restrictor" means a fitting inserted into the service connection to reduce flow capacity.

H. "Functional landscape" means landscape at a park, school, public recreation area or privately-operated common area that is utilized for recreational/leisure activities by more than a single residence.

I. "General Manager" means the General Manager of the District.

J. "Institutional" means schools, federal, state, and local governmental entities.

K. "Measurable rain" means ¼ inch within 24 hours.

L. "Non-potable water" means water that is not suitable for human consumption in conformance with federal, state, and local drinking water standards, and is not treated by the District to make it suitable for human consumption.

M. "Ornamental landscape" means all landscape not included in the definition of "functional landscape."

N. "Person" means any person, firm, partnership, association, corporation, company, organization, or other entity.

O. "Potable water" means water which conforms to the federal, state, and local drinking water standards then in effect, or which will be treated to conform to those standards.

P. "Premises" means the integral property or area, including improvements thereon, to which water service is provided, or for which an application for service is filed.

Q. "Public Health and Safety Threshold" means eleven (11) billing units of water allotted to an account for essential indoor use during any monthly billing period.

R. "Public median" means any landscaped area bounded on both sides by roads used for travel, whether publicly or privately owned.

S. "Recycled water" means water available from the District's recycled water facilities, which may include a combination of treated wastewater, intercepted surface and subsurface flows, untreated groundwater, and other waters.

T. "Service connection" means the pipe or tubing, fittings, and valves necessary to transport water from the distribution main to and through the meter.

U. "Variance" means an adjusted Water Allocation Target approved by the Board of Directors during a Level 4 or Level 5 declaration.

V. "Water Allocation Target" means the amount of water permitted to be used for each account per monthly billing period that is not subject to a civil penalty.

W. "Water user" means any user of water, including a water customer.

Article 3.0 Water Conservation and Unreasonable Uses of Water.

A. It shall be unlawful for any Person to make, cause, use or permit the use of water from the District for residential, commercial, industrial, institutional, agricultural, irrigation, governmental, or any other purpose in a manner contrary to any mandatory provision of this ordinance, or in an amount that exceeds the amount permitted by the Drought Response Levels which are in effect pursuant to this ordinance. The water conservation measures set forth in this Article 3.0 shall be in effect at all times and shall be subject to the penalties hereafter set forth.

B. It shall be unlawful for any Person to waste water or to use it unreasonably. Unreasonable uses of water shall include, but are not limited to, the following practices:

1. Allowing water to flow from a Person's property onto adjacent properties, or onto public or private roadways or streets, due to excessive irrigation and/or leaks;

2. Failing to repair a water leak;

3. Using water to wash down sidewalks, driveways, parking areas, tennis courts, patios, or other paved areas, except to alleviate immediate safety or sanitation hazards;

4. Watering lawns and/or groundcovers and irrigating landscaping between the hours of 8:00 a.m. and 8:00 p.m.

C. A Drought Response Level may be declared by the Board of Directors in accordance with the provisions of this Water Conservation Program. A Drought Response Level shall remain in full force and effect until discontinued by resolution of the Board of Directors.

D. The District may declare a Drought Emergency (Level 5) at any time, without regard to the Drought Response Level previously in effect.

E. During Drought Response Levels 2-5, the water conservation and supply shortage response measures hereinafter set forth are mandatory, and violations are subject to administrative, civil, and criminal penalties and remedies, cumulatively, as specified in this ordinance and by State law.

ARTICLE 4.0 Drought Response Level 1 – Drought Watch Condition.

A. A Drought Response Level 1 condition is also referred to as a “Drought Watch” condition. A Level 1 condition applies when the Board of Directors requests all water users to voluntarily reduce their water use up to ten (10) percent to ensure that sufficient supplies will be available to meet anticipated demands. The Board of Directors may declare the existence of a Drought Response Level 1 by the adoption of a resolution, and upon such declaration, the District shall implement the Level 1 conservation measures identified in this ordinance.

B. During a Level 1 Drought Watch condition, the District will increase its public education and outreach efforts to enhance awareness of the need to implement the following water conservation practices:

1. Do not use water to wash down sidewalks, driveways, parking areas, tennis courts, patios, or other paved areas, except to alleviate immediate safety or sanitation hazards.

2. Adjust sprinklers and irrigation systems to avoid overspray, runoff, and waste. Customers should also avoid watering on windy days.

3. Irrigate all landscapes before dawn, if possible, but never between 8:00 a.m. and 8:00 p.m. Use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped areas that are not irrigated by a landscape irrigation system.

4. Irrigation is prohibited during and for 48 hours after measurable rain as defined in Article 2.0.

5. Agricultural users are requested to reduce water usage and to consult with the local Resource Conservation District as needed or industry associations in their area for appropriate water conservation measures and to implement them as soon as possible.

6. Residents are urged to design and install water-wise landscaping utilizing native and other drought-tolerant plant materials, and to minimize turf areas for permanent water conservation.

7. Developers of Commercial, Industrial and Institutional properties are urged to design and install water-wise landscaping utilizing native and other drought-tolerant plant materials, and to minimize turf areas for permanent water conservation, as required by city/county landscape ordinances.

8. Install water-saving devices in indoor plumbing.

9. Check faucets, toilets, and pipes, both indoors and outdoors, for leaks and repair them immediately.

10. Use re-circulated water to operate decorative fountains, ponds, lakes or other similar aesthetic structures.

11. Wash motor vehicles, trailers, boats, and all other mobile equipment using a bucket or a hand-held hose with a positive shut-off nozzle, mobile high-pressure/low-volume wash system, or at a commercial site that re-circulates (reclaims) water onsite. Avoid washing during hot conditions when additional water is required due to evaporation.

12. Restaurants or other public places where food is served shall not serve drinking water to any customer unless expressly requested.

13. Operators of hotels and motels must provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guestroom using clear and easily understood language.

ARTICLE 5.0 Drought Response Level 2 – Drought Caution Condition.

A. A Drought Response Level 2 condition is also referred to as a “Drought Caution” condition. A Level 2 condition applies when the Board of Directors mandates all water users to reduce their water use more than ten (10) percent and up to twenty (20) percent to ensure that sufficient supplies will be available to meet anticipated demands. The Board of Directors shall declare the existence of a Drought Response Level 2 by the adoption of a resolution, and upon such declaration, the District shall implement the Level 2 conservation measures identified in this ordinance.

B. All persons using water from the District shall comply with Level 1 “Drought Watch” water conservation practices during a Level 2 drought and shall also comply with the following additional mandatory conservation measures:

1. Whether irrigated with potable or non-potable water, limit all outdoor irrigation to four (4) days per week for no more than ten (10) minutes per station per day. This provision does not apply to functional landscape, which shall be limited to five (5) days per week as approved by the District.

2. Ornamental landscapes, including trees that utilize properly operating water-efficient devices which include, but are not limited to, drip irrigation systems, stream rotor sprinklers, and are operated by a functional irrigation controller, upon verification by JCSD or its representative, may be irrigated on the following schedule:

- a. Drip irrigation – thirty (30) minutes per station on the days authorized for landscape irrigation.
- b. Stream rotors – twenty (20) minutes per station on the days authorized for landscape irrigation.

3. All leaks must be repaired or otherwise stopped within seventy-two (72) hours of notification by the District unless other arrangements are approved by the General Manager or designee.

C. During Drought Response Level 2, violation of the mandatory water conservation measures shall be subject to the civil penalties specified in Article 10.0, in addition to all other criminal and civil sanctions available under State law.

ARTICLE 6.0 Drought Response Level 3 – Drought Alert Condition.

A. A Drought Response Level 3 condition is also referred to as a “Drought Alert” condition. A Level 3 condition applies when the Board of Directors mandates all water users to reduce their water use more than twenty (20) percent and up to thirty (30) percent to ensure that sufficient supplies will be available to meet anticipated demands. The Board of Directors shall declare the existence of a Drought Response Level 3 by the adoption of a resolution, and upon such declaration the District shall implement the Level 3 conservation measures identified in this ordinance.

B. All persons using water from the District shall comply with Level 1 “Drought Watch” and Level 2 “Drought Caution” conservation practices during a Level 3 “Drought Alert” condition and shall also comply with the following additional mandatory conservation measures:

1. Whether irrigated with potable or non-potable water, limit outdoor irrigation to three (3) days per week for no more than ten (10) minutes per station per day. This provision does not apply to functional landscape which shall be limited to four (4) days per week as approved by the District.

2. Ornamental landscapes, including trees that utilize properly operating water-efficient devices which include, but are not limited to, drip irrigation systems, stream rotor sprinklers, and are operated by a functional irrigation controller, upon verification by JCSD or its representative, may be irrigated on the following schedule:

- a. Drip irrigation – thirty (30) minutes per station on the days authorized for landscape irrigation.
- b. Stream rotors – twenty (20) minutes per station on the days authorized for landscape irrigation.

3. The following irrigation schedule will be implemented and enforced: odd-numbered addresses (the last digit is an odd number) must commence and complete irrigation cycles on Mondays, Wednesdays and Fridays. Even-numbered addresses (the last digit is an even number) must commence and complete irrigation cycles on Tuesdays, Thursdays and Saturdays. There will be no authorized landscape irrigation on Sunday.

4. There will be no irrigation of turf on public medians.

5. Irrigation with potable water outside of newly-constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development is prohibited.

6. Use of potable water for dust control and grading of construction sites must be minimized. Each developer must submit a proposed Water Conservation Plan that includes projected water use and ongoing conservation efforts for review and approval by the District. Use of water for dust control and grading shall only be permitted as set forth in a Water Conservation Plan approved by the District.

7. Upon the declaration of a Drought Response Level 3 “Drought Alert” condition, issuance of new service availability letters shall be allowed provided that the applicant provides substantial evidence to the satisfaction of the District of an enforceable commitment that water demands for the project will be offset by one hundred percent (100%) prior to the provision of a new water meter(s). This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted for a period of one year or less.

8. All leaks must be repaired or otherwise stopped within forty-eight (48) hours of notification by the District unless other arrangements are approved by the General Manager.

C. During Drought Response Level 3, violation of the mandatory water conservation measures shall be subject to the civil penalties specified in Article 10.0, in addition to all other criminal and civil sanctions available under State law.

ARTICLE 7.0 Drought Response Level 4 – Drought Critical Condition.

A. A Drought Response Level 4 condition is also referred to as a “Drought Critical” condition. A Level 4 condition applies when the Board of Directors mandates all water users reduce their water use more than thirty (30) percent and up to forty (40) percent to ensure that sufficient supplies will be available to meet anticipated demands. The Board of Directors shall declare the existence of a Drought Response Level 4 by the adoption of a resolution, and upon such declaration, the District shall implement the Level 4 conservation measures identified in this ordinance.

B. All persons using District water shall comply with Level 1 “Drought Watch,” Level 2 “Drought Caution,” and Level 3 “Drought Alert” conservation practices during a Level 4 “Drought Critical” condition and shall also comply with the following additional mandatory conservation measures:

1. Whether irrigated with potable or non-potable water, limit all outdoor irrigation to two (2) days per week for no more than ten (10) minutes per station per day. This provision does not apply to functional landscape, which shall be limited to three (3) days per week as approved by the District. Additional exemptions shall include:

- a. Maintenance of existing landscaping necessary for fire protection as specified by the Fire Marshal of the local fire protection agency having jurisdiction over the property to be irrigated. If fire protection landscaping is not sustainable by irrigation two (2) days per week, irrigation may be increased to not more than three (3) days per week;
- b. Maintenance of existing landscaping for erosion control may be irrigated up to three (3) days per week;
- c. Watering of livestock and other animals;
- d. Public works projects that support public health and safety; and
- e. Actively irrigated environmental mitigation projects.

2. Ornamental landscapes, including trees that utilize properly operating water-efficient devices which include, but are not limited to, drip irrigation systems and are operated by a functional irrigation controller, upon verification by JCSD or its representative, may be irrigated on the following schedule:

- a. Drip irrigation – thirty (30) minutes per station on the days authorized for landscape irrigation.
- b. Stream rotors – twenty (20) minutes per station on the days authorized for landscape irrigation.

3. The following irrigation schedule will be implemented and enforced: odd-numbered addresses (the last digit is an odd number) must commence and complete irrigation cycles on Mondays and Thursdays. Even-numbered addresses (the last digit is an even number) must commence and complete irrigation cycles on Tuesdays and Fridays. There will be no authorized landscape irrigation on Wednesdays, Saturdays, and Sundays.

4. Vehicles may only be washed at commercial carwashes that re-circulate water or by high-pressure/low-volume wash devices.

C. Upon the declaration of a Drought Response Level 4 “Drought Critical” condition, issuance of new service availability letters shall be suspended, but new connections shall be allowed pursuant to service availability letters then in effect provided that the applicant provides substantial evidence to the satisfaction of the District of an enforceable commitment that water demands for the project will be offset by one hundred twenty-five percent (125%) prior to the provision of a new water meter(s). This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted for a period of one year or less. In addition, new connections shall be permitted if necessary to protect the public’s health, safety and welfare as determined by the Board of Directors; and temporary construction meters shall be permitted as necessary to service development for which permanent connections are authorized.

D. Upon the declaration of a Drought Response Level 4 condition, the District will suspend consideration of annexations to its service area, unless the annexation increases the water supply available to the District by more than the anticipated demands of the property to be annexed.

E. To increase conservation, the District may establish a water allocation for property served. The following method will be utilized which accounts for general public health and safety.

Residential and Multi-family Customers

1. The Board of Directors will determine the Water Allocation Target percentage in the resolution adopting a Level 4 “Drought Critical” Response.

2. This calculation will only be applied to consumption in excess of the Public Health and Safety Threshold of eleven (11) units per monthly billing period. A residential Water Allocation Target will be calculated for each account by comparing usage in the current billing period to the same period identified in the resolution.

3. If the residential account uses more water than the Water Allocation Target amount, excess consumption shall constitute violations subject to the civil penalties set forth in Article 10.0.

All Other Accounts

4. The Board of Directors will determine the Water Allocation Target percentage in the resolution adopting a Level 4 "Drought Critical" Response. A Public Health and Safety Threshold shall not apply.

5. A Water Allocation Target will be calculated for each account by comparing usage in the current billing period to the same period identified in the resolution.

6. If an account uses more water than the Water Allocation Target amount, excess consumption shall constitute violations subject to the civil penalties set forth in Article 10.0.

F. An application may be made to the Board of Directors for a variance from the Water Allocation Target.

G. During Drought Response Level 4, violation of the mandatory water conservation measures shall also be subject to all other criminal and civil sanctions available under State law, in addition to the civil penalties set forth in Article 10.0.

ARTICLE 8.0 Drought Response Level 5 – Drought Emergency Condition.

A. A Drought Response Level 5 condition is also referred to as a "Drought Emergency" condition. In the event of a water shortage of more than forty (40) percent, or at any other time that the Board of Directors deems it necessary or appropriate, the Board may consider declaring a Level 5 Drought Emergency condition pursuant to California Water Code section 350, et seq.

B. Upon declaration of a Level 5 Drought Emergency condition, the Board of Directors may consider a moratorium on new service connections, regardless of the existence of water availability letters for such connections. In addition, all persons using water from the District shall comply with conservation measures required during Level 1 "Drought Watch," Level 2 "Drought Caution,"

Level 3 “Drought Alert,” and Level 4 “Drought Critical” conditions and shall also comply with the following additional mandatory conservation measure.

C. To increase conservation, the District may establish a water allocation for the property served. The following method will be utilized which accounts for general public health and safety.

Residential and Multi-family Customers

1. The Board will determine the Water Allocation Target percentage in the resolution adopting a Level 5 “Drought Emergency” Response. This calculation will only be applied to consumption in excess of the Public Health and Safety Threshold of eleven (11) units per monthly billing period. A residential Water Allocation Target will be calculated for each account by comparing usage in the current billing period to the same period identified in the resolution.

2. If the residential account uses more water than the Water Allocation Target amount, excess consumption shall constitute violations subject to the civil penalties set forth in Article 10.0, or as otherwise provided in the resolution declaring the Level 5 Drought Emergency condition.

All Other Accounts

3. The Board of Directors will determine the Water Allocation Target percentage in the resolution adopting a Level 5 “Drought Emergency” Response. A Public Health and Safety Threshold shall not apply.

4. A Water Allocation Target will be calculated for each account by comparing usage in the current billing period to the same period identified in the resolution.

5. If an account uses more water than the Water Allocation Target amount, a penalty will be applied.

D. An application may be made to the Board of Directors for a variance from the Water Allocation Target.

E. During Drought Response Level 5, violation of the mandatory water conservation measures shall also be subject to all other criminal and civil sanctions available under State law, in addition to the civil penalties set forth in Article 10.0.

ARTICLE 9.0 Procedures for Determination and Notification of Drought Response Level.

A. General Manager shall monitor drought conditions and regulations, as well as evaluate the supply and demand for water by its customers, and shall recommend the Drought Response Level to be declared by the Board of Directors.

B. The existence of a Drought Response Level 1 "Watch" condition may be declared by the Board of Directors. The General Manager shall publish a notice of the determination in one or more newspapers, including a newspaper of general circulation within the District. The District shall also post notice of the condition on its website.

C. The existence of Drought Response Level 2 "Drought Caution," Level 3 "Drought Alert," or Level 4 "Drought Critical," or Level 5 "Drought Emergency" condition may be declared by resolution of the Board of Directors adopted at a regular or special public meeting held in accordance with State law. The mandatory conservation measures applicable to Drought Response Levels 2, 3, 4 or 5 conditions shall take effect immediately or as otherwise provided by State law. Within ten (10) days following the declaration of the response level, the District shall publish a copy of the resolution in a newspaper used for publication of official notices. If the District establishes a water allocation in response to a Drought Response Level 4 or Level 5 condition, it shall provide notice of the allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the District customarily mails the billing statement for fees or charges for ongoing water service. Water allocation shall be effective on the fifth (5th) day following the date of mailing or at such later date as specified in the notice.

D. The District's Board of Directors may declare an end to a Drought Response Level by the adoption of a resolution at any regular or special meeting held in accordance with State law.

ARTICLE 10.0 Violations and Penalties.

A. Any person, who uses, causes to be used, or permits the use of water in violation of this ordinance is guilty of an offense punishable as provided herein.

B. The District will make a reasonable effort to assist customers with compliance. Reasonable efforts include, but are not limited to, personal contact, door hanger, letter, email or via telephone whenever possible to notify customers of any violation.

C. Each day that a violation of this ordinance occurs is a separate offense.

D. Civil penalties may be levied for each violation of the water-use restrictions specifically cited in this ordinance in Drought Levels 2-5 as follows:

1. Twenty-five dollars (\$25.00) for a first violation of any provision of this ordinance.

2. Fifty dollars (\$50.00) for a second violation of any provision of this ordinance within one year of the date of the first violation.

3. One hundred dollars (\$100.00) for a third violation of this ordinance within one year of the date of the first violation.

4. Two hundred dollars (\$200.00) for a fourth violation of this ordinance within one year of the first violation.

5. Five hundred dollars (\$500.00) for a fifth violation of this ordinance within one year of the first violation.

E. When a Water Allocation Target is established for a water account during a Drought Response Level 4 – Drought Critical Condition or during a Drought Response Level 5 – Drought Emergency Condition, water use in excess of the assigned Water Allocation Target during any monthly billing period shall also constitute one or more violations of this ordinance, for which civil penalties shall be imposed, as follows:

1. Water use in excess of the Water Allocation Target per Equivalent Dwelling Unit in any monthly billing period shall constitute a first violation resulting in written notification.

2. Water use in excess of the Water Allocation Target per Equivalent Dwelling Unit in any monthly billing period within one year of the first violation shall constitute a second violation resulting in a second written notification and a twenty dollar (\$20.00) civil penalty.

3. Water use in excess of the Water Allocation Target per Equivalent Dwelling Unit in any monthly billing period within one year of the first and second violations shall constitute a third violation resulting in a fifty dollar (\$50.00) civil penalty. Such penalty shall be waived upon successful completion of authorized Water Conservation class/workshop.

4. Water use in excess of the Water Allocation Target per Equivalent Dwelling Unit in any monthly billing period within one year of the first, second, and third violations shall constitute a fourth violation resulting in a one hundred dollar (\$100.00) civil penalty.

5. Water use in excess of the Water Allocation Target per Equivalent Dwelling Unit in any monthly billing period within one year of the first, second, third, and fourth violations shall constitute a fifth violation resulting in a two hundred fifty dollar (\$250.00) civil penalty.

6. Water use in excess of the Water Allocation Target per Equivalent Dwelling Unit in any monthly billing period within one year of the first, second, third, fourth, and fifth violations shall constitute a sixth violation resulting in a five hundred dollar (\$500.00) civil penalty.

Civil penalties for water use in excess of an assigned Water Allocation Target shall be due and payable, as penalties, in addition to the District's charge for the water delivered to the account according to the District's water rate schedule then in effect. Penalty amounts may be separately itemized on the District's monthly bill for water service, and shall be due and payable at the same time, and in the same manner, as charges for water service. Subject to the hearing and appeal procedure hereinafter set forth, nonpayment of such penalties, when due, shall be cause for termination of water service, and the District may secure payment thereof by recording a lien on the property that received water service in the manner allowed by law.

F. When a civil penalty is to be imposed, the customer will be given written notice of the penalty to be imposed. Within seven (7) days after delivery of such notice, the customer may submit a written request to the District requesting a hearing by the General Manager or designee and an opportunity to present evidence that a violation has not occurred. The hearing shall be scheduled no later than fourteen (14) days after the District's receipt of such written request. Within fourteen (14) business days after the hearing, the General Manager or designee shall render a decision in writing to the customer that requested the hearing. Upon receipt of the written decision, the customer shall have fourteen (14) days to appeal the decision to the Board of Directors. The Board of Directors shall then schedule the matter for consideration at a regular or special meeting of the Board and render its decision, which shall be a final decision.

G. Penalties collected shall be utilized solely to implement and enforce water conservation measures.

H. Violation of a provision of this ordinance is subject to enforcement through installation of a flow-restricting device at the meter.

I. Pursuant to Water Code section 377, each violation of this ordinance may also be prosecuted as a misdemeanor punishable by imprisonment in the county jail for not more than thirty (30) days or by a fine not exceeding one thousand dollars (\$1,000.00) or by both.

J. Willful violations of this ordinance shall also constitute cause for termination of service to the property at which the violation occurs. In the event of termination of service, such service shall not be resumed until such time as the Board of Directors receives satisfactory assurances that violations will not recur. The customer shall be responsible for the District's standard fees and charges for termination and resumption of service.

ARTICLE 11.0 Revocation of Prior Ordinances.

Ordinance No. 387, establishing a water conservation program, is hereby repealed. This ordinance provides the only water conservation plan applicable to the District.

ARTICLE 12.0 Effective Date.

This ordinance shall become effective immediately as an urgency ordinance in accordance with Water Code section 376.

ADOPTED this 26th day of May 2015.



President of the Board of Directors

ATTEST:



Secretary of the Board of Directors

CERTIFICATION

I, Julie B. Saba, Secretary of the Board of Directors of Jurupa Community Services District, certify that the foregoing ordinance was adopted at a regular meeting of the Board of Directors on 26th day of May 2015, by the following vote of the Directors:

AYES: Jane F. Anderson, Kenneth J. McLaughlin, Robert Craig, Betty A. Anderson

NOES: Chad Blais

ABSENT: None

ABSTAINED: None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of Jurupa Community Services District this 26th day of May 2015.


Secretary of the Board of Directors

(SEAL)

APPENDIX N

JCSD RESOLUTIONS No. 2627 and No. 2628

RESOLUTION NO. 2627

**RESOLUTION OF THE BOARD OF DIRECTORS OF
JURUPA COMMUNITY SERVICES DISTRICT
ESTABLISHING A WATER CAPACITY CHARGE FOR
CONNECTIONS TO THE DISTRICT'S POTABLE WATER
SYSTEM AND FINDING THE APPROVAL OF SUCH
CHARGES EXEMPT FROM ENVIRONMENTAL REVIEW
UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY
ACT**

WHEREAS, Jurupa Community Services District ("District") collects Water Added Facilities Charges, otherwise known as capacity charges, for connections to the District's potable water distribution system; and

WHEREAS, pursuant to Government Code Sections 61115, 66013 and 66016, and District Ordinance No. 400, this Board of Directors ("Board") may adjust the District's current capacity charges by resolution to charge for public facilities in existence at the time the charge is imposed or for new facilities to be acquired or constructed in the future that are of proportional benefit to the person or property being charged, including supply or capacity contracts for rights or entitlements, real property interests, and entitlements and other rights involving capital expense relating to the District's use of existing or new public facilities; and

WHEREAS, this Board has engaged the professional engineering firm of Carollo Engineers, Inc. to conduct a study of the District's capacity charges imposed for connections to the District's potable water system, titled "2015 Capacity Charges Study" ("Study"), to determine what adjustments should be made to the District's Water Added Facilities Charges in order to fairly allocate the cost of public facilities currently existing or to be acquired or constructed in the future, including supply or capacity contracts for rights and entitlements, real property interests, and entitlements and other rights involving capital expense relating to the use of existing or new public facilities, in proportion to the benefit to the person or property being charged; and

WHEREAS, the Study includes data indicating the amount of the cost, or estimated cost, required to pay for capacity and water supply rights or entitlements to make potable water available, and the revenue sources anticipated to cover those costs; and

WHEREAS, a copy of the Study was made available to the public at least 10 days prior to the date of adoption of this resolution; and

WHEREAS, at least 14 days prior to the date of adoption of this resolution, the District mailed a notice to all persons that had filed with the District a written request for such notice, and also to a number of interested persons that had not filed a written request, of the meeting at which this Board would consider adoption of

this resolution; and

WHEREAS, the California Environmental Quality Act ("CEQA") confirms that the approval of rates, tolls, fares, and other charges for the purposes of obtaining funds for capital projects necessary to maintain service within the District's existing service area, are exempt from environmental review (Public Resources Code § 21080(b)(8); State CEQA Guidelines § 15273(a); and

WHEREAS, the proposed capacity charge is necessary to obtain funds consistent with the above CEQA exemptions and such capacity charge would be used to fund capital projects needed to maintain its ability to provide service within the District's existing service area; and

WHEREAS, at said meeting, this Board has invited and considered all written and oral comments on the Study and the proposed adjustments to the District's Water Added Facilities Charges imposed for connections to the District's potable water system, as set forth in the Study;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Jurupa Community Services District as follows:

1. Consistent with CEQA, the State CEQA Guidelines, and the District's Local CEQA Guidelines, the approvals of the capacity charge described in this Resolution is exempt from environmental review under CEQA as set forth in Public Resources Code § 21080(b)(8) and State CEQA Guidelines § 15273(a). This finding is based on the fact that the charge is for purposes of obtaining funds for capital projects to maintain service within the District's existing service area. These findings are supported by the system and capacity charge Study referenced above and incorporated herein by reference. Nonetheless, the Board finds that all appropriate environmental review will be completed when and as specific capital projects are brought forward for potential approval at a future time. Finally, the Board finds that it would be premature at this time to conduct environmental review for any specific capital improvement project because the timing of when individual projects may be brought forward for consideration is unknown. Specifically, the precise locations/sizes of the potential capital facilities are unknown; the exact acreages that may be disturbed by the construction of those facilities have not been determined; and the biological species, sensitive receptors, or other resources that may be affected by any construction or operation are likely to change between today and the time that any improvement is brought forward for construction. Accordingly, State CEQA Guidelines section 15004 confirms that environmental review should not yet be undertaken because there is not yet sufficient information available to enable "meaningful" environmental review.

2. In addition to the service charge and meter installation charge to be paid for each new connection to the District's potable water system, applicants for water service from the District shall also pay to the District a Water Capacity Charge which shall include both a facilities charge component per Meter Equivalent Unit and also a water resources charge component per Meter Equivalent Unit, according to the

schedule and as listed by meter size in Appendix A. Beginning July 1, 2016, and annually thereafter, the amount of all components of the Water Capacity Charge shall be increased in proportion to the change in the Engineering News Record - Construction Cost Index for the most recently reported 12-month period then available.

3. As used herein, the term "Meter Equivalent Unit" shall be defined as the capacity provided to a single-family residence through a 5/8 inch meter.

4. The Board hereby approves the imposition of a Water Capacity Charge as described above.

5. This resolution shall become effective immediately upon its adoption, and shall be applied to new development as proposed in the Study and in accordance with Section 6.1 of the District's Developers Handbook. The Water Capacity Charge shall supersede the Water Added Facilities Charge previously in effect.

6. District staff are hereby directed to file and have posted a Notice of Exemption with the County Clerk of Riverside County within five (5) working days of this approval.

7. The custodian of the record of proceedings for this action shall be the Secretary to the Board of Directors, whose offices are located at 11201 Harrel Street, Jurupa Valley, CA 91752.

ADOPTED this 14th day of March 2016.

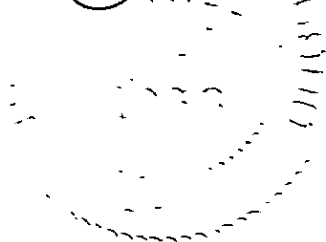


President of the Board of Directors

ATTEST:



Secretary of the Board of Directors



CERTIFICATION

I, Julie B. Saba, Secretary of the Board of Directors of Jurupa Community Services District, certify that the foregoing resolution was adopted by the Board of Directors at a regular meeting held on the 14th day of March 2016, by the following vote of the Directors:

AYES: Chad Blais, Kenneth J. McLaughlin, Betty A. Anderson,
Joan E. Roberts, Jane F. Anderson

NOES: None

ABSENT: None

ABSTAINED: None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of Jurupa Community Services District this 14th day of March 2016.


Secretary of the Board of Directors

(SEAL)



APPENDIX A

Water Charge by Meter Size Effective March 14, 2016

Meter Size, inches	MEU	Facility Component	Water Resources Component	Total Capacity Charge
5/8	1	\$ 7,767	\$ 1,779	\$ 9,545
3/4	1	7,767	1,779	9,545
1	2.5	16,392	4,446	20,839
1.5	5	32,784	8,893	41,677
2	8	52,455	14,228	66,683
3	16	104,002	28,457	132,459
4	25	163,921	44,464	208,385
6	50	327,843	88,928	416,770
8	80	524,548	142,284	666,833
10	210	1,631,039	373,497	2,004,535

Water Charge by Meter Size Effective July 1, 2017*

Meter Size, inches	MEU	Facility Component	Water Resources Component	Total Capacity Charge
5/8	1	\$ 8,274	\$ 3,557	\$ 11,831
3/4	1	8,274	3,557	11,831
1	2.5	20,684	8,893	29,577
1.5	5	41,369	17,786	59,154
2	8	66,190	28,457	94,647
3	16	132,379	56,914	189,293
4	25	206,843	88,928	295,770
6	50	413,685	177,856	591,541
8	80	661,896	284,569	946,465
10	210	1,737,477	746,993	2,484,471

* Above charge prior to annual adjustment for Engineering News Record - Construction Cost Index

RESOLUTION NO. 2628

RESOLUTION OF THE BOARD OF DIRECTORS OF JURUPA COMMUNITY SERVICES DISTRICT ESTABLISHING A SEWER CAPACITY CHARGE FOR CONNECTIONS TO THE DISTRICT'S SEWAGE COLLECTION AND TRANSMISSION SYSTEM AND FINDING THE APPROVAL OF SUCH CHARGES EXEMPT FROM ENVIRONMENTAL REVIEW UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

WHEREAS, Jurupa Community Services District ("District") collects a Sewer Facilities Fee, otherwise known as a sewer capacity charge, for connections to the District's sewage collection and transmission system; and

WHEREAS, pursuant to Government Code Sections 61115, 66013 and 66016, and District Ordinance No. 400, this Board of Directors ("Board") may adjust the District's current Sewer Facilities Fee by resolution to charge for public facilities in existence at the time the charge is imposed or for new facilities to be acquired or constructed in the future that are of proportional benefit to the person or property being charged, including supply or capacity contracts for rights or entitlements, real property interests, and entitlements and other rights involving capital expense relating to the District's use of existing or new public facilities; and

WHEREAS, this Board has engaged the professional engineering firm of Carollo Engineers, Inc. to conduct a study of the District's capacity charges imposed for connections to the District's sewage system, titled "2015 Capacity Charges Study" ("Study"), to determine what adjustments should be made to the District's Sewer Facilities Fee in order to fairly allocate the cost of public facilities currently existing or to be acquired or constructed in the future, including supply or capacity contracts for rights and entitlements, real property interests, and entitlements and other rights involving capital expense relating to the use of existing or new public facilities, in proportion to the benefit to the person or property being charged; and

WHEREAS, the Study includes data indicating the amount of the cost, or estimated cost, required to pay for capacity in the District's sewage collection and transmission system, and the revenue sources anticipated to cover those costs; and

WHEREAS, a copy of the Study was made available to the public at least 10 days prior to the date of adoption of this resolution; and

WHEREAS, at least 14 days prior to the date of adoption of this resolution, the District mailed a notice to all persons that had filed with the District a written request for such notice, and also to a number of interested persons that had not filed a written request, of the meeting at which this Board would consider adoption of this resolution; and

WHEREAS, the California Environmental Quality Act ("CEQA") confirms that the approval of rates, tolls, fares, and other charges for the purposes of obtaining funds for capital projects necessary to maintain service within the District's existing service area, are exempt from environmental review (Public Resources Code § 21080(b)(8); State CEQA Guidelines § 15273(a); and

WHEREAS, the proposed capacity charge is necessary to obtain funds consistent with the above CEQA exemptions and such capacity charge would be used to fund capital projects needed to maintain its ability to provide service within the District's existing service area; and

WHEREAS, at said meeting, this Board has invited and considered all written and oral comments on the Study and the proposed adjustments to the District's capacity charges imposed for connections to the District's sewage collection and transmission system, as set forth in the Study;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Jurupa Community Services District as follows:

1. Consistent with CEQA, the State CEQA Guidelines, and the District's Local CEQA Guidelines, the approvals of the capacity charge described in this Resolution is exempt from environmental review under CEQA as set forth in Public Resources Code § 21080(b)(8) and State CEQA Guidelines § 15273(a). This finding is based on the fact that the charge is for purposes of obtaining funds for capital projects to maintain service within the District's existing service area. These findings are supported by the system and capacity charge Study referenced above and incorporated herein by reference. Nonetheless, the Board finds that all appropriate environmental review will be completed when and as specific capital projects are brought forward for potential approval at a future time. Finally, the Board finds that it would be premature at this time to conduct environmental review for any specific capital improvement project because the timing of when individual projects may be brought forward for consideration is unknown. Specifically, the precise locations/sizes of the potential capital facilities are unknown; the exact acreages that may be disturbed by the construction of those facilities have not been determined; and the biological species, sensitive receptors, or other resources that may be affected by any construction or operation are likely to change between today and the time that any improvement is brought forward for construction. Accordingly, State CEQA Guidelines section 15004 confirms that environmental review should not yet be undertaken because there is not yet sufficient information available to enable "meaningful" environmental review.

2. Applicants for sewer service from the District shall pay to the District a Sewer Capacity Charge per Equivalent Dwelling Unit according to the schedule set forth in Appendix A. Beginning July 1, 2016, and annually thereafter, the amount of the Sewer Capacity Charge shall be increased in proportion to the change in the Engineering News Record - Construction Cost Index for the most recently reported 12-month period then available.

3. As used herein, the term "Equivalent Dwelling Unit" shall be defined as 220 gallons per day discharge to the sewer system.

4. In the Bellegrave Avenue Area as described in the District's Resolution No. 2615, the Sewer Capacity Charge, as adjusted, shall be increased by the amount of \$3,268, and the amount of such increase shall be allocated among the Eastvale Pipelines, the Bellegrave Avenue Area Pipelines, the River Road Lift Station & Force Mains, the Western Riverside County Regional Wastewater Authority Wastewater Treatment Plant Expansion, and Lift Station Conversion in the manner described in Resolution No. 2615.

5. The Board hereby approves the imposition of a Sewer Capacity Charge as described above

6. This resolution shall become effective immediately upon its adoption, and shall be applied to new development as proposed in the Study and in accordance with Section 6.1 of the District's Developers Handbook. The Sewer Capacity Charge shall supersede the Sewer Facilities Fee previously in effect.

7. District staff are hereby directed to file and have posted a Notice of Exemption with the County Clerk of Riverside County within five (5) working days of this approval.

8. The custodian of the record of proceedings for this action shall be the Secretary to the Board of Directors, whose offices are located at 11201 Harrel Street, Jurupa Valley, CA 91752.

ADOPTED this 14th day of March 2016.



President of the Board of Directors

ATTEST:



Secretary of the Board of Directors

CERTIFICATION

I, Julie B. Saba, Secretary of the Board of Directors of Jurupa Community Services District, certify that the foregoing resolution was adopted by the Board of Directors at a regular meeting held on the 14th day of March 2016, by the following vote of the Directors:

AYES: Chad Blais, Kenneth J. McLaughlin, Betty A. Anderson,
Joan E. Roberts, Jane F. Anderson

NOES: None

ABSENT: None

ABSTAINED: None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of Jurupa Community Services District this 14th day of March 2016.


Secretary of the Board of Directors

(SEAL)



Appendix A

Sewer Charge per EDU Effective March 14, 2016

EDU	Sewer Charge
1	\$ 6,441

Sewer Charge per EDU Effective July 1, 2017 *

EDU	Sewer Charge
1	\$ 6,971

* Above charge prior to annual adjustment for Engineering
News Record - Construction Cost Index

APPENDIX O

JCSD Resolution Nos. 2511 and 2512

RESOLUTION NO. 2511

RESOLUTION OF THE BOARD OF DIRECTORS OF JURUPA COMMUNITY SERVICES DISTRICT ESTABLISHING RATES FOR WATER SERVICE

WHEREAS, Jurupa Community Services District ("District") has engaged the services of a professional rate consultant, Municipal & Financial Services Group ("Rate Consultant"), to perform a study of the District's rates and charges for water and sewer services; and

WHEREAS, the District's Rate Consultant has provided a report to the District entitled "Comprehensive Water and Sewer Rate Study" recommending revisions to the District's rates and charges for water and sewer services, which has been posted on the District's internet web page and has been available for public review since September 2014; and

WHEREAS, this Board has also conducted a series of public workshops to consider the proposed adjustments to the District's water and sewer rates and to consider comments on the proposed rates; and

WHEREAS, pursuant to the requirements of Article XIID, Section 6 of the California Constitution, the District provided mailed notice of the proposed water and sewer rates to all property owners and customers who would be affected by said rates, advising them of a public hearing to be conducted by this Board on November 10, 2014, and the opportunity to protest the proposed rates in writing, which notice was mailed more than 45 days prior to the public hearing; and

WHEREAS, on November 10, 2014, this Board conducted a public hearing on the proposed rates as provided in the notice mailed to property owners and to customers who would be affected by the rates, considered all written protests to the proposed rates filed with the District prior to the conclusion of the public hearing, and has determined that the written protests filed with the District represent fewer than 50% of the number of parcels that would be affected by the proposed rates; and

WHEREAS, this Board has determined that the rates for water service proposed in the study are necessary in order to cover actual costs incurred by the District in providing water service to its customers and will not produce revenues in excess of costs of such service.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of Jurupa Community Services District hereby approves the adjusted rates for water service set forth on Exhibit "A," attached hereto, effective January 1, 2015.

BE IT FURTHER RESOLVED that the District's General Manager is hereby authorized to request a determination by this Board of Directors regarding the appropriate rate classification to be applied to any customer of the District, which determination shall be final and conclusive.

ADOPTED this 10th day of November 2014.


President of the Board of Directors

ATTEST:


Secretary of the Board of Directors

Water Rate Adjustments

Exhibit A

1. **Adjustment of Potable Water Rates.** Effective January 1, 2015 the District's water rates for all classes of potable consumptive uses other than those hereinafter specifically set forth, including single-family residential, multi-family residential, commercial, industrial and institutional customers (defined to include schools as well as State, Federal and local governmental entities), will be adjusted and will receive four additional adjustments each 12 months thereafter, to correspond to the following rate schedule:

- a) Monthly Service Charge (by size of meter):

Meter Size	2015	2016	2017	2018	2019
5/8"	\$25.36	\$25.36	\$28.68	\$30.54	\$32.51
3/4"	\$30.28	\$30.28	\$34.24	\$36.46	\$38.82
1"	\$50.54	\$50.54	\$57.16	\$60.86	\$64.79
1-1/2"	\$102.99	\$102.99	\$116.47	\$124.03	\$132.03
2"	\$161.69	\$161.69	\$182.86	\$194.72	\$207.28
3"	\$484.18	\$484.18	\$547.57	\$583.08	\$620.69
4"	\$950.56	\$950.56	\$1,075.00	\$1,144.72	\$1,218.56
6"	\$1,548.78	\$1,548.78	\$1,751.54	\$1,865.13	\$1,985.44
8"	\$1,736.05	\$1,736.05	\$1,963.32	\$2,090.65	\$2,225.51
10"	\$2,208.71	\$2,208.71	\$2,497.86	\$2,659.86	\$2,831.43

Plus

- b) Quantity charge per month in dollars per hundred cubic feet (HCF):

HCF	2015	2016	2017	2018	2019
Tier 1: 0 – 20 HCF	\$1.41	\$1.51	\$1.46	\$1.49	\$1.52
Tier 2: 21 – 50 HCF	\$1.79	\$1.92	\$1.85	\$1.89	\$1.93
Tier 3: 51 – 100 HCF	\$2.06	\$2.21	\$2.13	\$2.18	\$2.22
Tier 4: Over 100 HCF	\$2.30	\$2.46	\$2.38	\$2.43	\$2.48

2. **Adjustment of Potable Irrigation Water Rates.** Effective January 1, 2015 the District's water rates for potable irrigation customers will be adjusted and will receive four additional adjustments each 12 months thereafter, to correspond to the following rate schedule:

- a) Monthly Service Charge (by size of meter):

Meter Size	2015	2016	2017	2018	2019
5/8"	\$25.36	\$25.36	\$28.68	\$30.54	\$32.51
3/4"	\$30.28	\$30.28	\$34.24	\$36.46	\$38.82
1"	\$50.54	\$50.54	\$57.16	\$60.86	\$64.79
1-1/2"	\$102.99	\$102.99	\$116.47	\$124.03	\$132.03
2"	\$161.69	\$161.69	\$182.86	\$194.72	\$207.28
3"	\$484.18	\$484.18	\$547.57	\$583.08	\$620.69
4"	\$950.56	\$950.56	\$1,075.00	\$1,144.72	\$1,218.56
6"	\$1,548.78	\$1,548.78	\$1,751.54	\$1,865.13	\$1,985.44
8"	\$1,736.05	\$1,736.05	\$1,963.32	\$2,090.65	\$2,225.51
10"	\$2,208.71	\$2,208.71	\$2,497.86	\$2,659.86	\$2,831.43

Plus

- b) Quantity charge per month in dollars per hundred cubic feet:

	2015	2016	2017	2018	2019
Irrigation Rate per HCF	\$1.94	\$2.05	\$2.08	\$2.16	\$2.23

3. **Adjustment of Non-Potable Irrigation Water Rates.** Effective January 1, 2015 the District's water rates for non-potable irrigation customers will be adjusted and will receive four additional adjustments each 12 months thereafter, to correspond to the following rate schedule:

- a) Monthly Service Charge (by size of meter):

Meter Size	2015	2016	2017	2018	2019
5/8"	\$25.36	\$25.36	\$28.68	\$30.54	\$32.51
3/4"	\$30.28	\$30.28	\$34.24	\$36.46	\$38.82
1"	\$50.54	\$50.54	\$57.16	\$60.86	\$64.79
1-1/2"	\$102.99	\$102.99	\$116.47	\$124.03	\$132.03
2"	\$161.69	\$161.69	\$182.86	\$194.72	\$207.28
3"	\$484.18	\$484.18	\$547.57	\$583.08	\$620.69
4"	\$950.56	\$950.56	\$1,075.00	\$1,144.72	\$1,218.56
6"	\$1,548.78	\$1,548.78	\$1,751.54	\$1,865.13	\$1,985.44
8"	\$1,736.05	\$1,736.05	\$1,963.32	\$2,090.65	\$2,225.51
10"	\$2,208.71	\$2,208.71	\$2,497.86	\$2,659.86	\$2,831.43

Plus

- b) Quantity charge per month in dollars per hundred cubic feet:

	2015	2016	2017	2018	2019
Irrigation Rate per HCF	\$0.90	\$0.94	\$0.98	\$1.02	\$1.06

4. **Adjustment of Fire Hydrant Water Rates.** Effective January 1, 2015 the District's water rates for temporary water service from fire hydrants and from other connections for which the District's capacity charges have not been applied will be adjusted and will receive four additional adjustments each 12 months thereafter, to correspond to the following rate schedule:

- a) Monthly Service Charge (all hydrant meters):

	2015	2016	2017	2018	2019
All hydrant meters	\$161.69	\$161.69	\$182.86	\$194.72	\$207.28

Plus

- b) Quantity charge per month in dollars per hundred cubic feet:

HCF	2015	2016	2017	2018	2019
Tier 1: 0 – 20 HCF	\$2.62	\$2.72	\$2.67	\$2.70	\$2.73
Tier 2: 21 – 50 HCF	\$3.00	\$3.13	\$3.06	\$3.10	\$3.14
Tier 3: 51 – 100 HCF	\$3.27	\$3.42	\$3.34	\$3.39	\$3.43
Tier 4: Over 100 HCF	\$3.51	\$3.67	\$3.59	\$3.64	\$3.69

5. **Adjustment of Private Fire Protection Water Rates.** Effective January 1, 2015 the District's water rates for private fire protection service will be established and will thereafter receive four additional adjustments each 12 months, as follows:

- a) Monthly Private Fire Protection Standby Service Charge of \$29.00.

Plus

- b) Unauthorized use of private fire lines for non-fire protection use will result in a quantity charge per each HCF (hundred cubic feet) used without proper authorization from the District. The quantity charge (in dollars per hundred cubic feet) is:

	2015	2016	2017	2018	2019
First Unauthorized Use (per HCF)	\$6.90	\$7.38	\$7.14	\$7.29	\$7.44
Subsequent Unauthorized Use (per HCF)	\$23.00	\$24.60	\$23.80	\$24.30	\$24.80

6. **Water Pass-Through Adjustments.** Should the charges paid by the District to another party for water supplied to the District be increased or decreased, the District's Board of Directors may, by resolution, approve recalculated water rates to pass through the changes in such charges. If this occurs, the pass-through rate adjustment will not require a public hearing by the District's Board of Directors. At least 30 days before the effective date of the pass-through rate adjustment the District will inform its customers of the recalculated pass-through rate, which will be calculated to include the increases or decreases in such charges divided by projected water deliveries to customers. This recalculation of the rate will be applied as appropriate to the District's different customer classes in the manner set forth in this resolution.
7. **Subsequent Adjustments.** Following the above rate adjustments that become effective on January 1, 2019, the water rates then in effect will remain in effect until such later time as the District's Board of Directors takes steps required by Article XIII D of the California Constitution and other applicable law then in effect to further adjust the District's water rates.

CERTIFICATION

I, Julie B. Saba, Secretary of the Board of Directors of Jurupa Community Services District, certify that the foregoing resolution was adopted by the Board of Directors at a regular meeting held on the 10th day of November 2014, by the following vote of the Directors:

AYES: Betty A. Anderson, Jane F. Anderson, Robert Craig

NOES: Chad Blais

ABSENT: Kenneth J. McLaughlin

ABSTAINED: None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of Jurupa Community Services District this 10th day of November 2014.


Secretary of the Board of Directors

(SEAL)

RESOLUTION NO. 2512

RESOLUTION OF THE BOARD OF DIRECTORS OF JURUPA COMMUNITY SERVICES DISTRICT ESTABLISHING RATES FOR SEWER SERVICE

WHEREAS, Jurupa Community Services District ("District") has engaged the services of a professional rate consultant, Municipal & Financial Services Group ("Rate Consultant"), to perform a study of the District's rates and charges for water and sewer services; and

WHEREAS, the District's Rate Consultant has provided a report to the District entitled "Comprehensive Water and Sewer Rate Study" recommending revisions to the District's rates and charges for water and sewer services, which has been posted on the District's internet web page and has been available for public review since September 2014; and

WHEREAS, this Board has also conducted a series of public workshops to consider the proposed adjustments to the District's water and sewer rates and to consider comments on the proposed rates; and

WHEREAS, pursuant to the requirements of Article XIID, Section 6 of the California Constitution, the District provided mailed notice of the proposed water and sewer rates to all property owners and customers who would be affected by said rates, advising them of a public hearing to be conducted by this Board on November 10, 2014, and the opportunity to protest the proposed rates in writing, which notice was mailed more than 45 days prior to the public hearing; and

WHEREAS, on November 10, 2014, this Board conducted a public hearing on the proposed rates as provided in the notice mailed to property owners and to customers who would be affected by the rates, considered all written protests to the proposed rates filed with the District prior to the conclusion of the public hearing, and has determined that the written protests filed with the District represent fewer than 50% of the number of parcels that would be affected by the proposed rates; and

WHEREAS, this Board has determined that the rates for sewer service proposed in the study are necessary in order to cover actual costs incurred by the District in providing sewer service to its customers and will not produce revenues in excess of costs of such service.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of Jurupa Community Services District hereby approves the adjusted rates for sewer service set forth on Exhibit "A," attached hereto, effective January 1, 2015.

BE IT FURTHER RESOLVED that the District's General Manager is hereby authorized to request a determination by this Board of Directors regarding the appropriate rate classification to be applied to any customer of the District, which determination shall be final and conclusive.

ADOPTED this 10th day of November 2014.



President of the Board of Directors

ATTEST:



Secretary of the Board of Directors

Sewer Rate Adjustments

Exhibit A

SECTION 1. Domestic/Non-Industrial Sewer Service Fees

- 1) The District's sewer rate structure applicable to domestic single family, multi-family, institutional (defined to include schools as well as State, Federal and local governmental entities) and non-industrial customers shall be comprised of two components: (a) a Monthly Base Service Charge to be applied without regard to the quantity of water supplied to the customer; and (b) an HCF Quantity Charge utilizing the total quantity of water supplied to the customer during the month, with one HCF equal to 748 gallons. Effective January 1, 2015 the District's sewer rates will be adjusted and will receive four additional adjustments each 12 months thereafter, to correspond to the following rate schedule:

- a) **Monthly Base Service Charge.** The Monthly Base Service Charge shall be a fixed charge per Equivalent Dwelling Unit ("EDU"), with one EDU equal to 280 gallons per day. The Monthly Base Service Charge will correspond to the following schedule:

	2015	2016	2017	2018	2019
Service charge per EDU	\$23.95	\$23.95	\$24.89	\$25.39	\$25.90

- b) **HCF Quantity Charge (in dollars per hundred cubic feet).** The HCF Quantity Charge shall be a unit charge applied to an estimate of the quantity of sewage a customer will discharge into the sewage collection system each month. The quantity of sewage discharged each month shall be calculated using the total monthly water usage. In order to adjust for water delivered to the residential customers that may be used for irrigation purposes, and therefore is not discharged into the sewer, the maximum quantity of water considered for purposes of applying the HCF Quantity Charge for residential, multifamily and institutional customers shall not exceed 8 HCF per month per EDU. In cases where outdoor irrigation water is delivered through a separate connection, all of the water delivered through the meter measuring water for indoor use will be subject to the HCF Charge. In some instances, the District may utilize a sewer flow meter to measure the quantity of wastewater discharged to the sewer.. The HCF Quantity Charge will correspond to the following schedule:

	2015	2016	2017	2018	2019
Rate per HCF	\$1.51	\$1.61	\$1.57	\$1.60	\$1.64

- c) For non-industrial customers which are not residences, such as markets, office buildings,, churches, and meeting halls where water used by the facility is discharged directly into the sewer, the sewer rate shall be the same as that charged to residential customers except that the 8 HCF limit on the HCF Quantity Charge for residential service shall not apply. The same Monthly Base Service Charge will apply as applicable to residences.
- d) Water that is used exclusively for irrigation or other purposes where the water is not discharged into the sewer, and is separately metered, will not be subject to a charge for sewer service.

SECTION 2. Industrial Sewer Service Fees

- 1) The term “industrial wastewater” as used herein shall mean wastewater containing industrial process wastes, including all wastewater from any producing, manufacturing, processing or treatment process. The term “industrial waste discharger” shall mean a customer of the District that introduces industrial wastewater into the District’s sewer system. For industrial waste dischargers, the District’s HCF and Treatment Charge rates shall differ by the entity responsible for providing treatment of the waste collected by the District. The three treatment agencies that provide treatment of wastes for the District are Orange County Sanitation District (“OCSD”), City of Riverside (“Riverside”) and the Western Riverside County Regional Wastewater Authority (“WRCRWA”). Each treatment agency has a different rate structure for treatment of industrial wastes generated by the District and charges the District differently for treatment of these industrial waste discharges. The District shall allocate and pass these charges through to the industrial waste dischargers producing these discharges in accordance with how the District is charged for these discharges, in addition to billing the industrial dischargers for the District’s own collection charges, as follows. Charges applied to volume, or “flow,” shall be as metered by the District. Effective January 1, 2015 the District’s Industrial Sewer Service Fees will be adjusted and will receive four additional adjustments each 12 months thereafter, to correspond to the following rate schedule:

a) Discharges Treated by OCSD

- i. **Monthly Base Service Charge.** Each industrial waste discharger shall pay the same Monthly Base Service Charge per EDU per month as that applicable to non-industrial customers. The Monthly Base Service Charge will correspond to the following schedule:

	2015	2016	2017	2018	2019
Service charge per EDU	\$23.95	\$23.95	\$24.89	\$25.39	\$25.90

ii. **Treatment Charge.** The District contracts with Western Municipal Water District ("WMWD") to convey, treat and dispose of industrial waste discharged into the District's sewage collection system in areas of the District that discharge to the Inland Empire Brine Line (most notably, Community Facilities District No. 1). WMWD has contracted with the Santa Ana Watershed Project Authority ("SAWPA") for the use of the Inland Empire Brine Line to transport this industrial waste to OCSD, and SAWPA in turn has contracted with OCSD for the treatment and disposal of this industrial waste. WMWD measures the quantity of waste which the District delivers to the Inland Empire Brine Line, in millions of gallons per day ("MGD"); and also samples the quality of the waste which the District delivers to the Inland Empire Brine Line, testing for biochemical oxygen demand ("BOD") and for total suspended solids ("TSS") and Hardness. BOD and Hardness are combined with TSS in a formula to allocate an Inland Empire Brine Line TSS Imbalance, and they are measured in thousands of pounds. WMWD and SAWPA also reconcile the quantity and quality of the wastewater contributed by all users to the actual quantity and quality measured at the final measuring point on a monthly basis. WMWD then bills the District monthly for the following constituents, flows, fixed costs, and charges for the industrial waste which the District delivers to WMWD for treatment and disposal:

- BOD, per 1,000 pounds;
- TSS, per 1,000 pounds;
- Flow, per million gallons;
- Fixed treatment costs, per MGD;
- Fixed pipeline costs, per MGD;
- Sampling charges, per sample station; and
- Excess flows, per gallon of flow in excess of the quantity which the District has the right to deliver to WMWD by contract with WMWD.

As of the date of adoption of this resolution, the charges paid by the District to WMWD for treatment and disposal of the industrial waste delivered by the District are as set forth below:

BOD/1,000 lbs	TSS/1,000 lbs	Flow per Million Gallons	Fixed Treatment	Fixed Pipeline	Sampling	Excess Flow	Adjustments
\$295/ 1,000 lbs	\$412/ 1,000 lbs	\$1,016	\$11,369/ MGD/Mo	\$6,114/ MGD	\$589 – \$1,468 for each Weekly, Monthly, Quarterly, Semi- Annual and Annual Sample	\$0.1809 / Gallon of Excess Average Daily Flow	Monthly reconciliation for quality and quantity between meter stations and final monitoring station

Currently the above treatment charges are reviewed and may be revised by WMWD on an annual basis (but not to exceed an increase of more than 30%). WMWD's charges are passed through to the District's industrial waste dischargers as the Treatment Charge as follows:

The District utilizes water meters to calculate the volume of discharge contributed to the sewer system by industrial users. Some industrial waste dischargers have also installed sewer flow meters to measure the volume of waste discharged. The District periodically samples industrial waste discharge based on the relative strength and volume of the discharge produced by an industrial waste discharger or class of industrial waste dischargers (such as warehouses). Based upon those measurements and samples, the District calculates the industrial waste discharger's proportionate share of the charges imposed by WMWD to the District for treatment and disposal of industrial waste discharges. As adjustments are subsequently made to WMWD's charges, such adjustments shall likewise be passed along to the industrial waste discharger on a proportionate basis, in subsequent invoices from the District as described above. The Treatment Charge will be proportionally allocated to each industrial waste discharger based upon the 12 month rolling average of WMWD charges to the District and the 12 month rolling average of the flow, BOD, TSS, and Hardness contribution of the industrial waste discharger. The Fixed Monthly Base Service Charge and Treatment Charge shall be included as line items in the monthly water and sewer bills and will be adjusted on a quarterly basis.

- iii) **Rate Stabilization Fund**. In addition to the WMWD charges, the District also adds a Rate Stabilization Fund charge to the Treatment Charge to stabilize rates for industrial users. The total District-wide annual Rate Stabilization Fund charge will be evaluated on an annual basis and is currently \$100,000. This charge will be allocated among industrial waste dischargers based on their proportionate shares of the charges imposed by WMWD to the District. The rate stabilization charge is included in the calculation for the Treatment Charge for the industrial users who discharge to the OCSD and is added to the Treatment charges calculated under section 2 (1) (a) (ii). The revenue derived from the Rate Stabilization Fund will be applied by the District to help offset the pass-through of increases in charges for treatment by OCSD that would have occurred otherwise.

b. **Discharges Treated by Riverside**

- i. **Monthly Base Service Charge**. Each industrial waste discharger shall pay the same Monthly Base Service Charge per EDU per month as that applicable to non-industrial customers. The Monthly Base Service Charge will correspond to the following schedule:

	2015	2016	2017	2018	2019
Service charge per EDU	\$23.95	\$23.95	\$24.89	\$25.39	\$25.90

- ii. **HCF Charge**. The HCF Charge will be a charge per HCF (hundred cubic feet) of industrial waste discharged into the sewage collection system each month, measured by the quantity of water delivered to the discharger except as otherwise provided hereinafter. The charge per HCF will be the same as that charged to residential customers, but will not be capped at 8 HCF. The HCF Charge will correspond to the following schedule:

	2015	2016	2017	2018	2019
Rate per HCF	\$1.51	\$1.61	\$1.57	\$1.60	\$1.64

In cases where outdoor irrigation water is delivered through a separate connection, the HCF Charge will be applied only to the quantity of water delivered to the customer for indoor use. In cases where the District has installed a sewer flow meter to measure the volume of waste discharged by a discharger, the HCF Charge will be applied only to the volume of waste measured at that meter.

iii. **Treatment Charge.** The District has purchased 4 MGD of capacity in the Riverside treatment facility. Each day Riverside measures the total flow from the District and also tests for levels of TSS and BOD. If total flows, TSS levels or BOD levels exceed the following limits each month, Riverside charges the District for the excess flows and/or excess levels. The following flows and levels are currently allowed each month without additional charge by Riverside:

- Average flows of up to 120 million gallons per month;
- Average TSS levels of up to 220 mg per liter ("mg/L") per month;
- Average BOD levels of up to 230 mg/L per month.

Currently Riverside charges an additional fee of \$1,740.89 per million gallons per month for average flows in excess of 120 million gallons per month; an additional fee of \$0.32 per pound per month for average TSS levels in excess of 220 mg/L per month; and \$0.24 per pound per month for average BOD levels in excess of 230 mg/L per month.

Industrial waste dischargers that discharge to the Regional Water Quality Control Plant "RWQCP", with flows greater than 5,000 gallons per day and with TSS in excess of 220 mg/L or BOD in excess of 230 mg/L, will be subject to a Treatment Charge for excess BOD and TSS. The District periodically samples the quality of the industrial waste from each industrial waste discharger for levels of TSS and BOD. If any sample reveals a concentration of TSS or BOD which exceeds the concentration level allowed by Riverside, as set forth above or as revised by Riverside from time to time, the industrial waste discharger is deemed to have been delivering that same concentration of TSS or BOD since the date of the previous sample. Based on that concentration and the quantity of discharge measured by the quantity of water delivered to the discharger or by the quantity of waste measured by a meter installed to measure the quantity of waste discharged, as the case may be, the District will calculate the excess level of TSS or BOD, in pounds, and will add a Treatment Charge line item in the monthly water and sewer bill. The treatment charge will be calculated based upon a 12-month rolling average of flow, TSS and BOD, and will be charged monthly and updated quarterly. The rate charged for the excess TSS and BOD will be set at the same rates charged by Riverside for excess TSS or BOD levels, but in no event more than 50% greater than the rates identified above.

c. **Discharges Treated by WRCRWA**

- i. **Monthly Base Service Charge.** Each industrial waste discharger shall pay the same Monthly Base Service Charge per EDU per month as that

applicable to non-industrial customers. The Monthly Base Service Charge will correspond to the following schedule:

	2015	2016	2017	2018	2019
Service charge per EDU	\$23.95	\$23.95	\$24.89	\$25.39	\$25.90

- ii. **HCF Charge.** The HCF Charge will be a charge per HCF (hundred cubic feet) of industrial waste discharged into the sewage collection system each month, measured by the quantity of water delivered to the discharger except as otherwise provided hereinafter. The charge per HCF will be the same as that charged to residential customers, but will not be capped at 8 HCF. The HCF Charge will correspond to the following schedule:

	2015	2016	2017	2018	2019
Rate per HCF	\$1.51	\$1.61	\$1.57	\$1.60	\$1.64

In cases where outdoor irrigation water is delivered through a separate connection, the HCF Charge will be applied only to the quantity of water delivered to the customer for indoor use. In cases where the District has installed a sewer flow meter to measure the volume of waste discharged by a discharger, the HCF Charge will be applied only to the volume of waste measured at that meter.

- iii. **Treatment Charge.** WRCRWA currently charges only on the basis of flow and not water quality; thus there is no special industrial billing consideration at this time.

SECTION 3. Other Sewer Service Charges

- 1) **Sewer Pass-Through Adjustments.** Should the charges paid by the District to another party for sewage treatment be increased or decreased, the District's Board of Directors may, by resolution, implement an additional adjustment to the above sewer rates to pass through the changes in such charges. If this occurs, the pass-through rate adjustment will not require a public hearing by the District's Board of Directors. At least 30 days before the effective date of the pass-through rate adjustment the District will inform its customers of the recalculated pass-through rate, which will be calculated to include the increases or decreases in such charges divided by the projected sewer demand. The recalculated rate will be applied to the District's different customer classes in the manner set forth in this resolution.
- 2) **Subsequent Adjustments.** Following the above rate adjustments that become effective on January 1, 2019, the sewer rates then in effect will remain in effect until

such later time as the District's Board of Directors takes steps required by Article XIII D of the California Constitution and other applicable law then in effect to further adjust the District's sewer rates.

CERTIFICATION

I, Julie B. Saba, Secretary of the Board of Directors of Jurupa Community Services District, certify that the foregoing resolution was adopted by the Board of Directors at a regular meeting held on the 10th day of November 2014, by the following vote of the Directors:

AYES: Betty A. Anderson, Jane F. Anderson, Robert Craig

NOES: Chad Blais

ABSENT: Kenneth J. McLaughlin

ABSTAINED: None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of Jurupa Community Services District this 10th day of November 2014.


Secretary of the Board of Directors

(SEAL)

APPENDIX P
ADOPTION RESOLUTION

RESOLUTION NO. 2660

RESOLUTION OF THE BOARD OF DIRECTORS OF JURUPA COMMUNITY SERVICES DISTRICT ADOPTING THE 2015 URBAN WATER MANAGEMENT PLAN

WHEREAS, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et seq., known as the Urban Water Management Planning Act) during the 1983-1984 Regular Session, as subsequently amended, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan; and

WHEREAS, the Urban Water Management Planning Act requires each urban water supplier to update its Urban Water Management Plan at least once every five years on or before December 31, in years ending five and zero; and

WHEREAS, legislation referred to as the Water Conservation Act of 2009 or "SBX7-7" (Water Code, Part 2.55, Section 10608 et seq.), enacted by the California Legislature during the 2009 Extraordinary Session, extended the time by which urban retail water suppliers must adopt their 2015 Urban Water Management Plans until July 1, 2016, and, among other things, established requirements for urban retail water suppliers to prepare interim and urban water use targets for achieving increased water use efficiency by the years 2015 and 2020, in accordance with the goal of SBX7-7 to reduce statewide per capita water use 20 percent by the year 2020; and

WHEREAS, the Jurupa Community Services District (District) provides water service to a population of over 100,000 and is an urban retail water supplier for purposes of the Urban Water Management Planning Act and SBX7-7; and

WHEREAS, in accordance with the Urban Water Management Planning Act and SBX7-7, the District has prepared a 2015 Urban Water Management Plan (Plan) and undertaken certain coordination, notice, public involvement, and other procedures in relation to its Plan; and

WHEREAS, in accordance with applicable law, including Water Code Sections 10608.26 and 10642, and Government Code Section 6066, a properly noticed public hearing regarding said Plan was held by the Board of Directors on June 27, 2016, and the Plan was posted on the District's website two (2) weeks before the hearing; and

WHEREAS, pursuant to said public hearing on the District's Plan, the District, among other things, encouraged the active involvement of diverse social, cultural, and economic elements of the population within the District's service area with regard to the preparation of the Plan, allowed community input regarding the District's implementation plan for complying with SBX7-7, considered the economic impacts of

the District's implementation plan for complying with SBX7-7, and adopted Method 1 under Water Code Section 10608.20(b) for determining its water use targets; and

WHEREAS, the California Department of Water Resources issued a Guidebook to Assist Urban Water Suppliers to Prepare a 2015 Urban Water Management Plan (March 2016) (the "DWR Guidebook") and Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use (For the Consistent Implementation of the Water Conservation Act of 2009) (October 1, 2015) (the "DWR Methodologies") to provide guidance to urban retail water suppliers for purposes of preparing 2015 UWMPs, and the District utilized the DWR Guidebook and the DWR Methodologies in preparing its 2015 UWMP; and

WHEREAS, in accordance with Water Code Section 10620(e), the District has prepared its Plan with its own staff, with the assistance of consulting professionals, and in cooperation with other governmental agencies, and has utilized industry standards and the expertise of industry professionals in preparing its Plan; and

WHEREAS, the District's Board of Directors has reviewed and considered the purposes and requirements of the Urban Water Management Planning Act and SBX7-7, the contents of the 2015 Urban Water Management Plan, and the documentation contained in the administrative record in support of the Plan, and has determined that the factual analyses and conclusions set forth in the Plan are supported by substantial evidence.

NOW, THEREFORE, BE IT RESOLVED, DETERMINED AND ORDERED BY THE BOARD OF DIRECTORS OF JURUPA COMMUNITY SERVICES DISTRICT AS FOLLOWS:

1. The District hereby adopts Target Method 1 under Water Code Section 10608.20(b) for determining its water use targets, and the 2015 Urban Water Management Plan is hereby adopted and ordered filed with the Secretary of the Board.

2. The General Manager is hereby authorized and directed to include a copy of this Resolution in the District's 2015 Urban Water Management Plan and, in accordance with Water Code Section 10644(a), to file the 2015 Urban Water Management Plan with the California Department of Water Resources, the California State Library, and any city or county within which the District provides water supplies within thirty (30) days after this date.

3. The General Manager is hereby authorized and directed, in accordance with Water Code Section 10645, to make the 2015 Urban Water Management Plan available for public review not later than thirty (30) days after filing a copy thereof with the California Department of Water Resources.

4. The General Manager is hereby authorized and directed, in accordance with Water Code Section 10635(b), to provide that portion of the 2015 Urban Water Management Plan prepared pursuant to Water Code Section 10635(a) to any city or county within which the District provides water supplies not later than sixty (60) days after filing a copy thereof with the California Department of Water Resources.

5. The General Manager is hereby authorized and directed to implement the components of the 2015 Urban Water Management Plan in accordance with the Urban Water Management Planning Act and SBX7-7 including, but not limited to, the District's Water Conservation Programs and its water shortage contingency analysis.

6. The General Manager is hereby authorized and directed to recommend to the Board of Directors additional steps necessary or appropriate to effectively carry out the implementation of the 2015 Urban Water Management Plan.

ADOPTED this 27th day of June 2016.


President of the Board of Directors

ATTEST:


Secretary of the Board of Directors

[illegible]

I, Julie B. Saba, Secretary of the Board of Directors of the Jurupa Community Services District, do hereby certify that the above and foregoing is a full, true and correct copy of Resolution No. 2660.

DATED this 28th day of June 2016.


Secretary of the Board of Directors

(SEAL)

CERTIFICATION

I, Julie B. Saba, Secretary of the Board of Directors of Jurupa Community Services District, certify that the foregoing resolution was adopted by the Board of Directors at a regular meeting held on the 28th day of June 2016, by the following vote of the Directors:

AYES: Kenneth J. McLaughlin, Betty A. Anderson, Joan E. Roberts, Jane F. Anderson

NOES: None

ABSENT: Chad Blais

ABSTAINED: None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of Jurupa Community Services District this 28th day of June 2016.


Secretary of the Board of Directors

(SEAL)