

# Greater Tehachapi Area - 2015 Regional Urban Water Management Plan



June 2016

**Tehachapi-Cummings County Water District  
Bear Valley Community Services District  
City of Tehachapi  
Golden Hills Community Services District  
Stallion Springs Community Services District**



**Tehachapi-Cummings  
County Water District**  
*Our Water • Our Future*



**TEHACHAPI**  
CALIFORNIA  
Live Up.

  
**GOLDEN HILLS**  
COMMUNITY SERVICES DISTRICT



# Table of Contents

---

Section 1 : Introduction .....	1-1
1.01 Background and Purpose .....	1-1
1.02 Report Organization.....	1-2
1.03 Compliance with 2015 Water Use Targets .....	1-3
Section 2 Tehachapi Cummings-County Water District .....	2-1
2.01 Plan Preparation .....	2-1
2.01.1 Agency Identification .....	2-1
2.01.2 Coordination and Outreach .....	2-1
2.02 System Description.....	2-2
2.02.1 General Description .....	2-2
2.02.2 Service Area Climate .....	2-3
2.02.3 Service Area Population .....	2-4
2.03 System Water Use.....	2-5
2.03.1 Water Use.....	2-5
2.03.2 Distribution System Water Losses.....	2-7
2.03.3 Climate Change .....	2-8
2.04 Baselines and Targets.....	2-8
2.04.1 Updating Calculations from 2010 UWMP .....	2-8
2.04.2 Baseline Periods.....	2-9
2.04.3 Service Area Population .....	2-9
2.04.4 Gross Water Use .....	2-9
2.04.5 Baseline Daily Per Capita Water Use.....	2-10
2.04.6 2015 and 2020 Targets .....	2-10
2.04.7 2015 Compliance Daily per Capita Water Use (GPCD) .....	2-10
2.05 System Supplies .....	2-11
2.05.1 Purchased or Imported Water .....	2-11
2.05.2 Groundwater .....	2-12
2.05.3 Surface Water.....	2-15
2.05.4 Stormwater .....	2-15
2.05.5 Wastewater and Recycled Water .....	2-16
2.05.6 Desalinated Water Opportunities.....	2-17
2.05.7 Exchanges and Transfers.....	2-17

2.05.8	Future Water Projects.....	2-17
2.05.9	Summary of Existing and Planned Sources of Water .....	2-18
2.05.10	Climate Change Impacts to Supply .....	2-19
2.06	Water Supply Reliability Assessment.....	2-19
2.06.1	Constraints on Water Sources.....	2-19
2.06.2	Reliability by Type of Year.....	2-20
2.06.3	Supply and Demand Assessment .....	2-22
2.06.4	Regional Water Supply Reliability .....	2-24
2.07	Water Shortage Contingency Planning .....	2-24
2.07.1	Stages of Action.....	2-24
2.07.2	Consumption Reduction Measures .....	2-25
2.07.3	Determining Water Shortage Reductions.....	2-25
2.07.4	Revenue and Expenditure Impacts .....	2-25
2.07.5	Resolution or Ordinance.....	2-26
2.07.6	Catastrophic Supply Interruption .....	2-26
2.07.7	Minimum Supply Next Three Years.....	2-27
2.08	Demand Management Measures .....	2-28
2.08.1	Metering.....	2-28
2.08.2	Public Education and Outreach.....	2-29
2.08.3	Water Conservation Program Coordination and Staffing Support .....	2-29
2.08.4	Other Demand Management Measures .....	2-30
2.08.5	Asset Management.....	2-31
2.08.6	Wholesale Supplier Assistance Programs .....	2-32
2.08.7	Implementation over the Past Five Years .....	2-34
2.08.8	Planned Implementation to Achieve Water Use Targets .....	2-34
2.08.9	Members of the California Urban Water Conservation Council .....	2-34
2.08.10	Voluntary Reporting of Energy Intensity.....	2-34
2.09	Plan Adoption, Submittal and Implementation .....	2-35
2.09.1	Public Notice.....	2-35
2.09.2	Plan Adoption, Submittal, and Implementation .....	2-36
Section 3 Bear Valley CSD.....		3-1
3.01	Plan Preparation .....	3-1
3.01.1	Agency Identification .....	3-1
3.01.2	Coordination and Outreach .....	3-1
3.02	System Description.....	3-2

3.02.1	General Description.....	3-2
3.02.2	Service Area Climate.....	3-2
3.02.3	Service Area Population.....	3-3
3.03	System Water Use.....	3-3
3.03.1	Water Use.....	3-3
3.03.2	Distribution System Water Losses.....	3-5
3.03.3	Water Use for Lower Income Households/Future Water Savings.....	3-5
3.03.4	Climate Change.....	3-6
3.04	Baselines and Targets.....	3-6
3.04.1	Updating Calculations from 2010 UWMP.....	3-6
3.04.2	Baseline Periods.....	3-6
3.04.3	Service Area Population.....	3-7
3.04.4	Gross Water Use.....	3-7
3.04.5	Baseline Daily Per Capita Water Use.....	3-7
3.04.6	2015 and 2020 Targets.....	3-8
3.04.7	2015 Compliance Daily per Capita Water Use (GPCD).....	3-8
3.05	System Supplies.....	3-9
3.05.1	Purchased or Imported Water.....	3-9
3.05.2	Groundwater.....	3-9
3.05.3	Surface Water.....	3-10
3.05.4	Stormwater.....	3-10
3.05.5	Wastewater and Recycled Water.....	3-10
3.05.6	Desalinated Water Opportunities.....	3-12
3.05.7	Exchanges and Transfers.....	3-12
3.05.8	Future Water Projects.....	3-13
3.05.9	Summary of Existing and Planned Sources of Water.....	3-13
3.06	Water Supply Reliability Assessment.....	3-14
3.06.1	Constraints on Water Sources.....	3-14
3.06.2	Reliability by Type of Year.....	3-14
3.06.3	Supply and Demand Assessment.....	3-15
3.06.4	Regional Water Supply Reliability.....	3-17
3.07	Water Shortage Contingency Planning.....	3-17
3.07.1	Stages of Action.....	3-17
3.07.2	Prohibitions on End Users/Consumption Reduction Methods.....	3-18
3.07.3	Penalties, Charges, and Other Enforcement of Prohibitions.....	3-20

3.07.4	Determining Water Shortage Reductions .....	3-20
3.07.5	Revenue and Expenditure Impacts .....	3-20
3.07.6	Resolution or Ordinance .....	3-21
3.07.7	Catastrophic Supply Interruption .....	3-21
3.07.8	Minimum Supply Next Three Years.....	3-22
3.08	Demand Management Measures .....	3-22
3.08.1	Water Waste Prevention Ordinances .....	3-22
3.08.2	Metering.....	3-23
3.08.3	Conservation Pricing .....	3-23
3.08.4	Public Education and Outreach.....	3-23
3.08.5	Programs to Assess and Manage Distribution System Real Loss .....	3-23
3.08.6	Water Conservation Program Coordination and Staffing Support .....	3-23
3.08.7	Other Demand Management Measures .....	3-23
3.08.8	Implementation over the Past Five Years .....	3-23
3.08.9	Planned Implementation to Achieve Water Use Targets .....	3-23
3.08.10	Members of the California Urban Water Conservation Council .....	3-24
3.09	Plan Adoption, Submittal and Implementation .....	3-24
3.09.1	Public Notice.....	3-24
3.09.2	Plan Adoption, Submittal, and Implementation .....	3-25
Section 4	City of Tehachapi.....	4-1
4.01	Plan Preparation .....	4-1
4.01.1	Agency Identification .....	4-1
4.01.2	Coordination .....	4-1
4.02	System Description.....	4-2
4.02.1	General Description.....	4-2
4.02.2	Service Area Climate.....	4-2
4.02.3	Service Area Population .....	4-2
4.03	System Water Use.....	4-3
4.03.1	Water Use.....	4-3
4.03.2	Distribution System Water Losses.....	4-5
4.03.3	Water Use for Lower Income Households/Future Water Savings.....	4-6
4.03.4	Climate Change .....	4-6
4.04	Baselines and Targets.....	4-6
4.04.1	Updating Calculations from 2010 UWMP .....	4-6
4.04.2	Baseline Periods.....	4-7

4.04.3	Service Area Population .....	4-7
4.04.4	Gross Water Use .....	4-7
4.04.5	Baseline Daily Per Capita Water Use.....	4-8
4.04.6	2015 and 2010 Targets .....	4-8
4.04.7	2015 Compliance Daily per Capita Water Use (GPCD) .....	4-8
4.05	System Supplies .....	4-9
4.05.1	Purchased or Imported Water .....	4-9
4.05.2	Groundwater .....	4-9
4.05.3	Surface Water.....	4-11
4.05.4	Stormwater .....	4-11
4.05.5	Wastewater and Recycled Water .....	4-11
4.05.6	Desalinated Water Opportunities.....	4-13
4.05.7	Exchanges and Transfers.....	4-13
4.05.8	Future Water Projects.....	4-14
4.05.9	Summary of Existing and Planned Sources of Water .....	4-15
4.06	Water Supply Reliability Assessment.....	4-16
4.06.1	Constraints on Water Sources.....	4-16
4.06.2	Reliability by Type of Year.....	4-16
4.06.3	Supply and Demand Assessment .....	4-17
4.06.4	Regional Water Supply Reliability .....	4-18
4.07	Water Shortage Contingency Planning .....	4-19
4.07.1	Stages of Action.....	4-19
4.07.2	Prohibitions on End Users/Consumption Reduction Methods .....	4-20
4.07.3	Penalties, Charges, and Other Enforcement of Prohibitions.....	4-23
4.07.4	Determining Water Shortage Reductions .....	4-23
4.07.5	Revenue and Expenditure Impacts .....	4-23
4.07.6	Resolution or Ordinance.....	4-24
4.07.7	Catastrophic Supply Interruption .....	4-24
4.07.8	Minimum Supply Next Three Years.....	4-24
4.08	Demand Management Measures .....	4-25
4.08.1	Water Waste Prevention Ordinances .....	4-25
4.08.2	Metering.....	4-25
4.08.3	Conservation Pricing .....	4-26
4.08.4	Public Education and Outreach.....	4-26
4.08.5	Programs to Assess and Manage Distribution System Real Loss .....	4-26

4.08.6	Water Conservation Program Coordination and Staffing Support .....	4-26
4.08.7	Other Demand Management Measures .....	4-26
4.08.8	Implementation over the Past Five Years .....	4-26
4.08.9	Planned Implementation to Achieve Water Use Targets .....	4-26
4.08.10	Members of the California Urban Water Conservation Council .....	4-27
4.09	Plan Adoption, Submittal and Implementation .....	4-27
4.09.1	Public Notice.....	4-27
4.09.2	Plan Adoption, Submittal, and Implementation .....	4-27
Section 5	Golden Hills CSD.....	5-1
5.01	Plan Preparation .....	5-1
5.01.1	Agency Identification .....	5-1
5.01.2	Coordination .....	5-1
5.02	System Description.....	5-2
5.02.1	General Description.....	5-2
5.02.2	Service Area Climate.....	5-2
5.02.3	Service Area Population .....	5-3
5.03	System Water Use.....	5-3
5.03.1	Water Use.....	5-3
5.03.2	Distribution System Water Losses.....	5-5
5.03.3	Water Use for Lower Income Households/Future Water Savings.....	5-5
5.03.4	Climate Change .....	5-6
5.04	Baselines and Targets.....	5-6
5.04.1	Updating Calculations from 2010 UWMP .....	5-6
5.04.2	Baseline Periods.....	5-6
5.04.3	Service Area Population .....	5-7
5.04.4	Gross Water Use .....	5-7
5.04.5	Baseline Daily Per Capita Water Use.....	5-7
5.04.6	2015 and 2020 Targets .....	5-7
5.04.7	2015 Compliance Daily per Capita Water Use (GPCD).....	5-8
5.05	System Supplies .....	5-9
5.05.1	Purchased or Imported Water .....	5-9
5.05.2	Groundwater .....	5-9
5.05.3	Surface Water.....	5-10
5.05.4	Stormwater .....	5-11
5.05.5	Wastewater and Recycled Water .....	5-11

5.05.6	Desalinated Water Opportunities.....	5-12
5.05.7	Exchanges and Transfers.....	5-12
5.05.8	Future Water Projects.....	5-12
5.05.9	Summary of Existing and Planned Sources of Water .....	5-13
5.06	Water Supply Reliability Assessment.....	5-14
5.06.1	Constraints on Water Sources.....	5-14
5.06.2	Reliability by Type of Year.....	5-14
5.06.3	Supply and Demand Assessment .....	5-15
5.06.4	Regional Water Supply Reliability .....	5-17
5.07	Water Shortage Contingency Planning .....	5-17
5.07.1	Stages of Action.....	5-17
5.07.2	Prohibitions on End Users/Consumption Reduction Methods .....	5-18
5.07.3	Penalties, Charges, and Other Enforcement of Prohibitions.....	5-21
5.07.4	Determining Water Shortage Reductions.....	5-21
5.07.5	Revenue and Expenditure Impacts .....	5-21
5.07.6	Resolution or Ordinance.....	5-22
5.07.7	Catastrophic Supply Interruption .....	5-22
5.07.8	Minimum Supply Next Three Years.....	5-22
5.08	Demand Management Measures .....	5-23
5.08.1	Water Waste Prevention Ordinances .....	5-23
5.08.2	Metering.....	5-23
5.08.3	Conservation Pricing .....	5-24
5.08.4	Public Education and Outreach.....	5-24
5.08.5	Programs to Assess and Manage Distribution System Real Loss .....	5-24
5.08.6	Water Conservation Program Coordination and Staffing Support .....	5-24
5.08.7	Other Demand Management Measures .....	5-24
5.08.8	Implementation over the Past Five Years .....	5-24
5.08.9	Planned Implementation to Achieve Water Use Targets .....	5-24
5.08.10	Members of the California Urban Water Conservation Council .....	5-25
5.09	Plan Adoption, Submittal and Implementation .....	5-25
5.09.1	Public Notice.....	5-25
5.09.2	Plan Adoption, Submittal, and Implementation .....	5-26
Section 6 Stallion Springs CSD .....		6-1
6.01	Plan Preparation .....	6-1
6.01.1	Agency Identification .....	6-1



6.01.2	Coordination .....	6-1
6.02	System Description.....	6-2
6.02.1	General Description.....	6-2
6.02.2	Service Area Climate.....	6-2
6.02.3	Service Area Population .....	6-3
6.03	System Water Use.....	6-3
6.03.1	Water Use.....	6-3
6.03.2	Distribution System Water Losses.....	6-5
6.03.3	Water Use for Lower Income Households/Future Water Savings.....	6-5
6.03.4	Climate Change .....	6-6
6.04	Baselines and Targets.....	6-6
6.04.1	Updating Calculations from 2010 UWMP .....	6-6
6.04.2	Baseline Periods.....	6-6
6.04.3	Service Area Population .....	6-7
6.04.4	Gross Water Use .....	6-7
6.04.5	Baseline Daily Per Capita Water Use.....	6-7
6.04.6	2015 and 2020 Targets .....	6-8
6.04.7	2015 Compliance Daily per Capita Water Use (GPCD).....	6-8
6.05	System Supplies.....	6-9
6.05.1	Purchased or Imported Water .....	6-9
6.05.2	Groundwater.....	6-9
6.05.3	Surface Water.....	6-10
6.05.4	Stormwater .....	6-10
6.05.5	Wastewater and Recycled Water .....	6-10
6.05.6	Desalinated Water Opportunities.....	6-12
6.05.7	Exchanges and Transfers.....	6-12
6.05.8	Future Water Projects.....	6-12
6.05.9	Summary of Existing and Planned Sources of Water .....	6-13
6.06	Water Supply Reliability Assessment.....	6-14
6.06.1	Constraints on Water Sources.....	6-14
6.06.2	Reliability by Type of Year.....	6-14
6.06.3	Supply and Demand Assessment .....	6-15
6.06.4	Regional Water Supply Reliability .....	6-16
6.07	Water Shortage Contingency Planning .....	6-17
6.07.1	Stages of Action.....	6-17

6.07.2	Prohibitions on End Users/Consumption Reduction Methods .....	6-18
6.07.3	Penalties, Charges, and Other Enforcement of Prohibitions.....	6-21
6.07.4	Determining Water Shortage Reductions .....	6-21
6.07.5	Revenue and Expenditure Impacts .....	6-21
6.07.6	Resolution or Ordinance .....	6-22
6.07.7	Catastrophic Supply Interruption .....	6-22
6.07.8	Minimum Supply Next Three Years.....	6-22
6.08	Demand Management Measures .....	6-23
6.08.1	Water Waste Prevention Ordinances .....	6-23
6.08.2	Metering.....	6-23
6.08.3	Conservation Pricing .....	6-23
6.08.4	Public Education and Outreach .....	6-23
6.08.5	Programs to Assess and Manage Distribution System Real Loss .....	6-23
6.08.6	Water Conservation Program Coordination and Staffing Support .....	6-24
6.08.7	Other Demand Management Measures .....	6-24
6.08.8	Implementation over the Past Five Years .....	6-24
6.08.9	Planned Implementation to Achieve Water Use Targets .....	6-24
6.08.10	Members of the California Urban Water Conservation Council .....	6-24
6.09	Plan Adoption, Submittal and Implementation .....	6-24
6.09.1	Public Notice.....	6-24
6.09.2	Plan Adoption, Submittal, and Implementation .....	6-25

## Figures

- 2-1 Service Areas and Groundwater Basins

## Appendices

- A Notices
- B Resolutions Adopting 2015 UWMP Update
- C Climate Change Vulnerability Assessment from Kern IRWMP
- D Tables C15 and C16 Kern County Water Agency 2015 DCR ELT
- E Groundwater Adjudication Judgments/Groundwater Management Plan
- F Water Shortage Contingency Ordinances
- G SB X7-7 Verification Forms
- H AWWA Water Audit Reporting Worksheets
- I Energy Intensity Calculations

# List of Acronyms and Abbreviations

AB	Assembly Bill
Act	Urban Water Management Planning Act
AF	Acre-feet
BDCP	Bay Delta Conservation Plan
BMP(s)	Best management practice(s)
BVCSD	Bear Valley Community Services District
BWRA	Banked Water Recovery Account
Cal OES	California Office of Emergency Services
CBDA	California Bay-Delta Authority
CCI	California Department of Corrections and Rehabilitation Institution
CDP	Census Designated Place
CEQA	California Environmental Quality Act
City	City of Tehachapi
CII	Commercial, industrial, and institutional
Committee	Tehachapi Water Availability Preservation Committee
Corps	Army Corps of Engineers
CSD	Community Services District
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
CWC	California Water Code
CWSRF	Clean Water State Revolving Fund
DCR	2015 DWR State Water Project Delivery Capability Report
Department	California Department of Water Resources
DIRWM	Division of Integrated Regional Water Management
DMM(s)	Demand management measure(s)
DOF	Department of Finance
DOST	DWR online submittal tool
DWR	California Department of Water Resources
EC	Electrical Conductivity
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
ELT	Early Long Term Scenario from DCR
ET	Evapotranspiration
GHCSO	Golden Hills Community Services District
GHG	Greenhouse gas
GIS	Geographic Information System
GPCD	Gallons per capita per day
GTA	Greater Tehachapi Area
Guidebook	DWR 2015 Urban Water Management Plans Guidebook for Urban Water Suppliers
IRWM	Integrated Regional Water Management
IRWMP(s)	Integrated Regional Water Management Plan(s)
KCWA	Kern County Water Agency
Kern COG	Kern Council of Governments
MCL	Maximum Contaminant Level
M&I	Municipal and Industrial
MOU	Memorandum of Understanding
MTBE	Methyl Tertiary Butyl Ether
MWC	Mutual Water Company
Plan (or RUWMP)	Regional Urban Water Management Plan
RA2	Regional Alliance Option 2

RUWMP (or Plan)	Regional Urban Water Management Plan
SB	Senate Bill
SB X7-7	Water Conservation Bill of 2009
SCADA	Supervisory Control and Data Acquisition
SSCSD	Stallion Springs Community Services District
State Water Board	State Water Resources Control Board
SWP	State Water Project
SWPP	Source Water Protection Plan
TCCWD	Tehachapi-Cummings County Water District
TDS	Total Dissolved Solids
TUSD	Tehachapi Unified School District
USC	Urban Stakeholders Committee
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment

# Section I: Introduction

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## 1.01 Background and Purpose

The California Urban Water Planning Act (Act) requires urban water suppliers that have 3,000 or more service connections or supply 3,000 or more acre-feet (AF) of water per year to develop an Urban Water Management Plan (UWMP), which is submitted to the California Department of Water Resources (DWR) every five years. The UWMP is required to describe and evaluate water deliveries and uses, water supply sources, efficient water uses, demand management measures and water shortage contingency planning. . Since 2005, legislation has been implemented that interrelates with the Act. SB X7-7 (Water Conservation Bill of 2009) requires urban water suppliers to develop baseline daily per capita water use and urban water use targets with the goal of reducing per capita water use by 20 percent by 2020.

Five agencies, one wholesale supplier and four retail water suppliers, are included in this Regional Urban Water Management Plan (RUWMP or Plan):

- Tehachapi-Cummings County Water District (TCCWD) - lead agency and wholesale water supplier,
- Bear Valley Community Services District (BVCS),
- City of Tehachapi (City),
- Golden Hills Community Services District (GHCS), and
- Stallion Springs Community Services District (SSCS).

These agencies cooperate on various regional issues and have formed the Tehachapi Water Availability Preservation Committee comprised of representatives from each of the five agencies. The 2015 RUWMP is an update to the 2010 RUWMP adopted by these agencies. Although not all of the agencies meet the threshold for the requirement to adopt an UWMP, they have all agreed to participate in the RUWMP process. Regional planning allows the agencies to share information, avoid duplication of efforts, reduce costs, and implement a more coordinated regional approach to water management.

TCCWD, the wholesale water supplier for the area, provides State Water Project (SWP) water supplies that are used primarily for agriculture with some commercial, industrial, and urban uses. TCCWD also acts as the court-appointed watermaster for the three adjudicated basins in the Greater Tehachapi Area (GTA), from which the retail water purveyors produce most of the water supplies delivered in their service areas. However, the TCCWD does not supply these agencies with native groundwater. The agencies have rights pursuant to the judgments to exercise their groundwater supplies. TCCWD does provide untreated imported SWP water for groundwater recharge that is then accessed by the retail water purveyors.

This 2015 RUWMP Update has been prepared in accordance with the DWR “2015 Urban Water Management Plans Guidebook for Urban Water Suppliers” (Guidebook). The format of the Plan generally follows the recommended organization in Chapter 1.4 of the Guidebook and incorporates the required standardized tables for each of the participating agencies as numbered and shown in the Guidebook and as appropriate for the wholesale and retail agencies. Some of the tables are not applicable to the various agencies and are not included as noted in the text. As with the previous Plan, this RUWMP update includes a regional alliance (see **Table 1:2-2**). The letter agreement for the formation of the Regional Alliance is included in **Appendix A**.

Table 1:2-2: Plan Identification		
Select Only One	Type of Plan	Name of RUWMP or Regional Alliance
<input type="checkbox"/>	<b>Individual UWMP</b>	
	<input type="checkbox"/> Water Supplier is also a member of a RUWMP	
	<input type="checkbox"/> Water Supplier is also a member of a Regional Alliance	
<input checked="" type="checkbox"/>	<b>Regional Urban Water Management Plan (RUWMP)</b>	<b>Tehachapi Regional Plan</b>
NOTES:		

## 1.02 Report Organization

The RUWMP contains six sections as outlined below:

- Section 1 – Introduction
- Section 2 – Tehachapi-Cummings County Water District
- Section 3 – Bear Valley Community Services District
- Section 4 – City of Tehachapi
- Section 5 – Golden Hills Community Services District
- Section 6 – Stallion Springs Community Services District

Section 1 of this document addresses information presented in Chapter 1 of the Guidebook. Within the section for each agency are nine subsections that align with Chapters 2 through 10 in the Guidebook, as shown below:

- Subsection 1 – Plan Preparation
- Subsection 2 – System Description
- Subsection 3 – System Water Use
- Subsection 4 – Baselines and Targets
- Subsection 5 – System Supplies
- Subsection 6 – Water Supply Reliability Assessment
- Subsection 7 – Water Shortage Contingency Planning
- Subsection 8 – Demand Management Measures
- Subsection 9 – Plan Adoption, Submittal, and Implementation

More detailed descriptions of information that pertains to all of the agencies, such as location, climate, climate change impacts, groundwater basins, energy intensity, and Demand Management Measures are included in Section 2. The TCCWD serves as watermaster for the adjudicated groundwater basins and, through an agreement among the agencies, has taken the lead on implementation of a regional water conservation program.

Also included in Section 2 is the discussion of the update of the calculations of baseline daily per capita water use and urban water use targets from the 2010 RUWMP for the Regional Alliance. As with the 2010

RUWMP, targets have been calculated for the Regional Alliance and for each of the participating agencies. This is to permit the participating agencies to show compliance with their individual targets should the regional alliance targets not be met.

**1.03 Compliance with 2015 Water Use Targets**

In the 2015 Plan, water agencies must demonstrate compliance with their established water use targets for the year 2015. The Regional Alliance, and each participating agency individually, is in compliance with its respective Interim 2015 Target. In every case, the 2015 daily per capita water use is in compliance with the 2020 Targets as well. The targets and compliance daily per capita water use for each agency and the Regional Alliance are summarized in **Table 1:5-3**.

The SB X7-7 verification forms for each agency and the Regional Alliance are included in **Appendix G**. The update of the calculations of baseline daily per capita water use and urban water use targets from the 2010 RUWMP for each agency is discussed in their individual Plan sections.

Table 1:5-3: Water Use Targets Compliance Summary Regional Alliance and Participating Agencies			
Agency	2015 Interim Target*	Confirmed 2020 Target*	2015 Actual Water Use*
Regional Alliance	185	179	134
BVCSD	187	179	110
City	213	191	176
GHCSO	144	141	105
SSCSD	168	160	135
*All values are in Gallons per Capita per Day (GPCD)			
NOTES: See SB X7-7 Verification Forms in Appendix G.			

# Section 2 Tehachapi Cummings-County Water District

## 2.01 Plan Preparation

### 2.01.1 Agency Identification

TCCWD is a wholesaler. Its information in the RUWMP is presented in Calendar Year format and water quantities are presented in Acre Feet. See **Table 2:2-3**.

Table 2:2-3: Agency Identification	
Type of Agency (select one or both)	
<input checked="" type="checkbox"/>	Agency is a wholesaler
<input type="checkbox"/>	Agency is a retailer
Fiscal or Calendar Year (select one)	
<input checked="" type="checkbox"/>	UWMP Tables Are in Calendar Years
<input type="checkbox"/>	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP	
Unit	AF
NOTES:	

### 2.01.2 Coordination and Outreach

#### Law

*Each urban water supplier shall 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 (10620(d)(2)).*

*Each urban water supplier shall encourage the 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 (10642).*

*Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water*



*supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c) (10631(j)).*

*Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan (10621(b)).*

TCCWD provides a supplemental imported water supply from the State Water Project (SWP) to retail water suppliers in the GTA. The TCCWD provides untreated water for groundwater recharge that is then accessed by the retail water purveyors.

**Table 2:2-4** lists the water suppliers that were informed of SWP water supply projections as a part of the RUWMP development process. TCCWD provides wholesale imported water supplies to these agencies.

<b>Table 2:2-4 Wholesale: Water Supplier Information Exchange</b>	
Supplier has informed the following water suppliers of water supplies available in accordance with CWC 10631.	
Water Supplier Name	
	Bear Valley Community Services District
	City of Tehachapi
	Golden Hills Community Services District
	Stallion Springs Community Services Districts
NOTES: Agencies are participants in this RUWMP.	

In addition to the water suppliers listed in **Table 2:2-4**, the Kern County Planning Department was provided notice that an update to the RUWMP was being prepared and notice of the public hearing on the Plan. Further information on coordination of the Plan and public involvement is included in **Section 2.09**. Copies of notices are included in **Appendix A**.

## **2.02 System Description**

### **2.02.1 General Description**

#### **Law**

*Describe the service area of the supplier (10631(a)).*

The TCCWD is located within the Tehachapi mountain range east of Bakersfield in southeastern Kern County, and encompasses approximately 266,000 acres. The TCCWD provides imported water supplies (SWP), water resources management, and flood protection within several improvement districts in the Tehachapi Basin. The TCCWD serves as watermaster for three adjudicated groundwater basins: Brite Valley, Cummings Valley, and Tehachapi Valley. TCCWD sells imported SWP supplies to agricultural lands, the California Department of Corrections and Rehabilitation’s Correctional Institution in Tehachapi (CCI), and to retail water agencies within TCCWD through conjunctive use. The service area boundaries for TCCWD

and the four retail water suppliers covered by this RUWMP Update, along with the boundaries of the groundwater basins, are shown in **Figure 2-1**.

The TCCWD Imported Water Project takes delivery of water supplies from the California Aqueduct upstream of the Edmonston Pumping Plant (Reach 16A). Water is pumped from the Aqueduct to the Cummings Basin, where it is used for agriculture and the conjunctive use program for retail water purveyors. The TCCWD main pipeline is 31 miles in length and ranges from 18 to 30 inches in diameter. The nominal operating capacity of the line is 9,400 gallons per minute (21 cubic feet per second). The TCCWD system includes four pumping stations serving three pressure zones, and Jacobsen Reservoir (Brite Lake) which serves as a both a storage facility and recreational lake.

There are a number of entities within the TCCWD service area that use local groundwater but are not a party to the RUWMP. These include agricultural users, rural homes, mutual water companies, industrial facilities, and the CCI. These entities pump from the three adjudicated basins and from outside of these basins. Estimated groundwater usage by these entities has been included as necessary to understand the regional groundwater conditions.

**2.02.2 Service Area Climate**

**Law**

*Describe the climate of the supplier (10631(a)).*

The GTA is located in the mountains with elevations ranging from about 3,900 feet to almost 8,000 feet. Precipitation mainly occurs during the months of November through April, with occasional thunderstorms during the summer months. The area typically receives about 15-20 inches of snow annually. **Table 2:3-0** presents the average rates of evapo-transpiration (Eto), temperature, and precipitation of the service area.

Table 2:3-0: Climate													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Monthly Eto <sup>(a)</sup>	1.55	2.24	3.72	5.10	6.82	7.80	8.68	7.75	5.70	4.03	2.10	1.24	56.73
Average Precipitation (inches) <sup>(b)</sup>	2.01	1.77	1.96	0.92	0.40	0.09	0.08	0.27	0.24	0.38	1.23	1.62	10.97
Average Max Temperature (Fahrenheit) <sup>(b)</sup>	51.3	54.0	56.0	62.6	70.6	79.7	87.1	86.3	80.4	70.8	56.6	52.3	67.6
Average Min Temperature (Fahrenheit) <sup>(b)</sup>	29.6	31.6	33.5	37.5	43.8	51.5	57.2	54.9	48.1	40.7	34.4	30.4	41.1

Sources:

<sup>(a)</sup> CIMIS Reference Evapotranspiration Zones, November 2005. Standard Monthly Average Eto is for Zone 14, Mid-Central Valley, Southern Sierra Nevada, Tehachapi and High Desert Mountains.

<sup>(b)</sup> Western Regional Climate Center, Tehachapi Station (048826), Period of Record General Climate Summary.

### 2.02.3 Service Area Population

#### Law

*(Describe the service area) current and projected population . . . The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier . . . (10631(a)).*

*. . . (population projections) shall be in five-year increments to 20 years or as far as data is available (10631(a)).*

*Describe . . . other demographic factors affecting the supplier's water management planning (10631(a)).*

The State of California Department of Finance (DOF) prepares reports with population estimates for Cities and Counties on an annual basis. These estimates were used for the City of Tehachapi and the CCI for 2015. The 2015 population estimates for the participating CSDs were developed based on 2010 Census data and the population per connection method, using 2010 Census data for the Bear Valley Springs Census Designated Place (CDP), Golden Hills CDP, and the Stallion Springs CDP. The population for the remainder of the TCCWD was calculated based on the 2010 Census data and the percentage increase in population for the City of Tehachapi from 2010 to 2015. The population within the TCCWD service area was estimated to be about 35,700 in 2015 as shown in **Table 2:3-1**.

Population projections for the participating agencies for the years 2020 through 2035 were based on population projections for the City of Tehachapi (1.1% growth per year), and the unincorporated areas (1% growth per year) from the Kern Council of Governments (Kern COG) 2014 Regional Transportation Plan. No change in population is anticipated for the CCI. By the year 2035 the population within the TCCWD service area is projected to be approximately 42,847.

<b>Table 2:3-1 TCCWD: Population - Current and Projected</b>					
<b>Population Served</b>	<b>2015<sup>1</sup></b>	<b>2020<sup>2</sup></b>	<b>2025<sup>2</sup></b>	<b>2030<sup>2</sup></b>	<b>2035<sup>2</sup></b>
Bear Valley CSD	5,314	5,585	5,870	6,169	6,484
City of Tehachapi	8,815	9,311	9,834	10,387	10,971
Golden Hills CSD	8,787	9,235	9,706	10,201	10,721
Stallion Springs CSD	2,782	2,924	3,073	3,230	3,395
CCI (TCCWD)	4,213	4,213	4,213	4,213	4,213
Remaining TCCWD	5,789	6,084	6,394	6,720	7,063
<b>Total TCCWD</b>	<b>35,700</b>	<b>37,352</b>	<b>39,090</b>	<b>40,920</b>	<b>42,847</b>
<p>NOTES:</p> <p>1. 2015 population for the City of Tehachapi and CCI from California DOF Population Estimate Report E-5. 2015 population for the participating CSDs were developed using the population per connection method. The remainder of TCCWD was estimated based on 2010 Census data and the percentage increase in population for the City from 2010 to 2015.</p> <p>2. Population projections for 2020 through 2035 based on population projections of 1.1% per year for the City of Tehachapi and 1% for the unincorporated area from Kern COG (Regional Transportation Plan June 2014), except no change in population is assumed for the CCI.</p>					

## 2.03 System Water Use

### 2.03.1 Water Use

#### Law

*Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: (A) Single-family residential; (B) Multifamily; (C) Commercial; (D) Industrial; (E) Institutional and governmental; (F) Landscape; (G) Sales to other agencies; (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; (I) Agricultural (10631(e)(1) and (2)).*

*The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier (10631.1(a)).*

TCCWD makes water deliveries of imported SWP water supplies which may be used as follows:

- Direct delivery to agricultural, commercial, and industrial customers overlying the Cummings Valley, Tehachapi Valley, and Brite Valley groundwater basins.
- Groundwater recharge delivery in the Cummings Valley Basin for ultimate use by municipal and industrial (M&I) customers: BVCSD, SSCSD, and CCI. Evaporation losses from this recharge are estimated at 6 percent (Tehachapi-Cummings, 2010).
- Groundwater recharge delivery in the Tehachapi Valley Basin for ultimate use by M&I customers: City of Tehachapi and GHCSO. Evaporation losses from this recharge are estimated at 6 percent (Tehachapi-Cummings, 2010).
- Storage in Jacobsen Reservoir (Brite Lake).

In addition, TCCWD receives ownership of return flow water from agricultural application of SWP supplies, which are calculated as 15 percent of all metered imported water applied for agricultural use. These supplies can be delivered anywhere in the TCCWD for agricultural and M&I customers.

Water use data within the TCCWD for 2015 is summarized in **Table 2:4-1**. 2015 was an extremely dry year, so reduced SWP supplies were available to TCCWD for groundwater recharge. TCCWD makes no deliveries of water for saline intrusion barriers. The deliveries by the participating agencies for retail water usage are included in their respective sections of the Plan.

Table 2:4-1 TCCWD: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
	Additional Description	Level of Treatment When Delivered	Volume <sup>1</sup>
Sales to other agencies	Imported water sales	Raw Water	262
Sales to other agencies	Conjunctive use sales	Raw Water	1,048
Sales to other agencies	Wheeled water sales	Raw Water	60
Sales to other agencies	Recycled water sales	Raw Water	158
Agricultural irrigation		Raw Water	8,892
Groundwater recharge		Raw Water	37
Other	Estimated Other M&I <sup>2</sup>	Drinking Water	4,914
<b>TOTAL</b>			<b>15,371</b>
NOTES:			
1. Demands shown are for entire TCCWD service area. From TCCWD water demand summary.			
2. Estimated Other M&I use is met through groundwater pumping by retail water suppliers or other overlying landowners.			

**Table 2:4-2** includes projections of TCCWD’s water demands for the years 2020 through 2035 in five year increments. For retail water suppliers, projections for future water use are based on historic deliveries and projected growth rates. Descriptions of water usage projections for each of the participating agencies are included in their respective sections of the Plan. Projections of low income housing water use needs for single-family and multifamily residential housing will be addressed by the retail water suppliers in their Plan sections.

Agricultural water deliveries are anticipated to have minimal growth in the next ten to fifteen years with a possible decrease over the next twenty to thirty years. The water delivery projections in **Table 2:4-2** show consistent quantities through 2035. It is projected that in the long-term more agricultural land will convert to urban uses.

Table 2:4-2 TCCWD: Demands for Potable and Raw Water - Projected					
Use Type	Additional Description	Projected Water Use			
		2020	2025	2030	2035
Sales to other agencies	Imported water sales <sup>1</sup>	570	570	570	570
Sales to other agencies	Conjunctive use sales <sup>1</sup>	2,100	2,100	1,600	1,600
Sales to other agencies	Wheeled water sales	80	80	80	80
Sales to other agencies	Recycled water sales	800	800	800	800
Agricultural irrigation		9,500	9,500	9,500	9,500
Other	Estimated Other M&I <sup>2</sup>	5,172	5,493	6,331	6,687
<b>TOTAL</b>		<b>18,222</b>	<b>18,543</b>	<b>18,881</b>	<b>19,237</b>
NOTES:					
1. For M&I use. Deliveries are made to retail suppliers in most years so that adequate storage (5 year average SWP demand) is in place for recovery in dry years.					
2. Estimated Other M&I demands are for retail water suppliers or other overlying landowners to be met by groundwater pumping. Demands are for the entire TCCWD.					

**Table 2:4-3** summarizes TCCWD's total water demands from **Tables 2:4-1 and 2:4-2**.

Table 2:4-3 TCCWD: Total Water Demands					
Description	2015	2020	2025	2030	2035
Potable and Raw Water <i>From Tables 2:4-1 and 2:4-2</i>	15,371	18,222	18,543	18,881	19,237
Recycled Water Demand <i>From Table 2:6-4</i>	158	800	800	800	800
<b>TOTAL WATER DEMAND</b>	<b>15,529</b>	<b>19,022</b>	<b>19,343</b>	<b>19,681</b>	<b>20,037</b>
NOTES:					

### 2.03.2 Distribution System Water Losses

#### Law

*Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: . . . (J) Distribution system water loss. (10631(e)(1) and (2)).*

*For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.*

*The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association (10631(e)(3)).*

TCCWD's historical water loss rate (2002 – 2014) is 12.3 percent, and over the last five years is 10.9 percent. Losses are due primarily to evaporation losses and seepage from its storage reservoir (Jacobsen Reservoir), which also functions as the regional recreational lake (Brite Lake). While these losses cannot be fully mitigated due to the nature and use of open-air reservoirs, TCCWD continues to manage the reservoir to reduce evaporative losses as much as possible. In 2011, a bi-directional meter was installed to isolate the reservoir from the rest of the transmission system so as to identify how much of the overall loss is truly attributed to the reservoir evaporation. A detailed accounting of reservoir management in 2012 indicated that evaporation/seepage accounted for 30.1% of total system losses. Every 2 to 3 years, the shoreline is compacted while the water level is low to minimize seepage losses.

Prior to 2015, TCCWD had repaired only about 8 leaks throughout the pipeline's 40 year history. However, in 2015, five leaks were repaired in one year. Four of them occurred in the lower section of pipeline between the SWP aqueduct turnout and Pumping Plant 1. Additionally, system performance degradation occurred in 2015 that was speculated to be due to trapped air in that section of pipe. Leak detection was performed on the lower 7.2 miles of pipe by Pure Technologies using a SmartBall® in November 2015. One small leak was found (less than two gallons per minute) as well as five sections of pipe with entrained air. TCCWD is moving ahead with leak repair and exploring options to reduce trapped air to minimize future leaks.

TCCWD's goal is to reduce overall losses to no more than 12 percent of SWP imports and losses other than those due to the reservoir to no more than 7 percent.

**Table 2:4-4** summarizes the results of TCCWD's water loss audit for 2015 using the AWWA water audit reporting worksheet. As a wholesaler delivering water for agricultural and groundwater recharge uses, many of the inputs on the standard AWWA water loss audit reporting worksheet are not applicable. A copy of the TCCWD's water audit reporting worksheet for its importation system is included in **Appendix H**.

Table 2:4-4 TCCWD: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2015	769.6
NOTES: TCCWD Importation System water loss from AWWA water audit worksheet. See Appendix H.	

### 2.03.3 Climate Change

A Climate Change Vulnerability Assessment was completed as a part of the Tulare Lake Basin Portion of Kern County Integrated Regional Water Management Plan (Kern IRWMP) and is included in **Appendix C**. Climate change adaptation and mitigation was included as a part of prioritization of projects in the IRWMP. Discussion of the potential climate change impacts to water supplies is included in **Section 2.05.1**, **Section 2.05.10**, and **Section 2.07.2**.

## 2.04 Baselines and Targets

The TCCWD does not need to adopt baselines and targets as a wholesale supplier. However, baselines and targets for the Regional Alliance were adopted as a part of the 2010 RUWMP. The update of the calculations of baselines and targets for the Regional Alliance is included in this section. Measures and policies adopted by the TCCWD that help the retail water suppliers in its wholesale service area achieve their SB X7-7 targets are described in **Section 2.08**.

### 2.04.1 Updating Calculations from 2010 UWMP

#### Law

*An urban retail water supplier shall include in its urban water management plan due in 2010 . . . the baseline daily per capita water use . . . along with the bases for determining those estimates, including references to supporting data (10608.20(e)).*

*An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan (10608.20(g)).*

The same target method is proposed for use in this RUWMP Update that was used for the 2010 Plan. The Regional Alliance targets have been calculated based on Option 2 (RA2). The SB X7-7 verification form tables for the Regional Alliance (RA2) and the participating retail water suppliers are included in **Appendix G**. As with the 2010 RUWMP, targets have been calculated for the Regional Alliance and for each of the

participating agencies. This is to permit the participating agencies to show compliance with their individual targets should the regional alliance targets not be met.

## 2.04.2 Baseline Periods

### Law

*“Base daily per capita water use” means any of the following:*

- 1) *The urban retail water supplier’s estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*
- 2) *For an urban retail supplier that meets at least 10 percent of its measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*
- 3) *For the purposes of Section 10608.22, the urban retail water supplier’s estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year reporting period ending no earlier than December 31, 2007, and no later than December 31, 2010 (10608.12(b)).*

The Regional Alliance will utilize the same baseline period (2000 – 2009) as used in the 2010 RUWMP (see **SB X7-7 RA2 Table 1**).

## 2.04.3 Service Area Population

### Law

*When calculating per capita values for the purposes of this chapter, an urban water retailer shall determine population using federal, state, and local population reports and projections (10608.20(f)).*

The City population estimates were taken from State DOF Table E-8 and population estimates for the CSDs were developed based on the persons per connection method and U.S. Census data for 2000 and 2010 for each Census Designated Place (see descriptions in each agency’s respective section of the Plan). The Regional Alliance population estimate is the sum of the data for the four participating retail urban water suppliers (see **SB X7-7 RA2 Table 5**).

## 2.04.4 Gross Water Use

### Law

*“Gross Water Use” means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:*

- 1) *Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier*
- 2) *The net volume of water that the urban retail water supplier places into long term storage*



- 3) *The volume of water the urban retail water supplier conveys for use by another urban water supplier*
- 4) *The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24 (10608.12(g)).*

The gross water use for the Regional Alliance is the total gross water use of the four participating retail urban water suppliers as described in their respective sections of the Plan (see **SB X7-7 RA2 Table 5**).

#### 2.04.5 Baseline Daily Per Capita Water Use

The baseline daily per capita water use for the Regional Alliance (calculated by dividing the gross water use by the service area population) is shown for each of the baseline years in **SB X7-7 RA2 Table 5**.

#### 2.04.6 2015 and 2020 Targets

The 2020 Target for the Regional Alliance was calculated using Target Method 3 (95% of the Regional Target from the 20 x 2020 Water Convention Plan, State of California Agency Team, 2010) as shown in **SB X7-7 RA2 Table 7E**. The calculated target of 179 gpcd is the same as determined for the Regional Alliance in the 2010 RUWMP. The confirmation of the 2020 Target is shown in **SB X7-7 RA2 Table 7F**. The baseline and target information for the Regional Alliance is summarized in **Table 2:5-1**. Targets for the participating retail urban water suppliers are included in their respective sections of the Plan.

Table 2:5-1 Baselines and Targets Summary					
<i>Regional Alliance</i>					
Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target*	Confirmed 2020 Target*
10-15 year	2000	2009	190	185	179
5 Year	2003	2007	190		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES: See SB X7-7 RA2 tables in Appendix G.					

#### 2.04.7 2015 Compliance Daily per Capita Water Use (GPCD)

##### Law

*“Compliance daily per capita water use” means the gross water use during the final year of the reporting period (10608.12(e)).*

*Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015 (10608.24(a))*

The actual 2015 daily per capita water use for the Regional Alliance was 134 gpcd. The Regional Alliance is in overall compliance with the Regional Alliance 2015 Interim Target of 185 gpcd as shown in **Table 2:5-2**. The Alliance was also able to achieve compliance with the 2020 Target of 179 gpcd. The 2015 daily per

capita water use (134 gpcd) for the Regional Alliance is a reduction of approximately 30% from the 2000 to 2009 baseline period, and is 25% lower than the 2020 Target of 179 gpcd.

Table 2:5-2: 2015 Compliance <i>Regional Alliance*</i>		
Actual 2015 GPCD	2015 Interim Target GPCD	Did Supplier Achieve Targeted Reduction for 2015? Y/N
134	185	Yes
<i>*All values are in Gallons per Capita per Day (GPCD)</i>		
NOTES See SB X7-7 RA2 tables in Appendix G:		

## 2.05 System Supplies

### 2.05.1 Purchased or Imported Water

TCCWD purchases imported water from the SWP through contracts with the Kern County Water Agency (KCWA). Currently, TCCWD has two contracts with the KCWA for SWP entitlement (Table A), one for 4,300 acre-feet/year of agricultural water and the other for 15,000 acre-feet/year of M&I water. TCCWD is also able to purchase additional SWP supplies from the KCWA (such as Article 21 and turnback pool water) when available. Deliveries of imported SWP water for 2015 are included in **Table 2:6-8** in **Section 2.05.9**.

Projections for future deliveries of SWP water are estimated based on DWR’s 2015 update of the State Water Project Delivery Capability Report (DCR), a biennial report to assist SWP contractors and local planners in assessing the near and long-term availability of supplies from the SWP. In the 2015 update, DWR provides SWP supply estimates for SWP contractors to use in their planning efforts, including for use in their 2015 UWMPs. The 2015 DCR includes DWR’s estimates of SWP water supply availability under both current and future conditions.

DWR’s estimates of SWP deliveries are based on a computer model that simulates monthly operations of the SWP and Central Valley Project systems. Key assumptions and inputs to the model include the facilities included in the system, hydrologic inflows to the system, regulatory and operational constraints on system operations, and projected contractor demands for SWP water. For example, the 2015 DCR uses the following assumptions to model current conditions: existing facilities, hydrologic inflows to the model based on 82 years of historical inflows (1922 through 2003), current regulatory and operational constraints, and contractor demands at maximum Table A amounts.

To evaluate SWP supply availability under future conditions, the 2015 DCR included four model studies. The first of the future-conditions studies, the Early Long Term (ELT) scenario, used all of the same model assumptions for current conditions, but reflected changes expected to occur from climate change, specifically, a 2025 emission level and a 15 cm sea level rise. The other three future-conditions include varying model assumptions related to the Bay Delta Conservation Plan/California Water Fix (“BDCP”), such as changes to facilities and/or regulatory and operational constraints.

In spring 2015, DWR announced that BDCP would move from a Section 10 permit to a Section 7 permit process under the Federal Endangered Species Act. As a practical matter, this split the project into two distinct parts known as Cal WaterFix (Alternative 4A), the conveyance portion, and Cal EcoRestore, the restoration portion. Cal WaterFix is Alternative 4A in the recirculated environmental document, and the preferred alternative. Alternative 4A is different than any of the future scenarios modeled by DWR in the

DCR. While there is widespread support for the BDCP/Cal WaterFix project, it would be speculative at this time to assume they will move forward. While there is significant support for BDCP, plans are currently in flux- environmental review is ongoing and is not anticipated to be final until at least 2016, and several regulatory and legal requirements must be met prior to construction.

This RUWMP uses the ELT scenario analyzed in DWR's 2015 DCR as deemed to be the most conservative and appropriate study to use for long term planning estimates of future SWP supply availability. The ELT scenario is based on existing facilities, current operations, and regulatory constraints, with hydrology adjusted for the expected effects of climate change. This scenario is consistent with the studies DWR has used in its previous SWP Delivery Reliability Reports for supply availability under future conditions. Tables C.15 and C.16 from the 2015 DCR show the results of the ELT scenario for the KCWA's Ag and M&I Table A supplies and have been included as **Appendix D**.

The average annual percentage of Table A entitlement as shown in Tables C.15 and C.16 of the 2015 DCR is 60%. This results in an average entitlement allocation of about 11,580 acre-feet per year for TCCWD. Projections of future SWP deliveries are included in **Table 2:6-9** in **Section 2.05.9**.

## 2.05.2 Groundwater

### Law

*If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the Plan:*

*A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management (10631(b)(1)).*

*A description of any groundwater basin or basins from which the urban water supplier pumps groundwater (10631(b)(2)).*

*For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board (10631(b)(2)).*

*A description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree (10631(b)(2)).*

*For basins that have not been adjudicated, (provide) information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition (10631(b)(2)).*

*A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records (10631(b)(3)).*

TCCWD serves as the court-appointed watermaster for the three adjudicated basins (the Cummings Valley, Brite Valley, and Tehachapi Valley groundwater basins as shown on **Figure 2-1**) from which the participating retail water purveyors produce most of the water supplies delivered in their service areas. However, the TCCWD does not supply these agencies with native groundwater. The agencies have rights pursuant to the

judgments to exercise their groundwater supplies. TCCWD does provide untreated water for groundwater recharge that is then accessed by the retail water purveyors.

The Tehachapi Water Availability Preservation Committee (Committee) is made up of representatives from the five participating urban water suppliers and meets on a regular basis to plan for and manage available water supplies in the Greater Tehachapi area. The Committee adopted an update to the Tehachapi Source Water Protection Plan (SWPP) in April 2013. The purpose of the SWPP is to identify possible contaminating activities and provide specific recommendations to manage these potential threats in order to maintain the quality of water in the groundwater basins that are the source of drinking water for the Greater Tehachapi Area.

The descriptions of the groundwater basins and the pumping rights outlined in the various adjudications are included in this section. The overall pumping for all groundwater users is summarized in this section as well. The amount of pumping by each of the participating retail agencies is included in their individual sections of the Plan. The adjudication judgment documents are included in **Appendix E**.

### **Tehachapi Valley Basin:**

The Tehachapi Valley Groundwater Basin is described as two basins by the DWR in California's Groundwater Bulletin 118 (2006). The Tehachapi Valley West Groundwater Basin (DWR Basin No. 5-28) encompasses the western half of the Tehachapi Valley, with a surface area of about 14,800 acres. The basin is bounded on the north by the Sierra Nevada and on the south by the Tehachapi Mountains. A low-lying ridge connecting these two ranges forms the western boundary. A similar ridge with a narrow gap separates Brite Valley from Tehachapi Valley. Alluvial deposits are estimated to be 600 feet in depth.

The DWR notes that an alluvial high (surface drainage divide) forms the boundary between this basin and the adjacent Tehachapi Valley East Basin. However, this surface drainage divide does not create a boundary within the groundwater basin. The Tehachapi Valley East Basin (DWR Basin No. 6-45) encompasses a surface area of about 24,000 acres. The basin is bounded on the east by the Tehachapi Mountains.

Groundwater in the western portion of the Tehachapi Valley Basin is recharged primarily through percolating stream flows from Antelope, China and Brite Creeks, as well as artificial recharge of imported SWP supplies at Antelope Dam and China Hill. Blackburn and Mendiburu Creeks are the primary sources of recharge in the eastern portion of the basin.

Groundwater adjudication proceedings were initiated in 1966 in response to the decline in groundwater levels that had been experienced in the Tehachapi Valley Basin since 1950. The Tehachapi Basin adjudication judgment was filed in 1971, with an amended judgment filed in 1973 (Superior Court Case No. 97210). The adjudicated Tehachapi Basin includes portions of both the Tehachapi Valley West and East Basins. The physical solution in the judgment created "allowed pumping allocations" for each party which restricted total annual extractions within the Tehachapi Basin to the safe yield of 5,500 acre-feet. Exports from the groundwater basin are not allowed. Allowed pumping allocations per the judgment are as follows:

- City of Tehachapi – 1,822 Acre-feet
- Golden Hills CSD – 874 Acre-feet
- Other pumpers – 2,828 Acre-feet.

Groundwater in the Tehachapi Basin has an average electrical conductivity (EC) of 520  $\mu\text{mhos/cm}$  and an average Total Dissolved Solids (TDS) concentration of 315 milligrams/liter (DWR Bulletin 118, 2006). Some areas have experienced high levels of nitrogen, with some of the City's wells removed from service due to high nitrogen levels. Measures have been undertaken to attempt to reduce nitrogen concentration levels, including pumping wells with high nitrogen concentrations for agricultural use and improvements to the City's

Wastewater Treatment Facility. As noted in the 2010 RUWMP, a groundwater nitrogen (nitrate) level monitoring program has been proposed for the Tehachapi Basin.

A groundwater modeling study of the Tehachapi Basin was completed by Fugro West, Inc. in 2009 to provide a better understanding of the hydrogeology of the basin. The study found the safe yield of the basin to be about 5,317 acre-feet per year, with annual extractions averaging about 3,591 acre-feet. The TCCWD monitors selected wells seasonally for groundwater levels. Groundwater levels have increased since the adjudication and are now close to 1950 levels. The basin is not considered to be in overdraft.

#### **Cummings Valley Basin:**

The Cummings Valley Groundwater Basin (DWR Basin No. 5-27) is an alluvial basin bounded by the Tehachapi Mountains to the south and the Sierra Nevada to the north with low lying ridges connecting the two ranges on the east and west. Alluvium in the valley was deposited by Cummings Creek to the south, Chanac Creek to the east, and intermittent streams to the north. Coarser materials (gravels and cobbles) are found at the edges of the valley and finer grained materials (clay and sandy clay) are found near the center of the valley. The thickness of the alluvium increases from approximately 50 feet in the southern part of the valley to 450 feet in the northeast. The surface area of the Cummings Basin is about 10,000 acres (DWR Bulletin 118, 2006).

The Cummings Basin adjudication judgment was filed in 1972 (Superior Court Case No. 97209). Since groundwater pumping at the time of the judgment was less than the designated safe yield of the basin, the judgment did not include restrictions on pumping for overlying use within the basin. Exports of groundwater from the basin are not allowed. The judgment established a safe yield of 4,090 acre-feet per year.

The CCI, Fairview Ranch Mutual Water Company (MWC), various private entities, agricultural interests, and residences pump from the basin for overlying use. Stallion Springs CSD and Bear Valley CSD purchase surface water from TCCWD that is recharged within the basin. These agencies then recover this water from wells within the basin for delivery to portions of their service area located outside of the basin. The CCI also purchases imported supplies from the TCCWD through conjunctive use of groundwater recharge.

Groundwater in the Cummings Basin has an average electrical conductivity (EC) of 530  $\mu\text{mhos/cm}$  and an average TDS of 344 milligrams/liter (DWR Bulletin 118, 2006). Some areas have experienced high levels of nitrates. Active monitoring and mitigation programs for Methyl Tertiary Butyl Ether (MTBE) and perchlorate in surface soils are in place to avoid potential future water quality impacts.

The Cummings Basin has been in overdraft since 2002. As watermaster, the TCCWD is developing mitigation measures to correct this overdraft. A Groundwater Model Update, Cummings Groundwater Basin was completed in March 2015 by Fugro Consultants, Inc. The results of this model report indicate a perennial yield of 3,750 AF/year and a native safe yield of 2,990 AF/year. The native safe yield will be used as the safe yield of the Cummings Basin in this RUWMP. The watermaster submits annual reports to the Court on a calendar year basis.

#### **Brite Valley Basin:**

The Brite Valley Groundwater Basin (DWR Basin No. 5-80) is a small (3,170 acres of surface area) alluvial basin bounded by the Tehachapi Mountains to the south and the Sierra Nevada to the north with low lying ridges connecting the two ranges on the east and west. Alluvium in the valley was deposited by Brite Creek in the south and east portions of the basin and intermittent streams in the north and west. Coarser materials (gravels and cobbles) are found at the edges of the valley and finer grained materials (clay and sandy clay) are found near the center of the valley. Average thickness of alluvium is estimated to be 119 feet with a maximum of 500 feet on the northeast side of the basin (DWR Bulletin 118, 2006).

The Brite Basin adjudication judgment was filed in 1970 (Superior Court Case No. 97211). The adjudication determined the “natural safe yield” of the basin to be 500 acre-feet per year and the “base rights of pumpers” to be 631 acre-feet annually. Current pumping in the Brite Basin averages about 328 acre-feet per year. Groundwater levels are stable and no restrictions on groundwater production have been established.

SWP water is distributed from the Jacobsen Reservoir (Brite Lake) which is located within the Brite Basin. The use of groundwater in the Brite Basin is primarily by several agricultural and small M&I pumpers. There are no reported issues with groundwater quality.

**Bear Valley Basin:**

The Bear Valley Basin is located entirely within the boundary of the Bear Valley CSD. Bear Valley CSD’s Groundwater Management Plan (also included in **Appendix E**) estimates their safe yield to be 600 acre-feet per year (200 acre-feet per year for their alluvial wells and 400 acre-feet per year for their bedrock wells). This water is the Bear Valley CSD’s least expensive supply and is pumped preferentially. More information about the Bear Valley Basin is included in **Section 3.05.2**.

**Summary of Groundwater Pumping**

**Table 2:6-1** summarizes the total groundwater pumping for the various groundwater basins within the TCCWD for 2015. This pumping includes both recovery of conjunctive use water and native groundwater. Details about each participating agency’s groundwater pumping are included in their respective sections of the Plan.

Table 2:6-1 TCCWD: Groundwater Volume Pumped						
Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Tehachapi Basin	5,089	4,704	5,931	5,705	5,681
Alluvial Basin	Cummings Basin	3,955	3,849	4,732	4,403	4,537
Alluvial Basin	Brite Basin	346	347	347	347	347
Alluvial Basin	Bear Valley Basin	187	158	153	162	167
Fractured Rock	Bear Valley Basin	404	353	377	323	378
<b>TOTAL</b>		<b>9,981</b>	<b>9,411</b>	<b>11,540</b>	<b>10,940</b>	<b>11,110</b>
NOTES: This is a summary of all estimated groundwater pumping in the TCCWD and does not represent pumping by the TCCWD.						

**2.05.3 Surface Water**

TCCWD does not utilize sources of surface supply other than imported SWP supplies.

**2.05.4 Stormwater**

While the TCCWD does provide flood control in certain improvement districts and the recharge of stormwater

supplies contributes to groundwater storage within the TCCWD, the TCCWD does not intentionally divert stormwater directly for beneficial use. Stormwater and other native surface waters that recharge the groundwater basin contribute to the safe yield of the groundwater basins, and become part of the area's groundwater supplies as described in **Section 2.05.2**.

**2.05.5 Wastewater and Recycled Water**

**Law**

*The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area. (16033)*

TCCWD does not collect or treat wastewater. It does have a contract with the CCI to purchase Tertiary Treated (Title 22) recycled water. The contract calls for delivery of between 1,000 and 1,200 acre-feet of recycled water to be made available to the TCCWD annually. Problems with the CCI wastewater facility, including a catastrophic failure during 2015, have reduced the quantities of recycled water available to the TCCWD. Projections of future recycled water supplies from the CCI are 800 AF/year. Other agencies within TCCWD do collect, treat, and distribute recycled water, and the use of recycled water is expected to increase. Listed below are agencies within the TCCWD that collect and treat wastewater. The existing and planned recycled water usage of these retail agencies is discussed in their individual sections of the Plan.

- Bear Valley CSD
- City of Tehachapi
- Golden Hills Sanitation Company
- Stallion Springs CSD

TCCWD's current and projected use of recycled water is summarized in **Table 2:6-4**. The comparison of 2015 actual recycled water use to that projected in the 2010 RUWMP is included in **Table 2:6-5**. As noted above, there was a catastrophic failure at the CCI wastewater treatment plant which greatly reduced the quantity of recycled water available to the TCCWD in 2015.

<b>Table 2:6-4 TCCWD: Current and Projected Retailers Provided Recycled Water Within Service Area</b>						
Direct Use	Level of Treatment	2015	2020	2025	2030	2035
Golf course and agricultural irrigation	Tertiary	158	800	800	800	800
<b>Total</b>		<b>158</b>	<b>800</b>	<b>800</b>	<b>800</b>	<b>800</b>
NOTES: Delivered under contract with the CCI. 2015 recycled water usage was reduced due to a catastrophic failure of the CCI Wastewater Treatment Plant.						

Table 2:6-5 TCCWD: 2010 RUWMP Recycled Water Use Projection Compared to 2015 Actual		
Direct Use	2010 Projection for 2015	2015 actual use <sup>1</sup>
Golf course and agricultural irrigation	900	158
<b>Total</b>	<b>900</b>	<b>158</b>
NOTES: 2015 recycled water usage was reduced due to a catastrophic failure of the CCI Wastewater Treatment Plant.		

### 2.05.6 Desalinated Water Opportunities

#### Law

*Describe the opportunities for development of desalinated water, including but not limited to ocean water, brackish water, and groundwater, as a long-term supply. (10631(h))*

TCCWD has no plans for the development of desalinated water supplies within the planning horizon of this RUWMP. TCCWD has determined that desalination is not a cost-effective solution for its water supply needs due to the water resource opportunities that are available at a much lower cost.

### 2.05.7 Exchanges and Transfers

#### Law

*Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis. (10631(d))*

The TCCWD has entered into short term banking/exchange programs with its excess SWP supplies in years with SWP allocations greater than the needs of the TCCWD. In 2011, 6,131 AF were placed in storage in the Kern Water Bank on a second-priority basis. Recovery capacity is available to the TCCWD once the needs of the primary banking participants have been met. As of the end of 2015, 2,520 AF of TCCWD banked water remains in storage in the Kern Water Bank.

An additional 6,750 AF were placed in storage during 2011 in the West Kern Water District's banking project under a 2-for-1 exchange agreement. Under this agreement, one-half of the water became the property of the West Kern Water District and one-half of the water was banked for recovery by the TCCWD in future years. The water banked for the TCCWD was all recovered over a two year period. The TCCWD will investigate banking and exchange programs in future years when supplies are available in excess of the TCCWD's demands.

### 2.05.8 Future Water Projects

#### Law

*(Describe) all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify*



specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program (10631(g)).

The TCCWD is installing new natural gas engines to power its pumps that will allow it to import as much as 13,000 acre-feet per year of its annual SWP entitlement. The TCCWD is pursuing expansion of groundwater recharge areas in both the Cummings Valley and Tehachapi Basins in order to import the maximum possible amount of SWP water available annually for in-basin recharge and storage. Other future water projects include potential exchanges as described in **Section 2.05.7**, the joint Snyder Well Project with the City (see **Section 4.05.8**), and the Indirect Potable Reuse project under investigation by the City (see **Section 4.05.5**). The TCCWD will participate in the Cal WaterFix project if the KCWA participates.

### 2.05.9 Summary of Existing and Planned Sources of Water

#### Law

*Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a) (10631(b)).*

*(Provide) a detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records (10631(b)(4)).*

TCCWD’s existing and planned sources of water are summarized in **Tables 2:6-8 and 2:6-9**. Projected supplies include 60% of the TCCWD’s SWP Table A allocation, recycled water from the CCI, and the safe yield of all groundwater basins. Recovery of stored groundwater is not included.

Table 2:6-8 TCCWD: Water Supplies — Actual			
Water Supply Source	Additional Detail on Water Supply	2015	
		Actual Volume	Water Quality
Purchased or Imported Water	SWP	5,160	Raw Water
Recycled Water	From CCI	158	Recycled Water
Groundwater	M&I Use	5,510	Drinking Water
Groundwater	Agricultural use	4,543	Raw Water
<b>Total</b>		<b>15,371</b>	
NOTES: From annual summary prepared by the TCCWD.			

Table 2:6-9 TCCWD: Water Supplies — Projected					
Water Supply Source	Additional Detail on Water Supply	Projected Water Supply <i>Reasonably Available Volume</i>			
		2020	2025	2030	2035
Purchased or Imported Water	SWP	11,580	11,580	11,580	11,580
Recycled Water	From CCI	800	800	800	800
Groundwater	Safe Yield - All Basins	9,614	9,614	9,614	9,614
<b>Total</b>		<b>21,994</b>	<b>21,994</b>	<b>21,994</b>	<b>21,994</b>
NOTES: Does not include recovery of stored groundwater.					

### 2.05.10 Climate Change Impacts to Supply

The potential climate change impacts to the Kern Region’s water supplies are described in the Climate Vulnerability Assessment prepared as a part of the Kern IRWMP (see **Appendix C**). These are summarized as follows:

- Groundwater:
  - Changes in local hydrology could affect natural recharge to the local groundwater aquifers and the quantity of groundwater that could be pumped sustainably over the long-term.
  - Decreased inflow from runoff, increased evaporative losses, warmer and shorter winter seasons can alter natural recharge of groundwater, as well as conjunctive use operations.
  - If more precipitation occurs as rain, short-term high flows could result, and will require the Region to adapt to the faster runoff which will impact the timing of conjunctive uses.
  - Additional reductions in the imported water imposed by climate change would lead to more reliance on local groundwater.
- Imported Water:
  - Potential impacts on SWP water availability resulting from climate change will directly affect the amount of imported water supply delivered to the Greater Tehachapi Area.

Potential climate change impacts to SWP supplies are discussed in **Section 2.05.1** and **Section 2.07.2**.

## 2.06 Water Supply Reliability Assessment

### 2.06.1 Constraints on Water Sources

#### Law

*For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable (10631(c)(2)).*

*The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability (10634).*

The TCCWD anticipates that its sources of supplies will be available at a consistent level of use during the planning horizon of this Plan. The TCCWD is projected to have the capacity to meet normal year demands based on the average water delivery forecast of 60% of Table A amounts. Groundwater supplies for the GTA are from adjudicated basins, which should stabilize the availability of groundwater for the participating agencies throughout the Plan period. Future groundwater banking of excess SWP supplies would provide additional water supplies in years of SWP shortages.

## 2.06.2 Reliability by Type of Year

### Law

*Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following: (A) an average water year, (B) a single dry water year, (C) multiple dry water years (10631(c)(1)).*

An ongoing planning effort to increase long-term supply reliability for both the SWP and Central Valley Project (CVP) is taking place through the BDCP process. The co-equal goals of the BDCP are to improve water supply reliability and restore the Delta ecosystem. The BDCP is being prepared through a collaboration of state, federal, and local water agencies, state and federal fish agencies, environmental organizations, and other interested parties. Several “isolated conveyance system” alternatives are being considered in the plan that would divert water from the north Delta to the south Delta where water is pumped into the south-of-Delta stretches of the SWP and CVP. The new conveyance facilities would allow for greater flexibility in balancing the needs of the estuary with the reliability of water supplies. The plan would also provide other benefits, such as reducing the risk of long outages from Delta levee failures.

The BDCP has been in development since 2006 and is currently undergoing extensive environmental review. The Draft BDCP and its associated Draft Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) were released for public review in December 2013. In response to public comments, the BDCP was reevaluated, and in April 2015 the lead agencies announced a modified alternative which effectively split the project into two parts: the conveyance portion (known as Cal WaterFix), and the restoration portion (known as EcoRestore). The Cal WaterFix alternative is evaluated in a partially recirculated draft environmental document (Recirculated Draft EIR/Supplemental Draft EIS) that was released for public review in July 2015. That environmental document is anticipated to be finalized during 2016.

While there is widespread support for the BCDP/Cal WaterFix project, plans are currently in flux and environmental review is ongoing. Additionally, several regulatory and legal requirements must be met prior to any construction. Because of this uncertainty, any improvements in SWP reliability or other benefits that could result from this proposed project are not included in this Plan.

Tables C.15 and C.16 from the 2015 SWP Delivery Capacity Report (DCR) show the KCWA’s forecasted Agricultural and M&I supplies, respectively, for the ELT scenario and are included in **Appendix D**. For reliability of the TCCWD’s SWP supplies, the average water delivery forecast of 60% of Table A amounts for the ELT scenario was used for the average water year. Selection of the single dry water year and multiple dry water years is described below.

The extremely dry sequence from the beginning of January 2013 through the end of 2014 was one of the driest two-year periods in the historical record. Water year 2013 was a year with two hydrologic extremes. October through December 2012 was one of the wettest fall periods on record, but was followed by the driest consecutive 12 months on record. Accordingly, the 2013 State Water Project (SWP) supply allocation was a low 35% of SWP Table A amounts. The 2013 hydrology ended up being even drier than DWR’s conservative hydrologic forecast, so the SWP began 2014 with reservoir storage lower than targeted levels and less stored water available for 2014 supplies. Compounding this low storage situation, 2014 also was an extremely dry year, with runoff for water year 2014 the fourth driest on record. Due to extraordinarily dry conditions in 2013 and 2014, the 2014 SWP water supply allocation was a historically low 5% of Table A amounts.

The dry hydrologic conditions that led to the low 2014 SWP water supply allocation were extremely unusual, and to date have not been included in the SWP delivery estimates presented in DWR’s 2015 Delivery Capability Report. It is anticipated that the hydrologic record used in the DWR model will be extended to include the period through 2014 during the next update of the model, which is expected to be completed prior to issuance of the next update to the biennial SWP Delivery Capability Report. For the reasons stated above, this UWMP uses a conservative assumption that a 5% allocation of SWP Table A amounts represents the “worst case” scenario and will be used for the single dry water year condition. The multiple dry year period of 1990 through 1992 was selected based on the ELT forecasted SWP allocations of 14%, 16%, and 24% of Table A amounts (the “worst case” three year period from that scenario for KCWA M&I supplies as shown in Table C.16 in **Appendix D**).

The basis of SWP water year supplies for the various year types are summarized in **Table 2:7-1**.

Table 2:7-1 TCCWD: Basis of Water Year Data for SWP Supplies			
Year Type	Base Year	Available supplies if year type repeats <sup>1</sup>	
		Volume available	% of avg supply
Average Year <sup>2</sup>	Average	11,580	100%
Single-Dry Year <sup>3</sup>	2014	970	8%
Multiple-Dry Years 1st Year <sup>4</sup>	1990	2,700	23%
Multiple-Dry Years 2nd Year <sup>4</sup>	1991	3,090	27%
Multiple-Dry Years 3rd Year <sup>4</sup>	1992	4,630	40%

NOTES:

1. Estimates for SWP Table A supplies.
2. Average SWP Table A allocation of 60% from ELT scenario in 2015 SWP Delivery Capacity Report. See Tables C.15 and C.16 in Appendix D.
3. Single dry year based on Table A allocation of 5% (actual 2014).
4. Multiple dry years based on Table A allocations of 14%, 16%, and 24% for KCWA M&I supply from ELT scenario. See Table C.16 in Appendix D.

TCCWD’s SWP supplies are a supplemental source of supply to the GTA. The retail urban water suppliers rely on groundwater, both native groundwater and banked SWP supplies, to meet their demands in any one year. As a result, they are not directly subject to the reductions in SWP supplies for the year types noted in **Table 2:7-1**. The reliability of the groundwater supplies of the participating retail water suppliers are discussed in their respective sections of the Plan.

### 2.06.3 Supply and Demand Assessment

#### Law

*Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional or local agency population projections within the service area of the urban water supplier (10632(c)).*

The comparison of TCCWD’s supply and demand projections for the normal year is shown in **Table 2:7-2**. The projected water supplies are sufficient to meet demands for the normal year scenario throughout the twenty year planning horizon.

Table 2:7-2 TCCWD: Normal Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals (from Table 2:6-9)	21,994	21,994	21,994	21,994
Demand totals (from Table 2:4-3)	19,022	19,343	19,681	20,037
Difference	2,972	2,651	2,313	1,957
NOTES:				

The comparison of TCCWD’s supply and demand projections for the single dry year and multiple dry year scenarios are shown in **Tables 2:7:3 and 2:7-4** respectively. In the single dry year and multiple dry year scenarios, the quantity of SWP supplies available to TCCWD are reduced and limited supplies are available for sale to the retail water suppliers. However, sales of SWP water from previous years will have been stored as banked water for use by these agencies in dry years. Supply and demand comparisons for each retail agency are presented in their respective sections of the Plan.

TCCWD’s surface deliveries to agricultural users would also be reduced in the dry year scenarios due to the reductions in SWP supplies. Additional groundwater pumping to meet agricultural demands would occur in those years, subject to limitations from the applicable adjudication judgments.

Table 2:7-3 TCCWD: Single Dry Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals <sup>1</sup>	11,384	11,384	11,384	11,384
Demand totals <sup>2</sup>	16,461	16,781	17,118	17,474
Difference <sup>3</sup>	(5,077)	(5,397)	(5,734)	(6,090)
NOTES:				
<ol style="list-style-type: none"> <li>Includes estimated SWP supply from Table 2:7-1, and recycled water supply and safe yield of all groundwater basins from Table 2:6-9.</li> <li>Ag and M&amp;I Demands from Table 4-2 (does not include imported water sales demand).</li> <li>Difference is proposed to be made up by recovery of previously banked groundwater supplies and/or reductions in demand due to dry year conditions.</li> </ol>				

Table 2:7-4 TCCWD: Multiple Dry Years Supply and Demand Comparison					
Description		2020	2025	2030	2035
First year	Supply totals <sup>1</sup>	13,114	13,114	13,114	13,114
	Demand totals <sup>2</sup>	16,461	16,781	17,118	17,474
	Difference <sup>3</sup>	(3,347)	(3,667)	(4,004)	(4,360)
Second year	Supply totals <sup>1</sup>	13,504	13,504	13,504	13,504
	Demand totals <sup>2</sup>	16,461	16,781	17,118	17,474
	Difference <sup>3</sup>	(2,957)	(3,277)	(3,614)	(3,970)
Third year	Supply totals <sup>1</sup>	15,044	15,044	15,044	15,044
	Demand totals <sup>2</sup>	16,461	16,781	17,118	17,474
	Difference <sup>3</sup>	(1,417)	(1,737)	(2,074)	(2,430)
NOTES:					
<ol style="list-style-type: none"> <li>Includes estimated SWP supply from Table 2:7-1, and recycled water supply and safe yield of all groundwater basins from Table 2:6-9.</li> <li>Ag and M&amp;I Demands from Table 4-2 (does not include imported water sales demand).</li> <li>Difference is proposed to be made up by recovery of previously banked groundwater supplies and/or reductions in demand due to dry year conditions</li> </ol>					

## 2.06.4 Regional Water Supply Reliability

### Law

*An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions (10620(f)).*

The urban water suppliers in the Greater Tehachapi area have been working together for many years to manage available water supplies on a regional basis. The agencies have formed the Tehachapi Water Availability Preservation Committee which meets on a regular basis to plan for and manage available water supplies in the Greater Tehachapi area. More details regarding these efforts are included in other sections of the Plan.

## 2.07 Water Shortage Contingency Planning

### 2.07.1 Stages of Action

#### Law

*The plans shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:*

*Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50% reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage (10631(a)(1))*

The TCCWD is a wholesale supplier providing a supplemental, imported water supply for the GTA. Deliveries for urban use are made through groundwater recharge and conjunctive use. The retail urban water suppliers rely on groundwater pumping for their water supplies.

The TCCWD's Board of Directors imposes Rules and Regulations regarding the delivery of imported water and recycled water, and use of its facilities. Part L of TCCWD's rules and regulations for water service states:

*"SHORTAGES. District retains the right and power to later provide, consistent with any then applicable provisions of law, for priorities, restrictions, prohibitions and exclusions in the event of shortage or other emergency, including cessation or interruption of sale of water to particular users."*

The Board considers an emergency water shortage ordinance on an annual basis, if necessary. The TCCWD adopted a water shortage ordinance in 2015 (Ordinance 2015-1) which outlines the priorities for the sale and use of its available imported SWP supplies. Copies of the TCCWD's Rules and Regulations and its Ordinance 2015-1 are included in **Appendix F**.

Stages of action are not directly applicable to the TCCWD's water shortage policies. The TCCWD's water shortage contingency planning is summarized in **Table 2:8-1**. Water shortage contingency planning for the retail urban water suppliers are covered in their respective sections of the Plan.

Table 2:8-1 TCCWD Stages of Water Storage Contingency Plan		
Stage	Percent Supply Reduction <sup>1</sup>	Water Supply Condition
1	50%	Reduction in SWP Allocation Below Current Demand. See notes.
<sup>1</sup> One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
<p>NOTES:</p> <p>TCCWD's Rules and Regulations outline their policies regarding water shortages. TCCWD supplies are supplemental to the retail urban water suppliers, who rely on groundwater pumping for their water supplies. A water shortage ordinance (Ordinance 2015-1) outlines the TCCWD's priorities for the sale and use of SWP supplies for 2015. Copies of TCCWD's Rules and Regulations and its Ordinance 2015-1 are included in Appendix F.</p>		

### 2.07.2 Consumption Reduction Measures

#### Law

*Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply (10632(a)(5)).*

TCCWD has adopted a number of consumption reduction measures to help retail water suppliers reduce water usage. These are described in **Section 2.08: Demand Management Measures**.

### 2.07.3 Determining Water Shortage Reductions

#### Law

*A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis 10632(a)(9).*

TCCWD deliveries are entirely metered. The meter readings will be used to monitor the actual reductions in water usage in accordance with the water shortage contingency plan.

### 2.07.4 Revenue and Expenditure Impacts

#### Law

*An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments (10632(7)).*



TCCWD reviews its revenues and expenditures on an annual basis and evaluates the need to increase water rates in order to provide adequate revenues in times of water shortages. If necessary, the TCCWD may utilize reserves to address decreased water sales during a water shortage.

### 2.07.5 Resolution or Ordinance

#### Law

*A draft water shortage contingency resolution or ordinance (10632(8)).*

TCCWD's Ordinance 2015-1 is included in **Appendix F**.

### 2.07.6 Catastrophic Supply Interruption

#### Law

*Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster (10632(a)(3)).*

Response to a catastrophic event will include contact and coordination with TCCWD's customers. All customers (M&I and agriculture) will be notified when deliveries become unavailable and will be provided with an estimate of how soon water deliveries may be resumed. TCCWD personnel will survey and assess damage and respond accordingly with shutdowns and repairs. TCCWD's supplies are a supplemental source of supply, and the retail urban water suppliers rely on groundwater pumping to meet the demands of their customers. Details of the retail agencies' catastrophic supply interruption plans are included in their respective Plan sections.

Possible catastrophes affecting TCCWD's water supply may include:

- Widespread Power Outage/Natural Gas Supply Failure
- TCCWD Pump or Pipeline Failure
- Local Earthquake, Landslide or Flash Flood
- Aqueduct Failure (due to earthquake or other circumstances)
- Delta Levee Failure

Failure of the Aqueduct or Delta levees could result in significant outages and potential interruption in SWP service for six months or longer. The DWR has estimated that in the event of a major earthquake in or near the Delta, regular water supply deliveries from the SWP could be interrupted for up to three years, posing a substantial risk to the California business economy. Accordingly, a post-event strategy has been developed which would provide necessary water supply protections. The plan has been coordinated through DWR, the Army Corps of Engineers (Corps), Bureau of Reclamation, California Office of Emergency Services (Cal OES), the Metropolitan Water District of Southern California, and the State Water Contractors. Full implementation of the plan would enable resumption of at least partial deliveries from the SWP in less than six months.

DWR has developed the Delta Flood Emergency Management Plan to provide strategies for a response to Delta levee failures, which addresses a range of failures up to and including earthquake-induced multiple island failures during dry conditions when the volume of flooded islands and salt water intrusion are large. Under such severe conditions, the plan includes a strategy to establish an emergency freshwater pathway from the central Delta along Middle River and Victoria Canal to the export pumps in the south Delta. The plan includes the pre-positioning of emergency construction materials at existing and new stockpiles and warehouse sites in the Delta, and development of tactical modeling tools (DWR Emergency Response Tool) to predict levee repair logistics, water quality conditions, and timelines of levee repair and suitable water quality to restore exports. The Delta Flood Emergency Management Plan has been extensively coordinated

with state, federal and local emergency response agencies. DWR, in conjunction with local agencies, the Corps and Cal OES, regularly conduct simulated and field exercises to test and revise the plan under real time conditions.

DWR and the Corps provide vital Delta region response to flood and earthquake emergencies, complementary to an overall Cal OES structure. Cal OES is preparing its Northern California Catastrophic Flood Response Plan that incorporates the DWR Delta Flood Emergency Management Plan. These agencies utilize a unified command structure and response and recovery framework. DWR and the Corps, through a Draft Delta Emergency Operations Integration Plan (April 2015), would integrate personnel and resources during emergency operations.

The DWR Delta Levees Subvention Program has prioritized, funded, and implemented levee improvements along the emergency freshwater pathway and other water supply corridors in the central and south Delta region. These efforts have been complementary to the DWR Delta Flood Emergency Management Plan, which along with use of pre-positioned emergency flood fight materials in the Delta, relies on pathway and other levees providing reasonable seismic performance to facilitate restoration of the freshwater pathway after a severe earthquake. Together, these two DWR programs have been successful in implementing a coordinated strategy of emergency preparedness for the benefit of SWP and CVP export systems.

Significant improvements to the central and south Delta levee systems along Old and Middle Rivers began in 2010 and are continuing to the present time at Holland Island, Bacon Island, Upper and Lower Jones Tracts, Palm Tract and Orwood Tract. This complements substantially improved levees at Mandeville and McDonald Islands and portions of Victoria and Union Islands. Together, levee improvements along the pathway and Old River levees consisting of crest raising, crest widening, landside slope fill and toe berms, meet the needs of local reclamation districts and substantially improve seismic stability to reduce levee slumping and create a more robust flood-fighting platform.

### **2.07.7 Minimum Supply Next Three Years**

#### **Law**

*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's water supply (10632(a)(2)).*

An estimate of the minimum supplies available to the TCCWD in each of the next three years is given in **Table 2:8-4**. The estimated minimum supply includes the estimated SWP supply for the driest three year period from Table 7-1, and recycled water supply and safe yield of all groundwater basins from Table 6-9. In addition, the TCCWD currently has 13,082 acre-feet banked in groundwater storage. It is assumed that 1/5 of the total groundwater storage would be reasonably available for each of the next three years.

The minimum available supplies for each participating retail agency are discussed and presented in their respective Plan sections.

Table 2:8-4 TCCWD: Minimum Supply Next Three Years			
Available Water Supply	2016	2017	2018
		15,730	16,120
<p>NOTES:</p> <p>Includes the following:</p> <ol style="list-style-type: none"> <li>1. Estimated Multiple Dry Year SWP supply from Table 2:7-1</li> <li>2. Recycled water supply and safe yield of all groundwater basins from Table 2:6-9</li> <li>3. 1/5 of TCCWD current groundwater storage of 13,082 AF</li> </ol>			

## 2.08 Demand Management Measures

### Law

*Provide a description of the (wholesale) water supplier's water demand management measures. This description will include all of the following (10631(f)):*

*The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures: (ii) metering. (iv) public education and outreach. (vi) water conservation program coordination and staffing support. (vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented (10631(f)(1)(B)).*

*(Provide) a narrative description of that addresses the nature and extent of each water demand management measure implemented over the past five years (10631(f)(1)(A)).*

*For an urban wholesale water supplier, as defined in Section 10608.12, (provide) a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs (10631(f)(2)).*

The agencies as a region realize the importance of demand management. The agencies are committed to implementing water conservation strategies and water recycling programs to maximize sustainability in meeting future water needs for their respective customers. As the need for more robust water conservation programs became apparent, an unofficial agreement among the agencies identified TCCWD to take the lead in expanding a regional water conservation program. TCCWD applied for and obtained a grant from DWR to implement toilet replacement programs, and also hired a Water Conservation Coordinator. On December 9, 2015, TCCWD was ratified as a new member of CUWCC.

TCCWD is a wholesale water agency importing water to the GTA, but does provide direct deliveries to industrial and commercial users such as Cal-Portland Cement Plant, a cemetery, high school athletic fields and for temporary construction uses. There are several Demand Management Measures (DMM)s that are not applicable to TCCWD as a wholesale agency, but are implemented by TCCWD on behalf of the retail agencies.

### 2.08.1 Metering

This DMM requires water meters for all new construction and billings by volume of use, as well as establishing a program for retrofitting any existing unmetered connections. TCCWD has metered all

connections and currently implements this DMM. In the last several years, the TCCWD has installed between 3 and 7 new meters and replaced between 12 and 16 old meters each year.

### **2.08.2 Public Education and Outreach**

TCCWD contracts with JS Strategic Consulting to provide Project WET (Water Education for Teachers) training for Tehachapi Unified School District teachers. Initially, TCCWD funded one Project WET workshop in 2013. More recently, TCCWD's three-year funding commitment includes Tehachapi area-specific curriculum materials for second and fifth graders. Under this funding, one Project WET training was provided to 18 TUSD teachers on September 3, 2015, and development of area-specific curriculum materials and scheduling of additional training is ongoing.

Through 2012, school education programs were provided by Kern County Water Agency on a rotating basis. Tehachapi came up in the rotation in 2012 and water education was provided at four schools. The number of teachers from Tehachapi that attended Project WET workshops and the number of students that participated in Water Awareness Poster Contests between 2010 and 2012 are not known. Due to funding changes, KCWA no longer provided water education after 2012.

TCCWD conservation staff and traveling booth regularly attend the Tehachapi Farmers Market during summertime, providing free low flow showerheads and faucet aerators, as well as flyers for programs and events. TCCWD conservation staff also attended community events such as 4th of July Hot Dog Festival, Apple Festival, Fall Business Showcase, Bear Valley 4th of July Celebration, and the Stallion Springs Oktoberfest.

TCCWD partnered with Tehachapi Area Association of Realtors to produce a workshop titled "What's Up With Water?" on the evening of April 30, 2015. The event included several speakers, and water conservation giveaways. Several hands-on activities were also planned, but the speakers took up all the time. The event was very well attended, and participants had a number of questions for the speakers.

The water conservation coordinator provides a regular biweekly column in the local community tabloid newspaper, The Loop. The TCCWD conservation staff also provided occasional "guest commentary" articles to The Tehachapi News. Additionally, Tehachapi News did a special pull-out section commemorating TCCWD 50th Anniversary that included; mission, history, facilities, and focus on water conservation. This section included purchased advertising space to promote our programs. TCCWD regularly contributes to the three CSD newsletters and City outreach information.

TCCWD provides speaker services and has presented information on water conservation and water issues in general to Tehachapi Audubon Society, Tehachapi Area Association of Realtors, Tehachapi Democratic Club, Rotary Club, and other groups.

TCCWD's website contains links to water conservation sites as well as program specific information. TCCWD also contributes information to websites of the retail agencies. TCCWD printed and distributed table toppers to local restaurants using the design available from Save Our Water.

TCCWD supports several organizations that disseminate water conservation information. TCCWD is a member of the Water Education Foundation, the California Water Awareness Campaign, and the Water Association of Kern County. TCCWD also provides financial support for the mobile irrigation lab of the Northwest Kern Resources Conservation District.

### **2.08.3 Water Conservation Program Coordination and Staffing Support**

This DMM requires agencies to designate a water conservation coordinator to oversee water conservation program implementation. A water conservation coordinator was hired on May 27, 2014. Many of the DMMs

included in this section were implemented since then, and program development and implementation will continue to expand. Contact information for the Water Conservation Coordinator is as follows:

Liz Block, TCCWD Water Conservation Coordinator,  
[lblock@tccwd.com](mailto:lblock@tccwd.com), 661-822-5504

Program staffing support is provided specifically by the full time water conservation coordinator and one part time staff member on an as-needed basis. However, many of the other staff have supported water conservation in a variety of different ways. The bookkeeper issues rebate checks, the receptionist handles class registrations. Maintenance staff moved the TCCWD water truck to different areas and parked it with a toilet water savings banner. Other support is provided by consultants and contractors as appropriate.



Initial funding for the Water Conservation Program was based on a Proposition 84 grant to retrofit toilets. More recently, funding for general water conservation is included as a line item in the annual budget. Funding for Fiscal Year ending June 30, 2015 was \$30,000, and ending June 30, 2016 is \$50,000 plus labor costs. Because the water conservation program is relatively new, an appropriate amount of regular funding has not been identified.

#### **2.08.4 Other Demand Management Measures**

This category provides wholesale agencies the ability to report additional or innovative approaches to demand management that do not belong in the categories above. Many of TCCWD's programs are provided for the benefit of the retail urban water suppliers and are described in **Section 2.08.6**. The TCCWD's turf replacement rebate program is described below.

A major outreach effort was instigated when DWR opened the turf replacement rebate program in August 2015. Neither TCCWD nor the retail agencies had turf rebate programs, and the GTA is in the 10-county San Joaquin Valley area identified by DWR for additional funding. In July and August 2015, TCCWD provided a 4-part workshop on lawn removal, irrigation conversion, and landscape design to specifically support turf rebate participants as well as gardeners in general. Signups for the Saturday classes filled quickly, and a set of Thursday evening classes was added. A total of 77 people attended classes. Funding was provided in part by a \$2,000 grant from CUWCC to provide Outdoor Water Use Workshops. Classes will be offered on an ongoing basis until rebates or class demand declines.

To compliment the classes, no cost consultations were offered to residential homes to assist with landscape retrofit plans that meet DWR turf rebate requirements. A total of 23 homeowners (5 in BVCSD, 5 in COT, 5 in GHCSO, 2 in SSCSD, and 6 in unincorporated County areas) requested consultations in 2015. This program will also be ongoing.

The DWR turf rebate program includes an option to support government institutions to convert turf to low water use landscape and include an education component. TCCWD does not have appropriate property so the District has been working with Kern County Fire Department to re-landscape a local fire station. The landscape make-over is scheduled for implementation in spring 2016 and includes an educational brochure on low water landscaping.

Because the GTA climate is different from most of populated California, an area specific low water use plant list was developed that includes plants native to the Tehachapi Mountains. A booklet of Native Plants for Tehachapi was produced that includes pictures and details on 59 plants. The list and booklet are available on the TCCWD's web site, and are also distributed at workshops and events.

Finally, TCCWD removed the lawn at its office in 2014 and replaced it with a water conservation demonstration landscape that includes low water use plants and micro-irrigation.

### **2.08.5 Asset Management**

TCCWD actively manages its infrastructure through a variety of methods. O&M manuals have been prepared for all system components and are updated when conditions warrant. Maintenance checklists are used for preventative maintenance. System operation is controlled via SCADA system which can be monitored and adjusted via controls at pumping plants, main office and with mobile devices. A GIS system is currently being developed which will be utilized to manage system maintenance, repairs and upgrades.

TCCWD's main distribution pipe system is comprised of approx. 31 miles of bar wrapped, steel cylinder pipe (cement mortar lined and coated). The pipeline diameter varies between 18" and 30". The system was installed at one time and is approaching 45 years of service. TCCWD has embarked upon a multi-phase, multi-year inspection and analysis project to determine needed repairs and life cycle analysis. The first phase of this project is described in **Section 2.03.2**. The pipeline route is inspected for visible signs of leakage regularly and after every seismic event greater than 2.5 on the Richter scale with an epicenter within 15 km of any portion of the line.

TCCWD operates four, natural gas fired, internal combustion engine, pumping plants that raise the elevation of imported water approx. 3,500 vertical feet. These plants have recently undergone \$6,000,000 in upgrades. Maintenance and repairs are performed on a regular basis by in-house mechanics. System operation is continuously monitored via SCADA system. Emissions compliance is ensured by regular testing and operating permit compliance and is certified annually by the regulatory agencies.

TCCWD owns and operates Jacobsen Reservoir (Brite Lake) which serves as a storage facility and recreational lake. Additionally, TCCWD operates flood retention structures and other facilities that are utilized for groundwater recharge. The dams that form the lake and other retention structures are inspected annually by the State of California Division of Dam Safety and also by the Natural Resource Conservation Service. Seepage from Jacobsen Reservoir is monitored monthly via a system of Piezometers. Horizontal and vertical movement is accurately measured by a Professional Surveyor on a regular basis. All of these facilities are inspected after seismic events greater than 2.5 on the Richter scale with an epicenter within 15 km of the facility.

## **2.08.6 Wholesale Supplier Assistance Programs**

An unofficial agreement among the agencies identified TCCWD to take the lead in expanding a regional water conservation program. The programs actively implemented by the TCCWD for the benefit of the retail urban water suppliers are described below.

### **Water Survey Programs**

This program consists of offering water audits to residential and non-residential customers. Audit components include reviewing water usage history with the customer, identifying leaks inside and outside, and recommending improvements. Indoor water surveys are available upon request at no cost. To date, few indoor surveys have been conducted.

Outdoor water surveys, termed Irrigation Check-ups, are provided regularly throughout the spring, summer, and fall at no cost. Irrigation Check-ups include zone by zone inspection, identification of leaks and other inefficiencies, repairs, a site specific watering schedule, and assistance to reset the irrigation timer. A hand written report is provided at the end of the Check-up.

Outreach for Irrigation Check-ups has been through newspaper ads, TCCWD web site, and word of mouth. Rental agencies and realtors were contacted directly. Also, when the City started implementing and enforcing watering days, the TCCWD provided them with door hangers to accompany enforcement warnings.

Between August 6 and September 29, 2014, 17 Irrigation Check-ups were conducted (14 residential and 3 commercial), as follows:

- Bear Valley CSD - 5
- City of Tehachapi – 6
- Golden Hills CSD – 3
- Stallion Springs – 3
- Unincorporated County – 0

Between March 1 and November 9, 2015, 26 Irrigation Check-ups, all residential, were conducted as follows:

- Bear Valley CSD - 4
- City of Tehachapi – 19
- Golden Hills CSD – 2
- Stallion Springs – 0
- Unincorporated County – 1

### **Residential Plumbing Retrofit**

This program consists of installing physical devices to reduce the amount of water used and to limit the amount of water be served to its customers. TCCWD conducted showerhead exchange programs throughout summer and fall of 2015. Low flow faucet aerators were provided along with showerheads. Outreach included retail agency bill stuffers, ads in the Tehachapi News, and event announcements in The Loop (local entertainment tabloid). Specific events included Tehachapi Farmers Market, August 7 and 14, 2014; Stallion Springs Oktoberfest, October 4, 2014; and Tehachapi Apple Festival, October 11 and 12, 2014.

Showerhead Exchanges had low participation. For all events, only 23 residents exchanged showerheads. Remaining stock was, and will continue to be, given away at events and other resident contact situations. TCCWD also provides showerheads and faucet aerators for a local energy conservation group who include them in their door prize package.

An upcoming program will begin January 1, 2017. Senate Bill 407 (October 2009) established this date as the deadline for residential real property to retrofit noncompliant indoor fixtures (toilets, showerheads, and bathroom faucet aerators) with low flow fixtures. During a property sale, the seller must disclose if indoor fixtures are non-compliant. Direct outreach to owners of pre-1992 homes for sale will include no cost installation of low flow showerheads and faucet aerators as well as information on the ongoing toilet rebate program.

### **Large Landscape Conservation Programs**

TCCWD supplies raw water directly to several large landscapes along our pipelines. Landscaped area and Evapotranspiration (ET)-based demand have been estimated for eight active accounts. Water use compared to estimated demand is checked a couple of times during the irrigation season, and landowners are contacted if demand is excessive. For the most part, irrigation use has been reasonable, but the use by two accounts is high, and will be addressed in the beginning of spring, 2016. This program is ongoing.

### **High Efficiency Washing Machine Rebate Programs**

This program generally provides a financial incentive (rebate offer) to qualifying customers who install a high efficiency washing (HEW) machine in their home. To support retail agencies, TCCWD plans to work with local energy suppliers to develop a High Efficiency Washing Machine Rebate Program in 2016.

### **Ultra-Low Flush Toilet Replacement Program**

TCCWD applied for and received a Proposition 84 grant from DWR on March 20, 2013 to conduct a low flow toilet rebate and direct install program. In many ways, the low flow toilet program has been TCCWD's flagship water conservation program, as it triggered the hiring of a water conservation coordinator to implement the grant and develop additional programs to assist retail agencies reduce demand.

The low flow toilet grant funded both a rebate program and a direct install program. TCCWD runs project implementation, outreach, and data management as well as maintaining grant eligibility and providing quarterly and final reports. Requirements for both programs were that the building must be older than 1992 and the existing toilet(s) must use more than three gallons per flush (gpf).

For the low flow toilet direct install program, TCCWD contracted with a toilet installation company (Southwest Environmental, Inc.) and coordinated applications and scheduling. The direct install program was initially available only within the City of Tehachapi, as it is a disadvantaged community. Later it was expanded to include multi-family buildings in Golden Hills CSD. This program installed low flow toilets (892), showerheads (337), and bathroom faucet aerators (390) in 337 residential, multi-family, and commercial buildings. The majority of toilets installed were Niagara Stealth 0.8 gpf toilets. Estimated water savings based on previous fixture flow and number of people in the house is 29 acre feet per year. The program closed July 31, 2015. Toilets were distributed as follows:

- City of Tehachapi – 758
- Golden Hills CSD – 134

The low flow toilet rebate program started in June, 2014 and is available to anyone within the TCCWD water service area, including those on wells. Rebates are \$150 for the Niagara Stealth 0.8 gpf toilet and \$125 for 1.28 gpf toilets with EPA WaterStar Certification. To date, just over 500 toilets have been rebated. Water savings analysis is not yet available as it will be based on billing records. The rebate program was developed to rebate 1000 toilets, and will continue through 2017. Rebates were distributed as follows:

- Bear Valley CSD – 157 toilets
- City of Tehachapi – 63
- Golden Hills CSD – 159
- Stallion Springs CSD – 53



- Unincorporated County - 74

GTA residents and businesses were slow to respond to these programs. Extensive and repeated outreach effort was needed to reach participation goals. The outreach efforts included:

- Bill stuffers sent two different times for all retail agencies except for Stallion Springs, which sends the water bill on post cards
- Tehachapi News: regular advertising, web site advertising, and front page stick-on
- Movie theater advertising
- Flyers available in offices of all retail agencies and other miscellaneous locations
- Door hangers delivered to City of Tehachapi residents in older neighborhoods
- Direct mail-out to residents of unincorporated county areas
- Direct mail-outs to owners of multi-family property
- Door-to-door outreach to businesses in older Tehachapi commercial districts
- Direct contact to manufactured home park managers
- Announcements at City and CSD board meetings

### **2.08.7 Implementation over the Past Five Years**

The extent and nature of the implementation of the DMMs has been discussed in the previous sections.

### **2.08.8 Planned Implementation to Achieve Water Use Targets**

As a wholesale agency, TCCWD does not have specific water use targets.

### **2.08.9 Members of the California Urban Water Conservation Council**

On December 9, 2015, TCCWD was ratified as a new member of CUWCC.

### **2.08.10 Voluntary Reporting of Energy Intensity**

Water use in the Greater Tehachapi Area has an exceptionally high embedded energy cost because supplemental water used to supply agriculture and maintain groundwater levels is pumped 3,425 vertical feet from the California Aqueduct. The energy component of water use includes three aspects; energy used to move water through the SWP, energy used to move water from the Aqueduct turnout up the mountain to the GTA by TCCWD, and energy used to pump water by the four major distributors: City of Tehachapi and three CSDs.

The American Council for Energy Efficient Economy has estimated energy to pump water from the Harvey O. Banks Pumping Plant at the south edge of the Bay-Delta to the Wind Gap Pump Station (Reach 16) to be about 1,610 kWh/AF. The TCCWD pumps water up the mountain with the use of three large pumping stations and one smaller pumping station at the Jacobsen Reservoir. During peak agricultural demand, supplemental water is pumped from wells.

TCCWD distributes water to the City of Tehachapi and the three CSDs conjunctively, so all of the urban water providers use electricity to pump wells. Differences between retail agencies are due to elevation changes within their water service area. The City water service area has the least elevation change with only two pressure zones. The three CSDs use booster pumps to move water to residences at higher elevations. Bear Valley CSD has the largest gradient. Twelve booster stations push water from 4000 to 6300 feet of elevation.

Energy intensity estimates for the TCCWD and the four participating agencies are summarized in **Table 2:8-5**. Calculations of the 2015 energy intensity for the TCCWD, BVCSD, City of Tehachapi, and GHCSO are included in **Appendix I**. Information for the SSCSD and the SWP was included as part of a January 2015 grant application (based on 2014 data) developed by the TCCWD.

Table 2:8-5: Estimated Energy Intensity for Greater Tehachapi Area (kWh/AF/year)	
Agency	Total
SWP <sup>1</sup>	1,610
TCCWD <sup>2</sup>	10,455
BVCSD <sup>3</sup>	3,183
COT <sup>4</sup>	1,113
GHCSO <sup>5</sup>	1,136
SSCSD <sup>1</sup>	1,105
NOTES: 1. From January 2015 TCCWD grant application 2. TCCWD 2015 Energy Intensity Calculations (see Appendix I) less SWP 3. From BVCSD 2015 Energy Intensity Calculations (see Appendix I) 4. From COT 2015 Energy Intensity Calculations (see Appendix I) 5. From GHCSO 2015 Energy Intensity Calculations (see Appendix I)	

## 2.09 Plan Adoption, Submittal and Implementation

### 2.09.1 Public Notice

#### Law

*Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision (10621(b)).*

*Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area (10642).*

The efforts TCCWD has taken to involve appropriate agencies and the general public in the planning process are summarized below. The City of Tehachapi is a participant in this RUWMP. No separate notice was provided to the City. Copies of notices are included in **Appendix A**.

For the 2015 Plan update, the public hearing was held on June 8, 2016. Accordingly, notice was provided as follows:

- Notice to County on February 24, 2016 (at least 60 days prior to hearing),
- Letter to Interested Parties (see **Section 2.02**) on May 18, 2016,
- Notice in local newspaper on May 18, 2016 and May 25, 2016 (per Gov. Code 6066 – 2 weeks in advance of hearing),
- Posted Draft 2015 RUWMP at TCCWD Office on May 18, 2016 (2 weeks prior to hearing), and
- Drafts of the plan were provided to the entities that requested such drafts.

## 2.09.2 Plan Adoption, Submittal, and Implementation

### Law

*After the hearing, the plan shall be adopted as prepared or as modified after the hearing (10642).*

*An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016 (10621(d)).*

*The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan (10635(b)).*

*An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption (10644(a)(1)).*

*Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours. (10645).*

*The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640) (10621(c)).*

*Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption (10644(a)(1)).*

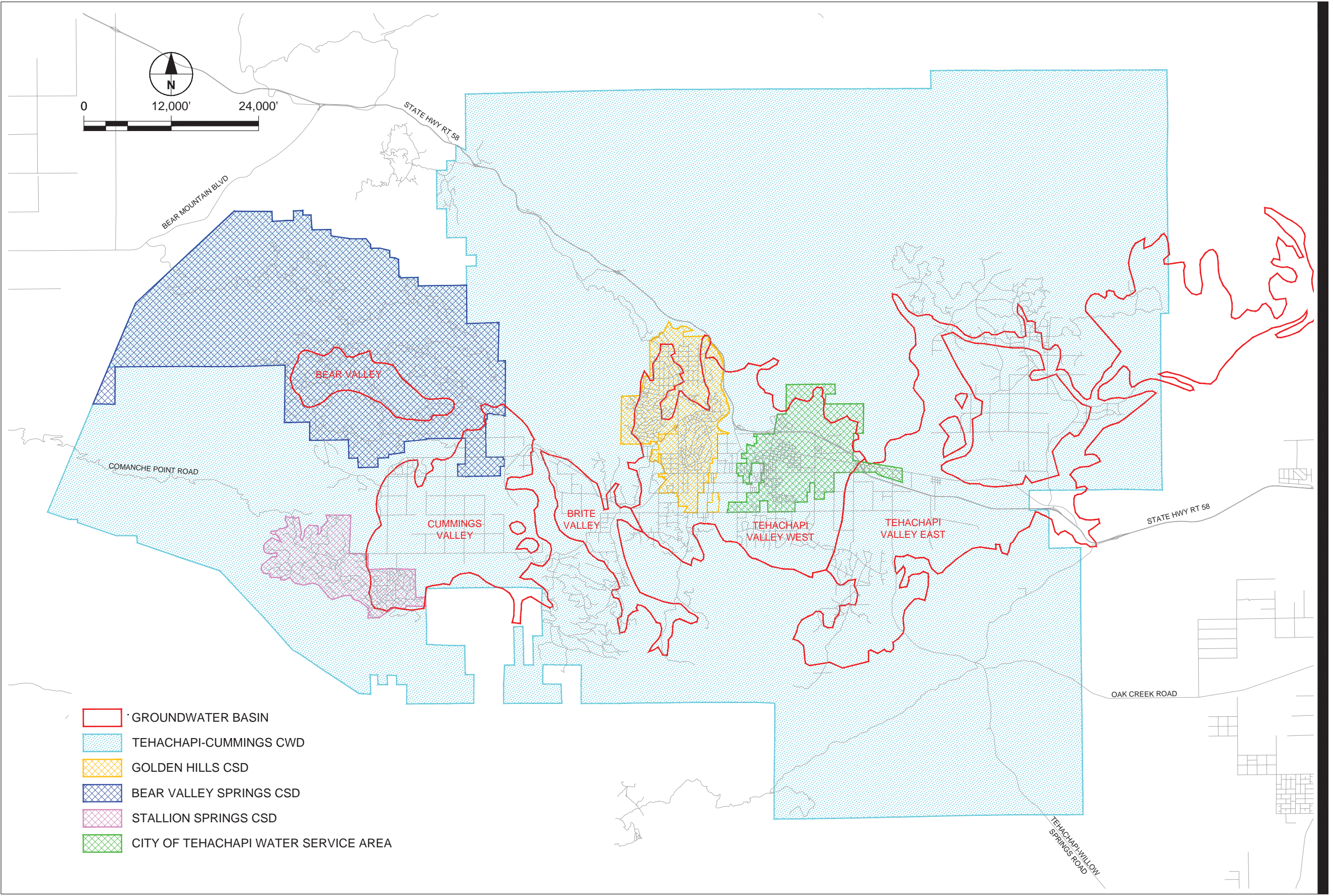
The 2015 RUWMP update plan was adopted by the TCCWD at the Regular Meeting of the Board of Directors on June 15, 2016. A public hearing on the update of the Regional Urban Water Management Plan was held on June 8, 2016. The intent of the Public Hearing was to gather input from the public that is served by TCCWD as well as other interested entities. Written and verbal comments received during the public hearing process have been addressed as appropriate in the final Plan. A copy of the resolution adopting the 2015 RUWMP update is included in **Appendix B**.







The Plan will be submitted to the California Department of Water Resources by July 1, 2016 and to the California State Library and the County within 30 days of adoption by the TCCWD on June 15, 2016.

Commencing no later than 30 days after July 1, 2016, the TCCWD will have a copy of the 2015 RUWMP available for public review at the TCCWD Office (see address below) during normal business hours.

Tehachapi-Cummings County Water District  
22901 Banducci Road  
Tehachapi, CA 93561

The 2015 RUWMP will also be posted on the TCCWD's website at [www.tccwd.com](http://www.tccwd.com).



-  GROUNDWATER BASIN
-  TEHACHAPI-CUMMINGS CWD
-  GOLDEN HILLS CSD
-  BEAR VALLEY SPRINGS CSD
-  STALLION SPRINGS CSD
-  CITY OF TEHACHAPI WATER SERVICE AREA

# Section 3 Bear Valley CSD

## 3.01 Plan Preparation

### 3.01.1 Agency Identification

BVCSD is a retail water supplier. In 2015, its service area consisted of 2,953 municipal connections and it supplied a volume of 654 acre-feet of water to its service area. Its information in the RUWMP is presented in Calendar Year format and water quantities are presented in Acre Feet. See **Table 3:2-1**.

Table 3:2-1 BVCSD: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015 <sup>1</sup>
CA1510038	Bear Valley CSD	2,953	654
<b>TOTAL</b>		<b>2,953</b>	<b>654</b>
NOTES:			
1. BVCSD groundwater production.			

### 3.01.2 Coordination and Outreach

#### Law

*Each urban water supplier shall 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 (10620(d)(2)).*

*Each urban water supplier shall encourage the 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 (10642).*

*Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c) (10631(j)).*

*Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by section 10642, notify any city or*

*county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan (10621(b)).*

BVCSD purchases imported SWP water from the TCCWD to augment its groundwater supplies. TCCWD was informed of BVCSD’s water use projections as a part of the RUWMP development process (See **Table 3:2-4**). The Kern County Planning Department was provided notice that an update to the RUWMP was being prepared and notice of the public hearing on the Plan. Further information on coordination of the Plan and public involvement is included in **Section 3.09**. Copies of notices are included in **Appendix A**.

<b>Table 3:2-4 BVCSD: Water Supplier Information Exchange</b>	
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.	
Wholesale Water Supplier Name	
Tehachapi-Cummings County Water District	
NOTES: TCCWD is a participant in this RUWMP.	

### **3.02 System Description**

#### **3.02.1 General Description**

##### **Law**

*Describe the service area of the supplier (10631(a)).*

The BVCSD was formed in 1970 and provides water and wastewater services to a 25,000 acre area in the Tehachapi Mountains known as Bear Valley Springs. Approximately 8,500 acres of the District are set aside for wilderness and greenbelt areas. BVCSD produces and distributes water for domestic and commercial use. Groundwater supplies from the Bear Valley basin are supplemented by conjunctive use programs (groundwater banking) with the TCCWD in the Cummings Basin. The service area boundary for BVCSD is shown on **Figure 2-1** in **Section 2.02.1**, which also includes more information on the Greater Tehachapi area.

#### **3.02.2 Service Area Climate**

##### **Law**

*Describe the climate of the supplier (10631(a)).*

See **Section 2.02.2**

### 3.02.3 Service Area Population

#### Law

*(Describe the service area) current and projected population . . . The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier . . . (10631(a)).*

*. . . (population projections) shall be in five-year increments to 20 years or as far as data is available (10631(a)).*

*Describe . . . other demographic factors affecting the supplier's water management planning (10631(a)).*

The 2015 population estimates for the BVCS D were developed based on 2010 Census data for the Bear Valley Springs CDP and the population per connection method. Population projections for the BVCS D are based on projections for the unincorporated areas of Kern County (1% growth per year) from the Kern COG 2014 Regional Transportation Plan. See **Table 3:3-1**.

Table 3:3-1 BVCS D: Population - Current and Projected					
Population Served	2015 <sup>1</sup>	2020 <sup>2</sup>	2025 <sup>2</sup>	2030 <sup>2</sup>	2035 <sup>2</sup>
	5,314	5,585	5,870	6,169	6,484
NOTES: 1. 2015 population calculated per 2010 census data for the Bear Valley Springs CDP and population per connection method (1.8 persons/connection). 2. Population projections for 2020 through 2035 based on population projections for the unincorporated area from Kern COG (Regional Transportation Plan June 2014).					

### 3.03 System Water Use

#### 3.03.1 Water Use

#### Law

*Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: (A) Single-family residential; (B) Multifamily; (C) Commercial; (D) Industrial; (E) Institutional and governmental; (F) Landscape; (G) Sales to other agencies; (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; (I) Agricultural (10631(e)(1) and (2)).*

Water use data within the BVCS D for 2015 is summarized in **Table 3:4-1**. 2015 was an extremely dry year. Water use restrictions and water conservation measures were enacted by the BVCS D to meet the conservation standard set for the BVCS D by the State. The BVCS D makes no deliveries of water for saline intrusion barriers. Total water use for the BVCS D water service area in 2015 was 23% less than the water use in 2014 and 33% less than the water use in 2013.

Table 3:4-1 BVCS D: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Other	Residential	Drinking Water	572
Commercial		Drinking Water	16
Institutional/Governmental		Drinking Water	4
Losses		Drinking Water	61
Other	Lake fill	Raw Water	266
<b>TOTAL</b>			<b>919</b>
NOTES:			

**Table 3:4-2** includes projections of BVCS D's water demands for the years 2020 through 2035 in five year increments. Projections for future water use are based on historic deliveries and projected population growth from **Table 3:3-1**.

Table 3:4-2 BVCS D: Demands for Potable and Raw Water - Projected					
Use Type	Additional Description	Projected Water Use			
		2020	2025	2030	2035
Other	All M&I uses (potable water) See notes.	947	995	1,045	1,099
Other	Lake fill (raw water)	150	150	150	150
<b>TOTAL</b>		<b>1,097</b>	<b>1,145</b>	<b>1,195</b>	<b>1,249</b>
NOTES: Projected M&I water usage based on population projections and average 2011-2015 water use of 151 gpcd.					

**Table 3:4-3** summarizes BVCS D's total water demands from **Tables 3:4-1** and **3:4-2**.

Table 3:4-3 BVCS D: Total Water Demands					
Description	2015	2020	2025	M&2030	2035
Potable and Raw Water <i>From Tables 3:4-1 and 3:4-2</i>	919	1,097	1,145	1,195	1,249
Recycled Water Demand <i>From Table 3:6-4</i>	30	30	30	30	30
<b>TOTAL WATER DEMAND</b>	<b>949</b>	<b>1,127</b>	<b>1,175</b>	<b>1,225</b>	<b>1,279</b>
NOTES:					



### 3.03.2 Distribution System Water Losses

#### Law

*Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: . . . (J) Distribution system water loss. (10631(e)(1) and (2)).*

*For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.*

*The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association (10631(e)(3)).*

**Table 3:4-4** includes the results of BVCSD’s water system audit for 2015. The audit was completed according to Appendix L of the Guidebook using the AWWA’s Water Audit Software. A copy of the BVCSD’s water audit reporting worksheet is included in **Appendix H**.

Table 3:4-4 BVCSD: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2015	53.77
NOTES: Water loss from AWWA Water Audit Reporting Worksheet (see Appendix H)	

### 3.03.3 Water Use for Lower Income Households/Future Water Savings

#### Law

*The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier (10631.1(a)).*

*If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area (10631 (e)(4)(A)).*

*. . . Water use projections that do not account for these water savings shall be noted of that fact (10631 (e)(4)(B)).*

The projection for affordable residential housing needs (combined low income and very low income) was estimated to be 38% of the total Residential Housing Needs Allocation for the City of Tehachapi in the 2014

Regional Transportation Plan prepared by Kern COG. Therefore, due to its proximity to the City of Tehachapi, low income housing water use needs for single-family and multifamily residential uses within the BVCS D are estimated to be 38% of its total residential water use.

The water use projections for the BVCS D do not account for water savings from codes, standards, ordinances, or transportation and land use plans. See **Table 3:4-5**.

Table 3:4-5 BVCS D: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections?	No
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

### 3.03.4 Climate Change

See **Section 2.03.3**.

## 3.04 Baselines and Targets

### 3.04.1 Updating Calculations from 2010 UWMP

#### Law

*An urban retail water supplier shall include in its urban water management plan due in 2010 . . . the baseline daily per capita water use . . . along with the bases for determining those estimates, including references to supporting data (10608.20(e)).*

*An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan (10608.20(g)).*

The same target method is proposed for use in this RUWMP Update that was used for the 2010 Plan. This section summarizes the calculations for the BVCS D. The calculations for the Regional Alliance are described in **Section 2.04**. The SB X7-7 verification form tables for the Regional Alliance and the BVCS D are included in **Appendix G**.

### 3.04.2 Baseline Periods

#### Law

*“Base daily per capita water use” means any of the following:*

- 4) *The urban retail water supplier’s estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*
- 5) *For an urban retail supplier that meets at least 10 percent of its measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a*

*maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*

- 6) *For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year reporting period ending no earlier than December 31, 2007, and no later than December 31, 2010 (10608.12(b)).*

The BVCS D will utilize the same baseline period (2000 – 2009) as used in the 2010 RUWMP as shown in their **SB X7-7 Table 1**.

### **3.04.3 Service Area Population**

#### **Law**

*When calculating per capita values for the purposes of this chapter, an urban water retailer shall determine population using federal, state, and local population reports and projections (10608.20(f)).*

The BVCS D population estimates were developed based on the persons per connection method and census data for 2000 and 2010 for the Bear Valley Springs CDP. Population per connection was calculated at 2.16 based on 2000 census data and 2.21 based on 2010 census data per the 2010 RUWMP. Population estimates for the BVCS D are shown in its **SB X7-7 Table 3**.

### **3.04.4 Gross Water Use**

#### **Law**

*“Gross Water Use” means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:*

- 5) *Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier*
- 6) *The net volume of water that the urban retail water supplier places into long term storage*
- 7) *The volume of water the urban retail water supplier conveys for use by another urban water supplier*
- 8) *The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24 (10608.12(g)).*

BVCS D's gross water use as shown in its **SB X7-7 Table 4** consists of its groundwater well production, with the exception of water pumped directly from wells to lakes for recreational use.

### **3.04.5 Baseline Daily Per Capita Water Use**

BVCS D's baseline daily per capita water use (calculated by dividing the gross water use by the service area population) is shown for each of the baseline years in its **SB X7-7 Table 5**.

### 3.04.6 2015 and 2020 Targets

The 2020 Target for the BVCS D was calculated using Target Method 3 (95% of the Regional Target from the 20 x 2020 Water Convention Plan, State of California Agency Team, 2010) as shown in its **SB X7-7 Table 7E**. The confirmation of the 2020 Target is shown in its **SB X7-7 Table 7F**. The baseline and target information for BVCS D is summarized in **Table 3:5-1**. The 2020 target calculated for the BVCS D is the same as calculated for the Regional Alliance.

Table 3:5-1 Baselines and Targets Summary <i>Bear Valley CSD</i>					
Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	2000	2009	196	187	179
5 Year	2004	2008	189		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES: See BVCS D SB X7-7 Tables in Appendix G.					

### 3.04.7 2015 Compliance Daily per Capita Water Use (GPCD)

#### Law

*“Compliance daily per capita water use” means the gross water use during the final year of the reporting period (10608.12(e)).*

*Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015 (10608.24(a))*

BVCS D is in compliance with the 2015 Interim Target as shown in **Table 3:5-2**. BVCS D has also achieved compliance with the 2020 Target. BVCS D’s daily per capita water use for 2015 (110 gpcd) is a reduction of 44% from its average per capita water usage for the 2000 to 2009 baseline period (196 gpcd), and is about 39% lower than its 2020 Target (179 gpcd).

Table 3:5-2: 2015 Compliance <i>Bear Valley CSD*</i>		
Actual 2015 GPCD	2015 Interim Target GPCD	Did Supplier Achieve Targeted Reduction for 2015? Y/N
110	187	Yes
*All values are in Gallons per Capita per Day (GPCD)		
NOTES: See BVCS D SB X7-7 Tables in Appendix G.		

## 3.05 System Supplies

### 3.05.1 Purchased or Imported Water

The BVCS D purchases imported SWP water from TCCWD to meet demands in excess of its groundwater supplies. SWP purchases are delivered to the BVCS D through groundwater recharge.

Deliveries of imported SWP water for 2015 are included in **Table 3:6-8** in **Section 3.05.9**. Projections of future SWP purchases are included in **Table 3:6-9** in **Section 3.05.9**. TCCWD's imported SWP supply is described in **Section 2.05.1**.

### 3.05.2 Groundwater

*If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the Plan:*

*A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management (10631(b)(1)).*

*A description of any groundwater basin or basins from which the urban water supplier pumps groundwater (10631(b)(2)).*

*For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board (10631(b)(2)).*

*A description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree (10631(b)(2)).*

*For basins that have not been adjudicated, (provide) information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition (10631(b)(2)).*

*A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records (10631(b)(3)).*

The BVCS D pumps groundwater from the Bear Valley Groundwater Basin and the Cummings Basin. The Bear Valley Basin is located entirely within the boundary of the BVCS D. The BVCS D's Groundwater Management Plan (included in **Appendix E**) estimates the safe yield of the Bear Valley Basin to be 600 acre-feet per year (200 acre-feet per year for their alluvial wells and 400 acre-feet per year for their bedrock wells). This water is the BVCS D's least expensive supply and is pumped preferentially. Groundwater quality is generally of good quality with few issues. There are two alluvial wells that are unused for potable water due to high nitrates and two bedrock wells that are unused for potable water due to high radioactivity issues.

BVCS D purchases surface water from TCCWD that is recharged within the Cummings Basin. This water is recovered from wells within the Cummings Basin and exported for delivery to its service area. More information on the Cummings Basin is included in **Section 2.05.2**.

BVCSD’s groundwater supply is obtained through 18 production wells, 5 of which are located in the Cummings Basin. Due to the limited groundwater supply available in the Bear Valley Basin, additional water supplies to meet future growth will need to come from expansion of the Cummings Basin conjunctive use operations. Five non-potable wells are used to pump groundwater for lake fill.

BVCSD’s total groundwater pumping for the last five years is included in **Table 3:6-1**.

Table 3:6-1 BVCSD: Groundwater Volume Pumped						
Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Bear Valley Basin	187	158	153	162	167
Fractured Rock	Bear Valley Basin	404	353	377	323	378
Alluvial Basin	Cummings Basin	343	555	642	568	374
<b>TOTAL</b>		<b>934</b>	<b>1,066</b>	<b>1,172</b>	<b>1,053</b>	<b>919</b>
NOTES: Includes pumping for lake fill and recovery of previously banked SWP supplies.						

### 3.05.3 Surface Water

BVCSD does not utilize surface water as a source of its urban water supply.

### 3.05.4 Stormwater

BVCSD does not utilize stormwater as a source of its urban water supply.

### 3.05.5 Wastewater and Recycled Water

#### Law

*The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier’s service area. (16033)*

BVCSD collects and treats wastewater from within its service area. Recycled water from the treatment plant is used for irrigation of a golf course from early spring to late fall. Treated effluent that does not go to the golf course is discharged for recharge within Sycamore Creek. These uses of wastewater and recycled water are expected to continue in the future.

The wastewater collected within the BVCSD service area for 2015 is summarized in **Table 3:6-2**.

Table 3:6-2 BVCS D: Wastewater Collected Within Service Area in 2015						
Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected in 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party?
Bear Valley CSD	Metered	55	Bear Valley CSD	WWTP	Yes	No
<b>Total Wastewater Collected from Service Area in 2015:</b>		<b>55</b>				
NOTES:						

Wastewater treatment and discharge within the BVCS D service area for 2015 is summarized in **Table 3:6-3**. Current and projected use of recycled water within the BVCS D service area is summarized in **Table 3:6-4**. A comparison of the projected recycled water use from the 2010 RUWMP and the actual recycled water use for 2015 is included in **Table 3:6-5**. Since expansion of recycled water use is not planned, **Table 3:6-6** is not included in this report.

Table 3:6-3 BVCS D: Wastewater Treatment and Discharge Within Service Area in 2015						
Wastewater Treatment Plant Name	Method of Disposal	Treatment Level	2015 volumes			
			Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Bear Valley CSD	Golf course irrigation	Tertiary	30		30	
Bear Valley CSD	Sycamore Creek outfall	Tertiary	25	25		
<b>Total</b>			<b>55</b>	<b>25</b>	<b>30</b>	<b>0</b>
NOTES: Distribution of wastewater effluent discharges estimated by the BVCS D.						

Table 3:6-4 BVCSD: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area						
Name of Agency Producing (Treating) the Recycled Water:	BVCSD					
Name of Agency Operating the Recycled Water Distribution System:	BVCSD					
Supplemental Water Added in 2015	None					
Beneficial Use Type	Level of Treatment	2015	2020	2025	2030	2035
Golf course irrigation	Tertiary	30	30	30	30	30
<b>Total:</b>		<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>
NOTES:						

Table 3:6-5 BVCSD: 2010 RUWMP Recycled Water Use Projection Compared to 2015 Actual		
Use Type	2010 Projection for 2015	2015 actual use
Golf course irrigation	35	30
<b>Total</b>	<b>35</b>	<b>30</b>
NOTES:		

### 3.05.6 Desalinated Water Opportunities

#### Law

*Describe the opportunities for development of desalinated water, including but not limited to ocean water, brackish water, and groundwater, as a long-term supply. (10631(h))*

BVCSD has no plans for the development of desalinated water supplies within the planning horizon of this RUWMP. Desalination is not a cost-effective solution for the water supply needs of the GTA due to the water resource opportunities that are available at a much lower cost.

### 3.05.7 Exchanges and Transfers

#### Law

*Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis. (10631(d))*

The BVCSD cannot transfer or exchange its groundwater supplies. Discussion of transfer opportunities on a regional basis is included in **Section 2.05.7**.



### 3.05.8 Future Water Projects

#### Law

*(Describe) all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program (10631(g)).*

BVCSD will develop and implement future water projects as necessary to maintain its groundwater supplies to meet its customers' potable water demands. The BVCSD is investigating options to provide treatment to wells that it currently cannot use due to high radioactivity issues. Discussion of future regional water projects for the GTA is included in **Section 2.05.8**.

### 3.05.9 Summary of Existing and Planned Sources of Water

#### Law

*Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a) (10631(b)).*

*(Provide) a detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records (10631(b)(4)).*

BVCSD's existing and planned sources of water are summarized in **Tables 3:6-8 and 3:6-9**. Projections for future purchases of SWP supplies are estimated to meet projected demands.

Table 3:6-8 BVCSD: Water Supplies — Actual			
Water Supply Description	Additional Detail on Water Supply	2015	
		Actual Volume	Water Quality
Purchased or Imported Water	Conjunctive use <sup>1</sup>	372	Raw Water
Groundwater	From District Wells	547	Drinking Water
Recycled Water	WTPP Effluent	30	Recycled Water
<b>Total</b>		<b>949</b>	
NOTES:			
1. From TCCWD BWRA Summary			

Table 3:6-9 BVCSD: Water Supplies — Projected					
Water Supply Description	Additional Detail on Water Supply	Projected Water Supply <i>Reasonably Available Volume</i>			
		2020	2025	2030	2035
Groundwater	Service to overlying lands in Cummings Basin	22	22	22	22
Groundwater	Bear Valley Basin safe yield	600	600	600	600
Purchased or Imported Water	Purchased SWP supplies <sup>1</sup>	475	523	573	627
Recycled Water	Golf course irrigation	30	30	30	30
<b>Total</b>		<b>1,127</b>	<b>1,175</b>	<b>1,225</b>	<b>1,279</b>
NOTES:					
1. Purchased SWP supplies are estimated to meet projected demands.					

### 3.06 Water Supply Reliability Assessment

#### 3.06.1 Constraints on Water Sources

##### Law

*For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable (10631(c)(2)).*

*The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability (10634).*

Due to the ongoing management of its groundwater supplies, the BVCSD anticipates that adequate groundwater supplies would be available at a consistent level of use during the planning horizon of this Plan.

#### 3.06.2 Reliability by Type of Year

##### Law

*Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following: (A) an average water year, (B) a single dry water year, (C) multiple dry water years (10631(c)(1)).*

The BVCSD relies on groundwater pumping to meet the demands of its customers, which includes pumping of groundwater from the Bear Valley Basin and recovery of previously recharged SWP supplies from the Cummings Basin. The BVCSD anticipates that the safe yield and water quality of the Bear Valley Basin will remain at close to current conditions for the next twenty years and beyond. The reliability of SWP supplies is discussed in **Section 2:06.2**. With average SWP deliveries at 60% long-term, the BVCSD anticipates that sufficient supplies will be reasonably available for purchase from the TCCWD as needed by the BVCSD.

The BVCSD currently purchases water supplies from the TCCWD in dry years. Starting in 2017, the BVCSD will begin accumulating banked supplies for use in dry years. The BVCSD will purchase additional water supplies from the TCCWD when available and develop a Banked Water Reserve Account (BWRA) equal to, at a minimum, five times the annual average of the BVCSD’s SWP water demand over the previous five years. It is anticipated that water supplies through the BWRA will be available for recovery by the BVCSD during the single dry year and multiple dry years scenarios.

The reliability of BVCSD’s groundwater supplies for the various water year types are summarized in **Table 3:7-1**.

Table 3:7-1 BVCSD: Basis of Water Year Data		
Year Type	Base Year	Available Supplies if Year Type Repeats
		% of Average Supply
Average Year	--	100%
Single-Dry Year	2014	100%
Multiple-Dry Years 1st Year	2013	100%
Multiple-Dry Years 2nd Year	2014	100%
Multiple-Dry Years 3rd Year	2015	100%
<p>NOTES:            The BVCSD pumps groundwater to meet its demands. Imported SWP supplies are purchased and recharged in the Cummings Basin to meet the District's projected demands beyond the safe yield of the Bear Valley Basin. It is anticipated that 100% of the average groundwater supplies will be available in every year.</p>		

### 3.06.3 Supply and Demand Assessment

#### Law

*Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional or local agency population projections within the service area of the urban water supplier (10632(c)).*

The comparison of BVCSD’s supply and demand projections for the normal year, single dry year and multiple dry year scenarios are shown in **Tables 3:7-2, 3:7:3, and 3:7-4** respectively.

Table 3:7-2 BVCSD: Normal Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals <i>(from Table 3:6-9)</i>	1,127	1,175	1,225	1,279
Demand totals <i>(from Table 3:4-3)</i>	1,127	1,175	1,225	1,279
Difference	0	0	0	0
NOTES:				

Table 3:7-3 BVCSD: Single Dry Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals	1,127	1,175	1,225	1,279
Demand totals	1,127	1,175	1,225	1,279
Difference	0	0	0	0
NOTES:				

Table 3:7-4 BVCSD: Multiple Dry Years Supply and Demand Comparison					
Description	2020	2025	2030	2035	
First year	Supply totals	1,127	1,175	1,225	1,279
	Demand totals	1,127	1,175	1,225	1,279
	Difference	0	0	0	0
Second year	Supply totals	1,127	1,175	1,225	1,279
	Demand totals	1,127	1,175	1,225	1,279
	Difference	0	0	0	0
Third year	Supply totals	1,127	1,175	1,225	1,279
	Demand totals	1,127	1,175	1,225	1,279
	Difference	0	0	0	0
NOTES:					

### 3.06.4 Regional Water Supply Reliability

#### Law

*An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions (10620(f)).*

The urban water suppliers in the Greater Tehachapi area have been working together for many years to manage available water supplies on a regional basis. The Water Availability Preservation Committee meets on a regular basis to plan for and manage available water supplies. More details regarding these efforts are included in other sections of the Plan.

### 3.07 Water Shortage Contingency Planning

#### 3.07.1 Stages of Action

#### Law

*The plans shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:*

*Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50% reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage (10631(a)(1))*

The BVCSD Water Shortage Contingency Plan is included in **Appendix F**. Water shortage regulations have been adopted in order to reduce consumption and reserve a sufficient supply of water for public health and safety. BVCSD also has in place more aggressive measures to support water supply interruptions in excess of 30% and up to 50% from catastrophic failure due to earthquake fire or extensive power failure.

The water shortage regulations include three stages of implementation. Actions in each stage would be undertaken by BVCSD and/or its consumers. When staff determines that water supply condition warrants activating a water alert or stage change, the General Manager will approve and notify the board. Presently there are not any defined triggers (i.e., water allocations, snow pack levels, etc.) for moving from one stage to the next. Any decision to change stages will however be based on the combination of water supplies, weather conditions, trends in water usage, groundwater levels, and water production.

Conservation measures gradually increase with each stage. The consumers are given opportunities to voluntarily reduce consumption in Stage 1. If these efforts are not sufficient, then Stage 2 is implemented which includes additional mandatory and voluntary measures. If these are not sufficient, then Stage 3, which includes several other mandatory regulations, is implemented.

The State of California requires that an urban water shortage contingency plan include up to a 50% reduction in consumption. It is not known how much the existing water shortage regulations will reduce consumption. The mandatory measures alone would not reduce consumption by 50% and this goal could probably only be achieved with strict enforcement and significant voluntary reductions.

The stages of action from BVCSD's Water Shortage Contingency Plan are summarized in **Table 3:8-1**.

Table 3:8-1 BVCSD Stages of Water Shortage Contingency Plan		
Stage	Percent Supply Reduction <sup>1</sup>	Water Supply Condition
Stage 1	See Notes	No Defined Trigger. District staff determines when to declare water shortage stages.
Stage 2	See Notes	No Defined Trigger. District staff determines when to declare water shortage stages.
Stage 3	See Notes	No Defined Trigger. District staff determines when to declare water shortage stages.
<sup>1</sup> One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
<p>NOTES:            BVCSD is completely supplied by groundwater. The decision to declare a water shortage stage is based on the combination of water supplies, weather conditions, water usage trends, groundwater levels, water tank levels, and water production. A 50% reduction in supply would be addressed through Stage 3.</p>		

### 3.07.2 Prohibitions on End Users/Consumption Reduction Methods

#### Law

*Additional, mandatory prohibitions against specific water use practices during water shortages, including but not limited to, prohibiting the use of potable water for street cleaning (10632(a)(4)).*

*Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply (10632(a)(5)).*

The prohibitions on end users for the various stages of the BVCSD's Water Shortage Contingency Plan are summarized in **Table 3:8-2**.

Consumption Reduction Methods are summarized in **Table 3:8-3**. Water conservation surcharges were adopted by the Board in 2014. See **Section 3.07.5**.

**Table 3:8-2 BVCS D: Restrictions and Prohibitions on End Uses**

Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1	Landscape - Restrict or prohibit runoff from landscape irrigation		No
1	Landscape - Prohibit certain types of landscape irrigation	Use of drip irrigation	No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner		No
1	Other - Prohibit use of potable water for washing hard surfaces		No
1	Other - Require automatic shut of hoses	Shutoff valves for vehicle washing	No
1	Other	Use of low flow shower heads and toilets	No
1	Other	Water consumption reductions for bathing, hand dishwashing and irrigation	No
1	Other	Running only full loads in the washing machine	No
1	CII - Restaurants may only serve water upon request	At the Oak Tree Country Club and Mulligan Room	No
2	Other	All Stage I Restrictions apply	Yes
2	Landscape - Limit landscape irrigation to specific times	Watering permitted only Monday through Saturday between 5 PM and 8 AM. Watering Prohibited on Sundays	Yes
2	Other	No BVCS D construction water permitted unless metered	Yes
2	Other - Require automatic shut off of hoses	Vehicle washing prohibited without an automatic shutoff valve	Yes
3	Other	All Stage I and Stage II Restrictions apply	Yes
3	Other	High volume water users (above 4,000 CF) shall submit water use curtailment plans for at least 30% reduction	Yes

**NOTES:**

Any person violating any of the provisions of this chapter or willfully and knowingly refusing to comply with the rules, regulations, and determinations of BVCS D shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished according to Section 1-4-1 of the Bear Valley CSD Code

Table 3:8-3 BVCSD: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference
1, 2, 3	Expand Public Information Campaign	District informs the public of the desired reductions
1, 2, 3	Implement or Modify Drought Rate Structure or Surcharge	Rates and surcharges shall be as established by resolution of the board of directors <sup>1</sup>
NOTES:		
1. Water conservation rate surcharges were adopted by the BVCSD board in 2014. See Section 3.07.5.		

### 3.07.3 Penalties, Charges, and Other Enforcement of Prohibitions

#### Law

*Penalties or charges for excessive use, where applicable 10632(a)(6).*

The BVCSD's Water Shortage Contingency Plan allows for the imposition of penalties as follows:

"Remedies for violations of this chapter are not exclusive and may be imposed cumulatively in the discretion of the district. For example, a violator may pay a surcharge, be subject to a flow restrictor, have water service be discontinued, and be prosecuted criminally."

### 3.07.4 Determining Water Shortage Reductions

#### Law

*A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis 10632(a)(9).*

The BVCSD's deliveries are entirely metered. The meter readings will be used to monitor the actual reductions in water usage in accordance with the water shortage contingency plan.

### 3.07.5 Revenue and Expenditure Impacts

#### Law

*An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments (10632(7)).*

The BVCSD has established surcharges for basic residential water rates when water shortage conditions are declared. The purposes of the surcharge include to encourage additional water conservation and to help defray the costs of constructing, maintaining and operating the District's water system as reduced usage of water lowers the revenues received. The currently adopted surcharges are as follows:



1. Stage One Condition Schedule (Moderate Water Shortage): During a stage one condition, the basic normal water rate schedule for residential customers will be increased by ten percent (10%) for all water used each month in excess of 10 units (1,000 cubic feet).
2. Stage Two Condition Schedule (Severe Water Shortage): During a stage two condition, the basic normal water rate schedule for residential customers will be increased by twenty percent (20%) for all water used each month in excess of 10 units (1,000 cubic feet).
3. Stage Three Condition Schedule (Critical Water Shortage): During a stage three condition, the basic normal water rate schedule for residential customers will be increased by thirty percent (30%) for all water used each month in excess of 10 units (1,000 cubic feet).

### 3.07.6 Resolution or Ordinance

#### Law

*A draft water shortage contingency resolution or ordinance (10632(8)).*

The BVCSD's water shortage contingency plan (Ordinance Code 7-4) is included in **Appendix F**.

### 3.07.7 Catastrophic Supply Interruption

#### Law

*Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster (10632(a)(3)).*

BVCSD has written guidelines in its Emergency Response Plan to address a catastrophic non-drought related interruption in water supply. The water shortage regulations would be used to reduce consumption after a catastrophic supply interruption until more stringent methods such as strict water rationing could be put in place.

The emergency activities that are undertaken by BVCSD depend upon the severity of the problem and how quickly the problem can be remedied. Possible catastrophes affecting water supply may include:

- Widespread Power Outage
- Local Earthquake, Landslide, or Flash Flood
- Aqueduct Failure (due to earthquake or other circumstances)
- Delta Levee Failure

In the event of power loss, BVCSD has emergency power generation equipment that can be used to maintain water operations. In the event of an earthquake or other disaster, BVCSD personnel will survey and assess damage and respond accordingly with repairs. Work will be scheduled to minimize the impacts to potable water system customers.

Failure of the Aqueduct or Delta levees is discussed in **Section 2.07.6**

### 3.07.8 Minimum Supply Next Three Years

#### Law

*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's water supply (10632(a)(2)).*

The BVCSD's minimum supply for the next three years is assumed to be the same as its 2015 supply as shown in **Table 3:8-4**.

Table 3:8-4 BVCSD: Minimum Supply Next Three Years			
	2016	2017	2018
Available Water Supply	919	919	919
NOTES: Minimum available supply is assumed to be the same as utilized in 2015.			

### 3.08 Demand Management Measures

#### Law

*...The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20 (10631(f)(1)(A)).*

*The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:*

- i. Water waste prevention ordinances*
- ii. Metering*
- iii. Conservation pricing*
- iv. Public education and outreach*
- v. Programs to assess and manage distribution system real loss*
- vi. Water conservation program coordination and staffing support*
- vii. Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.*

#### 3.08.1 Water Waste Prevention Ordinances

BVCSD Ordinance Code 7-1-6 (B) Water Waste states "No customer shall knowingly permit leaks or waste of water. Where water is wastefully or negligently used on a customer's premises seriously affecting the general service, the district may discontinue the service if such conditions are not corrected within five (5) days after giving the customer written notice."

### **3.08.2 Metering**

BVCSD charges all customers based on metered readings and established rate schedules. All current and new connections including temporary connections are required to be metered and billed per volume of use. Existing meters are checked on a regular basis for leakage and accuracy.

### **3.08.3 Conservation Pricing**

The BVCSD's rate schedule includes a monthly service charge and a tiered rate structure for water volume charges (quantity rates increase with higher volumes of water usage). The BVCSD board has also adopted water conservation surcharges for its residential water rates. See **Section 3.07.5**.

### **3.08.4 Public Education and Outreach**

The TCCWD provides Public Education and Outreach on a regional basis for all of the participating retail urban water suppliers. See **Section 2.08.4** for a description of these efforts.

### **3.08.5 Programs to Assess and Manage Distribution System Real Loss**

The BVCSD monitors pumping rates and water sales to identify average system water loss. Unusual water loss is investigated for possible leakage. BVCSD field personnel have the necessary equipment to locate and repair leaks in a timely manner. Customer water usage is also recorded and monitored in order to identify anomalies in water sales and usage that may be attributable to leakage or waste.

### **3.08.6 Water Conservation Program Coordination and Staffing Support**

The TCCWD provides water conservation program coordination and staffing support for all of the participating retail urban water suppliers. See **Section 2.08.6**.

### **3.08.7 Other Demand Management Measures**

The BVCSD's demand management measures are discussed in other sections of the Plan.

### **3.08.8 Implementation over the Past Five Years**

#### **Law**

*(Provide) a narrative description of that addresses the nature and extent of each water demand management measure implemented over the past five years (10631(f)(1)(A)).*

See **Section 2.08** for narrative descriptions of the nature and extent of the demand management measures implemented by the TCCWD on behalf of the participating agencies over the past five years.

### **3.08.9 Planned Implementation to Achieve Water Use Targets**

#### **Law**

*The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20 (10631(f)(1)(A)).*

While the BVCS D has achieved its water use reduction targets, it will continue with the implementation of its existing DMMs and look for ways to improve water use efficiency.

### 3.08.10 Members of the California Urban Water Conservation Council

#### Law

*For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivision (f) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California" dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum (10631(i)).*

BVCS D is a member of the California Urban Water Conservation Council (CUWCC) and a signatory to the MOU.

### 3.09 Plan Adoption, Submittal and Implementation

#### 3.09.1 Public Notice

#### Law

*Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision (10621(b)).*

*Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area (10642).*

The efforts BVCS D has taken to involve appropriate agencies and the general public in the planning process are summarized below. The City of Tehachapi is a participant in this RUWMP. No separate notice was provided to the City. Copies of notices are included in **Appendix A**.

For the 2015 Plan update, the public hearing was held on June 8, 2016. Accordingly, notice was provided as follows:

- Notice to County on February 24, 2016 (at least 60 days prior to hearing),
- Letter to Interested Parties (see **Section 2.02**) on May 18, 2016,
- Notice in local newspaper on May 18, 2016 and May 25, 2016 (per Gov. Code 6066 – 2 weeks in advance of hearing),
- Posted Draft 2015 RUWMP at BVCS D Office on May 18, 2016 (2 weeks prior to hearing), and
- Drafts of the plan were provided to the entities that requested such drafts.

### 3.09.2 Plan Adoption, Submittal, and Implementation

#### Law

*After the hearing, the plan shall be adopted as prepared or as modified after the hearing (10642).*

*An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016 (10621(d)).*

*The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan (10635(b)).*

*An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption (10644(a)(1)).*

*Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours. (10645).*

*The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640) (10621(c)).*

*Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption (10644(a)(1)).*

The 2015 RUWMP update plan was adopted by the BVCS D at the Regular Meeting of the Board of Directors on June 9, 2016. A public hearing on the update of the Regional Urban Water Management Plan was held on June 8, 2016. The intent of the Public Hearing was to gather input from the public that is served by BVCS D as well as other interested entities. Written and verbal comments received during the public hearing process have been addressed as appropriate in the final Plan. A copy of the resolution adopting the 2015 RUWMP update is included in **Appendix B**.

The Plan will be submitted to the California Department of Water Resources by July 1, 2016 and to the California State Library and the County within 30 days of adoption by the BVCS D on June 9, 2016.

Commencing no later than 30 days after July 1, 2016, the BVCS D will have a copy of the 2015 RUWMP available for public review at the BVCS D Office (see address below) during normal business hours.

Bear Valley CSD  
28999 South Lower Valley Road  
Tehachapi, CA 93561

The 2015 RUWMP will also be posted on the BVCS D's website at [www.bvcسد.com](http://www.bvcسد.com).

# Section 4 City of Tehachapi

## 4.01 Plan Preparation

### 4.01.1 Agency Identification

The City of Tehachapi is a retail water supplier. In 2015, its service area consisted of 3,085 municipal connections and it supplied a volume of 1,737 acre-feet of water to its service area. The City's information in the RUWMP is presented in Calendar Year format and water quantities are presented in Acre Feet. See **Table 4:2-1**.

Table 4:2-1 COT: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015 <sup>1</sup>
1510020	City of Tehachapi	3,085	1,737
<b>TOTAL</b>		<b>3,085</b>	<b>1,737</b>
NOTES:			
1. City of Tehachapi groundwater production.			

### 4.01.2 Coordination

#### Law

*Each urban water supplier shall 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 (10620(d)(2)).*

*Each urban water supplier shall encourage the 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 (10642).*

*Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c) (10631(j)).*

*Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by section 10642, notify any city or*

*county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan (10621(b)).*

The City purchases imported SWP water from the TCCWD to augment its groundwater supplies. TCCWD was informed of the City’s water use projections as a part of the RUWMP development process (See **Table 4:2-4**). The Kern County Planning Department was provided notice that an update to the RUWMP was being prepared and notice of the public hearing on the Plan. Further information on coordination of the Plan and public involvement is included in **Section 4.09**. Copies of notices are included in **Appendix A**.

<b>Table 4:2-4 COT: Water Supplier Information Exchange</b>
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name
Tehachapi-Cummings County Water District
NOTES: TCCWD is a participant in this RUWMP.

## **4.02 System Description**

### **4.02.1 General Description**

#### **Law**

*Describe the service area of the supplier (10631(a)).*

The City of Tehachapi was incorporated in 1909. The City’s water service area covers approximately 4,800 acres, not including the CCI which operates its own water and wastewater systems. The City operates six wells serving five pressure zones. Land use within the City is primarily residential, commercial, light industrial, schools, and parks. The City also provides wastewater collection and treatment for the lands within its service area. The service area boundary for the City is shown on **Figure 2-1** in **Section 2.02.1**, which also includes more information on the Greater Tehachapi area.

### **4.02.2 Service Area Climate**

#### **Law**

*Describe the climate of the supplier (10631(a)).*

See **Section 2.02.2**.

### **4.02.3 Service Area Population**

#### **Law**

*(Describe the service area) current and projected population . . . The projected population estimates shall be based upon data from the state, regional, or local service*

agency population projections within the service area of the urban water supplier . . . (10631(a)).

. . . (population projections) shall be in five-year increments to 20 years or as far as data is available (10631(a)).

Describe . . . other demographic factors affecting the supplier's water management planning (10631(a)).

The State of California Department of Finance (DOF) prepares reports with population estimates for Cities on an annual basis. This population estimate was used for the City of Tehachapi for 2015. Population projections for City for the years 2020 through 2035 were based on a 1.1% growth per year as included in 2014 Regional Transportation Plan prepared by Kern COG. See **Table 4:3-1**.

Table 4:3-1 COT: Population - Current and Projected					
Population Served	2015	2020	2025	2030	2035
	8,815	9,311	9,834	10,387	10,971
NOTES: 1. Population figures above do not include California Correctional Facility (CCI). 2. 2015 population for the City of Tehachapi from California DOF Population Estimate Report E-5. 3. Growth at 1.1% per year per KernCOG 2014 Regional Transportation Plan.					

### 4.03 System Water Use

#### 4.03.1 Water Use

##### Law

*Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: (A) Single-family residential; (B) Multifamily; (C) Commercial; (D) Industrial; (E) Institutional and governmental; (F) Landscape; (G) Sales to other agencies; (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; (I) Agricultural (10631(e)(1) and (2)).*

Water use data within the City of Tehachapi service area for 2015 is summarized in **Table 4:4-1**. The City water service area includes a variety of commercial, governmental, institutional, and industrial water users in addition to its residential customers. As a result, the City's per capita water usage is higher than the other retail water suppliers in the area which serve primarily residential customers. The City's per capita residential water usage for 2015 was about 100 gpcd.

2015 was an extremely dry year. Water use restrictions and water conservation measures were enacted by the City to meet the conservation standard set for the City by the State. The City makes no deliveries of water for saline intrusion barriers. Total water use for the City water service area in 2015 was 21% less than the water use in 2014 and 26% less than the water use in 2013.



Table 4:4-1 COT: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	811
Multi-Family		Drinking Water	175
Commercial	See Note 1	Drinking Water	233
Industrial		Drinking Water	16
Institutional/Governmental		Drinking Water	4
Landscape		Drinking Water	109
Other	Hydrant meters	Drinking Water	24
Other	Internal (Non-revenue)	Drinking Water	147
Sales/Transfers/Exchanges to other agencies	Sale to Union Pacific	Drinking Water	18
Losses		Drinking Water	236
<b>TOTAL</b>			<b>1,755</b>
NOTES:			
1. Includes: General Commercial, Hospital, Cemeteries, Churches, Hotel/Motels, Restaurants, and schools			

Table 4:4-2 includes projections of the City's water demands for the years 2020 through 2035 in five year increments. Projections for future water use are based on the projected population growth from Table 4:3-1 and a water use of 179 gpcd (the 2020 daily per capita water use target for the Regional Alliance).

Table 4:4-2 COT: Demands for Potable and Raw Water - Projected					
Use Type	Additional Description (as needed)	Projected Water Use			
		2020	2025	2030	2035
Other	Total Water Use for all Categories	1,867	1,972	2,083	2,200
<b>TOTAL</b>		<b>1,867</b>	<b>1,972</b>	<b>2,083</b>	<b>2,200</b>
NOTES: Projected water use estimated using the 2020 Target of 179 GPCD for the Regional Alliance.					

Table 4:4-3 summarizes the City's total water demands from Tables 4:4-1 and 4:4-2.

Table 4:4-3 COT: Total Water Demands					
	2015	2020	2025	2030	2035
Potable and Raw Water <i>From Tables 4:4-1 and 4:4-2</i>	1,755	1,867	1,972	2,083	2,200
Recycled Water Demand <i>From Table 4:6-4</i>	220	375	375	375	375
<b>TOTAL WATER DEMAND</b>	<b>1,975</b>	<b>2,242</b>	<b>2,347</b>	<b>2,458</b>	<b>2,575</b>
NOTES:					

#### 4.03.2 Distribution System Water Losses

##### Law

*Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: . . . (J) Distribution system water loss. (10631(e)(1) and (2)).*

*For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.*

*The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association (10631(e)(3)).*

**Table 4:4-4** includes the results of the City’s water system audit for 2015. The audit was completed according to Appendix L of the Guidebook using the AWWA’s Water Audit Software. A copy of the City’s water audit reporting worksheet is included in **Appendix H**.

Table 4:4-4 COT: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2015	259.9
NOTES: From AWWA Water Audit Worksheet WAS v5.0 (see Appendix H)	

### 4.03.3 Water Use for Lower Income Households/Future Water Savings

#### Law

*The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier (10631.1(a)).*

*If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area (10631 (e)(4)(A)).*

*. . . Water use projections that do not account for these water savings shall be noted of that fact (10631 (e)(4)(B)).*

The projection for affordable residential housing needs (combined low income and very low income) was estimated to be 38% of the total Residential Housing Needs Allocation for the City of Tehachapi in the 2014 Regional Transportation Plan prepared by Kern COG. Therefore, low income housing water use needs for single-family and multifamily residential uses within the City are estimated to be 38% of its total residential water use.

The water use projections for the City do not account for water savings from codes, standards, ordinances, or transportation and land use plans. See **Table 4:4-5**.

Table 4:4-5 COT: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections?	No
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

### 4.03.4 Climate Change

See **Section 2.03.3**.

## 4.04 Baselines and Targets

### 4.04.1 Updating Calculations from 2010 UWMP

#### Law

*An urban retail water supplier shall include in its urban water management plan due in 2010 . . . the baseline daily per capita water use . . . along with the bases for determining those estimates, including references to supporting data (10608.20(e)).*

*An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan (10608.20(g)).*

The same target method is proposed for use in this RUWMP Update that was used for the 2010 Plan. This section summarizes the calculations for the City. The calculations for the Regional Alliance are described in **Section 2.04**. The SB X7-7 verification form tables for the Regional Alliance and the City are included in **Appendix G**.

#### 4.04.2 Baseline Periods

##### Law

*“Base daily per capita water use” means any of the following:*

- 7) *The urban retail water supplier’s estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*
- 8) *For an urban retail supplier that meets at least 10 percent of its measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*
- 9) *For the purposes of Section 10608.22, the urban retail water supplier’s estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year reporting period ending no earlier than December 31, 2007, and no later than December 31, 2010 (10608.12(b)).*

The City will utilize the same baseline period (2000 – 2009) as used in the 2010 RUWMP as shown in their **SB X7-7 Table 1**.

#### 4.04.3 Service Area Population

##### Law

*When calculating per capita values for the purposes of this chapter, an urban water retailer shall determine population using federal, state, and local population reports and projections (10608.20(f)).*

The City’s population estimates are from the State DOF Table E-8 as shown in its **SB X7-7 Table 3**.

#### 4.04.4 Gross Water Use

##### Law

*“Gross Water Use” means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:*

- 9) *Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier*
- 10) *The net volume of water that the urban retail water supplier places into long term storage*
- 11) *The volume of water the urban retail water supplier conveys for use by another urban water supplier*
- 12) *The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24 (10608.12(g)).*

The City's gross water use as shown in its **SB X7-7 Table 4** consists of its groundwater well production.

**4.04.5 Baseline Daily Per Capita Water Use**

The City's baseline daily per capita water use (calculated by dividing the gross water use by the service area population) is shown for each of the baseline years in its **SB X7-7 Table 5**.

**4.04.6 2015 and 2010 Targets**

The City's 2020 target is calculated using Target Method 1 (20% reduction in baseline water use) as shown in its **SB X7-7 Table 7A**. The confirmation of the 2020 Target is shown in its **SB X7-7 Table 7F**. The 2015 interim target for the City is 213 gpcd. The baseline and target information for the City is summarized in **Table 4:5-1**. The City's calculated targets are greater than the targets for the Regional Alliance of 179 gpcd for 2020 and 185 for 2015.

Table 4:5-1 COT Baselines and Targets Summary					
Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	2000	2009	239	215	191
5 Year	2004	2008	246		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES:					

**4.04.7 2015 Compliance Daily per Capita Water Use (GPCD)**

**Law**

*“Compliance daily per capita water use” means the gross water use during the final year of the reporting period (10608.12(e)).*

*Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015 (10608.24(a))*

The City is in compliance with its 2015 Interim Target as shown in **Table 4:5-2**. The City has also achieved compliance with its 2020 Target (191 gpcd) as well as the 2015 and 2020 targets for the Regional Alliance (185 and 179 gpcd). The City's daily per capita water use for 2015 (176 gpcd) is a reduction of 26% from its average per capita water usage for the 2000 to 2009 baseline period (239 gpcd), and is 8% lower than its 2020 Target.

Table 4:5-2: 2015 Compliance City of Tehachapi*		
Actual 2015 GPCD	2015 Interim Target GPCD	Did Supplier Achieve Targeted Reduction for 2015? Y/N
176	215	Yes
*All values are in Gallons per Capita per Day (GPCD)		
NOTES: From SB X7-7 Table 6		

## 4.05 System Supplies

### 4.05.1 Purchased or Imported Water

The City purchases imported SWP water from TCCWD to meet demands in excess of its groundwater allocation. These supplies are delivered to the City through groundwater recharge. The City has an agreement with the TCCWD to maintain a Banked Water Reserve Account (BWRA) equal to, at a minimum, five times the annual average of the City's SWP water demand over the previous five calendar years. The City recovers water from its BWRA whenever SWP supplies are unavailable for purchase (due to drought, damage to SWP or TCCWD facilities, or any other event). The City's estimated BWRA balance as of December 31, 2015 is 1,295 acre-feet.

Due to TCCWD's reduced SWP allocation, the City did not purchase any SWP water from TCCWD in 2015. Projections of future SWP purchases are included in **Table 4:6-9** in **Section 4.05.9**. TCCWD's imported SWP supply is described in **Section 2.05.1**.

### 4.05.2 Groundwater

#### Law

*If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the Plan:*

*A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management (10631(b)(1)).*

*A description of any groundwater basin or basins from which the urban water supplier pumps groundwater (10631(b)(2)).*

*For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board (10631(b)(2)).*

*A description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree (10631(b)(2)).*

*For basins that have not been adjudicated, (provide) information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most*

*current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition (10631(b)(2)).*

*A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records (10631(b)(3)).*

The City pumps groundwater from the adjudicated Tehachapi Groundwater Basin. Groundwater adjudication proceedings were initiated in 1966 in response to the decline in groundwater levels that had been experienced in the Tehachapi Basin since 1950. The Tehachapi Basin adjudication judgment was filed in 1971, with an amended judgment filed in 1973 (Superior Court Case No. 97210). The judgment created “allowed pumping allocations” for each party which restricted total annual extractions within the Tehachapi Basin to the safe yield of 5,500 acre-feet. Exports from the groundwater basin are not allowed.

A groundwater modeling study of the Tehachapi Basin was completed by Fugro West, Inc. in 2009 to provide a better understanding of the hydrogeology of the basin. The study found the safe yield of the basin to be about 5,317 acre-feet per year, with annual extractions averaging about 3,591 acre-feet. The TCCWD monitors selected wells seasonally for groundwater levels. Groundwater levels have increased since the adjudication and are now close to 1950 levels. The basin is not considered to be in a state of overdraft or projected to become overdrafted.

Allowed pumping allocations per the judgment are as follows:

- City of Tehachapi – 1,822 Acre-feet
- Golden Hills CSD – 874 Acre-feet
- Other pumpers – 2,828 Acre-feet.

The adjudication judgment documents are included in **Appendix E**. More information on the Tehachapi Basin is included in **Section 2.05.2**.

Some areas have experienced high levels of nitrogen (nitrate), with some of the City’s wells removed from service due to nitrogen levels exceeding the Maximum Contaminant Level (MCL). Measures have been undertaken to attempt to reduce nitrogen concentrations, including pumping wells with high nitrogen concentrations for agricultural use and improvements to the City’s Wastewater Treatment Facility.

In addition to its allowable pumping allocation from the adjudication judgment, the City purchases surface water from TCCWD that is recharged into the groundwater basin and available for future recovery by the City’s wells. The City’s groundwater supply is obtained through six wells serving five pressure zones. The City’s groundwater pumping for the last five years is included in **Table 4:6-1**.

Table 4:6-1 COT: Groundwater Volume Pumped						
Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Tehachapi Basin	1,953	2,150	2,362	2,202	1,755
<b>TOTAL</b>		<b>1,953</b>	<b>2,150</b>	<b>2,362</b>	<b>2,202</b>	<b>1,755</b>
NOTES: From COT groundwater production records						

#### 4.05.3 Surface Water

The City does not have sources of surface supply other than imported SWP supplies it purchases from TCCWD.

#### 4.05.4 Stormwater

The City does not intentionally divert stormwater directly for beneficial use.

#### 4.05.5 Wastewater and Recycled Water

##### Law

*The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area. (16033)*

The City collects and treats wastewater from within its service area. Recycled water from the treatment plant is used for agricultural irrigation and percolates in storage ponds within its reclamation area. Based on the City's Annual Reports for the Wastewater Treatment Facility, about 53 acres have been used for disposal of effluent by irrigation of alfalfa and pasture (grasses and poplar trees). The City primarily uses alfalfa for effluent reclamation, with pasture accounting for about 20 percent of the land area. Effluent irrigation on the reclamation area is limited to the period from April through September. The recycled water use for irrigation within the reclamation area during 2015 is estimated to be about 220 acre-feet. Over the last six years, the estimated irrigation demand of the reclamation fields has averaged about 250 acre-feet per year.

The City currently uses an average of 125 acre-feet per year of potable water for process water at its WWTP. It has installed a recycled water system to utilize effluent for process water at its WWTP which is planned to begin operations in 2016.

The wastewater collected within the City's service area for 2015 is summarized in **Table 4:6-2**. Wastewater treatment and discharge within the City service area for 2015 is summarized in **Table 4:6-3**. Current and projected use of recycled water within the City service area is summarized in **Table 4:6-4**.

Table 4:6-2 COT: Wastewater Collected Within Service Area in 2015						
Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected in 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWWP Area?	Is WWTP Operation Contracted to a Third Party?
City of Tehachapi	Metered	930	City of Tehachapi	City WWTP	Yes	No
<b>Total Wastewater Collected from Service Area in 2015:</b>		<b>930</b>				
NOTES: From COT WWTP Annual Report						



Table 4:6-3 COT: Wastewater Treatment and Discharge Within Service Area in 2015						
Wastewater Treatment Plant Name	Method of Disposal	Treatment Level	2015 volumes			
			Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
COT WWTP	Land disposal, agricultural irrigation	Secondary, Undisinfected	930	930	220	0
<b>Total</b>			<b>930</b>	<b>930</b>	<b>220</b>	<b>0</b>
NOTES: From COT WWTP Annual Report						

Table 4:6-4 COT: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area							
Name of Agency Producing (Treating) the Recycled Water:		City of Tehachapi					
Name of Agency Operating the Recycled Water Distribution System:		City of Tehachapi					
Beneficial Use Type	General Description of 2015 Uses	Level of Treatment	2015	2020	2025	2030	2035
Agricultural irrigation <sup>1</sup>	Alfalfa and pasture fields	Secondary, Undisinfected	220	250	250	250	250
Industrial use <sup>2</sup>	WWTP Process Water	Secondary, Undisinfected		125	125	125	125
<b>Total:</b>			<b>220</b>	<b>375</b>	<b>375</b>	<b>375</b>	<b>375</b>
NOTES:							
1. Future agricultural irrigation usage based on average agricultural irrigation demand over the last six years.							
2. Estimated to be 125 acre-feet per year based on historic potable water usage at WWTP. Projected to begin operations in 2016.							

A comparison of the City's projected recycled water use from the 2010 RUWMP and the estimated actual recycled water use for 2015 (as agricultural irrigation) is included in **Table 4:6-5**. The City is investigating options for other uses of recycled water including indirect potable reuse (IPR) and landscape irrigation. These programs are in the feasibility study phase and will involve improvements to the City's wastewater treatment processes. The time frame for implementation and probable increase in recycled water usage for these projects are unknown at this time (see **Table 4:6-6**).

Table 4:6-5 COT: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual		
Use Type	2010 Projection for 2015	2015 actual use
Agricultural irrigation	629	220
<b>Total</b>	<b>629</b>	<b>220</b>
NOTES: From 2010 UWMP and COT WWTP Annual Report		

Table 4:6-6 COT: Methods to Expand Future Recycled Water Use		
Name of Action/Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Landscape Irrigation Facilities	unknown	unknown
IPR, Groundwater Recharge	unknown	unknown
<b>Total</b>		<b>-</b>
NOTES: These programs are currently in the feasibility study phase. Implementation dates and expected increase in recycled water use are unknown at this time.		

#### 4.05.6 Desalinated Water Opportunities

##### Law

*Describe the opportunities for development of desalinated water, including but not limited to ocean water, brackish water, and groundwater, as a long-term supply. (10631(h))*

The City has no plans for the development of desalinated water supplies within the planning horizon of this RUWMP. Desalination is not a cost-effective solution for the water supply needs of the GTA due to the water resource opportunities that are available at a much lower cost.

#### 4.05.7 Exchanges and Transfers

##### Law

*Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis. (10631(d))*

The City cannot transfer or exchange its groundwater supplies outside of the groundwater basin. Discussion of transfer opportunities on a regional basis is included in **Section 2.05.7**.

**4.05.8 Future Water Projects**

**Law**

*(Describe) all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program (10631(g)).*

Through the IRWMP process, the City has entered into a partnership with the TCCWD and the Tehachapi Unified School District (TUSD) to implement the Snyder Well Intertie Project. This project will connect an existing City well, which was removed from City’s system for high nitrogen concentration levels, to the TCCWD’s non-potable water system. The well, located adjacent to Jacobsen Middle School, will provide water for irrigation at the school site and be available as an additional water supply source for the TCCWD when not used for the school. It is hoped that utilizing the well for irrigation will reduce the nitrogen concentrations to below the MCL and allow the well to be reconnected to the City’s system for potable use. Although this is a joint project with the TCCWD, it is included within the City’s portion of the Plan since it will decrease demand on the City’s potable water system. The Snyder Well Project is summarized in **Table 4:6-7**.

Discussion of future regional water projects for the GTA is included in **Section 2.05.8**.

**Table 4:6-7 COT: Expected Future Water Supply Projects or Programs**

Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency
Snyder Well Intertie Project	Yes	TCCWD, TUSD	Connection of existing City well with high nitrogen levels to TCCWD system for non-potable use. Removal of school irrigation system from City's potable water system.	2016	All year types	70

NOTES: The project will result in a reduction in water demand due to removal of the school's irrigation system from the City's potable water system.

#### 4.05.9 Summary of Existing and Planned Sources of Water

##### Law

Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a) (10631(b)).

(Provide) a detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records (10631(b)(4)).

The City's existing and planned sources of water are summarized in **Tables 4:6-8 and 4:6-9**. Projections for purchase of SWP supplies are estimated to meet projected demands.

Table 4:6-8 COT: Water Supplies — Actual				
Water Supply Source	Additional Detail on Water Supply	2015		
		Actual Volume	Water Quality	Total Right or Safe Yield <sup>1</sup>
Groundwater	Pumping from Tehachapi Basin	1,755	Drinking Water	1,822
<b>Total</b>		<b>1,755</b>		<b>1,822</b>
NOTES:				
1. Adjudicated pumping allocation. Does not include the City's right to recover its previously recharged SWP supplies.				

Table 4:6-9 COT: Water Supplies — Projected					
Water Supply Source	Additional Detail on Water Supply	Projected Water Supply <i>Reasonably Available Volume</i>			
		2020	2025	2030	2035
Groundwater	Tehachapi Basin Pumping Allocation	1,822	1,822	1,822	1,822
Purchased or Imported Water	Purchased SWP supplies <sup>1</sup>	45	150	261	378
Recycled Water	Agricultural irrigation	250	250	250	250
Recycled Water	WWTP process water	125	125	125	125
<b>Total</b>		<b>2,242</b>	<b>2,347</b>	<b>2,458</b>	<b>2,575</b>
NOTES:					
1. Purchased SWP supplies are estimated to meet projected demands.					

## 4.06 Water Supply Reliability Assessment

### 4.06.1 Constraints on Water Sources

#### Law

*For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable (10631(c)(2)).*

*The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability (10634).*

Due to the ongoing management of its groundwater supplies, the City anticipates that adequate groundwater supplies would be available at a consistent level of use during the planning horizon of this Plan.

### 4.06.2 Reliability by Type of Year

#### Law

*Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following: (A) an average water year, (B) a single dry water year, (C) multiple dry water years (10631(c)(1)).*

The COT relies on groundwater pumping from the adjudicated Tehachapi Basin to meet the demands of its customers. The City has an adjudicated allocation of 1,822 acre-feet/year in addition to the right to recovery of previously recharged SWP supplies purchased from the TCCWD in its BWRA. Based on ongoing monitoring of the Tehachapi Basin, the City anticipates that the safe yield and water quality will remain at close to current conditions for the next twenty years and beyond.

The reliability of SWP supplies is discussed in **Section 2:06.2**. With average SWP deliveries at 60% long-term, the City anticipates that sufficient supplies will be reasonably available for purchase from the TCCWD and will have been previously recharged for recovery during the average year, single dry year, and multiple dry years scenarios. As of December 31, 2015, the City's BWRA balance is estimated to be 1,295 acre-feet.

The reliability of the City's groundwater supplies for the various water year types are summarized in **Table 4:7-1**.

Table 4:7-1 COT: Basis of Water Year Data		
Year Type	Base Year	Available Supplies if Year Type Repeats
		% of Average Supply
Average Year	Base Year	100%
Single-Dry Year	2015	100%
Multiple-Dry Years 1st Year	2013	100%
Multiple-Dry Years 2nd Year	2014	100%
Multiple-Dry Years 3rd Year	2015	100%
NOTES: The City pumps groundwater from an adjudicated basin with an annual allocation of 1,822 acre-feet. The City purchases SWP from TCCWD to meet its demands in excess of its groundwater allocation and stores at least a 5-year supply. It is anticipated that the City can provide 100% of average supplies in every year.		

#### 4.06.3 Supply and Demand Assessment

##### Law

*Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional or local agency population projections within the service area of the urban water supplier (10632(c)).*

The comparison of City's supply and demand projections for the normal year, single dry year, and multiple dry year scenarios are shown in **Tables 4:7-2, 4:7-3, and 4:7-4** respectively. The City's purchase and recharge of imported SWP supplies are based on providing a five year supply beyond its adjudicated allocation. The City anticipates having groundwater supplies available to meet demands during the normal, single dry year, and multiple dry year scenarios.

Table 4:7-2 COT: Normal Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals (from Table 4: 6-9)	2,242	2,347	2,458	2,575
Demand totals (from Table 4: 4-3)	2,242	2,347	2,458	2,575
Difference	0	0	0	0
NOTES:				

Table 4:7-3 COT: Single Dry Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals	2,242	2,347	2,458	2,575
Demand totals	2,242	2,347	2,458	2,575
Difference	0	0	0	0
NOTES:				

Table 4:7-4 COT: Multiple Dry Years Supply and Demand Comparison					
Description		2020	2025	2030	2035
First year	Supply totals	2,242	2,347	2,458	2,575
	Demand totals	2,242	2,347	2,458	2,575
	Difference	0	0	0	0
Second year	Supply totals	2,242	2,347	2,458	2,575
	Demand totals	2,242	2,347	2,458	2,575
	Difference	0	0	0	0
Third year	Supply totals	2,242	2,347	2,458	2,575
	Demand totals	2,242	2,347	2,458	2,575
	Difference	0	0	0	0
NOTES:					

#### 4.06.4 Regional Water Supply Reliability

##### Law

*An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions (10620(f)).*

The urban water suppliers in the Greater Tehachapi area have been working together for many years to manage available water supplies on a regional basis. The Water Availability Preservation Committee meets on a regular basis to plan for and manage available water supplies. More details regarding these efforts are included in other sections of the Plan.

## 4.07 Water Shortage Contingency Planning

### 4.07.1 Stages of Action

#### Law

*The plans shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:*

*Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50% reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage (10631(a)(1))*

The City has adopted Water Shortage Contingency Measures, which are included in Chapter 13.22 of their Code of Ordinances (see **Appendix F**). The Water Shortage Contingency Measures provide for three stages of alert conditions to address shortages of 10% to 50%.

Water conservation stages shall be called and imposed by resolution of the City Council and shall remain in full force and effect until otherwise determined or discontinued by resolution of the City Council. The City Manager will promulgate guidelines which will set forth the criteria for determining when a particular conservation stage is to be implemented and terminated.

The stages of the City's Water Shortage Contingency Plan are summarized in **Table 4:8-1**.

Table 4:8-1 City of Tehachapi Stages of Water Shortage Contingency Plan		
Stage	Percent Supply Reduction <sup>1</sup>	Water Supply Condition
Stage 1	10%	Pursuant to the guidelines or emergency or drought-related regulations imposed by the state or federal regulatory agencies.
Stage 2	30%	Pursuant to the guidelines and when it is apparent that the City's production or supply facilities cannot meet customer demand under Stage 1 conditions or pursuant to emergency or drought-related regulations imposed by state or federal regulatory agencies
Stage 2	50%	Pursuant to the guidelines and when it is apparent that the reductions achieved from Stage 1 and Stage 2 conditions are not sufficient to allow the City's production and supply to meet customer demand or pursuant to any emergency or drought-related regulations imposed by state or federal regulatory agencies.
<sup>1</sup> One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES:		



#### 4.07.2 Prohibitions on End Users/Consumption Reduction Methods

##### Law

*Additional, mandatory prohibitions against specific water use practices during water shortages, including but not limited to, prohibiting the use of potable water for street cleaning (10632(a)(4)).*

*Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply (10632(a)(5)).*

The prohibitions on end users for the various stages of the City's Water Shortage Contingency Plan are summarized in **Table 4:8-2**. Compliance with water shortage contingency measures during Stage 1 is voluntary. During Stage 2, all measures in Stage 1 also apply and become mandatory. Compliance with all measures in Stages 2 is mandatory. During Stage 3, all measures in Stages 1 and 2 also apply and compliance with all measures is mandatory. In the event of a prolonged Stage 3 condition, the City Council has the authority to take any other action available to ensure that the City's water supply is not jeopardized.

Consumption Reduction Methods from the Water Shortage Contingency Plan are summarized in **Table 4:8-3**.

Table 4:8-2 COT: Restrictions and Prohibitions on End Uses			
Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1	Landscape - Restrict or prohibit runoff from landscape irrigation	Prevent excessive run-off from entering adjacent properties, sidewalks, gutters, surface drains or storm drains	No
1	Other	Use of drip irrigation systems or other methods designed to prevent excessive runoff	No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner		No
1	Other - Prohibit use of potable water for washing hard surfaces	Use of broom or blower to clean driveways and paved or other hard surfaces	No
1	Other - Prohibit use of potable water for washing hard surfaces	Use of water for washing down driveways and paved or hard surfaces only when necessary to alleviate immediate fire or sanitation hazards	No
1	Other - Require automatic shut off of hoses	Use of shut off nozzle when using a hose to wash a vehicle or hand watering	No
1	Other	Use of low flow shower heads and shortening time in the shower	No

**Table 4:8-2 (Continued) COT: Restrictions and Prohibitions on End Uses**

Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1	Other	Use of volume reduction devices in toilets and being careful not to use the toilets as an ash tray or wastebasket	No
1	Other	Reduction in water consumption for bathing, hand dishwashing, and irrigation by reduction of flow time for these activities	No
1	Other	Running only full loads in the washing machine and dishwasher	No
2	Other	All Stage 1 Restrictions apply and compliance is mandatory	Yes
2	Landscape - Limit landscape irrigation to specific days	Odd number addresses irrigate Monday, Wednesday, and Friday. Even addresses irrigate on Tuesday, Thursday and Saturday. No irrigation on Sundays. Only exception shall be areas irrigated with non-potable water.	Yes
2	Landscape - Limit landscape irrigation to specific times	Any single irrigation station may not run longer than ten minutes per day.	Yes
2	Landscape - Limit landscape irrigation to specific times	Irrigation of turf and ornamental landscaping shall be prohibited between the hours of 10 A.M. and 4 P.M. daily.	Yes
2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	All observable leaks on a resident's premises shall be repaired within twenty-four hours of notification to customer.	Yes
2	Other - Prohibit use of potable water for washing hard surfaces	No hosing down of non-landscaped or hardscaped areas.	Yes
2	Other - Prohibit use of potable water for construction and dust control		Yes
2	Other	The washing of boats, vehicles or mobile equipment shall only be allowed in car washes or using a bucket and a hose with automatic shut off nozzle.	Yes
2	Water Features - Restrict water use for decorative water features, such as fountains	The use of water in ornamental fountains or water features shall only be permitted if the water is recirculated.	Yes
2	Other	The City manager will have the right to reduce the amount of water used in irrigating any park site, greenbelt or open areas within the City limits.	Yes

**Table 4:8-2 (Continued) COT: Restrictions and Prohibitions on End Uses**

Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
2	Landscape - Other landscape restriction or prohibition	No outdoor irrigation shall be permitted during and forty-eight hours after a measurable rainfall event.	Yes
2	Other	Restaurants and other food services establishments shall serve water to customers only on request.	Yes
2	Other	Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily and prominently display notice of this option.	Yes
2	Other	Other restrictions may be imposed if deemed necessary by the City manager or City Council.	Yes
3	Other	All Stage 1 and Stage 2 restrictions apply	Yes
3	Landscape - Prohibit certain types of landscape irrigation	No irrigating of lawns. Plants, trees and bushes may be irrigated by use of a bucket or the use of reclaimed gray water as allowed by State and County health rules and regulations.	Yes
3	Landscape - Restrict or prohibit runoff from landscape irrigation	No run-off shall occur	Yes
3	Other - Prohibit use of potable water for washing hard surfaces	Hosing down of unlandscaped or hard surfaces is prohibited.	Yes
3	Other water feature or swimming pool restriction	The introduction of water into swimming pools, wading pools and spas shall be prohibited.	Yes
3	Other	No washing of motor and recreational vehicles, except at car wash facility.	Yes
3	Landscape - Other landscape restriction or prohibition	Parks may irrigate trees and shrubbery with buckets only or other methods which ensure that no more than twenty gallons of water are used on a single tree or shrub during a period of one week. Irrigation of playing fields and open spaces shall be prohibited	Yes
NOTES: See Appendix F for City Water Shortage Contingency Measures.			

Table 4:8-3 City of Tehachapi: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference
1, 2, 3	Expand Public Information Campaign	The City Manager informs the public of the water conservation stage and the desired reductions in water usage.
3	Other	The City Council may take other action to reduce consumption as required
NOTES: See Appendix F for City Water Shortage Contingency Measures.		

#### 4.07.3 Penalties, Charges, and Other Enforcement of Prohibitions

##### Law

*Penalties or charges for excessive use, where applicable 10632(a)(6).*

The City's Water Shortage Contingency Plan allows for the imposition of penalties as follows:

"Civil Enforcement: The City shall have all remedies available in its Municipal Code and ordinances for the enforcement of this chapter including, without limitation, Section 1.16.065 (administrative citations). Any fine, penalty, interest, or costs imposed on a violator of this chapter may, in addition to all other remedies available to the City thereunder, be added to the violator's water bill and thereafter be subject to enforcement therein including, without limitation, disconnection or turnoff of water service.

Criminal Enforcement: Any person violating any provision of this chapter or failing to comply with any of its requirements shall be deemed guilty of a misdemeanor unless the violation is made an infraction by ordinance and shall be punishable as described in Chapter 1.20 of the Municipal Code."

#### 4.07.4 Determining Water Shortage Reductions

##### Law

*A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis 10632(a)(9).*

The City's deliveries to its customers are entirely metered. The meter readings will be used to monitor the actual reductions in water usage in accordance with the water shortage contingency plan.

#### 4.07.5 Revenue and Expenditure Impacts

##### Law

*An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments (10632(7)).*

The City reviews its revenues and expenditures on an annual basis and evaluates the need to increase water rates in order to provide adequate revenues in times of water shortages. The City conducted a water rate study in 2015 and adopted a new water rate schedule in 2016. If necessary, the City may utilize reserves to address decreased water sales during a water shortage.

#### **4.07.6 Resolution or Ordinance**

##### **Law**

*A draft water shortage contingency resolution or ordinance (10632(8)).*

The City's water shortage contingency plan (Tehachapi Ordinance Code Chapter 13.22) is included in **Appendix F**.

#### **4.07.7 Catastrophic Supply Interruption**

##### **Law**

*Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster (10632(a)(3)).*

The City will implement its water shortage contingency measures during a catastrophic non-drought related interruption in water supply. Stage 1, 2, or 3 restrictions may be implemented immediately by the City Manager as necessary to reduce consumption in the event of a facility malfunction or water supply interruption. In the event of a prolonged Stage 3 conditions, the City Council has the authority to enact further restrictions on water use.

The emergency activities that are undertaken by the City depend upon the severity of the problem and how quickly the problem can be remedied. Possible catastrophes affecting water supply may include:

- Widespread Power Outage
- Local Earthquake, Landslide, or Flash Flood
- Aqueduct Failure (due to earthquake or other circumstances)
- Delta Levee Failure

In the event of power loss, the City has emergency power generation equipment that can be used to maintain water operations. In the event of an earthquake or other disaster, City personnel will survey and assess damage and respond accordingly with repairs. Work will be scheduled to minimize the impacts to potable water system customers.

Failure of the Aqueduct or Delta levees is discussed in **Section 2.07.6**

#### **4.07.8 Minimum Supply Next Three Years**

##### **Law**

*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's water supply (10632(a)(2)).*

The City's minimum available water supply for the next three years is estimated based on its annual groundwater pumping allocation of 1,822 acre-feet and the recovery of previously stored SWP supplies purchased from the TCCWD. The City purchases SWP supplies from the TCCWD to meet its demands in

excess of its groundwater allocation and maintains a storage balance of an estimated five year supply. As of December 31, 2015, the City's estimated BWRA balance is 1,295 acre-feet. Assuming that one-fifth of that amount could be recovered in each of the next three years would provide an additional groundwater supply of 259 acre-feet per year. The City's minimum supplies for the next three years are summarized in **Table 4:8-4**.

Table 4:8-4 COT: Minimum Supply Next Three Years			
Available Water Supply	2016	2017	2018
	2,081	2,081	2,081
NOTES: Estimated supplies are the sum of the following: <ol style="list-style-type: none"> <li>1. The City's annual groundwater allocation of 1,822 acre-feet.</li> <li>2. 1/5 of the City's current BWRA balance (259 acre-feet).</li> </ol>			

#### 4.08 Demand Management Measures

##### Law

*...The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20 (10631(f)(1)(A)).*

*The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:*

- viii. Water waste prevention ordinances*
- ix. Metering*
- x. Conservation pricing*
- xi. Public education and outreach*
- xii. Programs to assess and manage distribution system real loss*
- xiii. Water conservation program coordination and staffing support*
- xiv. Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.*

##### 4.08.1 Water Waste Prevention Ordinances

The City has adopted water waste prevention measures as a part of its Municipal Code (Section 13.20.020) and in its Water Shortage Contingency Plan. See **Section 4.07**.

##### 4.08.2 Metering

The City charges all customers based on metered readings and established rate schedules. All current and new connections including temporary connections are required to be metered and billed per volume of use. Existing meters are checked on a regular basis for leakage and accuracy. A small number (6 to 10) of internal City accounts for landscape irrigation are currently unmetered. The City is working to install meters at these locations.

#### **4.08.3 Conservation Pricing**

City water users are billed a monthly service charge based on meter size and a quantity charge for water usage in excess of 4,000 gallons per month.

#### **4.08.4 Public Education and Outreach**

The TCCWD provides Public Education and Outreach on a regional basis for all of the participating retail urban water suppliers. See **Section 2.08.4** for a description of these efforts. The City Water Department staff conducted public outreach by utilizing water conservation door tags and providing assistance with leak detection.

#### **4.08.5 Programs to Assess and Manage Distribution System Real Loss**

The City utilizes the AWWA water audit tool. City staff reviews and audits water consumption for customers to detect extremely high water usage that may be due to leakage or waste. The City also contracts with an outside vendor on an annual basis for leak detection services.

#### **4.08.6 Water Conservation Program Coordination and Staffing Support**

The TCCWD provides water conservation program coordination and staffing support for all of the participating retail urban water suppliers. See **Section 2.08.6**.

#### **4.08.7 Other Demand Management Measures**

The City's demand management measures are discussed in other sections of the Plan.

#### **4.08.8 Implementation over the Past Five Years**

##### **Law**

*(Provide) a narrative description of that addresses the nature and extent of each water demand management measure implemented over the past five years (10631(f)(1)(A)).*

See **Section 2.08** for narrative descriptions of the nature and extent of the demand management measures implemented by the TCCWD on behalf of the participating agencies over the past five years.

#### **4.08.9 Planned Implementation to Achieve Water Use Targets**

##### **Law**

*The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20 (10631(f)(1)(A)).*

While the City has achieved its water use reduction targets, it will continue with the implementation of its existing DMMs and look for ways to improve water use efficiency.

#### 4.08.10 Members of the California Urban Water Conservation Council

##### Law

*For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivision (f) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California" dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum (10631(i)).*

The City is not currently a member of the California Urban Water Conservation Council.

#### 4.09 Plan Adoption, Submittal and Implementation

##### 4.09.1 Public Notice

##### Law

*Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision (10621(b)).*

*Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area (10642).*

The efforts the City has taken to involve appropriate agencies and the general public in the planning process are summarized below. Copies of notices are included in **Appendix A**.

For the 2015 Plan update, the public hearing was held on June 8, 2016. Accordingly, notice was provided as follows:

- Notice to the County on February 24, 2016 (at least 60 days prior to hearing),
- Letter to Interested Parties (see **Section 2.02**) on May 18, 2016,
- Notice in local newspaper on May 18, 2016 and May 25, 2016 (per Gov. Code 6066 – 2 weeks in advance of hearing),
- Posted Draft 2015 RUWMP at City Hall on May 18, 2016 (2 weeks prior to hearing), and
- Drafts of the plan were provided to the entities that requested such drafts.

##### 4.09.2 Plan Adoption, Submittal, and Implementation

##### Law

*After the hearing, the plan shall be adopted as prepared or as modified after the hearing (10642).*



*An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016 (10621(d)).*

*The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan (10635(b)).*

*An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption (10644(a)(1)).*

*Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours. (10645).*

*The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640) (10621(c)).*

*Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption (10644(a)(1)).*

The 2015 RUWMP update plan was adopted by the City at the Regular Meeting of the City Council on June 20, 2016. A public hearing on the update of the Regional Urban Water Management Plan was held on June 8, 2016. The intent of the Public Hearing was to gather input from the public that is served by the City's potable water system as well as other interested entities. Written and verbal comments received during the public hearing process have been addressed as appropriate in the final Plan. A copy of the resolution adopting the 2015 RUWMP update is included in **Appendix B**.

The Plan will be submitted to the California Department of Water Resources by July 1, 2016 and to the California State Library and the County within 30 days of adoption by the City on June 20, 2016.

Commencing no later than 30 days after July 1, 2016, the City will have a copy of the 2015 RUWMP available for public review at City Hall (see address below) during normal business hours.

Tehachapi City Hall  
115 S. Robinson Street  
Tehachapi, CA 93561

The 2015 UWMP will also be posted on the City's website at [www.liveuptehachapi.com](http://www.liveuptehachapi.com).

# Section 5 Golden Hills CSD

## 5.01 Plan Preparation

### 5.01.1 Agency Identification

Golden Hills Community Services District (Golden Hills CSD or GHCS D) is a retail water supplier. In 2015, its service area consisted of 2,819 municipal connections and it supplied a volume of 1,032 acre-feet of water to its service area. Golden Hills CSD’s information in the RUWMP is presented in Calendar Year format and water quantities are presented in Acre Feet. See **Table 5:2-1**.

GHCS D does not meet the threshold for preparing an UWMP as it serves less than 3,000 connections. However, GHCS D does want to continue to be proactive in water conservation and has voluntarily implemented water conservation measures to improve efficiency of water use.

Table 5:2-1 GHCS D: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015 <sup>1</sup>
CA1510045	Golden Hills Community Services District	2,819	1,032
<b>TOTAL</b>		<b>2819</b>	<b>1,032</b>
NOTES:			
1. GHCS D groundwater production.			

### 5.01.2 Coordination

#### Law

*Each urban water supplier shall 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 (10620(d)(2)).*

*Each urban water supplier shall encourage the 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 (10642).*

*Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water*

supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c) (10631(j)).

Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan (10621(b)).

GHCS D purchases imported SWP water from the TCCWD to augment its groundwater supplies. TCCWD was informed of GHCS D water use projections as a part of the RUWMP development process (See **Table 5:2-4**). The Kern County Planning Department was provided notice that an update to the RUWMP was being prepared and notice of the public hearing on the Plan. Further information on coordination of the Plan and public involvement is included in **Section 5.09**. Copies of notices are included in **Appendix A**.

<b>Table 5:2-4 GHCS D: Water Supplier Information Exchange</b>	
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.	
Wholesale Water Supplier Name	
Tehachapi-Cummings County Water District	
NOTES: TCCWD is a participant in this RUWMP.	

## **5.02 System Description**

### **5.02.1 General Description**

#### **Law**

*Describe the service area of the supplier (10631(a)).*

Golden Hills CSD is a retail water agency, located in the Tehachapi Mountains west of the City of Tehachapi. Golden Hills CSD began operations in 1966 and is governed by a five member board. GHCS D encompasses approximately 5,400 acres consisting of approximately 4,000 primarily residential parcels ranging in size from ¼-acre to over 20 acres. The service area boundary for the GHCS D is shown on **Figure 2-1** in **Section 2.02.1**, which also includes more information on the Greater Tehachapi area.

### **5.02.2 Service Area Climate**

#### **Law**

*Describe the climate of the supplier (10631(a)).*

See **Section 2.02.2**.

**5.02.3 Service Area Population**

**Law**

*(Describe the service area) current and projected population . . . The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier . . . (10631(a)).*

*. . . (population projections) shall be in five-year increments to 20 years or as far as data is available (10631(a)).*

*Describe . . . other demographic factors affecting the supplier's water management planning (10631(a)).*

The 2015 population estimate for Golden Hills CSD was developed based on 2010 Census data for the Golden Hills CDP and the population per connection method. Population projections for GHCS D for the years 2020 through 2035 were based on population projections for the unincorporated areas (1% growth per year) from the Kern COG 2014 Regional Transportation Plan. By the year 2035 the population within the Golden Hills CSD service area is projected to be approximately 10,721 as shown in **Table 5:3-1**.

<b>Table 5:3-1 GHCS D: Population - Current and Projected</b>					
Population Served	2015	2020	2025	2030	2035
	8,787	9,235	9,706	10,201	10,721
NOTES: 1. 2015 population calculated per 2010 census data for Golden Hills CDP and population per connection method (3.12 persons/connection). 2. Population projections for 2020 through 2035 based on population projections for the unincorporated area from Kern COG (Regional Transportation Plan June 2014).					

**5.03 System Water Use**

**5.03.1 Water Use**

**Law**

*Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: (A) Single-family residential; (B) Multifamily; (C) Commercial; (D) Industrial; (E) Institutional and governmental; (F) Landscape; (G) Sales to other agencies; (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; (I) Agricultural (10631(e)(1) and (2)).*

Water use data within Golden Hills CSD service area for 2015 is summarized in **Table 5:4-1**. 2015 was an extremely dry year. Water use restrictions and water conservation measures were enacted by Golden Hills CSD to meet the drought restrictions set by the State. Golden Hills CSD makes no deliveries of water for

saline intrusion barriers. Total water use for Golden Hills CSD water service in 2015 was 16% less than the water use in 2014 and 21% less than the water use in 2013.

Table 5:4-1 GHCS D: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	720
Multi-Family		Drinking Water	129
Commercial		Drinking Water	37
Institutional/Governmental		Drinking Water	31
Losses	Includes unbilled unmetered	Drinking Water	115
<b>TOTAL</b>			<b>1,032</b>
NOTES:			

Table 5:4-2 includes projections of Golden Hill CSD's water demands for the years 2020 through 2035 in five year increments. The future water demands for the GHCS D are based on the population projections in Table 5:3-1 and a future water use estimate of 121 gpcd.

Table 5:4-2 GHCS D: Demands for Potable and Raw Water - Projected					
Use Type	Additional Description	Projected Water Use			
		2020	2025	2030	2035
Other	Total for all water use types	1,256	1,320	1,387	1,458
<b>TOTAL</b>		<b>1,256</b>	<b>1,320</b>	<b>1,387</b>	<b>1,458</b>
NOTES: Projected water use from GHCS D (121 gpcd).					

Table 5:4-3 summarizes GHCS D's total water demands from Tables 5:4-1 and 5:4-2.

Table 5:4-3 GHCS D: Total Water Demands					
	2015	2020	2025	2030	2035
Potable and Raw Water <i>From Tables 5:4-1 and 5:4-2</i>	1,032	1,256	1,320	1,387	1,458
Recycled Water Demand <i>From Table 5:6-4</i>	0	0	0	0	0
<b>TOTAL WATER DEMAND</b>	<b>1,032</b>	<b>1,256</b>	<b>1,320</b>	<b>1,387</b>	<b>1,458</b>
NOTES:					

### 5.03.2 Distribution System Water Losses

#### Law

*Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: . . . (J) Distribution system water loss. (10631(e)(1) and (2)).*

*For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.*

*The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association (10631(e)(3)).*

**Table 5:4-4** includes the results of GHCS D’s water system audit for 2015. The audit was completed according to Appendix L of the Guidebook using the AWWA’s Water Audit Software. A copy of the GHCS D water audit reporting worksheet is included in **Appendix H**.

Table 5:4-4 GHCS D: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2015	102.1
NOTES: From AWWA Water Audit Worksheet WAS v5.0 (see Appendix H)	

### 5.03.3 Water Use for Lower Income Households/Future Water Savings

#### Law

*The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier (10631.1(a)).*

*If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area (10631 (e)(4)(A)).*

*. . . Water use projections that do not account for these water savings shall be noted of that fact (10631 (e)(4)(B)).*

The projection for affordable residential housing needs (combined low income and very low income) was estimated to be 38% of the total Residential Housing Needs Allocation for the City of Tehachapi in the 2014

Regional Transportation Plan prepared by Kern COG. Therefore, due to its proximity to the City of Tehachapi, low income housing water use needs for single-family and multifamily residential uses within the GHCS D are estimated to be 38% of its total residential water use.

The water use projections for the GHCS D do not account for water savings from codes, standards, ordinances, or transportation and land use plans. See **Table 5:4-5**.

Table 5:4-5 GHCS D: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections?	No
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

### 5.03.4 Climate Change

See **Section 2.03.3**.

## 5.04 Baselines and Targets

### 5.04.1 Updating Calculations from 2010 UWMP

#### Law

*An urban retail water supplier shall include in its urban water management plan due in 2010 . . . the baseline daily per capita water use . . . along with the bases for determining those estimates, including references to supporting data (10608.20(e)).*

*An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan (10608.20(g)).*

The same target method is proposed for use in this RUWMP Update that was used for the 2010 Plan. This section summarizes the calculations for the GHCS D. The calculations for the Regional Alliance are described in **Section 2.04**. The SB X7-7 verification form tables for the Regional Alliance and the GHCS D are included in **Appendix G**.

### 5.04.2 Baseline Periods

#### Law

*“Base daily per capita water use” means any of the following:*

- 10) *The urban retail water supplier’s estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*
- 11) *For an urban retail supplier that meets at least 10 percent of its measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a*

*maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*

- 12) *For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year reporting period ending no earlier than December 31, 2007, and no later than December 31, 2010 (10608.12(b)).*

The GHCS D will utilize the same baseline period (2000 – 2009) as used in the 2010 RUWMP as shown in their **SB X7-7 Table 1**.

### 5.04.3 Service Area Population

#### Law

*When calculating per capita values for the purposes of this chapter, an urban water retailer shall determine population using federal, state, and local population reports and projections (10608.20(f)).*

The GHCS D population estimates were developed based on the persons per connection method and census data for 2000 and 2010 for the Golden Hills CDP. Population per connection was calculated as 3.12 based on 2010 census data per the 2010 RUWMP. Population estimates for the GHCS D are shown in its **SB X7-7 Table 3**.

### 5.04.4 Gross Water Use

#### Law

*“Gross Water Use” means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:*

- 13) *Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier*
- 14) *The net volume of water that the urban retail water supplier places into long term storage*
- 15) *The volume of water the urban retail water supplier conveys for use by another urban water supplier*
- 16) *The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24 (10608.12(g)).*

GHCS D's gross water use as shown in its **SB X7-7 Table 4** consists of its groundwater well production.

### 5.04.5 Baseline Daily Per Capita Water Use

GHCS D's baseline daily per capita water use (calculated by dividing the gross water use by the service area population) is shown for each of the baseline years in its **SB X7-7 Table 5**.

### 5.04.6 2015 and 2020 Targets

The 2020 water use target for the GHCS D was calculated using Target Method 3 (95% of the Regional Target from the 20 x 2020 Water Convention Plan, State of California Agency Team, 2010) as shown in its **SB X7-7 Table 7E**. The confirmation of the 2020 Target is shown in its **SB X7-7 Table 7F**. By law, the



maximum 2020 target is 95% of an agency’s 5-year baseline water usage. Golden Hills CSD as an individual agency has a 5-year baseline water use of 149 GPCD. This results in a 2020 water use target of 141 gpcd for the GHCS D. The baseline and target information for GHCS D is summarized in **Table 5:5-1**.

Table 5:5-1 Baselines and Targets Summary Golden Hills CSD					
Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	2000	2009	147	144	141
5 Year	2003	2007	149		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES: See GHCS D SB X7-7 Tables in Appendix G.					

#### 5.04.7 2015 Compliance Daily per Capita Water Use (GPCD)

##### Law

*“Compliance daily per capita water use” means the gross water use during the final year of the reporting period (10608.12(e)).*

*Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015 (10608.24(a))*

GHCS D is in compliance with the urban water use targets of 185 gpcd for 2015 and 179 gpcd for 2020 established for the Regional Alliance in **Section 2.04**. In addition, GHCS D is in compliance with its 2015 Interim Target for an individual agency as shown in **Table 5:5-2**. GHCS D has also achieved compliance with its 2020 Target as an individual agency. GHCS D’s daily per capita water use for 2015 (105 gpcd) is a reduction of 29% from its average per capita water usage for the 2000 to 2009 baseline period (147 gpcd), and is about 26% lower than its 2020 Target (141 gpcd).

Table 5:5-2: 2015 Compliance Golden Hills CSD*		
Actual 2015 GPCD	2015 Interim Target GPCD	Did Supplier Achieve Targeted Reduction for 2015? Y/N
105	144	Yes
*All values are in Gallons per Capita per Day (GPCD)		
NOTES: See GHCS D SB X7-7 Tables in Appendix G.		

## 5.05 System Supplies

### 5.05.1 Purchased or Imported Water

The GHCS D purchases imported SWP water from TCCWD to meet demands in excess of its groundwater allocation. These supplies are delivered to GHCS D through groundwater recharge. Golden Hills CSD has an agreement with the TCCWD to maintain a Banked Water Reserve Account (BWRA) equal to, at a minimum, five times the annual average of the GHCS D's SWP water demand over the previous five calendar years. The GHCS D recovers water from its BWRA whenever SWP supplies are unavailable for purchase (due to drought, damage to SWP or TCCWD facilities, or any other event). The GHCS D's estimated BWRA balance as of December 31, 2015 is 2,925 acre-feet.

Deliveries of imported SWP water for 2015 are included in **Table 5:6-8** in **Section 5.05.9**. Projections of future SWP purchases are included in **Table 5:6-9** in **Section 5.05.9**. TCCWD's imported SWP supply is described in **Section 2.05.1**.

### 5.05.2 Groundwater

#### Law

*If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the Plan:*

*A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management (10631(b)(1)).*

*A description of any groundwater basin or basins from which the urban water supplier pumps groundwater (10631(b)(2)).*

*For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board (10631(b)(2)).*

*A description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree (10631(b)(2)).*

*For basins that have not been adjudicated, (provide) information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition (10631(b)(2)).*

*A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records (10631(b)(3)).*

Golden Hills CSD pumps groundwater from the adjudicated Tehachapi Groundwater Basin. GHCS D had 15 active wells and 2,819 service connections as of 2015.

Groundwater adjudication proceedings were initiated in 1966 in response to the decline in groundwater levels that had been experienced in the Tehachapi Basin since 1950. The Tehachapi Basin adjudication judgment was filed in 1971, with an amended judgment filed in 1973 (Superior Court Case No. 97210). The judgment created “allowed pumping allocations” for each party which restricted total annual extractions within the Tehachapi Basin to the safe yield of 5,500 acre-feet. Exports from the groundwater basin are not allowed.

A groundwater modeling study of the Tehachapi Basin was completed by Fugro West, Inc. in 2009 to provide a better understanding of the hydrogeology of the basin. The study found the safe yield of the basin to be about 5,317 acre-feet per year, with annual extractions averaging about 3,591 acre-feet. The TCCWD monitors selected wells seasonally for groundwater levels. Groundwater levels have increased since the adjudication and are now close to 1950 levels. The basin is not considered to be in a state of overdraft or projected to become overdrafted.

Allowed pumping allocations per the judgment are as follows:

- City of Tehachapi – 1,822 Acre-feet
- Golden Hills CSD – 874 Acre-feet
- Other pumpers – 2,828 Acre-feet.

The adjudication judgment documents are included in **Appendix E**. More information on the Tehachapi Basin is included in **Section 2.05.2**.

In addition to its allowable pumping allocation from the adjudication judgment, the GHCS D purchases surface water from TCCWD that is recharged into the groundwater basin and available for future recovery by the GHCS D’s wells. Golden Hills CSD also has a lease agreement for 800 acre-feet per year of allowed pumping allocation from the Lehigh Southwest Cement Company. This lease is presumed to expire by 2025. Of this 800 AF allocation, GHCS D has used in the range of 50 to 250 acre-feet per year to meet its own demands and has subleased the remaining allocation to other entities.

**Table 5:6-1** summarizes the groundwater pumping by the GHCS D from the Tehachapi Basin for the last 5 years.

Table 5:6-1 GHCS D: Groundwater Volume Pumped						
Groundwater Type	Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Tehachapi Basin	1,193	1,274	1,312	1,225	1,032
<b>TOTAL</b>		<b>1,193</b>	<b>1,274</b>	<b>1,312</b>	<b>1,225</b>	<b>1,032</b>
NOTES: From GHCS D groundwater production records.						

### 5.05.3 Surface Water

GHCS D does not have sources of surface supply other than imported SWP supplies that it purchases from TCCWD.

#### 5.05.4 Stormwater

GHCS D does not intentionally divert stormwater directly for beneficial use.

#### 5.05.5 Wastewater and Recycled Water

##### Law

*The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area. (16033)*

Golden Hills Sanitation Company (GHSC) owns and operates the wastewater treatment and recycling facility located within GHCS D. Originally, Golden Hills CSD and the GHSC collectively submitted a Report of Waste Discharge to the Central Valley RWQCB. However, in 2001 the Golden Hills CSD revoked its name from the RWQCB Waste Discharge Requirements (permit), dedicated the treatment site property to the GHSC, and terminated any contractual relationship with the GHSC.

The tertiary treated effluent from the GHSC WWTP was originally planned to be disposed of on the front nine fairways of the Golden Hills Country Club golf course. After the golf course closed in the mid-1990's, GHSC has been operating outside of the RWQCB permitted use. Currently, tertiary effluent is disposed of in Tom Sawyer Lake and percolates into the Tehachapi Basin.

The wastewater collected within the GHCS D's service area for 2015 is summarized in **Table 5:6-2**. Wastewater treatment and discharge within the GHCS D service area for 2015 is summarized in **Table 5:6-3**. There are no current or projected uses of recycled water within the service area of GHCS D. Therefore, **Table 5:6-4**, **Table 5:6-5**, and **Table 5:6-6** are not included in this report. The future of wastewater treatment in the Golden Hill CSD is currently under investigation. Potential options include repair of the existing WWTP in Golden Hills or a joint project with the City of Tehachapi where wastewater would be conveyed to the City for treatment at the City's existing WWTP. For the purposes of this Plan, existing WWTP operations are assumed to continue.

Table 5:6-2 GHCS D: Wastewater Collected Within Service Area in 2015						
Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected in 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party?
Golden Hills Sanitation Company	Estimated	34	Golden Hills Sanitation Company	Golden Hills WWTP	Yes	Yes
<b>Total Wastewater Collected from Service Area in 2015:</b>		<b>34</b>				
NOTES: Information provided by GHCS D						

**Table 5:6-3 GHCS D: Wastewater Treatment and Discharge Within Service Area in 2015**

Wastewater Treatment Plant Name	Method of Disposal	Treatment Level	2015 volumes			
			Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Golden Hills WWTP	Tom Sawyer Lake -Lake outfall	Tertiary	34	34	0	0
<b>Total</b>			<b>34</b>	<b>34</b>	<b>0</b>	<b>0</b>
NOTES: Information provided by GHCS D						

**5.05.6 Desalinated Water Opportunities**

**Law**

*Describe the opportunities for development of desalinated water, including but not limited to ocean water, brackish water, and groundwater, as a long-term supply. (10631(h))*

GHCS D has no plans for the development of desalinated water supplies within the planning horizon of this RUWMP. GHCS D has determined that desalination is not a cost-effective solution for its water supply needs due to the water resource opportunities that are available at a lower cost.

**5.05.7 Exchanges and Transfers**

**Law**

*Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis. (10631(d))*

The GHCS D cannot transfer or exchange its groundwater supplies outside of the groundwater basin. The GHCS D has entered into lease agreements with other entities that have adjudicated allowed pumping allocations within the Tehachapi Basin. The GHCS D’s current lease agreement is described in **Section 5.05.2**. Discussion of transfer opportunities on a regional basis is included in **Section 2.05.7**.

**5.05.8 Future Water Projects**

**Law**

*(Describe) all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program (10631(g)).*

GHCS D is currently implementing the Steuber Phase of the Antelope Conjunctive Use Project. The project consists of a new 500 gpm (minimum) well and 4,500 lineal feet of pipeline to convey pumped groundwater to the GHCS D distribution system. The project will provide the following benefits:

- Provide an important water supply to help GHCS D meet peak demands, and ensure demands can be met if the largest capacity well is off-line.
- Shift groundwater pumping to the east and away from a cone of depression forming in the GHCS D.
- Provide much needed recovery capacity at the Antelope Dam Conjunctive Use Project, and make groundwater recharge in the area more practical and feasible.
- Provide additional emergency water supply to the neighboring City of Tehachapi, who can receive water from the well through an existing interconnection which also provides excess pipeline capacity to meet anticipated future City demands.

The project is anticipated to be completed in early 2017.

Discussion of future regional water projects for the GTA is included in **Section 2.05.8**.

**5.05.9 Summary of Existing and Planned Sources of Water**

**Law**

*Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a) (10631(b)).*

*(Provide) a detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records (10631(b)(4)).*

The GHCS D’s actual 2015 water supplies are summarized in **Table 5:6-8**. Projections of future water supplies are shown in **Table 5:6-9**. The GHCS D currently leases an additional 800 acre-feet/year of allowed pumping allocation from the Lehigh Cement Company of which approximately 50-250 acre-feet/year has been used to meet the demands of its customers. This lease is anticipated to expire by 2025. Projections for purchases of SWP supplies in **Table 5:6-9** have been estimated to meet projected demands.

<b>Table 5: 6-8 GHCS D: Water Supplies — Actual</b>			
Water Supply	Additional Detail on Water Supply	2015	
		Actual Volume	Water Quality
Groundwater	GHCS D Allowed Pumping Allocation (includes leases) and Salvage Area well production	916	Drinking Water
Purchased or Imported Water	Conjunctive use through groundwater recharge	116	Raw Water
<b>Total</b>		<b>1,032</b>	
NOTES: Per GHCS D			

Table 5:6-9 GHCS D: Water Supplies — Projected					
Water Supply	Additional Detail on Water Supply	Projected Water Supply <i>Reasonably Available Volume</i>			
		2020	2025	2030	2035
Groundwater	GHCS D Allowed Pumping Allocation <sup>1</sup>	1,116	866	866	866
Purchased or Imported Water	Purchased SWP supplies <sup>2</sup>	140	454	521	592
<b>Total</b>		<b>1,256</b>	<b>1,320</b>	<b>1,387</b>	<b>1,458</b>
NOTES:					
1. GHCS D leases 800 AF of pumping allocation from Lehigh Southwest Cement Company in addition to its 866 AF right. 250 AF is assumed to be used to meet GHCS D demands. The lease is anticipated to expire by 2025.					
2. Purchases of SWP supplies have been projected as shown in order to meet future demands.					

## 5.06 Water Supply Reliability Assessment

### 5.06.1 Constraints on Water Sources

#### Law

*For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable (10631(c)(2)).*

*The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability (10634).*

Due to the ongoing management of its groundwater supplies, the GHCS D anticipates that they would be available at a consistent level of use during the planning horizon of this Plan. Water quality issues may be a future constraint. Groundwater in some areas of the Tehachapi Basin has been found to have high nitrogen levels. As noted in the 2010 RUWMP, a groundwater nitrogen level monitoring program has been proposed for the Tehachapi Basin.

### 5.06.2 Reliability by Type of Year

#### Law

*Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following: (A) an*

average water year, (B) a single dry water year, (C) multiple dry water years (10631(c)(1)).

The GHCS D relies on groundwater pumping from the adjudicated Tehachapi Basin to meet the demands of its customers. The GHCS D has an adjudicated allocation of 866 acre-feet/year in addition to the right to recovery of previously recharged SWP supplies purchased from the TCCWD in its BWRA. Based on ongoing monitoring of the Tehachapi Basin, the GHCS D anticipates that the safe yield and water quality will remain at close to current conditions for the next twenty years and beyond.

The reliability of SWP supplies is discussed in **Section 2:06.2**. With average SWP deliveries at 60% long-term, the GHCS D anticipates that sufficient supplies will be reasonably available for purchase from the TCCWD and will have been previously recharged for recovery during the average year, single dry year, and multiple dry years scenarios. As of December 31, 2015, the GHCS D’s BWRA balance is estimated to be 2,925 acre-feet.

The reliability of the GHCS D’s groundwater supplies for the various water year types are summarized in **Table 5:7-1**.

Table 5:7-1 GHCS D: Basis of Water Year Data		
Year Type	Base Year	Available Supplies if Year Type Repeats
		% of Average Supply
Average Year	Base Year	100%
Single-Dry Year	2015	100%
Multiple-Dry Years 1st Year	2013	100%
Multiple-Dry Years 2nd Year	2014	100%
Multiple-Dry Years 3rd Year	2015	100%
NOTES: The GHCS D pumps groundwater from an adjudicated basin with an annual allocation of 866 acre-feet. The GHCS D purchases SWP from TCCWD to meet its demands in excess of its groundwater allocation and stores at least a 5-year supply. It is anticipated that the GHCS D can provide 100% of average supplies in every year.		

### 5.06.3 Supply and Demand Assessment

#### Law

*Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional or local agency population projections within the service area of the urban water supplier (10632(c)).*

The comparison of GHCS D’s supply and demand projections for the normal year, single dry year, and multiple dry year scenarios are shown in **Tables 5:7-2, 5:7-3, and 5:7-4** respectively. The GHCS D’s



purchase and recharge of imported SWP supplies are based on providing a five year supply beyond its adjudicated allocation. The GHCS D anticipates having groundwater supplies available to meet demands during the normal, single dry year, and multiple dry year scenarios.

Table 5:7-2 GHCS D: Normal Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals <i>(from Table 5:6-9)</i>	1,256	1,320	1,387	1,458
Demand totals <i>(from Table 5:4-3)</i>	1,256	1,320	1,387	1,458
Difference	0	0	0	0
NOTES:				

Table 5:7-3 GHCS D: Single Dry Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals	1,256	1,320	1,387	1,458
Demand totals	1,256	1,320	1,387	1,458
Difference	0	0	0	0
NOTES:				

Table 5:7-4 GHCS D: Multiple Dry Years Supply and Demand Comparison					
Description		2020	2025	2030	2035
First year	Supply totals	1,256	1,320	1,387	1,458
	Demand totals	1,256	1,320	1,387	1,458
	Difference	0	0	0	0
Second year	Supply totals	1,256	1,320	1,387	1,458
	Demand totals	1,256	1,320	1,387	1,458
	Difference	0	0	0	0
Third year	Supply totals	1,256	1,320	1,387	1,458
	Demand totals	1,256	1,320	1,387	1,458
	Difference	0	0	0	0
NOTES:					

## 5.06.4 Regional Water Supply Reliability

### Law

*An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions (10620(f)).*

The urban water suppliers in the Greater Tehachapi area have been working together for many years to manage available water supplies on a regional basis. The Water Availability Preservation Committee meets on a regular basis to plan for and manage available water supplies. More details regarding these efforts are included in other sections of the Plan.

## 5.07 Water Shortage Contingency Planning

### 5.07.1 Stages of Action

#### Law

*The plans shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:*

*Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50% reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage (10631(a)(1))*

The GHCS D Water Shortage Contingency Plan is included in **Appendix F**. Water shortage regulations have been adopted in order to reduce consumption and reserve a sufficient supply of water for public health and safety. The water shortage regulations include three stages of implementation. Actions in each stage would be undertaken by GHCS D and/or its consumers. When staff determines that water supply condition warrants activating a water alert or stage change, the General Manager will approve and notify the board. Presently there are not any defined triggers (i.e., water allocations, snow pack levels, etc.) for moving from one stage to the next. Any decision to change stages will however be based on the combination of water supplies, weather conditions, trends in water usage, groundwater levels, and water production.

Conservation measures gradually increase with each stage. The consumers are given opportunities to voluntarily reduce consumption in Stage I. If these efforts are not sufficient, then Stage II is implemented which includes additional mandatory and voluntary measures. If these are not sufficient, then Stage III, which includes several other mandatory regulations, is implemented.

The State of California requires that an urban water shortage contingency plan include up to a 50% reduction in consumption. The voluntary measures alone would not reduce consumption by 50% and this goal could probably only be achieved with strict enforcement and significant mandatory reductions.

The stages of action from GHCS D's Water Shortage Contingency Plan are summarized in **Table 5:8-1**.

Table 5:8-1 GHCS D Stages of Water Shortage Contingency Plan		
Stage	Percent Supply Reduction <sup>1</sup>	Water Supply Condition
Stage I	See Notes	No Defined Trigger. District staff determines when to declare water shortage stages.
Stage II	See Notes	No Defined Trigger. District staff determines when to declare water shortage stages.
Stage III	See Notes	No Defined Trigger. District staff determines when to declare water shortage stages.
<sup>1</sup> One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
<p><b>NOTES:</b>            GHCS D is completely supplied by groundwater. The decision to declare a water shortage stage is based on the combination of water supplies, weather conditions, water usage trends, groundwater levels, water tank levels, and water production. A 50% reduction in supply would be addressed through Stage III.</p>		

### 5.07.2 Prohibitions on End Users/Consumption Reduction Methods

#### Law

*Additional, mandatory prohibitions against specific water use practices during water shortages, including but not limited to, prohibiting the use of potable water for street cleaning (10632(a)(4)).*

*Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply (10632(a)(5)).*

The prohibitions on end users for the various stages of the GHCS D's Water Shortage Contingency Plan are summarized in **Table 5:8-2**. In the event of a prolonged Stage 3 condition, the GHCS D Board of Directors has the authority to take any other action available to ensure that the GHCS D's water supply is not jeopardized and may impose a building moratorium until such time as the water supply is increased.

Consumption Reduction Methods are summarized in **Table 5:8-3**. A copy of the GHCS D's Stage III Water Alert Notice for 2015 is included in **Appendix F**.

**Table 5:8-2 GHCS D: Restrictions and Prohibitions on End Uses**

Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
Stage I	Other	Voluntary water conservation by GHCS D Customers (10% reduction target)	No
Stage II	Landscape - Limit landscape irrigation to specific days	Alternate day irrigation of landscaping	Yes
Stage II	Other - Prohibit use of potable water for washing hard surfaces	No hosing down of un-landscaped areas	Yes
Stage II	Other	Washing of boats and vehicles only allowed at carwashes or with a hose equipped with a shutoff valve	Yes
Stage II	Water Features - Restrict water use for decorative water features, such as fountains	Water in ornamental fountains shall only be allowed where all water in the fountain is re-circulated	Yes
Stage II	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	The introduction of water into swimming pools, wading pools, and spas shall be prohibited	Yes
Stage II	Landscape - Other landscape restriction or prohibition	GHCS D will have the right to reduce the amount of water used in irrigation of parks or greenbelts. All irrigation will be performed between the hours of 8PM and 6AM. No run-off will be allowed	Yes
Stage II	Other	Other restrictions as deemed necessary by the General Manager	Yes
Stage II	Other	Car washes must limit wash/rinse cycle to 10 gallons or less	Yes
Stage III	Landscape - Prohibit all landscape irrigation	No irrigating of lawns. Plants and bushes may be watered by use of a bucket or the use of reclaimed gray water. No run-off allowed	Yes
Stage III	Other - Prohibit use of potable water for washing hard surfaces	No hosing down of un-landscaped areas	Yes
Stage III	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	No washing of motor or recreational vehicles, including boats, except at a car wash facility	Yes

**Table 5:8-2 (Continued) GHCS D: Restrictions and Prohibitions on End Uses**

Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
Stage III	Other	The management of the car wash must provide the General Manager with evidence that a normal wash/rinse cycle can be accomplished at the site through the use of 10 gallons water or less. Such washing shall require use of an automatic shut-off nozzle	Yes
Stage III	Other water feature or swimming pool restriction	The introduction of water into swimming pools, wading pools, and spas shall be prohibited	Yes
Stage III	Landscape - Prohibit certain types of landscape irrigation	Parks may irrigate trees and shrubbery only with buckets or other methods which ensure that no more than twenty (20) gallons of water are used on a single tree or shrub during a period of (1) week. Irrigation of playing fields and open spaces shall be prohibited	Yes
Stage III	Landscape - Other landscape restriction or prohibition	GHCS D will have the right to reduce the amount of water used in irrigation of parks or greenbelts. All irrigation will be performed between the hours of 8PM and 6AM. No run-off will be allowed	Yes
Stage III	Other	Account holders will be issued warnings and surcharges if found to be violating Stage I restrictions	Yes
NOTES: From Golden Hills CSD Water Shortage Contingency Plan and 2010 RUWMP			

Table 5:8-3 GHCS D: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or
1, 2, 3	Expand Public Information Campaign	GHCS D Manager informs the public of the Consumption Reduction Stage and desired usage reduction percentage
2	Implement or Modify Drought Rate Structure or Surcharge	A 15% increase of the current water rates may be imposed. Water end use restrictions implemented.
3	Implement or Modify Drought Rate Structure or Surcharge	A 25% increase of the current water rates may be imposed. Water end use restrictions implemented.
NOTES: From Golden Hills CSD Water Shortage Contingency Plan and 2010 RUWMP		

### 5.07.3 Penalties, Charges, and Other Enforcement of Prohibitions

#### Law

*Penalties or charges for excessive use, where applicable 10632(a)(6).*

In the event of a violation of the terms of the GHCS D's water restrictions, the General Manager has the authority to issue warnings and/or impose surcharges. If water abuses continue, the General Manager has the authority to lock the meter or remove the meter from the property. Details on the penalties can be found in **Appendix F**.

### 5.07.4 Determining Water Shortage Reductions

#### Law

*A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis 10632(a)(9).*

The GHCS D's deliveries are entirely metered. The meter readings will be used to monitor the actual reductions in water usage in accordance with the water shortage contingency plan.

### 5.07.5 Revenue and Expenditure Impacts

#### Law

*An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments (10632(7)).*

The GHCS D has established water rate adjustments that can be implemented when water shortage conditions are declared. The purposes of the rate adjustment include encouraging additional water conservation and helping to defray the costs of constructing, maintaining and operating the District's water system as reduced usage of water lowers the revenues received. A rate adjustment equal to a 15% increase

of the current water rates may be imposed during a Stage II Water Alert and a rate adjustment equal to a 25% increase of the current water rates may be imposed during a Stage II Water Alert.

The GHCS D reviews its revenues and expenditures on an annual basis and evaluates the need to increase water rates or impose a rate adjustment in order to provide adequate revenues in times of water shortages.

#### **5.07.6 Resolution or Ordinance**

##### **Law**

*A draft water shortage contingency resolution or ordinance (10632(8)).*

Golden Hills CSD's Water Shortage Contingency Plan and adopting ordinance are included in **Appendix F**.

#### **5.07.7 Catastrophic Supply Interruption**

##### **Law**

*Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster (10632(a)(3)).*

GHCS D has written guidelines in its Emergency Response Plan to address a catastrophic non-drought related interruption in water supply. The water shortage regulations could be used to reduce consumption after a catastrophic supply interruption.

The emergency activities that are undertaken by GHCS D depend upon the severity of the problem and how quickly the problem can be remedied. Possible catastrophes affecting water supply may include:

- Widespread Power Outage
- Local Earthquake, Landslide, or Flash Flood
- Aqueduct Failure (due to earthquake or other circumstances)
- Delta Levee Failure

In the event of power loss, GHCS D has emergency power generation equipment that can be used to maintain water operations. In the event of an earthquake or other disaster, GHCS D personnel will survey and assess damage and respond accordingly with repairs. Work will be scheduled to minimize the impacts to potable water system customers.

Failure of the Aqueduct or Delta levees is discussed in **Section 2.07.6**

#### **5.07.8 Minimum Supply Next Three Years**

##### **Law**

*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's water supply (10632(a)(2)).*

The GHCS D's minimum available water supply for the next three years is estimated based on its annual groundwater pumping allocation of 866 acre-feet and the recovery of previously stored SWP supplies purchased from the TCCWD. The GHCS D purchases SWP supplies from the TCCWD to meet its demands in excess of its groundwater allocation and maintains a storage balance of an estimated five year supply. As of December 31, 2015, the GHCS D's estimated BWRA balance is 2,925 acre-feet. Assuming that one-fifth of

that amount could be recovered in each of the next three years would provide an additional groundwater supply of 585 acre-feet per year. Use of the GHCS D’s leased allowed pumping allocation is not included. The GHCS D’s minimum supplies for the next three years are summarized in **Table 5:8-4**.

Table 5:8-4 GHCS D: Minimum Supply Next Three Years			
Available Water Supply	2016	2017	2018
	1,451	1,451	1,451
NOTES: Estimated supplies are the sum of the following: <ol style="list-style-type: none"> <li>1. The GHCS D’s annual groundwater allocation of 866 acre-feet.</li> <li>2. 1/5 of the GHCS D’s current BWRA balance (585 acre-feet).</li> </ol> Use of the GHCS D’s leased allowed pumping allocation is not included.			

## 5.08 Demand Management Measures

### Law

*... The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20 (10631(f)(1)(A)).*

*The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:*

- xv. *Water waste prevention ordinances*
- xvi. *Metering*
- xvii. *Conservation pricing*
- xviii. *Public education and outreach*
- xix. *Programs to assess and manage distribution system real loss*
- xx. *Water conservation program coordination and staffing support*
- xxi. *Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.*

### 5.08.1 Water Waste Prevention Ordinances

The GHCS D has adopted water waste prevention measures as a part of its Water Shortage Contingency Plan as described in **Section 5.07**. The GHCS D uses an AMR system to detect on-site leaks. If the system detects a leak, a mailer is sent to the applicable customer(s). Golden Hill CSD has an illegal Water Connection/Theft policy with a fine of \$2,500. The Golden Hills CSD does not have on-going water restrictions since its per capita usage has averaged 123 gpcd over the past five years. If per-capita usage increases, the GHCS D will impose water use restrictions as necessary.

### 5.08.2 Metering

The GHCS D has been fully metered since it first delivered water. All customers are charged based on metered readings and established rate schedules. All current and new connections including temporary



connections are required to be metered and billed per volume of use. Existing meters are checked on a regular basis for leakage and accuracy. All production wells have been equipped with meters.

### **5.08.3 Conservation Pricing**

GHCS D's rate schedule includes a monthly service charge and quantity rate charges for the volume of water used. Quantity rates are higher for water usage greater than 500 cubic feet. Adjustments to the rate schedule are expected in 2016 as a result of the water rate study that is in progress.

### **5.08.4 Public Education and Outreach**

The TCCWD provides Public Education and Outreach on a regional basis for all of the participating retail urban water suppliers. See **Section 2.08.4** for a description of these efforts. The GHCS D Water Department staff provides assistance to customers with locating on-site leaks identified through the AMR system and is available to meet with customers upon request to identify applicable water conservation measures. The GHCS D also includes water conservation information in the annual water quality reports that are mailed to its customers and has a landscape conservation demonstration garden at its headquarters.

### **5.08.5 Programs to Assess and Manage Distribution System Real Loss**

The GHCS D compares metered consumption and well production on a monthly basis. The meter program is operated using an AMR system which includes an automated intermittent and continuous leak detection program. If a leak is detected during the monthly meter reading process, customers are promptly notified. On average, losses since completion of the AMR system have been reduced into a range between 2% and 6%. The GHCS D is reviewing a potential water main replacement fund as a part of its water rate study.

### **5.08.6 Water Conservation Program Coordination and Staffing Support**

The TCCWD provides water conservation program coordination and staffing support for all of the participating retail urban water suppliers. See **Section 2.08.6**.

### **5.08.7 Other Demand Management Measures**

The GHCS D's demand management measures are discussed in other sections of the Plan.

### **5.08.8 Implementation over the Past Five Years**

#### **Law**

*(Provide) a narrative description of that addresses the nature and extent of each water demand management measure implemented over the past five years (10631(f)(1)(A)).*

See **Section 2.08** for narrative descriptions of the nature and extent of the demand management measures implemented by the TCCWD on behalf of the participating agencies over the past five years.

### **5.08.9 Planned Implementation to Achieve Water Use Targets**

#### **Law**

*The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20 (10631(f)(1)(A)).*

Although the GHCSO has achieved its water use reduction targets it will continue with the implementation of its existing DMMs and will look for ways to improve water use efficiency.

#### 5.08.10 Members of the California Urban Water Conservation Council

##### Law

*For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivision (f) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California" dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum (10631(i)).*

The GHCSO is not currently a member of the California Urban Water Conservation Council.

### 5.09 Plan Adoption, Submittal and Implementation

#### 5.09.1 Public Notice

##### Law

*Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision (10621(b)).*

*Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area (10642).*

The efforts GHCSO has taken to involve appropriate agencies and the general public in the planning process are summarized below. The City of Tehachapi is a participant in this RUWMP. No separate notice was provided to the City. Copies of notices are included in **Appendix A**.

For the 2015 Plan update, the public hearing was held on June 8, 2016. Accordingly, notice was provided as follows:

- Notice to County on February 24, 2016 (at least 60 days prior to hearing),
- Letter to Interested Parties (see **Section 2.02**) on May 18, 2016,
- Notice in local newspaper on May 18, 2016 and May 25, 2016 (per Gov. Code 6066 – 2 weeks in advance of hearing),
- Posted Draft 2015 RUWMP at GHCSO Office on May 18, 2016 (2 weeks prior to hearing), and
- Drafts of the plan were provided to the entities that requested such drafts.

## 5.09.2 Plan Adoption, Submittal, and Implementation

### Law

*After the hearing, the plan shall be adopted as prepared or as modified after the hearing (10642).*

*An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016 (10621(d)).*

*The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan (10635(b)).*

*An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption (10644(a)(1)).*

*Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours. (10645).*

*The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640) (10621(c)).*

*Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption (10644(a)(1)).*

The 2015 RUWMP update plan was adopted by the GHCS D at the Regular Meeting of the Board of Directors on June 16, 2016. A public hearing on the update of the Regional Urban Water Management Plan was held on June 8, 2016. The intent of the Public Hearing was to gather input from the public that is served by GHCS D as well as other interested entities. Written and verbal comments received during the public hearing process have been addressed as appropriate in the final Plan. A copy of the resolution adopting the 2015 RUWMP update is included in **Appendix B**.

The Plan will be submitted to the California Department of Water Resources by July 1, 2016 and to the California State Library and the County within 30 days of adoption by the GHCS D on June 16, 2016.

Commencing no later than 30 days after July 1, 2016, the GHCS D will have a copy of the 2015 RUWMP available for public review at the GHCS D Office (see address below) during normal business hours.

Golden Hills CSD  
21415 Reeves Street  
Tehachapi, CA 93581

The 2015 RUWMP will also be posted on the GHCS D's website at [www.ghcsd.com](http://www.ghcsd.com).

# Section 6 Stallion Springs CSD

## 6.01 Plan Preparation

### 6.01.1 Agency Identification

SSCSD is a retail water supplier. In 2015, its service area consisted of 1,314 municipal connections and it supplied a volume of 421 acre-feet of water to its service area. Its information in the RUWMP is presented in Calendar Year format and water quantities are presented in Acre Feet. See **Table 6:2-1**.

SSCSD does not meet the threshold for preparing an UWMP as it serves less than 3,000 connections. However, SSCSD does want to continue to be proactive in water conservation and has voluntarily implemented water conservation measures to improve efficiency of water use.

Table 6:2-1 SSCSD: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015 <sup>1</sup>
CA1510025	Stallion Springs CSD	1,314	421
<b>TOTAL</b>		<b>1314</b>	<b>421</b>
NOTES:			
1. SSCSD groundwater production.			

### 6.01.2 Coordination

#### Law

*Each urban water supplier shall 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 (10620(d)(2)).*

*Each urban water supplier shall encourage the 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 (10642).*

*Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water*

supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c) (10631(j)).

Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan (10621(b)).

SSCSD purchases imported SWP water from the TCCWD to augment its groundwater supplies. TCCWD was informed of SSCSD’s water use projections as a part of the RUWMP development process (See **Table 6:2-4**). The Kern County Planning Department was provided notice that an update to the RUWMP was being prepared and notice of the public hearing on the Plan. Further information on coordination of the Plan and public involvement is included in **Section 6.09**. Copies of notices are included in **Appendix A**.

<b>Table 6:2-4 SSCSD: Water Supplier Information Exchange</b>
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name
Tehachapi-Cummings County Water District
NOTES: TCCWD is a participant in this RUWMP.

## 6.02 System Description

### 6.02.1 General Description

#### Law

*Describe the service area of the supplier (10631(a)).*

The Stallions Springs CSD was originally created in 1970 as the Tehachapi Mountain CSD, but later became known as Stallion Springs CSD. The SSCSD provides water and wastewater services to approximately 2,510 lots in the Tehachapi Mountains west of the City of Tehachapi. SSCSD produces and distributes water for domestic and commercial use and is governed by a five member board. Groundwater supplies from the Cummings Valley basin are supplemented by conjunctive use programs (groundwater banking) with the TCCWD. The service area boundary for SSCSD is shown on **Figure 2-1** in **Section 2.02.1**, which also includes more information on the Greater Tehachapi area.

### 6.02.2 Service Area Climate

#### Law

*Describe the climate of the supplier (10631(a)).*

See **Section 2.02.2**

### 6.02.3 Service Area Population

#### Law

*(Describe the service area) current and projected population . . . The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier . . . (10631(a)).*

*. . . (population projections) shall be in five-year increments to 20 years or as far as data is available (10631(a)).*

*Describe . . . other demographic factors affecting the supplier's water management planning (10631(a)).*

The 2015 population estimates for the SSCSD were developed based on 2010 Census data for the Stallion Springs CDP and the population per connection method. Population projections for the SSCSD are based on projections for the unincorporated areas of Kern County (1% growth per year) from the Kern COG 2014 Regional Transportation Plan. See **Table 6:3-1**.

Table 6:3-1 SSCSD: Population - Current and Projected					
Population Served	2015 <sup>1</sup>	2020 <sup>2</sup>	2025 <sup>2</sup>	2030 <sup>2</sup>	2035 <sup>2</sup>
	2,782	2,924	3,073	3,230	3,395
NOTES: 1. 2015 population calculated per 2010 census data for the Stallion Springs CDP and population per connection method (2.12 persons/connection). 2. Population projections for 2020 through 2035 based on population projections for the unincorporated area from Kern COG (Regional Transportation Plan June 2014).					

### 6.03 System Water Use

#### 6.03.1 Water Use

#### Law

*Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: (A) Single-family residential; (B) Multifamily; (C) Commercial; (D) Industrial; (E) Institutional and governmental; (F) Landscape; (G) Sales to other agencies; (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; (I) Agricultural (10631(e)(1) and (2)).*

Water use data within the SSCSD for 2015 is summarized in **Table 6:4-1**. Water usage is almost entirely residential with some small retail venues, a golf course, an extreme sports camp, and a few government buildings. 2015 was an extremely dry year. Water use restrictions and water conservation measures were enacted by the SSCSD to meet the conservation standard set for the SSCSD by the State. The SSCSD

makes no deliveries of water for saline intrusion barriers. Total water use for the SSCSD water service area in 2015 was 11% less than the water use in 2014 and 13% less than the water use in 2013.

Table 6:4-1 SSCSD: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Other	Residential	Drinking Water	292
Commercial		Drinking Water	18
Losses		Drinking Water	111
<b>TOTAL</b>			<b>421</b>
NOTES:			

**Table 6:4-2** includes projections of SSCSD’s water demands for the years 2020 through 2035 in five year increments. Projections for future water use are based on historic deliveries and the projected population growth from **Table 6:3-1**.

Table 6:4-2 SSCSD: Demands for Potable and Raw Water - Projected					
Use Type	Additional Description	Projected Water Use			
		2020	2025	2030	2035
Other	Residential and Commercial	508	534	561	590
<b>TOTAL</b>		<b>508</b>	<b>534</b>	<b>561</b>	<b>590</b>
NOTES: Projected water usage based on population projections and average 2011-2015 water use of 155 gpcd.					

**Table 6:4-3** summarizes SSCSD’s total water demands from **Tables 6:4-1 and 6:4-2**.

Table 6:4-3 SSCSD: Total Water Demands					
Description	2015	2020	2025	2030	2035
Potable and Raw Water <i>From Tables 6:4-1 and 6:4-2</i>	421	508	534	561	590
Recycled Water Demand <i>From Table 6:6-4</i>	0	20	20	20	20
<b>TOTAL WATER DEMAND</b>	<b>421</b>	<b>528</b>	<b>554</b>	<b>581</b>	<b>610</b>
NOTES:					

### 6.03.2 Distribution System Water Losses

#### Law

*Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: . . . (J) Distribution system water loss. (10631(e)(1) and (2)).*

*For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.*

*The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association (10631(e)(3)).*

**Table 6:4-4** includes the results of SSCSD’s water system audit for 2015. The audit was completed according to Appendix L of the Guidebook using the AWWA’s Water Audit Software. A copy of the SSCSD’s water audit reporting worksheet is included in **Appendix H**.

Table 6:4-4 SSCSD: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2015	105.74
NOTES: Water loss from AWWA Water Audit Reporting Worksheet (see Appendix H)	

### 6.03.3 Water Use for Lower Income Households/Future Water Savings

#### Law

*The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier (10631.1(a)).*

*If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area (10631 (e)(4)(A)).*

*. . . Water use projections that do not account for these water savings shall be noted of that fact (10631 (e)(4)(B)).*



The projection for affordable residential housing needs (combined low income and very low income) was estimated to be 38% of the total Residential Housing Needs Allocation for the City of Tehachapi in the 2014 Regional Transportation Plan prepared by Kern COG. Therefore, due to its proximity to the City of Tehachapi, low income housing water use needs for single-family and multifamily residential uses within the SSCSD are estimated to be 38% of its total residential water use.

The water use projections for the SSCSD do not account for water savings from codes, standards, ordinances, or transportation and land use plans. See **Table 6:4-5**.

<b>Table 6:4-5 SSCSD: Inclusion in Water Use Projections</b>	
Are Future Water Savings Included in Projections?	No
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

### 6.03.4 Climate Change

See **Section 2.03.3**.

## 6.04 Baselines and Targets

### 6.04.1 Updating Calculations from 2010 UWMP

#### Law

*An urban retail water supplier shall include in its urban water management plan due in 2010 . . . the baseline daily per capita water use . . . along with the bases for determining those estimates, including references to supporting data (10608.20(e)).*

*An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan (10608.20(g)).*

The same target method is proposed for use in this RUWMP Update that was used for the 2010 Plan. This section summarizes the calculations for the SSCSD. The calculations for the Regional Alliance are described in **Section 2.04**. The SB X7-7 verification form tables for the Regional Alliance and the SSCSD are included in **Appendix G**.

### 6.04.2 Baseline Periods

#### Law

*“Base daily per capita water use” means any of the following:*

- 13) *The urban retail water supplier’s estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*
- 14) *For an urban retail supplier that meets at least 10 percent of its measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier*

*may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*

- 15) *For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year reporting period ending no earlier than December 31, 2007, and no later than December 31, 2010 (10608.12(b)).*

The SSCSD will utilize the same baseline period (2000 – 2009) as used in the 2010 RUWMP as shown in its **SB X7-7 Table 1**.

### 6.04.3 Service Area Population

#### Law

*When calculating per capita values for the purposes of this chapter, an urban water retailer shall determine population using federal, state, and local population reports and projections (10608.20(f)).*

The SSCSD population estimates were developed based on the persons per connection method and census data for 2000 and 2010 for the Stallion Springs CDP. Population per connection was calculated at 2.1 based on 2000 and 2010 census data per the 2010 RUWMP. Population estimates for the SSCSD are shown in its **SB X7-7 Table 3**.

### 6.04.4 Gross Water Use

#### Law

*“Gross Water Use” means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:*

- 17) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier*
- 18) The net volume of water that the urban retail water supplier places into long term storage*
- 19) The volume of water the urban retail water supplier conveys for use by another urban water supplier*
- 20) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24 (10608.12(g)).*

SSCSD's gross water use as shown in its **SB X7-7 Table 4** consists of its groundwater well production.

### 6.04.5 Baseline Daily Per Capita Water Use

SSCSD's baseline daily per capita water use (calculated by dividing the gross water use by the service area population) is shown for each of the baseline years in its **SB X7-7 Table 5**.

**6.04.6 2015 and 2020 Targets**

The 2020 Target for the SSCSD was calculated using Target Method 3 (95% of the Regional Target from the 20 x 2020 Water Convention Plan, State of California Agency Team, 2010) as shown in its **SB X7-7 Table 7E**. The confirmation of the 2020 Target is shown in its **SB X7-7 Table 7F**. By law, the maximum 2020 target is 95% of an agency’s 5-year baseline water usage. Stallion Springs CSD as an individual agency has a 5-year baseline water use of 169 GPCD. This results in a 2020 water use target of 160 gpcd for the SSCSD. The baseline and target information for SSCSD is summarized in **Table 6:5-1**.

Table 3:5-1 Baselines and Targets Summary <i>Stallion Springs CSD</i>					
Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	2000	2009	176	168	160
5 Year	2005	2009	169		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES: See SSCSD SB X7-7 Tables in Appendix G.					

**6.04.7 2015 Compliance Daily per Capita Water Use (GPCD)**

**Law**

*“Compliance daily per capita water use” means the gross water use during the final year of the reporting period (10608.12(e)).*

*Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015 (10608.24(a))*

SSCSD is in compliance with the 2015 Interim Target as shown in **Table 6:5-2**. SSCSD has also achieved compliance with the 2020 Target. SSCSD’s daily per capita water use for 2015 (135 gpcd) is a reduction of 23% from its average per capita water usage for the 2000 to 2009 baseline period (176 gpcd), and is 16% lower than its 2020 Target (160 gpcd).

Table 6:5-2: 2015 Compliance <i>Stallion Springs CSD*</i>		
Actual 2015 GPCD	2015 Interim Target GPCD	Did Supplier Achieve Targeted Reduction for 2015? Y/N
135	168	Yes
*All values are in Gallons per Capita per Day (GPCD)		
NOTES: See SSCSD SB X7-7 Tables in Appendix G.		

## 6.05 System Supplies

### 6.05.1 Purchased or Imported Water

The SSCSD purchases imported SWP water from TCCWD to meet demands in excess of its groundwater supplies. SWP purchases are delivered to the SSCSD through groundwater recharge.

Deliveries of imported SWP water for 2015 are included in **Table 6:6-8** in **Section 6.05.9**. Projections of future SWP purchases are included in **Table 6:6-9** in **Section 6.05.9**. TCCWD's imported SWP supply is described in **Section 2.05.1**.

### 6.05.2 Groundwater

*If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the Plan:*

*A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management (10631(b)(1)).*

*A description of any groundwater basin or basins from which the urban water supplier pumps groundwater (10631(b)(2)).*

*For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board (10631(b)(2)).*

*A description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree (10631(b)(2)).*

*For basins that have not been adjudicated, (provide) information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition (10631(b)(2)).*

*A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records (10631(b)(3)).*

The Stallion Springs CSD pumps groundwater from the adjudicated Cummings Basin and from areas outside of the adjudicated groundwater basin within the Stallion Springs community.

SSCSD purchases surface water from TCCWD that is recharged within the Cummings Basin. This water is recovered from wells within the Cummings Basin and delivered to the SSCSD service area. The TCCWD serves as watermaster and oversees programs to manage groundwater supplies within the Cummings Basin. The Cummings Basin has been in overdraft since 2002. The SSCSD is working with the TCCWD to develop and implement mitigation measures to correct this overdraft. More information on the Cummings Basin is included in **Section 2.05.2**.

SSCSD’s groundwater supply is obtained through seven production wells, four of which are located in the Cummings Basin. Additional water supplies to meet future growth will come from expansion of the Cummings Basin conjunctive use operations.

SSCSD’s groundwater pumping for the last five years is included in **Table 6:6-1**.

Table 6:6-1 SSCSD: Groundwater Volume Pumped						
Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Cummings Basin	451	417	424	433	370
Alluvial Basin	Outside of adjudicated Cummings Basin	21	99	40	20	51
<b>TOTAL</b>		<b>472</b>	<b>516</b>	<b>464</b>	<b>453</b>	<b>421</b>
NOTES: Includes recovery of previously banked SWP supplies.						

**6.05.3 Surface Water**

SSCSD does not utilize surface water as a source of its urban water supply.

**6.05.4 Stormwater**

SSCSD does not utilize stormwater as a source of its urban water supply.

**6.05.5 Wastewater and Recycled Water**

**Law**

*The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier’s service area. (16033)*

SSCSD collects and treats wastewater from within its service area. Disinfected secondary treated effluent is discharged to Chanac Creek and is regulated by a NPDES permit. This method of wastewater disposal is expected to continue in the near future. However, the SSCSD is evaluating options for upgrading the WWTP to tertiary treatment with the goal of utilizing the recycled water for golf course irrigation. This work is in the preliminary stage.

The wastewater collected within the SSCSD service area for 2015 is summarized in **Table 6:6-2**. Wastewater treatment and discharge within the SSCSD service area for 2015 is summarized in **Table 6:6-3**. The estimated future use of recycled water for golf course irrigation is summarized in **Tables 6:6-4 and 6:6-6**. **Table 6:6-5** is not included in this report since no recycled water use for the SSCSD in 2015 was projected in the 2010 RUWMP.

**Table 6:6-2 SSCSD: Wastewater Collected Within Service Area in 2015**

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected in 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party?
The Stallion Springs CSD	Estimated	21	Stallion Springs CSD	Stallion Springs WWTF	Yes	No
<b>Total Wastewater Collected from Service Area in 2015:</b>		<b>21</b>				

NOTES:

**Table 6:6-3 SSCSD: Wastewater Treatment and Discharge Within Service Area in 2015**

Wastewater Treatment Plant Name	Method of Disposal	Treatment Level	2015 volumes			
			Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Stallion Springs WWTF	Chanac Creek outfall	Secondary, Disinfected - 23	21	21		
<b>Total</b>			<b>21</b>	<b>21</b>	<b>15</b>	<b>0</b>

NOTES:

**Table 6:6-4 SSCSD: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area**

Name of Agency Producing (Treating) the Recycled Water:	Stallion Springs CSD					
Name of Agency Operating the Recycled Water Distribution System:	Stallion Springs CSD					
Supplemental Water Added in 2015	None					
Beneficial Use Type	Level of Treatment	2015	2020	2025	2030	2035
Golf course irrigation	Tertiary	0	20	20	20	20
<b>Total:</b>		<b>0</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>

NOTES: SSCSD is currently developing a scope of work for tertiary effluent upgrades to the WWTF. It is unknown at this time how much treated effluent would be utilized by the golf course.

Table 6:6-6 SSCSD: Methods to Expand Future Recycled Water Use		
Name of Action/Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Upgrade plant to tertiary and send effluent to golf course	3-5 years	20
<b>Total</b>		<b>20</b>
NOTES: Golf course irrigation requirements are estimated.		

### 6.05.6 Desalinated Water Opportunities

#### Law

*Describe the opportunities for development of desalinated water, including but not limited to ocean water, brackish water, and groundwater, as a long-term supply. (10631(h))*

Stallion Springs CSD has no plans for the development of desalinated water supplies within the planning horizon of this RUWMP. Desalination is not a cost-effective solution for the water supply needs of the GTA due to the water resource opportunities that are available at a much lower cost.

### 6.05.7 Exchanges and Transfers

#### Law

*Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis. (10631(d))*

The SSCSD cannot transfer or exchange its groundwater supplies. Discussion of transfer opportunities on a regional basis is included in **Section 2.05.7**.

### 6.05.8 Future Water Projects

#### Law

*(Describe) all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program (10631(g)).*

SSCSD will develop and implement future water projects as necessary to maintain its groundwater supplies to meet its customers' potable water demands. Discussion of future regional water projects for the GTA is included in **Section 2.05.8**.

### 6.05.9 Summary of Existing and Planned Sources of Water

#### Law

Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a) (10631(b)).

(Provide) a detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records (10631(b)(4)).

SSCSD's existing and planned sources of water are summarized in **Tables 6:6-8 and 6:6-9**. Water demands for lands overlying the Cummings Basin are estimated to be 40% of the overall water demands. These lands will be served by groundwater from the Cummings Basin. Projections for future purchases of SWP supplies are estimated to meet the remaining water demands.

Table 6:6-8 SSCSD: Water Supplies — Actual			
Water Supply Description	Additional Detail on Water Supply	2015	
		Actual Volume	Water Quality
Groundwater	From District Wells	183	Drinking Water
Purchased or Imported Water	Conjunctive use <sup>1</sup>	238	Raw Water
<b>Total</b>		<b>421</b>	
NOTES:			
1. From TCCWD BWRA Summary.			

Table 6:6-9 SSCSD: Water Supplies — Projected					
Water Supply Description	Additional Detail on Water Supply	Projected Water Supply Reasonably Available Volume			
		2020	2025	2030	2035
Groundwater	Service to overlying lands <sup>1</sup>	203	214	224	236
Purchased or Imported Water	Purchased SWP supplies <sup>2</sup>	305	320	337	354
Recycled Water	Golf course irrigation	20	20	20	20
<b>Total</b>		<b>528</b>	<b>554</b>	<b>581</b>	<b>610</b>
NOTES:					
1. Groundwater service to overlying lands in the Cummings Basin estimated as 40% of overall water demands.					
2. Purchased SWP supplies are estimated to meet remaining water demands.					



## 6.06 Water Supply Reliability Assessment

### 6.06.1 Constraints on Water Sources

#### Law

*For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable (10631(c)(2)).*

*The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability (10634).*

Due to the ongoing management of its groundwater supplies, the SSCSD anticipates that they would be available at a consistent level of use during the planning horizon of this Plan.

### 6.06.2 Reliability by Type of Year

#### Law

*Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following: (A) an average water year, (B) a single dry water year, (C) multiple dry water years (10631(c)(1)).*

The SSCSD relies on groundwater pumping to meet the demands of its customers, which includes recovery of previously recharged SWP supplies from the Cummings Basin. The SSCSD anticipates that with groundwater management measures implemented by the watermaster, the safe yield and water quality of the Cummings Basin will remain at close to current conditions for the next twenty years and beyond. The reliability of SWP supplies is discussed in **Section 2:06.2**. With average SWP deliveries at 60% long-term, the SSCSD anticipates that sufficient supplies will be reasonably available for purchase from the TCCWD as needed by the SSCSD.

The SSCSD currently purchases water supplies from the TCCWD in dry years. Starting in 2017, the SSCSD will begin accumulating banked supplies for use in dry years. The SSCSD will purchase additional water supplies from the TCCWD when available and develop a Banked Water Reserve Account (BWRA) equal to, at a minimum, five times the annual average of the SSCSD's SWP water demand over the previous five years. It is anticipated that water supplies through the BWRA will be available for recovery by the SSCSD during the single dry year and multiple dry years scenarios.

The reliability of SSCSD's groundwater supplies for the various water year types are summarized in **Table 6:7-1**.

Table 6:7-1 SSCSD: Basis of Water Year Data		
Year Type	Base Year	Available Supplies if Year Type Repeats
		% of Average Supply
Average Year	Base Year	100%
Single-Dry Year	2014	100%
Multiple-Dry Years 1st Year	2013	100%
Multiple-Dry Years 2nd Year	2014	100%
Multiple-Dry Years 3rd Year	2015	100%
NOTES: The SSCSD pumps groundwater to meet its demands. Imported SWP supplies are purchased and recharged for use by areas of the SSCSD located outside of the Cummings Basin. It is anticipated that 100% of the average groundwater supplies will be available in every year.		

### 6.06.3 Supply and Demand Assessment

#### Law

*Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional or local agency population projections within the service area of the urban water supplier (10632(c)).*

The comparison of SSCSD's supply and demand projections for the normal year, single dry year and multiple dry year scenarios are shown in **Tables 6:7-2, 6:7-3, and 6:7-4** respectively.

Table 6:7-2 SSCSD: Normal Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals (from Table 6:6-9)	528	554	581	610
Demand totals (from Table 6:4-3)	528	554	581	610
Difference	0	0	0	0
NOTES:				

Table 6:7-3 SSCSD: Single Dry Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals	528	554	581	610
Demand totals	528	554	581	610
Difference	0	0	0	0
NOTES:				

Table 6:7-4 SSCSD: Multiple Dry Years Supply and Demand Comparison					
Description		2020	2025	2030	2035
First year	Supply totals	528	554	581	610
	Demand totals	528	554	581	610
	Difference	0	0	0	0
Second year	Supply totals	528	554	581	610
	Demand totals	528	554	581	610
	Difference	0	0	0	0
Third year	Supply totals	528	554	581	610
	Demand totals	528	554	581	610
	Difference	0	0	0	0
NOTES:					

#### 6.06.4 Regional Water Supply Reliability

##### Law

*An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions (10620(f)).*

The urban water suppliers in the Greater Tehachapi area have been working together for many years to manage available water supplies on a regional basis. The Water Availability Preservation Committee meets on a regular basis to plan for and manage available water supplies. More details regarding these efforts are included in other sections of the Plan.

## 6.07 Water Shortage Contingency Planning

### 6.07.1 Stages of Action

#### Law

*The plans shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:*

*Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50% reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage (10631(a)(1))*

The SSCSD Water Shortage Contingency Plan is included in **Appendix F**. Water shortage regulations have been adopted in order to reduce consumption and reserve a sufficient supply of water for public health and safety. SSCSD staff is also investigating more aggressive measures to encourage water conservation.

The SSCSD's Water Shortage Contingency Plan includes protocols to respond to long term and short term water shortages and authorizes the Board to select the most appropriate level of conservation measures based on then current conditions. The Board shall conduct duly noticed public meetings to inform water customers of any change in the level of water conservation needed to meet the limited water supply and measures needed to meet those limitations.

The water shortage regulations include four stages of implementation. Conservation measures gradually increase with each stage. Emergency response stage actions become effective when the Stallion Springs CSD Board of Directors declares that the District is unable to provide sufficient water supply to meet ordinary demands, to the extent that insufficient supplies would be available for human consumption, sanitation and/or fire protection.

The General Manager will monitor the District's projected supply and demand for water on a daily basis and determine the extent of the conservation required through the implementation or termination of stages one, two, three and four conditions. The declaration of a stage condition shall be made by public announcements, posting of notices in three (3) locations accessible to the public and publication of the notice in the "Tehachapi News" and on the District website. The stage designated shall become effective immediately upon announcement. The declaration of any stage condition shall be reported to the Board at its next meeting. The Board shall then ratify the declaration, rescind the declaration or direct the declaration of a different stage.

The stages of action from SSCSD's Water Shortage Contingency Plan are summarized in **Table 6:8-1**.

Table 6:8-1 SSCSD Stages of Water Shortage Contingency Plan		
Stage	Percent Supply Reduction <sup>1</sup>	Water Supply Condition
Stage 1	10%	This condition exists when the District determines that it may not be able to meet ninety-percent (90%) or more of the projected water demands of its customers, either now or within six (6) months, and that water use should be reduced by not less than ten percent (10%).
Stage 2	20%	This condition exists when the District determines that it may not be able to meet eighty-percent (80%) or more of the projected water demands of its customers, either now or within six (6) months, and that water use should be reduced by not less than twenty percent (20%).
Stage 3	30%	A Stage three condition applies during periods when the District determines that it may not be able to meet seventy-percent (70%) or more of the projected water demands of its customers now or within six (6) months, and that a reduction of not less than thirty percent (30%) in potable water use is required to meet minimal demands of all its customers.
Stage 4	50%	A Stage four condition applies during periods when the District determines that it may not be able to meet fifty-percent (50%) or more of the projected water demands of its customers now or within six (6) months, and that a reduction of not less than fifty percent (50%) in potable water use is required to meet minimal demands of all its customers.
<sup>1</sup> One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES:		

### 6.07.2 Prohibitions on End Users/Consumption Reduction Methods

#### Law

*Additional, mandatory prohibitions against specific water use practices during water shortages, including but not limited to, prohibiting the use of potable water for street cleaning (10632(a)(4)).*

*Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply (10632(a)(5)).*

The prohibitions on end users for the various stages of the SSCSD's Water Shortage Contingency Plan are summarized in **Table 6:8-2**. Consumption Reduction Methods are summarized in **Table 6:8-3**.

**Table 6:8-2 SSCSD: Restrictions and Prohibitions on End Uses**

Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1	Other	Preventing excessive water from flowing off property served onto adjacent properties, sidewalks, gutters, surface drains, storm drains or over land.	No
1	Landscape - Other landscape restriction or prohibition	Use of drip irrigation systems or other methods designed to prevent excessive surface irrigation of landscaped areas, resulting in conditions such as puddling or runoff.	No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Immediate repair of all observable leaks of water on the customer's premises.	No
1	Other - Prohibit use of potable water for washing hard surfaces	Use of broom or blower instead of a hose to clean driveways and paved surfaces. Use of water in cleaning of driveways and other paved surfaces only when necessary to alleviate immediate fire or un-sanitation hazards.	No
1	Other	Being careful not to leave hose running while washing a vehicle.	No
1	Other	Use of low flow shower heads and shortening the time spent in the shower.	No
1	Other	Use of volume reduction devices in toilets and being careful not to use the toilet as an ashtray or waste bucket	No
1	Other	Reduction in water consumption for bathing, hand washing and irrigation by reduction of flow time for these devices.	No
1	Other	Running only full loads in the washing machine and dishwasher.	No
1	Other	Capturing cold tap water while waiting for tap water to come down the pipes, to be used later on house plants or garden.	No
1	Other	Serving water to customers at any and all restaurants within the service area is only upon specific request.	No
2	Other	All Stage 1 conditions apply	No

**Table 6:8-2 (Continued) SSCSD: Restrictions and Prohibitions on End Uses**

Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
2	Landscape - Limit landscape irrigation to specific times	Lawn watering and landscape irrigation is only permitted Monday Through Saturday between (5:00) P.M. and (8:00) A.M. local time. However, this watering is permitted at any time on these days if a handheld hose is used, equipped with a nozzle that automatically shuts of when released, or when handheld container or a drip irrigation system is used.	No
2	Landscape - Limit landscape irrigation to specific days	Lawn Watering and landscape irrigation is prohibited on Sundays.	No
2	Other - Prohibit use of potable water for construction and dust control	Construction water for grading and compacting maybe used at any time provided the water is from a source other than the District potable water system.	No
2	Other	Potable metered water may be used for other construction between seven o'clock (7:00) A.M. and five o'clock (5:00) P.M., local time.	No
2	Other	Washing of vehicles or other equipment is permitted only if done using a handheld bucket or a handheld hose equipped with a nozzle that automatically shuts off when released.	No
3	Other	All Stage 1 and 2 conditions apply	No
3	Other	All high volume users (defined as over 8,000 cubic feet on a bi-monthly basis) shall submit to the District water curtailment plans for at least thirty percent (30%) overall reduction in water use within 10 (10) days of notice by the District of the declaration of a stage three condition.	No
4	Other	All Stage 1, 2, and 3 conditions apply	No
4	Other	Remaining water supplies must be allocated to preserve human health and environment integrity. All customers are only permitted to use water at the minimum required for public health and protection. Firefighting is the only allowable outdoor water use.	No
NOTES:			

Table 6:8-3 SSCSD: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference
All Stages	Expand Public Information Campaign	Board shall conduct duly noticed public meetings to inform water customers. Declaration of stage condition shall be publicized in the "Tehachapi News" and SSCSD Website
NOTES:		

### 6.07.3 Penalties, Charges, and Other Enforcement of Prohibitions

#### Law

*Penalties or charges for excessive use, where applicable 10632(a)(6).*

The SSCSD's Water Shortage Contingency Plan allows for the imposition of penalties as follows:

"The Board of Directors shall consider an ordinance consistent with this policy which provides for enforcement authority, legal remedies, including fines, penalties and/or termination of water service, and an appeal procedure."

### 6.07.4 Determining Water Shortage Reductions

#### Law

*A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis 10632(a)(9).*

The SSCSD's deliveries are entirely metered. The meter readings will be used to monitor the actual reductions in water usage in accordance with the water shortage contingency plan.

### 6.07.5 Revenue and Expenditure Impacts

#### Law

*An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments (10632(7)).*

The SSCSD reviews its revenues and expenditures on an annual basis and evaluates the need to increase water rates in order to provide adequate revenues in times of water shortages. If necessary, the SSCSD may utilize reserves to address decreased water sales during a water shortage.



### 6.07.6 Resolution or Ordinance

#### Law

*A draft water shortage contingency resolution or ordinance (10632(8)).*

The SSCSD's adopted water shortage contingency plan is included in **Appendix F**.

### 6.07.7 Catastrophic Supply Interruption

#### Law

*Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster (10632(a)(3)).*

SSCSD has written guidelines in its Emergency Response Plan to address a catastrophic non-drought related interruption in water supply. The water shortage regulations would be used to reduce consumption after a catastrophic supply interruption until more stringent methods such as strict water rationing could be put in place.

The emergency activities that are undertaken by SSCSD depend upon the severity of the problem and how quickly the problem can be remedied. Possible catastrophes affecting water supply may include:

- Widespread Power Outage
- Local Earthquake, Landslide, or Flash Flood
- Aqueduct Failure (due to earthquake or other circumstances)
- Delta Levee Failure

In the event of power loss, SSCSD has emergency power generation equipment that can be used to maintain water operations. In the event of an earthquake or other disaster, SSCSD personnel will survey and assess damage and respond accordingly with repairs. Work will be scheduled to minimize the impacts to potable water system customers.

Failure of the Aqueduct or Delta levees is discussed in **Section 2.07.6**

### 6.07.8 Minimum Supply Next Three Years

#### Law

*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's water supply (10632(a)(2)).*

The SSCSD's minimum supply for the next three years is assumed to be the same as its 2015 supply as shown in **Table 6:8-4**.

Table 6:8-4 SSCSD: Minimum Supply Next Three Years			
	2016	2017	2018
Available Water Supply	421	421	421
NOTES: Minimum supply is assumed to be the same as utilized in 2015.			

## 6.08 Demand Management Measures

### Law

*...The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20 (10631(f)(1)(A)).*

*The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:*

- xxii. Water waste prevention ordinances*
- xxiii. Metering*
- xxiv. Conservation pricing*
- xxv. Public education and outreach*
- xxvi. Programs to assess and manage distribution system real loss*
- xxvii. Water conservation program coordination and staffing support*
- xxviii. Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.*

#### 6.08.1 Water Waste Prevention Ordinances

Wasting water within the Stallion Springs CSD is prohibited by ordinance. In addition, the SSCSD provides information to all property owners and renters regarding the design, installation, and maintenance of water efficient landscapes and the use of drought resistant plants and efficient irrigation systems.

#### 6.08.2 Metering

SSCSD charges all customers based on metered readings and established rate schedules. All current and new connections including temporary connections are required to be metered and billed per volume of use. Existing meters are checked on a regular basis for leakage and accuracy.

#### 6.08.3 Conservation Pricing

SSCSD's rate schedule includes a monthly service charge and a tiered structure for water volume charges with rates that increase with the volume of water used.

#### 6.08.4 Public Education and Outreach

The TCCWD provides Public Education and Outreach on a regional basis for all of the participating retail urban water suppliers. See **Section 2.08.4** for a description of these efforts. SSCSD includes water conservation tips and articles in its quarterly newsletter and on its website [www.mysscscsd.com](http://www.mysscscsd.com). Water conservation messages have also been posted by the SSCSD on community bulletin boards.

#### 6.08.5 Programs to Assess and Manage Distribution System Real Loss

The SSCSD monitors pumping rates and water sales to identify average system water loss. Unusual water loss is investigated for possible leakage. SSCSD field personnel have the necessary equipment to locate and repair leaks in a timely manner. Customer water usage is also recorded and monitored in order to identify anomalies in water sales and usage that may be attributable to leakage or waste.

### **6.08.6 Water Conservation Program Coordination and Staffing Support**

The TCCWD provides water conservation program coordination and staffing support for all of the participating retail urban water suppliers. See **Section 2.08.6**.

### **6.08.7 Other Demand Management Measures**

The SSCSD's demand management measures are discussed in other sections of the Plan.

### **6.08.8 Implementation over the Past Five Years**

#### **Law**

*(Provide) a narrative description of that addresses the nature and extent of each water demand management measure implemented over the past five years (10631(f)(1)(A)).*

See **Section 2.08** for narrative descriptions of the nature and extent of the demand management measures implemented by the TCCWD on behalf of the participating agencies over the past five years.

### **6.08.9 Planned Implementation to Achieve Water Use Targets**

#### **Law**

*The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20 (10631(f)(1)(A)).*

Although the SSCSD has achieved its water use reduction targets it will continue to implement its existing DMMs and look for ways to use water more efficiently.

### **6.08.10 Members of the California Urban Water Conservation Council**

#### **Law**

*For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivision (f) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California" dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum (10631(i)).*

SSCSD is not currently a member of the California Urban Water Conservation Council (CUWCC).

## **6.09 Plan Adoption, Submittal and Implementation**

### **6.09.1 Public Notice**

#### **Law**

*Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The*

*urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision (10621(b)).*

*Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area (10642).*

The efforts SSCSD has taken to involve appropriate agencies and the general public in the planning process are summarized below. The City of Tehachapi is a participant in this RUWMP. No separate notice was provided to the City. Copies of notices are included in **Appendix A**.

For the 2015 Plan update, the public hearing was held on June 8, 2016. Accordingly, notice was provided as follows:

- Notice to County on February 24, 2016 (at least 60 days prior to hearing),
- Letter to Interested Parties (see **Section 2.02**) on May 18, 2016,
- Notice in local newspaper on May 18, 2016 and May 25, 2016 (per Gov. Code 6066 – 2 weeks in advance of hearing),
- Posted Draft 2015 RUWMP at SSCSD Office on May 18, 2016 (2 weeks prior to hearing), and
- Drafts of the plan were provided to the entities that requested such drafts.

## **6.09.2 Plan Adoption, Submittal, and Implementation**

### **Law**

*After the hearing, the plan shall be adopted as prepared or as modified after the hearing (10642).*

*An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016 (10621(d)).*

*The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan (10635(b)).*

*An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption (10644(a)(1)).*

*Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours. (10645).*

*The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640) (10621(c)).*

*Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption (10644(a)(1)).*

The 2015 RUWMP update plan was adopted by the SSCSD at the Regular Meeting of the Board of Directors on June 21, 2016. A public hearing on the update of the Regional Urban Water Management Plan was held on June 8, 2016. The intent of the Public Hearing was to gather input from the public that is served by SSCSD as well as other interested entities. Written and verbal comments received during the public hearing process have been addressed as appropriate in the final Plan. A copy of the resolution adopting the 2015 RUWMP update is included in **Appendix B**.

The Plan will be submitted to the California Department of Water Resources by July 1, 2016 and to the California State Library and the County within 30 days of adoption by the SSCSD on June 21, 2016.

Commencing no later than 30 days after July 1, 2016, the SSCSD will have a copy of the 2015 RUWMP available for public review at the SSCSD Office (see address below) during normal business hours.

Stallion Springs CSD  
27800 Stallion Springs Drive  
Tehachapi, CA 93561

The 2015 RUWMP will also be posted on the SSCSD's website at [www.mysscscsd.com](http://www.mysscscsd.com)

# Appendix A

## Notices

## Letter Agreement

Between and Among the Tehachapi-Cummings County Water District, Bear Valley Community Services District, Golden Hills Community Services District, City of Tehachapi and Stallion Springs Community Services District For Establishing a Regional Alliance to Comply with SB X7-7, the Water Conservation Act of 2009

### Recitals

1. The Water Conservation Act of 2009 (SB X7-7; Water Code Sections 10608 et seq.) set a goal of achieving a 20% reduction in statewide urban per capita water use by the year 2020 and requires urban water retailers to set a 2020 urban per capita water use target (Water Code Sections 10608.20 et seq.). SB X7-7 provides that urban water retailers may plan, comply and report on a regional basis, individual basis, or both. The parties hereto are voluntarily addressing such requirements as part of the update of their Urban Water Management Plan being undertaken pursuant to the Urban Water Management Planning Act (Water Code Sections 10610 et seq.), although they do not presently meet the requirements of an "urban water supplier" under such acts.
2. The Parties to this Letter Agreement (Tehachapi-Cummings County Water District, Bear Valley Community Services District, Golden Hills Community Services District, City of Tehachapi and Stallion Springs Community Services District) are eligible to form a "Regional Alliance" pursuant to the *California Department of Water Resources Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (DWR Methodologies) because the Parties are located in the same hydrologic region, the Tulare Lake Hydrologic Region. The Parties are also participating and developing a Regional Urban Water Management Plan wish to establish a Regional Alliance for purposes of complying with SB X7-7.

### Agreement for the Regional Alliance Formation, Target Calculation, and Reporting

#### Section 1. Regional Alliance Formation and Target Calculation

The Parties hereby form a Regional Alliance and agree to inform DWR, prior to July 1, 2011, that a Regional Alliance has been formed, pursuant to the DWR Methodologies. The Parties agree that the Regional Alliance Target will be calculated using Option 1 (as described in DWR Methodology 9). The Parties will include the Regional Alliance Target in the Regional 2010 Urban Water Management Plan.

#### Section 2. Regional Alliance Review

The Parties agree to review and re-calculate the Regional Alliance and Regional Alliance Target, no later than December 31, 2015, in preparation of their respective 2015 Urban Water Management Plans.

#### Section 3. Regional Alliance Reporting

The Parties agree to prepare and submit Regional Alliance Reports pursuant to the DWR Methodologies, including, but not limited to, the following information:

- Baseline Gross Water Use and Service Area Population,
- 2015 and 2020 Water Use Targets (Individual and Regional).

- Compliance Year Gross Water Use and Service Area Population, and
- Adjustments to Gross Water Use in Compliance Year

Section 4. Regional Water Supply Planning

The Parties agree to participate in discussions regarding regional water supply planning.

Section 5. Regional Alliance Dissolution

The Parties agree that each Party can withdraw from the Regional Alliance at any time without penalty by giving written notice to all other Parties. If a Party withdraws from the Regional Alliance, the Parties agree that the Regional Target will be recalculated among remaining participating Parties as set forth in the DWR Methodologies.

Section 6. Miscellaneous

- (a) This Letter Agreement shall be between and among those Parties that have executed this Letter Agreement by June 30, 2011. If all Parties have not executed this Letter Agreement by said date, the Parties who have executed this Letter Agreement by June 30, 2011, agree that the Regional Target will be recalculated among participating Parties as set forth in the DWR Methodologies.
- (b) As noted above the parties hereto are not currently required to prepare or submit an Urban Water Management Plan nor comply with SB X7-7 and are voluntarily doing so as good stewards of their water resources, and therefore at the present time have no obligation to meet such requirements except to the extent their respective governing bodies elect to do so. By enter into this Letter Agreement and acting in concert to update their Urban Water Management Plan in a manner consistent with SB X7-7 the parties do not forgo any of their respective rights under applicable law.

Section 7. Letter Agreement Authorization

This Letter Agreement may be signed in counterparts. By signing below, each signatory states that he or she is authorized to sign this Letter Agreement on behalf of the Party for which he or she is signing.

Ed Grimes 6/13/11  
Signature Date

Ed Grimes  
Print Name City of Tehachapi

John Martin 6/13/11  
Signature Date

JOHN MARTIN  
Print Name Tehachapi-Cummings CWD

Rob Northcutt 6/13/11  
Signature Date

ROB NORTHUTT  
Print Name Bear Valley CSD

Kathleen Cassil June 9, 2011  
Signature Date

Kathleen Cassil  
Print Name Golden Hills CSD

Sandra K. Young 6-21-2011  
Signature Date

SANDRA K. YOUNG  
Print Name Stallion Springs CSD



February 24, 2016

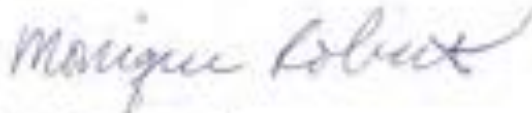
Ms. Lorelei Oviatt  
Kern County Planning Department  
2700 M Street, Suite 100  
Bakersfield, CA 93301-2370

**Notice of Preparation of 2015 Update to the  
Tehachapi Regional Urban Water Management Plan**

Dear Ms. Oviatt,

In accordance with the California Water Code Sections 10620 and 10621, you are being notified that the members of the Tehachapi Water Availability Preservation Committee (Tehachapi Cummings County Water District, Bear Valley CSD, City of Tehachapi, Golden Hills CSD, and Stallion Springs CSD) are reviewing their Regional Urban Water Management Plan and considering amendments or changes to the Plan. AECOM is under contract to prepare the 2015 RUWMP Update on behalf of the committee. If you would like to provide comments during this process, please let us know.

Sincerely,



Monique Roberts, PE  
Project Manager

cc: John Martin, TCCWD  
David Edmonds, BVCSD  
Jon Curry, City of Tehachapi  
Bill Fisher, GHCSO  
Lori Rodgers, SSCSD

May 18, 2016

Ms. Lorelei Oviatt  
Kern County Planning Department  
2700 M Street, Suite 100  
Bakersfield, CA 93301-2370

**Notice of Public Hearing on the 2015 Update to the  
Tehachapi Regional Urban Water Management Plan (RUWMP)**

Dear Ms. Oviatt,

In accordance with the California Water Code Section 10642, you are being notified on behalf of the members of the Tehachapi Water Availability Preservation Committee (Tehachapi Cummings County Water District, Bear Valley CSD, City of Tehachapi, Golden Hills CSD, and Stallion Springs CSD) that a Draft of the 2015 RUWMP Update has been prepared. A public workshop on the 2015 RUWMP has been scheduled for Wednesday, June 8, 2016 at 6:00 p.m., at the office of the Golden Hills Community Services District, 21415 Reeves Street, Tehachapi, California, 93581.

Please let us know if you would like a copy of the Draft 2015 RUWMP or if you would like to provide any comments on the Plan.

Sincerely,



Monique Roberts, PE  
Project Manager

cc. John Martin, TCCWD  
David Edmonds, BVCSD  
Jon Curry, City of Tehachapi  
Bill Fisher, GHCSO  
Lori Rodgers, SSCSD

**NOTICE OF PUBLIC WORKSHOP  
TEHACHAPI WATER AVAILABILITY PRESERVATION COMMITTEE**

NOTICE is hereby given that a Public Workshop will be held by the Tehachapi Water Availability Preservation Committee on Wednesday, June 8, 2016 at 6:00 p.m., at the office of the Golden Hills Community Services District, 21415 Reeves Street, Tehachapi, California, 93581 to consider the following:

The Tehachapi Water Availability Preservation Committee, consisting of five local public agencies within the Greater Tehachapi Area – the Tehachapi-Cummings County Water District, the Bear Valley Community Services District, the City of Tehachapi, the Golden Hills Community Services District, and the Stallion Springs Community Services District – has prepared a 2015 Regional Urban Water Management Plan (2015 RUWMP), in compliance with the Urban Water Management Planning Act. The 2015 RUWMP is an update to the 2010 RUWMP that was adopted by each participating agency. A Draft copy of the 2015 RUWMP is available for public review at the Office of each participating agency.

Publication dates: May 18 and May 25, 2016

# PROOF OF PUBLICATION

The TEHACHAPI NEWS  
411 N. MILL STREET  
TEHACHAPI, CA 933561

Ad Number: 14141630  
Edition: Tehachapi News  
Class Code: Public Notices

PO #: VTCU00  
Account: VTCU00  
Run Times: 2  
Step Date: 05/25/2016

Start Date: 05/18/2016

Billing Lines: 51

Issues: 5.71

Total Cost: \$ 117.50

Billing Address: Tehachapi Cummings County Water District  
P.O. Box 326  
Tehachapi, CA 93561

Tehachapi Cummings County Water District  
P.O. Box 326  
Tehachapi, CA 93561

STATE OF CALIFORNIA  
COUNTY OF KERN

I AM A CITIZEN OF THE UNITED STATES AND A RESIDENT OF THE COUNTY AFORESAID; I AM OVER THE AGE OF EIGHTEEN YEARS, AND NOT A PARTY TO OR INTERESTED IN THE ABOVE-ENTITLED MATTER. I AM THE ASSISTANT PRINCIPAL CLERK OF THE PRINTER OF THE TEHACHAPI NEWS, A NEWSPAPER OF GENERAL CIRCULATION, PRINTED AND PUBLISHED WEEKLY IN THE CITY OF TEHACHAPI COUNTY OF KERN,

AND WHICH NEWSPAPER HAS BEEN ADJUDGED A NEWSPAPER OF GENERAL CIRCULATION BY THE SUPERIOR COURT OF THE COUNTY OF KERN, STATE OF CALIFORNIA, THAT THE NOTICE, OF WHICH THE ANNEXED IS A PRINTED COPY, HAS BEEN PUBLISHED IN EACH REGULAR AND ENTIRE ISSUE OF SAID NEWSPAPER AND NOT IN ANY SUPPLEMENT THEREOF ON THE FOLLOWING DATES, TO WIT:

**Pub Dates**

18/May/16

25/May/16

ALL IN YEAR 2016

I CERTIFY (OR DECLARE) UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT.

DATED AT TEHACHAPI CALIFORNIA

5/25/16

First Text  
NOTICE OF PUBLIC WORKSHOP TEHACHAPI WATER

**NOTICE OF PUBLIC  
WORKSHOP TEHACHAPI  
WATER AVAILABILITY  
PRESERVATION  
COMMITTEE**

NOTICE is hereby given that a Public Workshop will be held by the Tehachapi Water Availability Preservation Committee on Wednesday, June 9, 2016 at 6:00 p.m. at the office of the Golden Hills Community Services District, 2100 Beavers Street, Tehachapi, CA 93561 to consider the following: The Tehachapi Water Availability Preservation Committee, consisting of ten local public agencies within the Greater Tehachapi Area - the Tehachapi Cummings County Water District, the Deer Valley Community Services District, the City of Tehachapi, the Golden Hills Community Services District, and the Golden Springs Community Ser-

VICES DISTRICT - has prepared a 2015 Regional Urban Water Management Plan (RWMP) which is in compliance with the Urban Water Management Planning Act. The 2015 RWMP is an update to the 2010 RWMP that was adopted by each participating agency. A draft copy of the 2015 RWMP is available for public review at the Office of each participating agency. Published 5/18 & 5/25/2016. Ad#14141630.

Appendix B  
Resolutions Adopting 2015 UWMP Update

**RESOLUTION NO. 10-16**

**A RESOLUTION OF THE TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT  
ADOPTING THE 2015 REGIONAL 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, and as amended subsequently, 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, the primary objective of which is to plan for the conservation and efficient use of water; and

**WHEREAS**, Tehachapi-Cummings County Water District (TCCWD) is a wholesale supplier of water; and

**WHEREAS**, TCCWD along with retail purveyors within TCCWD as a Regional Alliance, have jointly prepared a Regional Urban Water Management Plan; and

**WHEREAS**, the Plan shall be periodically reviewed at least once every five years, and that appropriate amendments or changes shall be made to the Plan which are indicated by the review; and

**WHEREAS**, the updated Plan must be adopted after public review and hearing, and filed with the California Department of Water Resources by July 1, 2016; and

**WHEREAS**, TCCWD along with retail purveyors within TCCWD have therefore, prepared and circulated for public review a draft 2015 Regional Urban Water Management Plan, and a properly noticed public workshop regarding said Plan was held by the Regional Alliance on June 8, 2016; and

**WHEREAS**, The Board of Directors of the TCCWD received public comment regarding the 2015 Regional Urban Water Management Plan at its regular monthly Board meeting held on June 15, 2016;

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of TCCWD that the 2015 Regional Urban Water Management Plan is hereby adopted and the General Manager is hereby authorized and directed to file the 2015 Regional Urban Water Management Plan with the California Department of Water Resources by July 1, 2016.

**Adopted:** June 15, 2016

  
David E. Worden, President

Attest:

  
Lori Bunn, Secretary

**SECRETARY'S CERTIFICATE**

I, LORI BUNN, Secretary of the Board of Directors of Tehachapi-Cummings County Water District, hereby certify as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a regular meeting of the Board of Directors of the District, duly and legally held at the regular meeting place thereof on June 15, 2016. All of the members of the Board of Directors received due notice of the meeting and a majority thereof was present. At the meeting, the resolution was adopted by the following vote:

AYES:	Hadley, Hall, Pack, Piel and Worden
NOES:	None
ABSTAIN:	None
ABSENT:	None

ATTEST:

  
Lori Bunn, Secretary

(SEAL)

**RESOLUTION NO. 15/16-31**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF  
BEAR VALLEY COMMUNITY SERVICES DISTRICT  
ADOPTING THE 2015 REGIONAL URBAN WATER MANAGEMENT PLAN**

**WHEREAS**, the California Legislature has enacted Assembly Bill 797 (codified as Water Code Section 10810 et seq), known as the Urban Water Management Planning Act), 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, the primary objective of which is to plan for the conservation and efficient use of water; and

**WHEREAS**, Tehachapi-Cummings County Water District (TCCWD) as a Regional Alliance is a wholesale supplier of water; and

**WHEREAS**, TCCWD along with retail purveyors within TCCWD, which includes the Bear Valley Community Services District, have jointly prepared a Regional Urban Water Management Plan; and

**WHEREAS**, the Plan is required to be periodically reviewed at least once every five years, and that appropriate amendments or changes must be made to the Plan which are indicated by the review; and

**WHEREAS**, the updated Plan must be adopted after public review and hearing, and filed with the California Department of Water Resources by July 1, 2016; and

**WHEREAS**, TCCWD along with retail purveyors within TCCWD have prepared and circulated for public review a draft 2015 Regional Urban Water Management Plan, and a properly noticed public hearing regarding the updated Plan was held by the Regional Alliance on June 9, 2016; and

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of Bear Valley Community Services District that the 2015 Regional Urban Water Management Plan is hereby adopted and the General Manager is hereby authorized and directed to file the 2015 Regional Urban Water Management Plan with the California Department of Water Resources by July 1, 2016.



PASSED, APPROVED AND ADOPTED on June 9, 2016, by the following vote:

AYES: Baron, LaClaire, Ritchie, Grace, Zanutto  
NOES: None  
ABSENT: None  
ABSTAIN: None

  
\_\_\_\_\_  
Richard Zanutto, Board President  
Bear Valley Community Services District

ATTEST:

  
\_\_\_\_\_  
Kristy McEwen  
Secretary of the Board of Directors

**RESOLUTION NO. 30-16**

**A RESOLUTION OF THE CITY OF TEHACHAPI ADOPTING THE  
2015 REGIONAL 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, and as amended subsequently, 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, the primary objective of which is to plan for the conservation and efficient use of water; and

**WHEREAS**, the City of Tehachapi (City) is a retail supplier of water; and

**WHEREAS**, the City of Tehachapi along with retail purveyors within Tehachapi Cummings County Water District (TCCWD) as a Regional Alliance, have jointly prepared a Regional Urban Water Management Plan; and

**WHEREAS**, the Plan shall be periodically reviewed at least once every five years, and that the City shall make any amendments or changes to its plan which are indicated by the review; and

**WHEREAS**, the updates Plan must be adopted by July 1, 2016, after public review and hearing, and filed with the California Department of Water Resources; and

**WHEREAS**, the City along with retail purveyors within TCCWD have therefore, prepared and circulated for public review a draft 2015 Regional Urban Water Management Plan, and a properly noticed public workshop regarding said Plan was held by the Regional Alliance on June 8, 2016; and

**WHEREAS**, The Board of Directors of the TCCWD received public comment regarding the 2015 Regional Urban Water Management Plan at its regular monthly Board meeting held on June 15, 2016;

**NOW, THEREFORE, BE IT RESOLVED** by the City Council that the 2015 Regional Urban Water Management Plan is hereby adopted and the City Manager is hereby authorized and directed to file the 2015 Regional Urban Water Management Plan with the California Department of Water Resources by July 1, 2016.

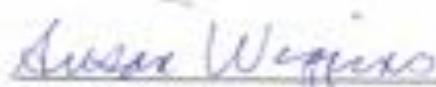
**PASSED AND ADOPTED** at a special meeting of the City Council of the City of Tehachapi on June 20, 2016 by the following vote:

AYES: WIGGINS, NIXON, GRIMES, SMITH, WAHLSTROM

NOES: NONE

ABSTAIN: NONE

ABSENT: NONE

  
\_\_\_\_\_  
SUSAN WIGGINS  
Mayor of the City of Tehachapi, California

**ATTEST:**

  
\_\_\_\_\_  
TORI MARSH  
City Clerk of the City of Tehachapi, California

I hereby certify that the foregoing resolution was duly and regularly adopted by the City Council of the City of Tehachapi at a special meeting thereof held on June 20, 2016.

  
\_\_\_\_\_  
TORI MARSH  
City Clerk of the City of Tehachapi, California

**RESOLUTION NO. 16-24**

**A RESOLUTION OF THE GOLDEN HILLS COMMUNITY SERVICES DISTRICT  
ADOPTING THE 2015 REGIONAL 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, and as amended subsequently, 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, the primary objective of which is to plan for the conservation and efficient use of water; and

**WHEREAS**, Tehachapi-Cummings County Water District (TCCWD) is a wholesale supplier of water; and

**WHEREAS**, TCCWD along with retail purveyors within TCCWD as a Regional Alliance, have jointly prepared a Regional Urban Water Management Plan; and

**WHEREAS**, the Plan shall be periodically reviewed at least once every five years, and that appropriate amendments or changes shall be made to the Plan which are indicated by the review; and

**WHEREAS**, the updated Plan must be adopted after public review and hearing, and filed with the California Department of Water Resources by July 1, 2016; and

**WHEREAS**, TCCWD along with retail purveyors within TCCWD have therefore, prepared and circulated for public review a draft 2015 Regional Urban Water Management Plan, and a properly noticed public workshop regarding said Plan was held by the Regional Alliance on June 8, 2016; and

**WHEREAS**, The Board of Directors of the TCCWD received public comment regarding the 2015 Regional Urban Water Management Plan at its regular monthly Board meeting held on June 15, 2016;

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of TCCWD that the 2015 Regional Urban Water Management Plan is hereby adopted and the General Manager is hereby authorized and directed to file the 2015 Regional Urban Water Management Plan with the California Department of Water Resources by July 1, 2016.

**PASSED AND ADOPTED** at a regular meeting of the Board of Directors of Golden Hills Community Services District on June 16, 2016.

AYES: Barrett, Buckley, Cassil, Kennedy, White

NOES: None

ABSTAIN: None

ABSENT: None




Larry Barrett, President

#### CERTIFICATION

I HEREBY CERTIFY that the foregoing Resolution is the Resolution of said District as duly passed and adopted by said Board of Directors on the 16<sup>TH</sup> day of June 2016.

WITNESS my hand and seal of said Board of Directors this 16<sup>TH</sup> day of June 2016.



Joseph D. Hughes, Legal Counsel

(DISTRICT SEAL)

**BEFORE THE BOARD OF DIRECTORS OF THE  
STALLION SPRINGS COMMUNITY SERVICES DISTRICT**

Resolution No. 2016-14

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
STALLION SPRINGS COMMUNITY SERVICES DISTRICT  
ADOPTING THE 2015 REGIONAL 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, or "Act") during the 1983-1984 Regular Session, and as 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, the primary objective of which is to plan for the conservation and efficient use of water; and

**WHEREAS**, Stallion Springs Community Services District (Stallion Springs CSD) is a retail supplier of water; and

**WHEREAS**, Stallion Springs CSD, along with Tehachapi-Cummings County Water District (TCCWD) and other retailer purveyors within the TCCWD as a Regional Alliance (a) are now participating with the other parties in preparing an update of an Urban Water management Plan, although at the present time there is no obligation to have an Urban Water Management Plan because the above-referenced threshold requirements are not yet met, and (b) by voluntary adopting this Plan as provided below, the Stallion Springs CSD does not forgo any of its rights under applicable law; and

**WHEREAS**, the Act provides such plans are to be periodically reviewed, at once every five years, and STALLION SPRINGS CSD intend to make appropriate amendments or changes to its plan which are indicated by the review; and

**WHEREAS**, the current update of the Plan must be adopted by July 1, 2016, after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption; and

**WHEREAS**, STALLION SPRINGS CSD, along with the TCCWD and other affected purveyors have, prepared and circulated for public review a draft Regional Urban Water Management Plan, and a properly noticed public hearing regarding said Plan was held on June 8, 2016, and this Board considered any and all comments and objections concerning adoption of said plan, and

**WHEREAS**, The Board of Directors of the Stallion Springs CSD received public comment regarding the 2015 Regional Urban Water Management Plan at its regular monthly Board meeting held on June 21, 2016;

**NOW, THEREFORE, BE IT RESOLVED AND ORDERED**, by this Board of Directors of STALLION SPRINGS CSD that the Regional Urban Water Management Plan is hereby adopted, subject to the matters recited above, and the General Manager is hereby

authorized and directed to file the 2015 Urban Water Management Plan with the California Department of Water Resources within 30 days of this date, and take other actions furtherance thereof.

ALL THE FOREGOING, being on motion of Director Wellman, seconded by Director Young and authorized by the following vote, to wit:

AYES: Director Gordon, Director McLaughlin, Director Wellman, Director Young, Chair Lamkin

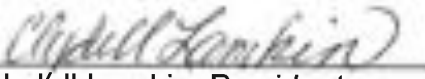
NOES:

ABSENT:

ABSTAIN:

I HEREBY CERTIFY that the foregoing Resolution is the Resolution of said District as duly passed and adopted by said Board of Directors on the 21<sup>st</sup> day of June, 2016.

WITNESS my hand and seal of said Board of Directors this 21<sup>st</sup> day of June, 2016.

  
Clydell Lamkin, President  
Stallion Springs CSD Board of Directors

ATTEST:

  
Lori Rodgers, Secretary  
Stallion Springs CSD Board of Directors

## Appendix C

# Climate Change Vulnerability Assessment Tulare Lake Basin Portion of Kern County Integrated Regional Water Management Plan (Kern IRWMP)



**Kennedy/Jenks Consultants**  
**Engineers & Scientists**

2775 North Ventura Road, Suite 100  
Oxnard, California 93036  
805-973-5700  
FAX: 805-973-1440

8 September 2014

California Department of Water Resources  
Division of Integrated Regional Water Management  
Financial Assistance Branch – Attn: Ted Daum  
Post Office Box 942836  
Sacramento, CA 94236-0001

Subject: Climate Change and Vulnerability Assessment submission as an addendum to the  
Tulare Lake Basin Portion of Kern County Integrated Regional Water Management  
Plan (Kern IRWMP)

Dear Mr. Daum:

Enclosed please find the Climate Change and Vulnerability Assessment submission as an addendum to the Tulare Lake Basin Portion of Kern County Integrated Regional Water Management Plan (Kern IRWMP). It is being submitted as a result of the June 6, 2014 IRWM Plan Review Process recommendations prepared by DWR. Members of the Kern IRWMP Executive Committee discussed the results of the Plan Review Process with you during a conference call on July 7, 2014, when it was determined that the Climate Change Standard and Vulnerability Assessment should be addressed so that the Kern IRWMP would be in compliance with the IRWM Guidelines. This will also enable the Kern IRWMP to meet the requirements of the Proposal Solicitation Package for Emergency Drought Funding; an application was submitted by project proponents on July 21, 2014.

The Kern IRWMP participants met on August 25, 2014 to conduct the Vulnerability Assessment and review the draft Climate Change submission (agenda and meeting notes attached). Comments were received and incorporated.

Your contact person for matters regarding this submittal is:

Ms. Lauren Bauer  
Kern County Water Agency  
PO Box 58  
Bakersfield, CA 93302-0058  
661/634-1411  
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Mr. Ted Daum  
California Department of Water Resources  
8 September 2014  
Page 2

We appreciate your assistance in this matter. Please feel free to contact Ms. Bauer with any questions or comments.

Very truly yours,

KENNEDY/JENKS CONSULTANTS



Mary Lou Cotton  
Practice Leader, Water Resources

Attachments

cc: Joe Yun, DWR

September 5, 2014

## **Technical Memorandum**

To: Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
From: Mary Lou Cotton  
Subject: Vulnerability to Climate Change Technical Memorandum  
K/J 1289035\*01

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Climate change refers to significant changes in temperature, precipitation, wind patterns and other weather that occur over several decades and beyond. Climatic changes observed in recent decades are occurring due to rising average global temperatures that are the result of elevated levels of gases released primarily by human activities, which trap heat in the atmosphere in a process known as the greenhouse effect. These so-called greenhouse gases (GHGs) include, among others, water vapor, carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>).

Climate change is impacting California water resources in many ways, including through rising sea levels, reduced snowpack, and more frequent and severe droughts. Impacts and vulnerabilities vary by region resulting in the need for tailored actions to ensure the viability of regional watersheds, including the Kern Region. These actions focus on reducing the intensity of climate change through mitigation measures and adapting to climate change effects.

This technical memorandum identifies the potential climate change vulnerabilities in the Kern Region as well as potential future actions to mitigate the vulnerabilities to climate change. The climate change vulnerability assessment presented in this section includes the checklist assessment in the Department of Water Resources (DWR's) *Climate Change Handbook for Regional Water Planning* and is consistent with climate change requirements in the Proposition 84 Integrated Regional Water Management Plan (IRWMP) Guidelines (June 2014).

### **1.1 Climate Change Projections Overview**

A climate change assessment is performed using the output of computer models that project future conditions from inputs on GHG emissions. These models are not predictive, but provide projections of potential future climate scenarios that can be used for planning purposes.

Climate change has the potential to have significant impacts on the Kern IRWM Region. The U.S. Bureau of Reclamation (Reclamation), the State of California and others continue to study climate change and its potential impacts on water and other resources in the western states.

The primary climate variables projected by global climate models (GCMs) that are important for water resources planning in California are changes in air temperature, changes in precipitation patterns, and sea level rise. The State of California 2009 Climate Change Impacts Assessment (California Climate Change Center 2009) provides the scientific basis for developing statewide climate change impact projections. The 2009 assessment provided future climate projections to support water resources decision making in California. A set of six GCMs were run for two

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 2

GHG emissions scenarios, A2 and B1, selected from the Intergovernmental Panel on Climate Change (IPCC) Special Report on Emissions Scenarios (SRES). The IPCC report provides a family of common scenarios that cover a range of plausible trends in GHG emissions over the 21st century as a result of economic, technological, and population change (IPCC 2007). Scenario A2 assumes higher GHG emissions and high growth in population and represents a more competitive world that lacks cooperation in development (similar to business as usual), while B1 is a lower GHG emission scenario that represents social consensus for sustainable development. Each GCM was used to simulate a historical period from 1950-1999 and a future projection period from 2000 to 2100. The 1950-1999 period serves as a baseline or “present condition” for the models so that future conditions can be projected. Table 1 lists the six GCM models and their sponsoring organization, the combination of which were used to evaluate climate change impacts in the Kern Region.

**Table 1: Summary of Global Climate Models**

<b>GCM</b>	<b>Sponsoring Organization and Model Name</b>
NCAR-PCM1 <sup>(a)</sup>	National Center for Atmospheric Research (NCAR) Parallel Climate Model (PCM)
GFDL-CM21 <sup>(a)</sup>	National Oceanic and Atmospheric Administration (NOAA) Geophysical Fluids Dynamics Laboratory (GFDL) model, version 2.1
NCAR-CCSM3 <sup>(a)</sup>	NCAR Community Climate System Model (CCSM)
MPI-ECHAM5	Max Plank Institute ECHAM5/MPI-OM Used by DWR for its climate change analysis for the 2011 Reliability Report, but the 2013 Draft Report Update uses Bay Delta Conservation Plan (BDCP) LLT CC5 input hydrology.
MIROC32	MIROC 3.2 medium-resolution model from the Center for Climate System Research of the University of Tokyo and collaborators
CNRM-CM3 <sup>(a)</sup>	French Centre National de Recherches Météorologiques (CNRM) models
Four Model Average <sup>(a)</sup>	Cal-Adapt website. Average of the following four GCMs: NCAR-PCM1, GFDL-CM21, NCAR-CCSM3, and CNRM-CM3. Used in this analysis for Kern River Region

Note: (a) Model used by Cal-Adapt.

DWR used the MPI-ECHAM5 model with the A2 emissions scenario when preparing the 2011 *State Water Project Delivery Reliability Report*. MPI-ECHAM5 represents the median of the six GCMs listed in Table 1. However, the 2013 *Draft Delivery Reliability Report* (December 2013) uses the climate change input hydrology developed for the Bay Delta Conservation Plan (BDCP) for the Late Long Term planning horizon and the 5th climate change region (BDCP LLT CC5 input hydrology). This had the effect of lowering State Water Project (SWP) long-term future reliability, from 60% to 58%.

The California Energy Commission’s Public Interest Energy Research Program (PIER) recently established the Cal-Adapt website (<http://cal-adapt.org/>), whose purpose is to explore California’s climate change research. In part, the website provides output from four climate

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 3

models (NCAR-PCM1, GFDL-CM21, NCAR-CCSM3, and CNRM-CM3) and two GHG emission scenarios (A2 and B1) downscaled to any location in California. The four GCMs are a subset of the six GCMs identified in Table 1. Because the BDCP LLT CC5 GCM is not included in Cal-Adapt, an average of the four GCMs (also provided by Cal-Adapt) with the A2 emission scenario was used in this analysis for the Kern Region.

## 1.2 Kern Region Climate Change Projections

Climate change is expected to have various impacts on the Kern Region including: (1) changing hydrology, and the resultant impacts to conjunctive use operations, due to a shift from snow to rain precipitation, (2) higher wildfire risk due to warmer, drier conditions over the year, and associated impacts on water quality and flooding, (3) fluctuations in temperature resulting in longer and drier conditions over the year, and associated impacts on water quality and flooding, (4) longer and more severe multi-year droughts, (5) greater summer water demand from all categories of users and (6) impacts to habitats and species.

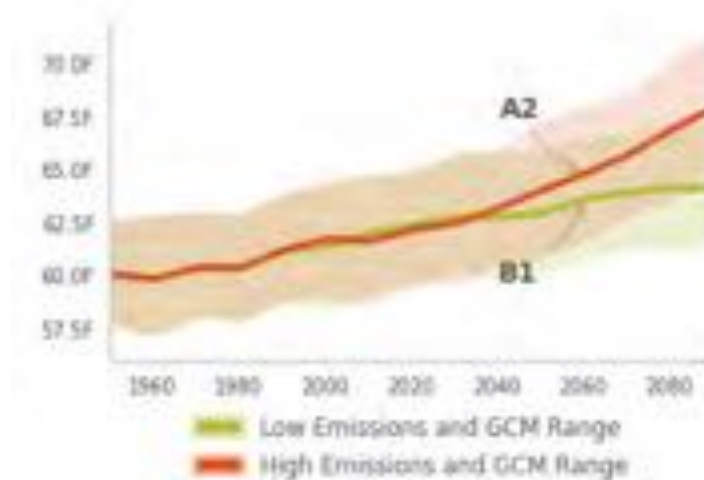
### 1.2.1 Temperature

Cal-adapt projects that locally, overall air temperatures are expected to rise from 1 degree Fahrenheit (°F) to 2.3°F over the next few decades. The historical average annual temperature in the Kern region is 61.4°F; the A2 and B1 scenarios project increases of 3.5°F and 6.3°F by the end of the 21st century. Figure 1 shows the projected air temperature change for the four GCMs averaged from 2000 through 2100, compared with the historical baseline from 1950-2000. The projected temperature increases begin to diverge at mid-century so that, by the end of the century, the temperature increases projected in the higher emissions scenario A2 are almost twice as high as those projected in the lower emissions scenario B1.

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 4

**Figure 1: Historical and Projected Annual Average  
Air Temperature for Kern County**



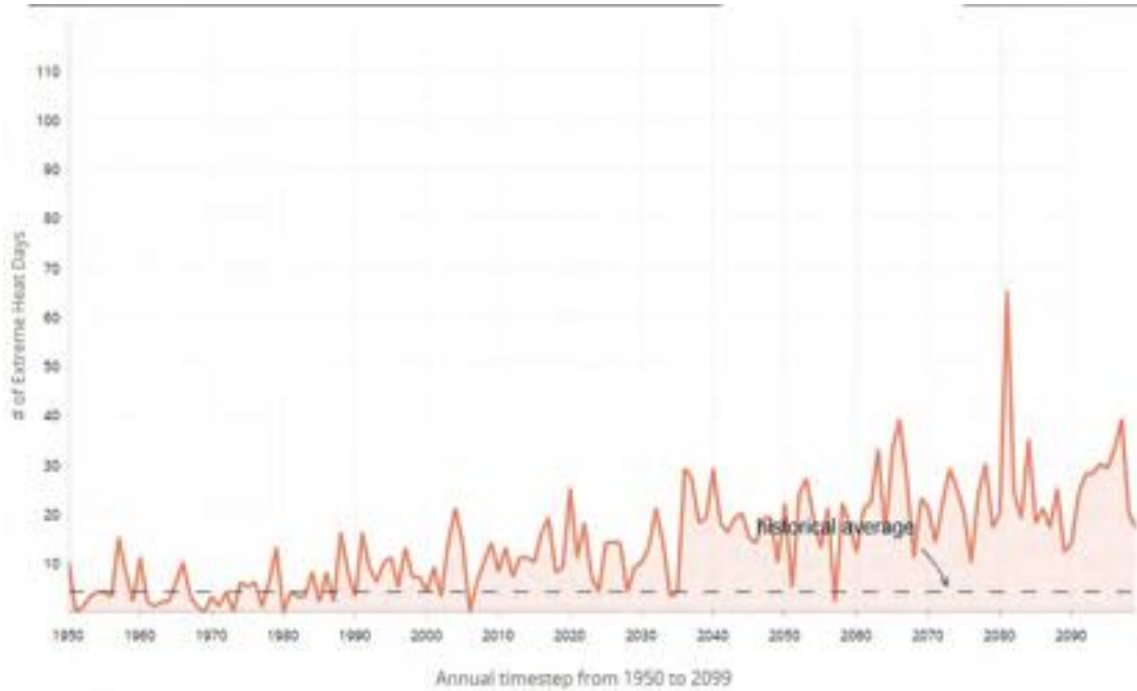
Source: Cal-adapt.org. Bakersfield Area

In addition to overall temperature increases, the region is projected to encounter higher incidences of extreme temperatures. Figure 2 and Figure 3 show the projected increases in extreme temperature days in Kern County for the B1 and A2 emission scenarios. This chart displays a count of the number of days that the selected area on the map is projected to exceed the area's calculated "extreme heat threshold" of 101 °F for each year 1950-2099. The historical annual average number of extreme heat days is four. Both scenarios project that number will increase to about 30 days by mid-century and either 40 or 70 days by the end of the century, depending on the emissions scenario. The increased temperatures will likely increase evaporation, leading to drier soils, increased crop evapotranspiration, and a longer growing season.

# Technical Memorandum

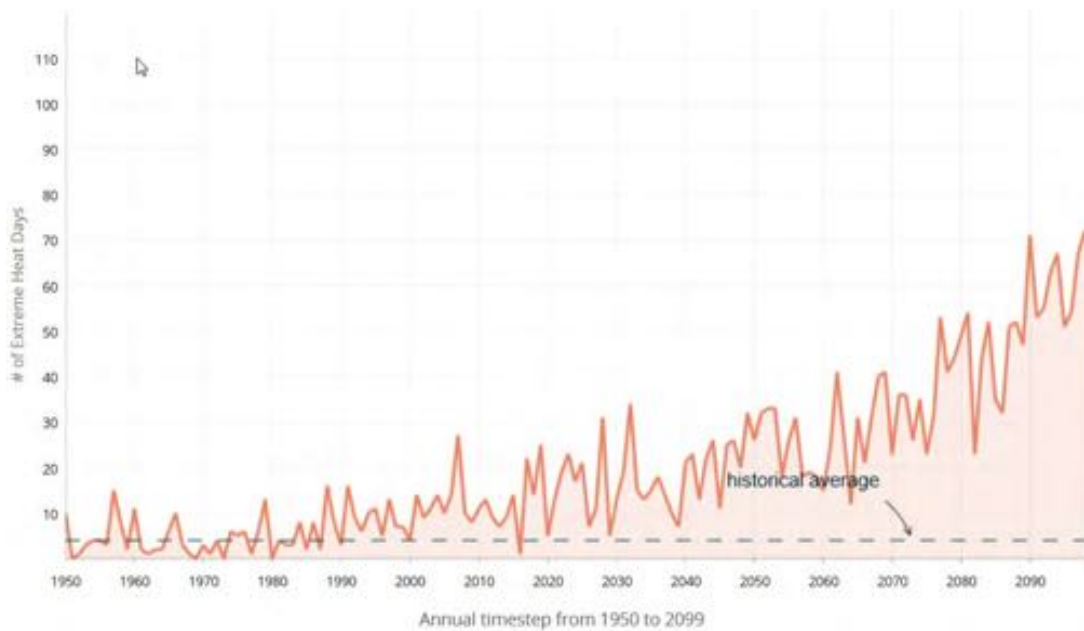
Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 5

**Figure 2: Number of Extreme Heat Days (Low Emission Scenario)**



Source: Cal-adapt.org. Bakersfield Area

**Figure 3: Number of Extreme Heat Days (High Emission Scenario)**



Source: Cal-adapt.org. Bakersfield Area

### 1.2.2 Precipitation

Precipitation in the Kern Region is essentially all in the form of rain, and significant shifts in the timing of precipitation are not expected to occur. On average the projections indicate little change in total annual precipitation in California. Furthermore, among several models, precipitation projections do not show a consistent trend during the next century. The Mediterranean seasonal precipitation pattern is expected to continue, with most precipitation falling during winter from North Pacific storms. One of the four climate models projects slightly wetter winters, and another projects slightly drier winters with a 10 to 20 percent decrease in total annual precipitation. However, even modest changes would have a significant impact because California ecosystems are conditioned to historical precipitation levels and water resources are nearly fully utilized.

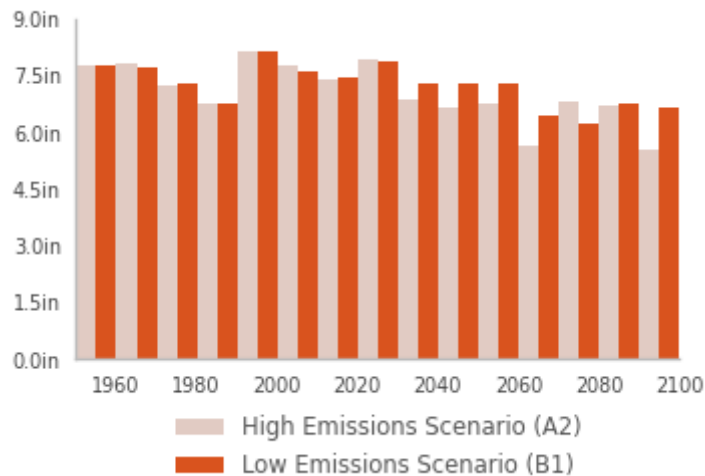
Figure 4 shows the decadal precipitation projections from 1960 through 2100 for the Bakersfield area in Kern County. There appears to be continued variable precipitation over the next century, with an overall consistent decrease. Drier conditions may result in a reduction in effective precipitation for crop irrigation needs and higher wildfire risk in the Region.



# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 7

**Figure 4: Projected Annual Precipitation for the Bakersfield Area in Kern County**



Source: Cal-adapt.org. Bakersfield Area

## 1.2.3 Wildfire

Fire is an important ecosystem disturbance. It promotes vegetation and wildlife diversity, releases nutrients into the soil, and eliminates heavy accumulation of underbrush that can fuel catastrophic fires. Statewide, the area projected to be burnt by wildfire toward the end of the century will increase substantially, especially in mountainous areas. As climate changes, it appears that summer dryness will begin earlier, last longer and become more intense. These changes may exacerbate fire occurrences, which have historically peaked in late summer and early fall. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range.

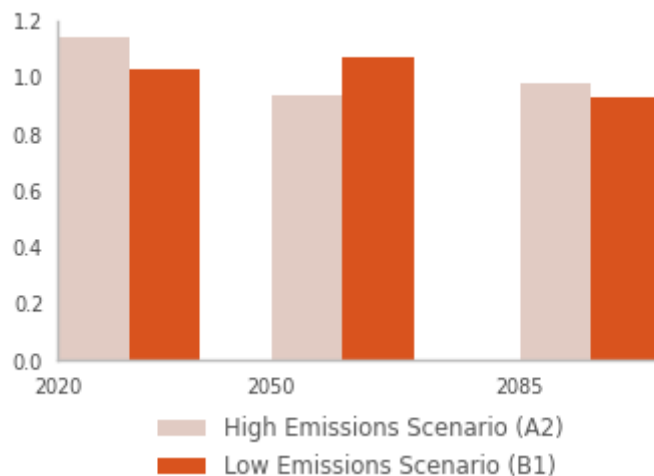
Because wildfire risk is determined by a combination of factors including precipitation, winds, temperature, landscape and vegetation conditions, future risks will not be uniform throughout the state. In years with wet winters, annual vegetation growth is plentiful. But accentuated dryness during summer would produce a hazardous fuel load that worsens the wildfire problem in some of Southern California wildlands. With expanding development into the urban/wildland interface, threats to human safety and property are even greater. The spread of invasive species that are more fire-prone, coupled with more frequent and prolonged periods of drought, all increase the risk of fires, and reduce the capacity of native species to recover. Wildfires are also bad news for the region in terms of air quality, human health, soil erosion and stress on watersheds.

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 8

Figure 5 shows projected increases in potential area burned in the Bakersfield area of Kern County. The y-axis represents the ratio of additional fire risk for an area compared to the expected burn area. These data are modeled solely on climate projections and do not take landscape and fuel sources into account. New wildfire risk projections are currently being produced that take more landscape information into account.

**Figure 5: Projected Increase in Potential Area Burned in the Bakersfield Area of Kern County**



Source: Cal-adapt.org. Bakersfield Area

Fire is an important process in maintaining a diverse ecosystem in the Region. It is unclear at this time whether projected increased wildfire risk will be beneficial or harmful to long term ecosystem health and habitat maintenance, but will likely negatively impact water quality with increased turbidity loading to water supplies.

### 1.3 Resources in the Kern Region Vulnerable to Climate Change

This section identifies the resources within the Kern Region, its related areas that are potentially affected, and their collective potential vulnerability to climate change. Table 2 provides a general overview of the water-related resources that are considered important in the Kern Region and potentially sensitive to future climate change. Resources that are likely to be vulnerable to climate change are considered for further analysis in the preceding subsections. Table 2 also highlights those resources in the Region that are unlikely to be affected by climate change and therefore they do not warrant further analysis and consideration at this time. The summary table provides the main categories applicable to water planning in the Kern Region with a general overview of the qualitative assessment of each category with respect to anticipated climate change impacts. Table 4 in Section 1.4 below provides the complete assessment of the regional vulnerability to the potential climate change impacts using the

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 9

'Vulnerability Assessment Checklist', found in the *Climate Change Handbook for Regional Water Planning* (DWR, 2011).

**Table 2: Climate Change Vulnerability Assessment Overview**

<b>Watershed Characteristics</b>	<b>General Overview of Vulnerabilities</b>
Water Demand	Urban and Agricultural Water Demand – Changes of hydrology in the Region as a result of climate change could lead to changes in water demand, both in quantities and patterns. Increased irrigation (outdoor landscape or agricultural) is anticipated to occur with temperature rise, increased evaporation losses with warmer temperature and longer growing season.
	Imported Water – State Water Project (SWP) and Central Valley Project (CVP) water via the California Aqueduct and the Friant-Kern Canal are an important portion of the water resources available to the Region. Potential impacts on SWP and CVP water availability resulting from climate change directly affect the amount of imported water supply delivered to the Region, part of which will be delivered to recharge groundwater banking programs in the Kern Region.
Water Supply	Groundwater – Changes in local hydrology could affect natural recharge to the local groundwater aquifers and the quantity of groundwater that could be pumped sustainably over the long-term. Decreased inflow from runoff, increased evaporative losses, warmer and shorter winter seasons can alter natural recharge of groundwater, as well as conjunctive use operations. Alternatively, if more precipitation occurs as rain, short-term high flows could result, and will require the Region to adapt to the faster runoff which will impact the timing of conjunctive uses. In addition, additional reductions in the imported water imposed by climate change would lead to more reliance on local groundwater, resulting in reductions in base flows, reduced groundwater outflows, increased depth to groundwater and increased land subsidence. .

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 10

## Watershed Characteristics

## General Overview of Vulnerabilities

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Water Quality	<p>Imported Water – Sea level rise could result in increases in chloride and bromide (a disinfection by product precursor), potentially requiring changes in drinking water treatment. Increased temperatures could result in an increase in algal blooms and taste and odor events.</p> <p>Regional Surface Water – Increased temperature could result in lower dissolved oxygen, increased algal blooms, and taste and odor affect to the Kern River and its tributaries. Decrease in annual precipitation could result in higher concentrations of contaminants in these surface waters during droughts. Increased wildfire risk and flashier storms could increase turbidity loads for water treatment, irrigation filtration systems and spreading basins (sedimentation and loss of percolation rates).</p> <p>Return flows from groundwater banking programs have inherent water qualities. Increased use of banking projects is leading to replacement of higher quality snowmelt surface water (Kern River and Friant CVP), as these supplies are being diverted further upstream than historical diversions to effect transfers and exchanges, and replaced with groundwater supplies that are higher in salt constituents (TDS, nitrates, etc.).</p>
Sea Level Rise	<p>The Kern Region is not directly subject to sea level rise. However, potential effects of sea level rise would affect imported water supply conditions. As discussed above, the principal concern is the potential for sea water intrusion to increase Sacramento-San Joaquin Delta (Delta) salinity. While sea level rise is not a direct regional concern, pursuant to the California Ocean Protection Council Resolution adopted March 11, 2011, it should be considered in the project selection/prioritization process.</p>
Flooding	<p>Local surface flows could change as a result of more frequent and intense storm events, leading to more areas susceptible to flooding, and increasing risk of direct flood damage in the Kern Region.</p>
Ecosystem and Habitat	<p>Increased temperature and potential decreases in annual precipitation could put stress on sensitive ecosystems and alter habitats. Water-dependent recreation could also be affected by water quality impacts. In addition, the Kern Region may be subject to increased wildfire risk, which could alter habitat.</p>
Hydropower	<p>Hydropower production in the Kern Region is small, however power through the Western Area Power Administration operated by the BOR does provide power to the CVP. Because of the amount of hydropower used in comparison to the size of the Region is relatively small, climate change effects on hydropower are not considered to be significant.</p>

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## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 11

Climate change processes are supported by extensive scientific research and are based on a vast number of peer-reviewed and published technical literature. Much of the available literature presents general information, but there is relatively little information that presents specific tools on how to assess impacts in the context of addressing climate change impacts on water resources. In addition, far less information is available on smaller geographic areas and the spatial resolution of the existing climate change models is still quite low. One additional challenge is that precipitation projections cannot be easily converted directly into surface runoff and groundwater recharge effects to connect with the local water resources planning activities.

The following sections present the vulnerability of each sector identified in Table 2 with respect to climate change projections given the existing tools and available data. This is an initial attempt using projections specific to the Kern Region for the vulnerability assessment in support of the IRWMP. The outcome of this initial assessment is intended to help understand the potential impacts, to integrate climate change into long-term planning, and to improve understanding of the uncertainties associated with climate change effects. Consistent with the water resources planning horizon in the Kern Region through 2050, the vulnerability analysis considers projections for mid-21<sup>st</sup> century (2050), consistent with DWR's modeling approach to climate change.

### 1.3.1 Water Demand

Increasing air temperatures due to climate change will result in increased evaporation leading to drier soils, increased plant evapotranspiration (ET), and a longer growing season. All of these factors generally increase water demand however there are not sufficient data available to estimate a total volume.

The Cal-Adapt A2 emissions scenario projects an average temperature increase for the Kern Region of about 3.3°F by the mid-century (2050) and increase of about 6.3°F by the end of century (Figure 1). Characterizing the impacts of temperature rise on water demand is a difficult task and discussed on a qualitative basis. While water use varies considerably depending on other factors such as regional economy, population, and land use, a qualitative assessment of water demand increase can be noted based on the projected temperature increase from the Cal-Adapt emission scenarios.

Kern County is characterized by its traditional industries, agriculture, oil and gas production, as well as increasing urbanization and population growth. Total water demand for the region is projected to increase only slightly. Water use to meet municipal water needs are projected to increase significantly due to population growth - about 48 percent from approximately 189,162 acre-feet per year (AFY) in 2005 to 281,284 projected for 2030 (Kern IRWMP 2011). However most of the use in the Kern Region is agricultural. Although historically the trend of agricultural water use has been decreasing, for purposes of this report future agricultural water demands are assumed to stay the same at 2,669,713 AFY (Kern IRWMP 2011), although there are some current reports that forecast a decrease in overall usage within the Region. Total 2005 urban and agricultural demand for the Kern Region is estimated at around 2,857,755 AFY and

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 12

projected 2030 total demand is estimated to be 2,938,818 AFY, a change of just under 3 percent (Kern IRWMP 2011).

An important effect of changing weather conditions is likely to be on landscape and agricultural demand. Higher temperature generally increases ET rates; but some research studies also suggest higher CO<sub>2</sub> levels and higher temperature increase rates of plant growth, and can shorten the time to plant maturity (Hanak and Lund, 2008). This would reduce the overall plant water uptake, partially compensating for potential reductions in agricultural water supply. Thus, the net effect on agricultural crops is still uncertain (Kiparsky and Gleick, 2005) and remains an important area of on-going research.

Qualitatively, the ET projections with climate change suggest water demand for agriculture in the Region is anticipated to increase during months where ET is high and decrease in months where ET is low. As a result of increased ET, urban water demand is anticipated to increase as well because of greater outdoor water use for landscape irrigation and agriculture.

Demand management is an important adaptation given decreased water supply as a result of climate change. Agriculture has a variety of water demand management options including fallowing fields of annual crops and changing the crop itself to one that may be less water intensive, yet economically viable. Additionally, in some cases, farmers may be able to switch their water source from surface water to groundwater. Demand management options for the urban landscape sector range from climate appropriate plants to improved irrigation methods. Water demand management strategies are discussed in Section 11.2 in the November 2011 Kern IRWM Plan.

### 1.3.2 Water Supply

For long-term water supply planning, coping with variability is a challenge. With potential additional changes imposed by climate change, there will be a heightened need to evaluate and respond to increased water supply variability.

Climate change is expected to affect Regional imported water supplies as follows:

- Total precipitation is expected to decrease in the Sierra Nevada sources, reducing runoff to surface supplies.
- Snow pack projected to decrease as precipitation shifts toward more rain and less snow.
- Timing of runoff is expected to shift to earlier in the year, affecting reservoir storage especially in the spring and summer months, as well as groundwater recharge activities.
- Sea level rise may impact Delta water deliveries.

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 13

Climate change is expected to affect Regional surface and groundwater supplies as follows:

- Total precipitation is not projected to change significantly, however the trend is decreasing.
- Variability in annual precipitation is expected to continue, with vulnerability to droughts. This is especially important for the highly variable Kern River system.
- More intense storms anticipated that may affect surface water runoff, surface storage and groundwater recharge.

Climate change is expected to affect Regional oil and gas activities requiring supplies as follows:

Oil and gas drilling in the county could be impacted by decreasing water availability, particularly in times of drought by limiting the amount of water available for cooling, fuel extraction, and power generation. The effects of climate change and water availability on the oil and gas sector include a combination of potential direct and indirect impacts. Water is required in many different stages of the oil and gas value chain, from exploration to processing to transport, and the volume of water used in these activities varies, with the largest volume used in the refining process. Among exploration and production processes, the largest volume of water is used as a supplemental source.

Because the Kern Region relies heavily on imported supplies, any reduction or change in the timing or availability of those supplies could have negative impacts on the Region. Reductions in imported water supplies would lead to increased reliance on local groundwater, recycled water or other sources of supplies if demand was not reduced. Changes in local hydrology could affect surface storage of water and natural recharge to the local groundwater and the quantity of groundwater that could be pumped in a sustainable manner. The following sections describe potential climate change impacts to the region's water supplies.

### 1.3.2.1 Imported Supplies

Imported water deliveries to the Kern Region are from the SWP and CVP via the California Aqueduct, and the Friant-Kern Canal. Increasing development and environmental demands on water availability and quality for agricultural, municipal and industrial (M&I), and groundwater banking purposes, coupled with curtailments of imported SWP and CVP deliveries due to prolonged drought and regulatory restrictions, have intensified the competition for available water supplies in the Kern Region. It is estimated that due to drought and decreases in imported water supply, about 45,000 acres of farmland in the Region will be idled and an additional 100,000 acres will be under-irrigated. Climate change impacts are likely to exacerbate these challenges.

In an effort to assess the impacts of these varying conditions on SWP supply reliability, DWR issues its "*State Water Project Delivery Reliability Report*". DWR's long-term SWP delivery reliability analyses incorporate assumptions that are intended to account, among other impacts, for potential supply shortfalls related to global climate change. The long-term average delivery

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
 September 5, 2014  
 1289035\*01  
 Page 14

of contractual SWP Table A supply is projected to be 62 percent under current conditions and 58 percent under future conditions over the 20-year projection (DWR 2013). Within that long-term average, SWP Table A deliveries can range from 12 percent (single dry year) to 97 percent (single wet year) of contractual amounts under current conditions, and from 11 percent (single dry year) to 98 percent (single wet year) under future conditions. Contractual amounts are projected to be 31 percent during multiple-dry year periods (assuming a 4-year dry period), and from 81 to 85 percent during multiple wet periods (assuming a 4-year wet period). Table 3 shows SWP supplies projected to be available to the Region in average/normal years and summarizes estimated SWP supply availability in a single dry year and over a multiple dry year period. While detailed analysis of CVP supply reliability has not been performed, it is likely that similar impacts from climate change will also apply to the CVP.

**Table 3: Kern County Water Agency (KCWA) Wholesaler Supply Reliability (AF)**

Wholesaler (Supply Source)	2015	2020	2025	2030
<b>Average Water Year</b>				
DWR (SWP)				
KCWA Table A Supply	579,263	579,263	579,263	579,263
% of Table A Amount(a)	58%	58%	58%	58%
<b>Single Dry Year</b>				
DWR (SWP)				
KCWA Table A Supply	109,860	109,860	109,860	109,860
% of Table A Amount(a)	11%	11%	11%	11%
<b>Multiple Dry Year</b>				
DWR (SWP)				
KCWA Table A Supply	309,606	309,606	309,606	309,606
% of Table A Amount(a)	31%	31%	31%	31%

Note: (a) Percentages of Table A amount from DWR's 2013 SWP Delivery Reliability Report and assumes future conditions. Also assumes Table A contract amount of 998,730 AFY.

### 1.3.2.2 Groundwater

The San Joaquin Valley groundwater basin covers the majority of the managed groundwater resources in the Kern Region. Other groundwater basins in the Kern Region include the Kern River Valley groundwater basin to the east; Walker Basin Creek Valley groundwater basin to the southeast; Cummings Valley and Tehachapi Valley West on the eastern side of the Region, Brite Valley to the southwest; and Cuddy Canyon Valley, Cuddy Ranch Area, Cuddy Valley; and



## **Technical Memorandum**

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 15

Mil Potrero Area basins to the south. All of these groundwater basin boundaries are within the watershed boundary of the Kern Region (see Figure 2-7 in the November 2011 Kern IRWM Plan for basin locations).

One of the longest-standing issues in the Kern Region is groundwater overdraft. Groundwater provides approximately 39 percent of local water needs; however it is estimated to be as much as 60 percent in dry years. Further, certain portions of the groundwater basin underlying the Kern Region have experienced overdraft conditions.

The Kern Region is well-known for its long-established and successful conjunctive use and banking programs. These programs overlie the major portions of the groundwater basin and can access surface supplies from the Kern River, the SWP, the Friant-Kern Canal, and more. In times of high flows, these surface supplies are recharged and stored to help to lessen the effects of dry period conditions when the Region relies on the groundwater basin.

The groundwater in the Kern Region may also be subject to decreasing reliability related to the extent and duration of longer drought periods that may occur due to climate change. There are limited data available to quantify the sustainable groundwater supplies and therefore to assess the resiliency of these supplies after drought events. A better understanding of groundwater supplies will be important to continued resiliency against climate change, as water supply management becomes a more important issue in the Region.

While the basins have supply exceeding the future projected pumping levels, based on the basins' characteristics and their natural recharge processes, changes in local hydrology and natural recharge are anticipated to have a direct impact on available groundwater storage. Warmer winters would increase the amount of runoff available for groundwater recharge, but reductions in inflow from runoff and increased evaporative losses could reduce the amount of natural recharge. The extent to which climate change will change the natural recharge processes and the impact of that change are not exactly known and are difficult to quantify.

### **1.3.3 Water Quality**

Improving water quality is a Kern Region Plan objective that may be impacted by climate change. Studies of potential climate change impacts on water quality exist, but few trends in relationships between hydroclimate (hydrology and weather variables) have been identified. Key climate vulnerabilities potentially important to the Kern Region include increasing temperature and changes in precipitation patterns. Increased wildfire risk is another potential factor that could affect water quality in the Kern Region. Outside the Kern Region, sea level rise in the Delta is expected to impact water quality of imported SWP water.

Surface waters in the Region are expected to be more directly vulnerable to water quality impacts of climate change, while water quality impacts to groundwater sources would be indirect, as conjunctive use and banking programs can increase the amount of salts in the underlying aquifer dependent on the source of the recharge water.

## **Technical Memorandum**

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 16

### **1.3.3.1 Imported Water Quality**

SWP water currently meets or exceeds applicable standards (see Appendix D in the November 2011 Kern IRWM Plan for data). However, there is concern with some constituents that are approaching SWP acceptance criteria, particularly arsenic and selenium. SWP and CVP water is vulnerable to potential effects of climate change at the source in the Delta and in storage in Regional reservoirs. Sea-level rise will increase the intrusion of salinity into the Delta and its exported water. This will increase chloride and bromide (a disinfection byproduct [DBP] precursor that is also a component of sea water) concentrations in the SWP and CVP imported water. In addition, decreased freshwater flows into the Delta could increase the concentration of organic matter, which contribute to potentially higher DBP formation concentrations, in the SWP and CVP water. However, CVP water from the Friant system is of very high-quality as it originates from Sierra snowmelt and is similar in characteristics to Kern River supplies.

Extreme storm events, although rare, may cause quick response time thereof in canal flow rates, which may be more intense due to climate change and may present treatment challenges for source water and sedimentation issues in recharge basins because of increased turbidity. In the past, high turbidity events in reservoirs and conveyance facilities have required modification of the treatment processes (primarily additional chemical usage) for extended periods. In addition, an intense winter rainfall event after a wildfire in a watershed that burned the prior year can result in extremely high turbidities and fine organic matter in the water. The additional sludge production can overwhelm the treatment plants' solids handling equipment and require plants to be shut down or reduce their capacities for brief periods of time, or make capital investment to enlarge solids handling facilities. Similarly, turbidity events can negatively impact porosity in recharge basins, lessening their absorptive capacity. This combination of more intense rainfall events and increased wildfire risk is more likely under projected climate change conditions.

The warmer temperatures could also lead to increased taste and odor events triggered by algal blooms; which are characterized by water quality changes during the spring and summer such as increases in DO and DO saturation, pH and fluorescence. Water treatment plants can be designed to address taste and odor events through pre-ozonation but use of higher ozone dosages to control taste and odor events must also consider the need to control bromate formation (from the oxidation of bromide), which could increase due to greater bromide levels in the imported SWP and CVP water affected by climate change. Local canals would have to deal with the algae and effects thereof with higher treatment cost (i.e. copper sulfate).

### **1.3.3.2 Regional Surface Water Quality**

The primary regional surface water in the Kern Region is the Kern River. Local minor streams, many of which are ephemeral, provide additional local surface water. A very small percentage of minor stream runoff is collected and used as irrigation for agriculture; the majority of these irregularly-occurring flows serve to recharge local groundwater basins. However, the Kern River serves as a major source of supply to groundwater banking programs in the Region.

The Kern River and its tributaries, while generally considered a high quality supply, are vulnerable to potential water quality impacts due to climate change as a result of increased

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 17

temperature, more frequent heavy rainfall events, increased wildfire risk, and longer periods of low natural stream flow from decreased annual precipitation. Increased water temperature generally reduces DO and can promote algal blooms if nutrients are available in the source. The storm events can transport sediments and other pollutants along the river, while long periods of low flow can increase concentrations of pollutants from wastewater plant and non-point discharges. Increased wildfires may contribute to the turbidity events. Key water quality constituents of concern are nitrogen and chloride, in addition to reduced DO and increased algae growth, turbidity and sedimentation. Taken together these can impact drinking water supplies as well as supplies utilized for groundwater recharge.

Imported water stored in Isabella Reservoir will also be vulnerable to climate change when considering reduced runoff volumes which could affect turbidity and increasing water temperatures, dissolved oxygen (DO) levels, and pH.

### 1.3.3.3 Groundwater Quality

Groundwater quality throughout the region is typically suitable for most urban and agricultural uses with only localized impairments including high TDS (salts), sodium chloride, sulfate, nitrate, organic compounds, boron and arsenic. High TDS, arsenic, boron, and nitrates are the primary groundwater quality issues. Various constituents can impact agricultural uses and M&I uses in different ways.

Any water quality impacts to groundwater sources due to climate change are expected to be indirect, primarily due to decreased recharge from lower precipitation, increased periodic recharge from earlier/faster snowmelt runoff and increased use of groundwater to make up loss of imported or local surface water supplies. Decreased recharge and increased groundwater pumping may allow concentrations of groundwater contaminants such as perchlorate and volatile organic compounds to increase, which may trigger additional treatment requirements and increase groundwater treatment costs. Increased use of lower quality groundwater may also have some concerns associated with soil properties over a long period.

### 1.3.4 Flooding

Flooding is one of the most costly and destructive natural disaster; thus, a change in flood risk is a potential significant effect of climate change that could have great implications for the Kern Region. Local minor streams are the second-largest source of local surface water to the Region after the Kern River. Streams with measurable runoff are grouped into four separate watershed areas: Poso, Caliente, El Paso, and San Emigdio. Under certain hydrologic conditions, some of these streams carry very large flows that can be quite damaging. Examples include flooding in the Kelso Creek area, and in the area around the cities of Arvin and Lamont. Regional efforts to address flooding and to better manage such flow events have been initiated among various parties in the Region, including the County of Kern, KCWA and the affected areas.

The FEMA Flood Insurance Rate Map for the Kern Region designates multiple areas as "High Risk," areas with a 1 percent or greater risk of flooding in any year and a 26 percent chance of flooding over the life of a 30-year mortgage. The area at greatest flood risk is the area

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 18

surrounding the communities of Lamont, Weedpatch, and the city of Arvin. The area is also prone to wildfires, which impact water quality when rain washes fire debris into waterways. Other large flood area includes the Buena Vista lakebed as well as areas in the historic Tulare lakebed and nearby drainage areas. Areas along the Kern River and other local streams like Tejon, El Paso and Grapevine in the southern region are also considered to have a high flood risk. These areas are depicted in Figure 2-8 in the November 2011 Kern IRWM Plan.

Regional efforts to address flooding and to better manage such flow events have been initiated among various parties in the Kern Region, including the County of Kern, KCWA and the affected areas. For more information on flood management see Section 10.2 in the November 2011 Kern IRWM Plan.

While the Cal-Adapt climate change model projects precipitation decrease of 10 percent by 2050 on the long-term basis, research data suggest that there is a risk of increased flooding in California (Kiparsky and Gleick 2005). Flooding depends not only on average precipitation but on the timing and intensity of precipitation. Climate change projections are not sensitive enough to assess short term extreme events such as flooding, but the general expectation is that more intense storms would occur. This could present larger areas susceptible to flooding and increase the risk of direct flood damage in the Region.

### 1.3.5 Ecological Health and Habitat

Ecosystem health and habitat protection are important to the Kern Region. Increased temperature, changes in precipitation patterns, and increased wildfire risk projected for potential climate change scenarios are potential stressors to ecosystems and habitat in the Region.

Environmental resources of the Kern Region include the Kern River, Sequoia National Forest, several wildlife refuges, and the unique flora and fauna of the Tejon Pass area and Transverse Ranges. The riparian forest along the South Fork Kern River in the vicinity of Onyx and Weldon is one of the highest quality and most extensive stands of that vegetation type in California. This section of the river has the largest populations of Southwestern willow flycatchers and yellow-billed cuckoos in California. Much of this forest is conserved in the USFS South Fork Wildlife Area, Audubon California's Kern River Preserve, and California Department of Fish and Game's (CDFG's) Canebrake Ecological Reserve. For more detail on the Kern Region's ecological resources, see Section 2.4 in the November 2011 Kern IRWM Plan. All of these species and habitats have acclimated to the historical climate and water resources and may or may not to adapt to potential changes due to future climate change.

Increased air temperature will increase water temperature in rivers, tributary streams, ponds, and lakes, with resulting decreases in DO. This combination may stress fish and biota that depend on higher DO levels and colder water which may impact their sustainability. The increased annual average air temperatures may also alter plant habitat by changing the length and timing of the growing season and/or allowing non-native species to outcompete native species and disrupt ecosystems that depend on the present habitats. Thus, measures to control non-native species may be needed to maintain habitats. Water available for plant habitat could be impacted by potential decreases in annual precipitation and increases in ET

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 19

due to projected increases in temperature. Decreased precipitation could also directly affect formation of vernal ponds.

Ackerly *et al.* (2012) summarizes existing research on the relationship between climate and biodiversity and how changes in climate historically have and will in the future impact habitat. In terrestrial systems, the impacts of rising temperature and changing precipitation patterns have the largest effect and that in estuarine and intertidal areas, sea-level rise results in the most important direct impact. These habitats may be affected directly by habitat loss through erosion, or indirectly via human responses such as coastal armoring (e.g., construction of sea walls) and other infrastructural changes.

### 1.4 Regional Vulnerability Assessment

Table 4 provides an assessment of the regional vulnerability to the potential climate change impacts using the 'Vulnerability Assessment Checklist', found in the 'Climate Change Handbook for Regional Water Planning' (DWR, 2011). This checklist provides a further evaluation of the effects on regional water demands and supplies, as well as water quality, flooding events, environmental and ecosystems, and hydropower systems within the Kern Region.

In addition to the assessment of vulnerabilities provided in Table 4, the Kern Region prioritized the identified vulnerabilities during a Stakeholder meeting in August 2014. The results are displayed in the Climate Change Vulnerabilities Prioritization Table provided in Appendix A. Meeting minutes from the August Stakeholder meetings are also included with Appendix A, documenting the planning efforts of the Region.

**Table 4: Vulnerability Assessment Checklist**

Resource Checklist Item	Kern Regional Condition
<b>Water Demand</b>	
<i>Are there major industries that require cooling/process water in your planning region?</i>	Kern County is characterized by its traditional industries, agriculture, oil and gas production, as well as increasing urbanization and population growth. Oil and gas drilling in the county could be impacted by decreasing water availability, particularly in times of drought by limiting the amount of water available for cooling, fuel extraction, and power generation. Additionally, process water is required in packing plants and other locations for processing crops harvested from the field, further contributing to the significance of the use.
<i>Does water use vary by more than 50% seasonally in parts of your region?</i>	Yes. A significant amount of water in the Kern Region is used for agricultural purposes, the demand for which fluctuates greatly in the summer compared to the winter.
<i>Are crops grown in your region climate-sensitive? Would shifts in daily heat patterns, such as how long heat lingers before night-time cooling, be prohibitive for some crops?</i>	Yes. The Kern Region is the second largest agricultural county in the state in economic value, and produces over 250 different crops, including over 30 types of fruits and nuts, over 40 types of vegetables, over 20 field crops, lumber, nursery stock, livestock, poultry and dairy products. Many of these are climate-sensitive and could be prohibitively affected by shifts in daily heat patterns.
<i>Do groundwater supplies in your region lack resiliency after drought events?</i>	With only six (6) inches per year of average rainfall, groundwater is necessary to maintain a sufficient water supply in the semi-desert climate of the Region. It is estimated that on average groundwater accounts for 39 percent of total water supply to the Region; however, it is estimated to be as much as 60 percent during dry years. Long-established and successful conjunctive use and banking programs. These programs overlie the major portions of the groundwater basin and can access surface supplies from the Kern River, the SWP, the Friant-Kern Canal, and more. In times of high flows, these surface supplies are recharged and stored to help to lessen the effects of dry period conditions when the Region relies on the groundwater basin.

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 21

<b>Resource Checklist Item</b>	<b>Kern Regional Condition</b>
<p><i>Are water use curtailment measures effective in your region?</i></p>	<p>Stakeholders of this IRWMP have identified water use efficiency as an important component of water supply planning. One of the stated objectives of this IRWMP is to “Pursue and implement cost effective water use efficiency programs.” In addition to direct water use efficiency, stakeholders have expressed a desire to improve system operation, reduce system water loss, and decrease energy use related to water infrastructure. Another objective of this IRWMP is to “Replace aging infrastructure to reduce system water losses, improve operational efficiencies, and reduce service interruptions.” Lastly, implementation of agricultural land fallowing programs within the Region also help to curtail water use.</p>
<p><i>Are some instream flow requirements in your region either currently insufficient to support aquatic life, or occasionally unmet?</i></p>	<p>No. However, since 1994, the two large projects that import water into the Kern Region, the CVP and the SWP, have been incrementally impacted by environmental and regulatory requirements that have served to diminish the ability of the projects to reliably deliver water supplies. A large proportion of recent imported water cutbacks has stemmed from fishery issues in the Sacramento-San Joaquin Delta, where the pumping plants for the CVP and SWP are located, as well as San Joaquin River Settlement or Public Law 111-111 where water previously supplied to the CVP Friant Division for M&amp;I and agricultural irrigation is being diverted into the San Joaquin River for in-stream flows.</p>
<p><b>Water Supply</b></p>	
<p><i>Does a portion of the water supply in your region come from snowmelt?</i></p>	<p>Yes. The Kern River is fed by annual snowmelt from the Southern Sierra Nevada, including Mount Whitney. The SWP, CVP and Friant system are also fed by Sierra snowmelt.</p>

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 22

<b>Resource Checklist Item</b>	<b>Kern Regional Condition</b>
<i>Does part of your region rely on water diverted from the Delta, imported from the Colorado River, or imported from other climate-sensitive systems outside your region?</i>	Yes. The Kern Region receives SWP and CVP water delivered through the Delta, which is affected by climate change. Friant CVP also has a Delta connection with the San Joaquin River Restoration Program as well as San Joaquin River Exchange Contractor rights.
<i>Does part of your region rely on coastal aquifers? Has salt intrusion been a problem in the past?</i>	The Kern Region does not rely on coastal aquifers. While salt intrusion from coastal aquifers is not applicable, salt management is still an issue in the region with regard to increasing salinity in groundwater. Salt in imported water supplies such as the SWP and CVP is the major source of salt which circulates throughout the groundwater in Kern County.
<i>Would your region have difficulty in storing carryover supply surpluses from year to year?</i>	There is limited carryover available for SWP and CVP water in San Luis Reservoir. Carryover of Friant CVP water in Millerton Lake/Friant Dam has limited capacity. Carryover of Kern River water in Isabella Reservoir is limited by the Reservoir's flood control purpose and US Army Corps of Engineers Regulations. However, there are opportunities to expand the Region's groundwater storage capabilities.
<i>Has your region faced a drought in the past during which it failed to meet local water demands?</i>	No. Water demands have been met through the use of groundwater which, during drought, can result in significant declines in groundwater levels. To the extent that surface water supplies are reduced in the future (as a result of climate change and/or regulatory constraints), recharge will be reduced, which will affect the availability of groundwater for meeting local water demands.



# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 23

Resource Checklist Item	Kern Regional Condition
<p><i>Does your region have invasive species management issues at your facilities, along conveyance structures, or in habitat areas?</i></p>	<p>Yes. Aquatic pests, including invasive plants have been fought on the Kern River for decades. Prevention and control of invasive species is an ongoing battle by many resource agencies such as the Kern River Preserve Audubon Society, and the Kern River Ranger District. Canal operators treat aquatic weeds, mainly with use of copper sulfate.</p>
<p><b>Water Quality</b></p>	
<p><i>Are increased wildfires a threat in your region? If so, does your region include reservoirs with fire-susceptible vegetation nearby which could pose a water quality concern from increased erosion?</i></p>	<p>Yes. Parts of the Kern Region are prone to wildfires, which impact water quality when rain washes fire debris into waterways. In July 2008, the Piute Fire burned a significant area in the region. It was soon followed by a summer thunderstorm, which washed fire debris into the South Fork and ultimately down the Kern River. Many water purveyors were forced to switch from Kern River water to alternate sources to avoid contamination of settling ponds and costly treatment of the water.</p>
<p><i>Does part of your region rely on surface water bodies with current or recurrent water quality issues related to eutrophication, such as low dissolved oxygen or algal blooms? Are there other water quality constituents potentially exacerbated by climate change?</i></p>	<p>Yes. The Kern River, the primary native surface supply in Region, is generally considered a high quality supply. However, Isabella Lake which serves as the source for the lower Kern River is listed on the 303(D) list for dissolved oxygen and pH. Climate change could exacerbate these water quality conditions from increased temperatures. Banking return flows result in replacement of higher quality snowmelt water with groundwater.</p>
<p><i>Are seasonal low flows decreasing for some waterbodies in your region? If so, are the reduced low flows limiting the waterbodies' assimilative capacity?</i></p>	<p>Possibly. Annual Kern River flows and flows in local ephemeral streams could be decreasing through time.</p>

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 24

Resource Checklist Item	Kern Regional Condition
<i>Are there beneficial uses designated for some water bodies in your region that cannot always be met due to water quality issues?</i>	No. Water is intended for many beneficial uses including agricultural water supplies, groundwater recharge, water replenishment, recreation, wildlife habitat, rare and endangered species, and wetland ecosystems. Most of these are met within the Kern Region; however there are two TMDLs for Lake Isabella with regard to DO and pH.
<i>Does part of your region currently observe water quality shifts during rain events that impact treatment facility operation?</i>	No.
<b>Sea Level Rise</b>	
<i>Has coastal erosion already been observed in your region?</i>	No. The Kern Region is located in the Southern San Joaquin Valley, and concerns regarding coastal regions are not applicable.
<i>Are there coastal structures, such as levees or breakwaters, in your region?</i>	No.
<i>Is there significant coastal infrastructure, such as residences, recreation, water and wastewater treatment, tourism, and transportation) at less than six feet above mean sea level in your region?</i>	No.
<i>Are there climate-sensitive low-lying coastal habitats in your region?</i>	No.
<i>Are there areas in your region that currently flood during extreme high tides or storm surges?</i>	No.
<i>Is there land subsidence in the coastal areas of your region?</i>	No.
<i>Do tidal gauges along the coastal parts of your region show an increase over the past several decades?</i>	No.
<b>Flooding</b>	
<i>Does critical infrastructure in your region lie within the 200-year floodplain?</i>	Yes. The FEMA Flood Insurance Rate Map for the Kern Region designates multiple areas as “High Risk”, areas with a 1 percent or

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 25

Resource Checklist Item	Kern Regional Condition
	greater risk of flooding in any year and a 26 percent chance of flooding over the life of a 30-year mortgage. Figure 2-8 (in the November 2011 Kern IRWM Plan) shows the areas that are within the 100- and 500-year floodplain. Flooding can result in the inundation of structures, causing water damage to structural elements and contents, as well as impact damage to structures, roads, bridges, culverts, and other features from high velocity flows and from debris carried by floodwaters.
<i>Does part of your region lie within the Sacramento-San Joaquin Drainage District?</i>	No.
<i>Does aging critical flood protection infrastructure exist in your region?</i>	Yes. In general, many Kern County communities are older and the physical components of their water systems are aging and outdated. Aging infrastructure is a particular issue for rural communities and DACs.
<i>Have flood control facilities (such as impoundment structures) been insufficient in the past?</i>	Yes. The primary flood control facility in the Region is Isabella Dam on the Kern River. The dam protects the urban Bakersfield area and about 350,000 acres of agricultural land and oilfields. Kern River had an unregulated flow until 1954 when the Isabella Dam and Reservoir were constructed by the Army Corps of Engineers. Unfortunately, due to seepage and earthquake concerns, the flood control capacity of the reservoir has recently been limited. Other areas near Lamont in the southern portion of the Region also have infrastructure that could be impacted.
<i>Are wildfires a concern in parts of your region?</i>	Yes. Parts of the Kern Region are prone to wildfires, which impact water quality when rain washes fire debris into waterways.
<b>Ecosystem and Habitat Vulnerability</b>	
<i>Does your region include inland or coastal aquatic habitats vulnerable to erosion and sedimentation issues?</i>	Coastal aquatic habitats are not applicable to the Region. However,

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 26

Resource Checklist Item	Kern Regional Condition
	aquatic pests, including invasive plants have been fought on the Kern River for decades. Prevention and control of invasive species is an ongoing battle by many resource agencies such as the Kern River Preserve Audubon Society, and the Kern River Ranger District.
<i>Does your region include estuarine habitats which rely on seasonal freshwater flow patterns?</i>	No.
<i>Do climate-sensitive fauna or flora populations live in your region?</i>	Environmental resources of the Region include the Kern River, Sequoia National Forest, several wildlife refuges, and the unique flora and fauna of the Tehachapi Mountains, Tejon Pass area and Transverse Ranges. The riparian forest along the South Fork Kern River in the vicinity of Onyx and Weldon is one of the highest quality and most extensive stands of that vegetation type in California. This section of the river has the largest populations of Southwestern willow flycatchers and yellow-billed cuckoos in California. All of these resources could be potentially affected by climate change.
<i>Do endangered or threatened species exist in your region? Are changes in species distribution already being observed in parts of your region?</i>	Yes. There are threatened and endangered species in the Kern Region including the bald eagle, burrowing owl, California condor, California red-legged frog, least bell's vireo, and the San Joaquin kit fox to name a few. Whether or not changes in species distribution have occurred is unknown.

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 27

<b>Resource Checklist Item</b>	<b>Kern Regional Condition</b>
<i>Does the region rely on aquatic or water-dependent habitats for recreation or other economic activities?</i>	Yes. Water-dependent recreation includes a wide variety of outdoor activities that can be divided into two (2) categories. The first category includes fishing, boating, swimming, and rafting, which occur on lakes, reservoirs, and rivers. The second category includes recreation that is enhanced by water features but does not require actual use of the water, such as wildlife viewing, picnicking, camping, and hiking.
<i>Are there rivers in your region with quantified environmental flow requirements or known water quality/quantity stressors to aquatic life?</i>	No.
<i>Do estuaries, coastal dunes, wetlands, marshes, or exposed beaches exist in your region? If so, are coastal storms possible/frequent in your region?</i>	There are several wildlife refuges within the Kern Region including the Kern National Wildlife Refuge that manages some wetlands. Coastal storms are not possible in the Region, due to its location in the southern San Joaquin Valley.
<i>Does your region include one or more of the habitats described in the Endangered Species Coalition's Top 10 habitats vulnerable to climate change</i>	Yes, the Kern Region's eastern boundary is the southern Sierra Nevada, which is listed on the Top 10 habitats list.
<i>Are there areas of fragmented estuarine, aquatic, or wetland wildlife habitat within your region? Are there movement corridors for species to naturally migrate? Are there infrastructure projects planned that might preclude species movement?</i>	Yes. There are many wildlife habitats in the Kern Region. Most notably is the Kern National Wildlife Refuge which provides habitat for wintering and migrating waterfowl, shorebirds, and marsh birds and also provides habitat for upland and riparian bird species. However, there are no infrastructure projects planned in the Region that are known to preclude species movement.

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 28

Resource Checklist Item	Kern Regional Condition
<b>Hydropower</b>	
<i>Is hydropower a source of electricity in your region?</i>	Yes. Within the Kern Region is the Rio Bravo Hydro Project Hydro Power Plant which has a design capacity of 14 mega watts (MWe). However, most of the energy provided in the Kern Region comes from its 37 high-efficiency cogeneration facilities that produce two sources of energy in the form of steam and electricity.
<i>Are energy needs in your region expected to increase in the future? If so, are there future plans for hydropower generation facilities or conditions for hydropower generation in your region?</i>	Yes. Energy needs in the Region will increase in the future as a result of several factors, which include changes in land use from agricultural uses to urban uses, increasing population and increases in groundwater pumping. However, the Kern Region has a variety of efforts planned to reduce energy use, and to develop local energy supply sources. These efforts include utilization of renewable resources, such as wastewater treatment plant digester gas recovery, hydropower, and solar power.

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 29

## 1.4.1 Vulnerability Prioritization

This section discusses a list of prioritized vulnerabilities based on stakeholder input on the importance of these sectors to the Kern Region. The watershed vulnerability assessment identifies the water resource characteristics for each sector most vulnerable to potential climate change projections. The Region can use the assessment results to prioritize the sectors with vulnerabilities and develop adaptive strategies to respond to potential climate change impacts. The sector vulnerability prioritization is defined as follows (1 being the sector most prioritized [high risk] and 4 being the sector least prioritized [low risk] with respect to climate change vulnerability):

1. Water Supply; Water Quality
2. Water Demand; Flooding
3. Ecosystem and Habitat
4. Sea Level Rise and Hydropower

The vulnerability assessment and prioritization was conducted based on the *Climate Change Vulnerability Checklist* provided as Table 4, data currently available and inputs from the stakeholders involved in the preparation of this study for the Kern Region. This assessment can be improved in the future with further data gathering and analyzing of the prioritized vulnerabilities.

## 1.5 Climate Change Adaptations

The Kern IRWMP (Plan) identifies strategies to address adapting and mitigating the general effects of climate change. The objectives for the Kern Region address adapting and mitigating the general effects of climate change, including changes in the amount, intensity, timing, quality, and variability of runoff and recharge. These “no regrets” adaptations recognize the current water management context for the region. In addition, mitigation strategies addressed by the objectives for the Kern IRWMP include energy efficiency improvements, emissions reductions, and carbon sequestration through vegetation growth. The Climate Change Handbook (DWR, 2011) was used to help develop these adaptation and mitigation strategies, which are listed in Table 10-2 in the November 2011 Kern IRWM Plan.

For this technical memorandum, potential adaptation strategies have been grouped by water resource and priorities developed in the climate change vulnerability analysis. This approach will allow the Kern Region to incorporate climate change adaptation and GHG mitigation measures in projects developed and evaluated as part of the IRWMP process. While the focus of this discussion is adaptation, some of the adaptation strategies will overlap with and enhance GHG mitigation measures.

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 30

## 1.5.1 Vulnerability Priority 1 (Highest) Sectors: Water Supply and Water Quality

Water supply and water quality were identified as the highest priority sectors that could potentially be impacted by climate change. The potential impacts due to climate change and the suggested regional adaptation strategies are summarized below.

### 1.5.1.1 Water Supply

Climate change projections suggest continued highly variable annual precipitation with slightly drier climate by mid-century. The overall impact will include reductions in Kern River, SWP and CVP imported water and greater reliance on groundwater supplies with the potential to affect long-term planning.

Suggested Regional adaptation strategies to address potential reductions in water supply include the following:

- Expand water storage and conjunctive management of surface and groundwater resources.
- Encourage local projects to increase regional self-reliance.
- Enhance use of recycled water for appropriate uses as a drought-proof water supply.
- Enhance practices of water exchanges and water banking outside the Region to supplement water supply.
- Encourage local agencies to develop and implement AB 3030 Groundwater Management Plans as a fundamental component of the IRWM plan.
- Develop plans for local agencies in the Kern Region to monitor the elevation of their groundwater basins.
- Encourage cities and the county agencies in the Kern Region to adopt local ordinances that protect the natural functioning of groundwater recharge areas.

### 1.5.1.2 Water Quality

Climate change projections suggest increased temperature and continued highly variable annual precipitation with slightly drier climate by mid-century that could degrade water quality.

Suggested Regional adaptation strategies to address potential water quality impacts include the following:

- Consider water quality improvements associated with water transfers and water banking on Regional water supply.



# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 31

- Encourage projects (ex. conjunctive use) that improve water quality of contaminated groundwater sources.
- Increase implementation of low impact development (LID) techniques to improve stormwater management.
- Comply with NPDES permits to ensure water quality protection.

## **1.5.2 Vulnerability Priority 2 (Second Highest) Sectors: Water Demand and Flooding**

Water demand and flooding were identified as the second highest priority sectors that could potentially be impacted by climate change. The potential impacts due to climate change and the suggested regional adaptation strategies are summarized below.

### **1.5.2.1 Water Demand**

Climate change projections suggest increases in average annual air temperature by mid-century and increased evaporative losses are expected to increase both urban and agricultural water demand. Suggested Regional adaptation strategies to address potential increases in water demand include the following:

- Aggressively increase cost effective water use efficiency.
- Encourage agricultural users to adopt efficient water management practices.
- Encourage landscape water users to adopt efficient water management practices, including xeriscaping.

### **1.5.2.2 Flooding**

Climate change projections are not sensitive enough to assess short term extreme events such as flooding, but the general expectation is that more intense storms will occur. Suggested Regional adaptation strategies to address potential increases in flood risk include:

- Improve emergency preparedness and response capacity in anticipation of potential increases in extreme events.
- Practice and promote integrated flood management among water and flood management agencies.
- Flood management should be integrated with watershed management on open space, agricultural, wildlife areas, and other low-density lands.
- Avoid significant new development in areas that cannot be adequately protected from flooding.

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 32

- Encourage land use policies including LID that maintain or restore historical hydrological characteristics.
- Development of a Kern Region Flood Protection Plan.

### 1.5.3 Vulnerability Level 3 (Third Highest) Sector: Ecosystem and Habitat

Ecosystem Health and Habitat was identified as the third highest priority sector category that could potentially be impacted by climate change. The potential impacts due to climate change and the suggested regional adaptation strategies are summarized below. Climate change projections of increasing annual average temperature suggest potential environmental stressors that may affect the sustainability of existing ecosystems and habitat. Suggested Regional adaptation strategies to address potential Ecosystem Health and Habitat impacts include the following:

- Promote water resources management strategies that restore and enhance ecosystem services.
- Provide or enhance connected “migration corridors” for animals and plants to promote increased biodiversity and allow the plants and animals to move to more suitable habitats to avoid serious impacts and support increased biodiversity.
- Consider projects that provide seasonal aquatic habitat in streams and support corridors of native riparian forests that create shaded riverine and terrestrial habitat.

### 1.5.4 Vulnerability Priority 4 (Lowest) Sectors: Sea Level Rise and Hydropower

Sea level rise and hydropower were identified as the lowest priority sectors for the Kern Region.

#### 1.5.4.1 Sea Level Rise

Climate change projections suggest sea level rise off most of the California Coast of over half a meter by mid-century and by about one meter by the end of the century. Suggested Regional adaptation strategies to address potential reductions in water supply include the following:

- Support DWR/USBR strategies that minimize the impact of sea level rise on salinity intrusion into the Delta and impact water quality deliveries in the SWP and CVP.
- Support DWR/USBR strategies for protecting levees in the Delta from the potential effects of projected sea level rise.

#### 1.5.4.2 Hydropower

Climate change projections suggest continued highly variable annual precipitation with slightly drier climate by mid-century, affecting hydropower generation. Strategies to address potential reductions in hydropower include the following:

# Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 33

- Support alternative economically viable energy projects within the region including solar energy and wind energy.

## 1.6 Data Gaps and Next Steps

### 1.6.1 Data Improvement

The climate change assessment conducted in this Plan update is qualitative in some areas due to limited data, high level of uncertainty, and, in some cases, because impacts to a given sector are not expected to be severe. The intent of future data gathering is to address gaps in the current vulnerability assessment, to improve the understanding of climate change impacts and vulnerabilities, and to enable a more quantitative analyses. Recommended future data gathering efforts will include data that facilitate more quantitative analysis of the vulnerability, as described in the following sections. Data gathering efforts will be considered in the context of the current and proposed projects and funding available.

This section describes potential areas of future data gathering efforts for the priority sectors identified earlier. The recommendations focus on the top four priority sectors; namely, water supply, water quality, water demand, and flooding. The lower priority sectors include ecosystem health and habitat and fire, which require a lesser degree of data collection. Climate change vulnerability of ecosystem health and habitat is difficult to quantify, and reliance on generalized studies will likely satisfy the Region's needs. Thus, the Kern Region should prioritize data gathering efforts for the sectors most vulnerable to climate change impacts.

#### 1.6.1.1 Climate Change Models and Scenarios

Cal-Adapt modeling results for the Kern Region were used for projections of temperature, ET, precipitation, and runoff for the Region. The California Energy Commission maintains the Cal-Adapt site and will update the modeling tools as new climate change modeling results, based on more refined data, become available from the IPCC. Thus, to the extent feasible, the available climate change tools and projections for the Region will be reviewed periodically and the vulnerability assessment updated in future versions of the Plan.

#### 1.6.1.2 Updates on Climate Change Research

Research on the climate change impacts on water resources is ongoing and continues to evolve with further analysis and more refined methodologies. During the preparation of this Plan update, key literature resources on climate change have been reviewed. New scientific findings will be reviewed periodically and incorporated into the climate change vulnerability assessment, especially the findings pertinent to the sectors most vulnerable to the climate change in the Region.

#### 1.6.1.3 Vulnerability Assessment Update

As noted above, a goal of further data collection is to enable a more quantitative analysis of the high priority watershed sectors that are more vulnerable to climate change in future Plan updates. Water supply and water quality were identified as the highest priority sectors and

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 34

water demand and flooding were identified as the second highest priority sectors that could potentially be impacted by climate change.

### 1.6.1.4 Water Demand

Cal-Adapt projections suggest water demand in the Region is likely to increase as a result of higher temperature with the greatest temperature increase anticipated during dry months compared to wet months. Historical records of annual water demand data currently available are not specific enough to quantify the effects from increasing temperature. As discussed earlier in the vulnerability assessment, the most important effect of changing weather conditions is likely to be on agricultural demand, but the overall effects on agricultural water demand is uncertain.

Suggestions for future data gathering efforts to quantify the climate change effects on municipal and agricultural water demand include the following:

- Collect and analyze historical monthly records of water demand data for the Region to quantify the weather effects on water use and seasonal variations in response to changes in historical temperature.
- Collect and analyze historical monthly records of water demand data for each purveyor in the Region to demonstrate purveyor-specific patterns in response to changes in climate.
- Based on the water demand and temperature data, develop a regression analysis correlating water demand to temperature on a monthly or seasonal basis for the Region and each purveyor. The historical response can be used to infer future response with the projected changes in temperature with climate change.
- Characterize the variations in indoor and outdoor water use, both for the Region and each purveyor. Future data gathering should focus on the seasonal and monthly patterns both in indoor and outdoor usage to evaluate the effects of weather conditions on each use category.
- Collect and analyze historical agricultural water demand to quantify the weather effects on water use and seasonal variations in response to changes in historical temperature.
- Identify the major industries in the Region that require cooling and/or process water. As water temperature increases, cooling water needs may also increase.

### 1.6.1.5 Water Supply

Future assessment of water supply climate change vulnerability will incorporate the most up-to-date data available from DWR and the most current groundwater supply availability.

Suggestions for future data gathering efforts to quantify the climate change effects on water supply include the following:

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 35

- Update DWR SWP Delivery Reliability Report projections - DWR provides an updated analysis and report every two years.
- Review or request other reports (e.g., USBR, Army Corp of Engineers, etc).
- Update available groundwater supply projections – Groundwater production in a given year varies depending on hydrologic conditions. Changes in local hydrology and natural recharge are anticipated to have a direct impact on available groundwater storage and may affect current safe operating ranges. Updates on the groundwater safe operating ranges will be needed when further assessments of water supply vulnerability to climate change are performed for future Plan updates.
- Evaluate the effects of reduction in precipitation from climate change on the groundwater operational ranges and quantify the potential reduction in groundwater supply due to reduction in precipitation from climate change.

### 1.6.1.6 Water Quality

Collection of historical water quality data within the Region would greatly improve the understanding of Regional water quality and how it may be impacted by climate change. For imported SWP water, the vulnerability analysis relied on DWR projections of water quality impacts in the Delta due to sea level rise and increases in salinity. Future analyses will incorporate updated DWR or other agency studies on the potential impacts of climate change on SWP quality.

Suggestions for future data gathering efforts to quantify the climate change effects on water quality include:

- Monitor future and collect historical water quality data within the Region during storm events.
- Develop a long-term water quality record for the Kern River that would assist in improving the understanding of Regional water quality.
- Collect long-term weather records associated with air temperature, precipitation, and ET to assess potential correlations with seasonal water quality.
- Develop, to the extent possible, a long term surface/ground/aerial deposition model that can be continuously updated and refined with newly available data. Model should be ready accessible to stakeholders and in a user-friendly format to allow better understanding of trends over time.

### 1.6.1.7 Flooding

A quantitative assessment of the potential impacts of climate change on flooding cannot be performed as climate projections are not sensitive enough to project short-term extreme events such as flooding. Rather, the 100-year and 500-year floodplains were used to define flooding risk zones that should be considered in location of water infrastructure.

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 36

Suggestions for future data gathering efforts to address the potential climate change effects on flooding include the following:

- Perform an inventory of runoff monitoring stations in the Region to see if a more robust runoff record can be developed. Those data may allow an analysis of historical storm events correlated with precipitation events as well as annual precipitation to provide a better understanding of conditions that may lead to more extreme flooding conditions.

As recommended by DWR's Climate Change Handbook for Regional Water Planning, future work should focus on gathering the 200-year floodplain maps for the Region after DWR develops them under the authorization of Senate Bill 5 (SB 5) enacted in 2007. Currently, the 100-year and 500-year floodplain maps are available from FEMA. Additional information on the DWR's Best Available Maps (BAM) program can be found at the following website:

<http://gis.bam.water.ca.gov/bam/>.

- Coordinate with the Region stakeholders for advanced flood preparation and quick response and document the protocol(s).
- Perform an inventory of critical infrastructure located in floodplains, especially those that were impacted during the historical flood events in 1969 and 1983.
- Update the projections of runoff with climate change as updates from Cal-Adapt become available.
- Work with local flood plain managers and/or equivalent to determine areas of concern as information from FEMA evolves.

## Technical Memorandum

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner  
September 5, 2014  
1289035\*01  
Page 37

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## **Technical Memorandum**

Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

September 5, 2014

1289035\*01

Page 38

## **Appendix A**

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Climate Change Vulnerabilities Prioritization

August 2014 Kern Region Stakeholder Meeting Minutes



**Climate Change Vulnerabilities Prioritization**

Kern IRWMP Objectives	Climate Change Vulnerabilities	Prioritization (High, Medium, Low)
<b>Increase Water Supply</b>		
Through cooperation and collaboration with other regions restore water supplies to levels that will mitigate for water lost from the region and eliminate overdraft	Water Supply	H
Pursue and implement cost effective water use efficiency programs	Water Demand	M
Increase water storage capacity in the region by increasing recharge acreage and expanding groundwater banking programs before all prime recharge land has been developed	Water Supply, Sea Level Rise	H
Integrate management of water banking facilities to maximize conjunctive use over the planning horizon	Water Supply	H
Increase/augment water supplies to meet region demands (e.g., M&I, agricultural, environmental) by 2050.	Water Supply, Sea Level Rise	H
<b>Improve Operational Efficiency</b>		
Increase transfers and exchanges flexibility over the planning horizon	Water Supply	H
Create tools to re-regulate water supplies within the region, including storage, storm flows, and operational flows over the planning horizon	Water Supply	H
Increase distribution efficiencies and reduce energy usage over the planning horizon	Water Demand	M
Increase the use of alternate energy sources (e.g., solar)	Hydropower	M
Replace aging infrastructure to reduce system water losses, improve operational efficiencies, and reduce service interruptions	Water Supply, Flooding	M
Increase the use of recycled water for direct reuse within the Kern Region	Water Supply, Water Demand, Water Quality	M
Optimize local management of water resources to improve water supply reliability over the planning horizon	Water Supply	H
Increase pool of qualified candidates to operate water and wastewater systems	Water Quality	L
<b>Improve Water Quality</b>		
Monitor and/or manage headwaters/areas of origin, natural streams, and recharge areas to prevent or mitigate contamination	Ecosystem and Habitat, Water Quality	M
Identify and preserve prime recharge areas in the Kern fan area and other areas	Water Supply, Water Quality	H
Improve water quality for DACs and the watershed over the planning horizon	Water Supply, Water Quality	H
Continue to provide drinking water that meets or exceeds water quality standards; and support efforts to attain appropriate standards throughout the planning horizon	Water Supply, Water Quality	H
Maximize the use of lesser quality water for appropriate uses (landscaping, certain ag crops, “aesthetic” projects) throughout the planning horizon	Water Supply, Water Quality	M
Coordinate and enhance aquatic pest control efforts from this point forward	Ecosystem and Habitat, Water Quality, Water Supply	M
<b>Promote Land Use Planning and Resource Stewardship</b>		
Promote stewardship of the Kern River by applying appropriate measures in various reaches of the river from this point forward	Ecosystem and Habitat	M
Encourage the removal of non-native invasive plant species that affect water quality, reliability, and operations	Ecosystem and Habitat, Water Supply, Water Quality	M
Identify and promote the regeneration and restoration of native riparian habitat	Ecosystem and Habitat	M
Coordinate agricultural and urban water suppliers to more effectively address land use planning issues from this point forward	Habitat, Water Demand, Water Supply	M
Improve the linkage between land use planning and water supply in the region throughout the planning horizon	Ecosystem and Habitat, Water Supply	H
Increase educational opportunities to improve public awareness of water supply, conservation, and water quality issues throughout the planning horizon	Ecosystem and Habitat, Water Supply, Water Demand, Water Quality	H
Improve and coordinate integrated land use planning to support stewardship of environmental resources, such as the Kern River and Kern Fan, and integrate with habitat conservation plans and other ongoing planning efforts from this point forward	Ecosystem and Habitat, Water Supply	M
Preserve and improve ecosystem/watershed health throughout the planning horizon	Ecosystem and Habitat	M
<b>Improve Regional Flood Management</b>		
Improve regional flood management by addressing preparedness, response, and post flood actions throughout the planning horizon	Flooding	M
Reduce the effects of poor quality runoff throughout the planning horizon	Flooding, Water Quality	M
Identify and promote innovative flood management projects to protect vulnerable areas	Flooding	H
Plan new developments to minimize flood impacts from this point forward	Ecosystem and Habitat, Flooding	M

# Tulare Lake Basin Portion of Kern County Integrated Regional Water Management Plan

August 25, 2014 - 1:00 pm – 3:00 pm  
Kern County Water Agency  
Stuart T. Pyle Water Resources Center  
3200 Rio Mirada Drive, Bakersfield, CA 93308

## **Meeting Objectives:**

- Recommendations from DWR Plan Review Process:
- Climate Change Vulnerability Assessment Prioritization

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## **PARTICIPANTS MEETING AGENDA**

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- 1:00 I Welcome and Introductions – Executive Committee Chair**  
Meeting purpose and agenda *A quorum of the EC was present as follows: Bill Taube, Chair, Regina Houchin, Jon Curry, Greg Fenton, and Lauren Bauer.*
- 
- 1:05 II General Information Items**  
A. Revised/Updated Participant Funding Agreement – Lauren Bauer  
*Lauren described the process for obtaining indications from all signatories that they would be willing to execute the “First Amendment to the Agreement with KCWA for IRWM Plan Management Services.” An email request for comments on the form of the agreement is currently being conducted; comments are due by COB September 1, 2014. After the Amendment is finalized, an email poll of signatories regarding their wiliness to execute will be conducted.*
- 
- 1:20 III Funding Opportunities - KJ/P&P Team**  
A. Water Energy Draft PSP - \$19M  
B. Update on Emergency Drought Funding Application  
*Mary Lou Cotton of Kennedy/Jenks Consultants gave a brief update on these items and referred to a handout of DWR’s compiled list of applicants for the Emergency Drought Funding.*
- 
- 1:30 IV IRWM Plan Status – KJ**  
A. Kern IRWM Plan DWR Plan Review Recommendations: Climate Change Vulnerability Assessment Prioritization – KJ and EC Members  
*Mary Lou described the draft Climate Change Technical Memo and Vulnerability Assessment table that were sent to the participants on August 20. She then described the Vulnerability Assessment and prioritization process, and led the group through a discussion of the vulnerabilities that could potentially impact the Tulare Lake Basin Portion of Kern County Region. The group collectively discussed and agreed upon the prioritization of the vulnerabilities, and directed Mary Lou to include it as part of the Climate Change package to be submitted to DWR by September 9, 2014.*
- 
- 2:00 V. Public Comment**  
*Representatives from the Community Water Center reported that the Tulare Lake Basin Disadvantaged Community Study is ready and will be presented to the Tulare County Board of Supervisors on September 9. A draft of the report (prepared by Provost & Pritchard) is available on the Tulare County website. The report contains recommendations regarding DACs for various IRWM Regions.*
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**Close**

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## Appendix D

### Table C.15 and Table C. 16 - Kern County WA: 2015 DCR ELT

Table C.15. Kern County WA-AG: 2015 DCR ELT

SWP Table A Deliveries for 2015 Study					Probability Curve			
Year	Delivery w/o Article 56 Carryover (TAF)	Article 56 Carryover (TAF)	Total Table A Delivery (TAF)	Percent of Maximum Table A	Year	Total Table A Delivery (TAF)	Exceedence Frequency (%)	Percent of Maximum Table A
1922	616	0	616	73%	1938	848	0%	100%
1923	525	0	525	62%	1958	848	1%	100%
1924	148	0	148	17%	1969	848	2%	100%
1925	401	0	401	47%	1969	848	4%	100%
1926	414	0	414	49%	1969	848	5%	100%
1927	551	0	551	65%	1980	847	6%	100%
1928	648	0	648	76%	1952	822	7%	97%
1929	150	0	150	18%	1998	795	9%	94%
1930	402	0	402	47%	1956	753	10%	89%
1931	167	0	167	20%	1967	745	11%	88%
1932	399	0	399	47%	1941	733	12%	86%
1933	294	0	294	35%	1995	733	14%	86%
1934	235	0	235	28%	1984	732	15%	86%
1935	554	0	554	65%	1978	731	16%	86%
1936	625	0	625	74%	1997	721	17%	85%
1937	628	0	628	74%	1943	718	19%	85%
1938	848	0	848	100%	1951	672	20%	79%
1939	219	0	219	26%	1973	662	21%	78%
1940	562	0	562	66%	1986	651	22%	77%
1941	733	0	733	86%	1928	648	23%	76%
1942	632	0	632	74%	1974	636	25%	75%
1943	718	0	718	85%	1979	635	26%	75%
1944	336	0	336	40%	1942	632	27%	74%
1945	629	0	629	74%	1945	629	28%	74%
1946	591	0	591	70%	1937	628	30%	74%
1947	388	0	388	46%	1936	625	31%	74%
1948	438	0	438	52%	1922	616	32%	73%
1949	357	0	357	42%	1996	616	33%	73%
1950	471	0	471	56%	1970	611	35%	72%
1951	672	0	672	79%	2000	607	36%	72%
1952	822	0	822	97%	1975	602	37%	71%
1953	438	0	438	52%	1946	591	38%	70%
1954	536	0	536	63%	1965	589	40%	69%
1955	380	0	380	45%	1963	579	41%	68%
1956	753	0	753	89%	1985	567	42%	67%
1957	436	0	436	51%	1999	564	43%	67%
1958	848	0	848	100%	1966	564	44%	66%
1959	397	0	397	47%	1940	562	46%	66%
1960	392	0	392	46%	1971	556	47%	66%
1961	191	0	191	22%	1935	554	48%	65%
1962	501	0	501	59%	1927	551	49%	65%
1963	579	0	579	68%	1954	536	51%	63%
1964	404	0	404	48%	1993	525	52%	62%
1965	589	0	589	69%	1923	525	53%	62%
1966	564	0	564	66%	1962	501	54%	59%

SWP Table A Deliveries for 2015 Study					Probability Curve			
Year	Delivery w/o Article 56 Carryover (TAF)	Article 56 Carryover (TAF)	Total Table A Delivery (TAF)	Percent of Maximum Table A	Year	Total Table A Delivery (TAF)	Exceedence Frequency (%)	Percent of Maximum Table A
1967	745	0	745	88%	1989	497	56%	59%
1968	461	0	461	54%	1950	471	57%	56%
1969	848	0	848	100%	1968	461	58%	54%
1970	611	0	611	72%	2003	461	59%	54%
1971	556	0	556	66%	1972	440	60%	52%
1972	440	0	440	52%	1948	438	62%	52%
1973	662	0	662	78%	1953	438	63%	52%
1974	636	0	636	75%	1957	436	64%	51%
1975	602	0	602	71%	1926	414	65%	49%
1976	368	0	368	43%	1964	404	67%	48%
1977	68	0	68	8%	1930	402	68%	47%
1978	731	0	731	86%	1925	401	69%	47%
1979	635	0	635	75%	1932	399	70%	47%
1980	847	0	847	100%	1959	397	72%	47%
1981	350	0	350	41%	1960	392	73%	46%
1982	848	0	848	100%	1947	388	74%	46%
1983	848	0	848	100%	1955	380	75%	45%
1984	732	0	732	86%	1976	368	77%	43%
1985	567	0	567	67%	1949	357	78%	42%
1986	651	0	651	77%	1981	350	79%	41%
1987	173	0	173	20%	1944	336	80%	40%
1988	122	0	122	14%	2002	328	81%	39%
1989	497	0	497	59%	1933	294	83%	35%
1990	131	0	131	16%	1994	264	84%	31%
1991	132	0	132	16%	2001	239	85%	28%
1992	137	0	137	16%	1934	235	86%	28%
1993	525	0	525	62%	1939	219	88%	26%
1994	264	0	264	31%	1961	191	89%	22%
1995	733	0	733	86%	1987	173	90%	20%
1996	616	0	616	73%	1931	167	91%	20%
1997	721	0	721	85%	1929	150	93%	18%
1998	795	0	795	94%	1924	148	94%	17%
1999	564	0	564	67%	1992	137	95%	16%
2000	607	0	607	72%	1991	132	96%	16%
2001	239	0	239	28%	1990	131	98%	16%
2002	328	0	328	39%	1988	122	99%	14%
2003	461	0	461	54%	1977	68	100%	8%
<b>Average</b>	<b>505</b>	<b>0</b>	<b>505</b>	<b>60%</b>		<b>505</b>		<b>60%</b>
<b>Maximum</b>	<b>848</b>	<b>0</b>	<b>848</b>	<b>100%</b>		<b>848</b>		<b>100%</b>
<b>Minimum</b>	<b>68</b>	<b>0</b>	<b>68</b>	<b>8%</b>		<b>68</b>		<b>8%</b>

Table C.16. Kern County WA-MI: 2015 DCR ELT

SWP Table A Deliveries for 2015 Study					Probability Curve			
Year	Delivery w/o Article 56 Carryover (TAF)	Article 56 Carryover (TAF)	Total Table A Delivery (TAF)	Percent of Maximum Table A	Year	Total Table A Delivery (TAF)	Exceedence Frequency (%)	Percent of Maximum Table A
1922	98	0	98	73%	1969	135	0%	100%
1923	83	0	83	62%	1938	135	1%	100%
1924	24	0	24	18%	1938	135	2%	100%
1925	64	0	64	47%	1938	135	4%	100%
1926	66	0	66	49%	1982	135	5%	100%
1927	88	0	88	65%	1980	134	6%	100%
1928	103	0	103	76%	1952	130	7%	97%
1929	25	0	25	18%	1998	126	9%	94%
1930	64	0	64	47%	1943	125	10%	92%
1931	27	0	27	20%	1956	120	11%	89%
1932	63	0	63	47%	1967	118	12%	88%
1933	48	0	48	36%	1995	118	14%	87%
1934	39	0	39	29%	1941	116	15%	86%
1935	88	0	88	65%	1984	116	16%	86%
1936	99	0	99	74%	1978	116	17%	86%
1937	100	0	100	74%	1997	114	19%	85%
1938	135	0	135	100%	1986	108	20%	80%
1939	33	0	33	24%	1951	107	21%	79%
1940	89	0	89	66%	1973	105	22%	78%
1941	116	0	116	86%	1928	103	23%	76%
1942	100	0	100	74%	1974	101	25%	75%
1943	125	0	125	92%	1979	101	26%	75%
1944	54	0	54	40%	1942	100	27%	74%
1945	100	0	100	74%	1945	100	28%	74%
1946	94	0	94	70%	1937	100	30%	74%
1947	51	0	51	38%	1936	99	31%	74%
1948	70	0	70	52%	1922	98	32%	73%
1949	57	0	57	42%	1996	98	33%	73%
1950	75	0	75	56%	1970	97	35%	72%
1951	107	0	107	79%	2000	96	36%	72%
1952	130	0	130	97%	1975	95	37%	71%
1953	70	0	70	52%	1946	94	38%	70%
1954	85	0	85	63%	1965	93	40%	69%
1955	60	0	60	45%	1963	92	41%	68%
1956	120	0	120	89%	1999	90	42%	67%
1957	69	0	69	51%	1966	89	43%	66%
1958	135	0	135	100%	1940	89	44%	66%
1959	63	0	63	47%	1971	88	46%	66%
1960	59	0	59	44%	1935	88	47%	65%
1961	29	0	29	21%	1927	88	48%	65%
1962	79	0	79	59%	1954	85	49%	63%
1963	92	0	92	68%	1993	83	51%	62%
1964	58	0	58	43%	1923	83	52%	62%
1965	93	0	93	69%	1985	81	53%	60%
1966	89	0	89	66%	1989	80	54%	60%

SWP Table A Deliveries for 2015 Study					Probability Curve			
Year	Delivery w/o Article 56 Carryover (TAF)	Article 56 Carryover (TAF)	Total Table A Delivery (TAF)	Percent of Maximum Table A	Year	Total Table A Delivery (TAF)	Exceedence Frequency (%)	Percent of Maximum Table A
1967	118	0	118	88%	1962	79	56%	59%
1968	73	0	73	54%	1950	75	57%	56%
1969	135	0	135	100%	1968	73	58%	54%
1970	97	0	97	72%	1972	70	59%	52%
1971	88	0	88	66%	1948	70	60%	52%
1972	70	0	70	52%	1953	70	62%	52%
1973	105	0	105	78%	1957	69	63%	51%
1974	101	0	101	75%	1926	66	64%	49%
1975	95	0	95	71%	2003	66	65%	49%
1976	61	0	61	45%	1930	64	67%	47%
1977	11	0	11	8%	1925	64	68%	47%
1978	116	0	116	86%	1932	63	69%	47%
1979	101	0	101	75%	1959	63	70%	47%
1980	134	0	134	100%	1976	61	72%	45%
1981	58	0	58	43%	1955	60	73%	45%
1982	135	0	135	100%	1960	59	74%	44%
1983	135	0	135	100%	2002	59	75%	44%
1984	116	0	116	86%	1964	58	77%	43%
1985	81	0	81	60%	1981	58	78%	43%
1986	108	0	108	80%	1949	57	79%	42%
1987	29	0	29	22%	1944	54	80%	40%
1988	21	0	21	15%	1947	51	81%	38%
1989	80	0	80	60%	1933	48	83%	36%
1990	19	0	19	14%	1994	39	84%	29%
1991	22	0	22	16%	1934	39	85%	29%
1992	32	0	32	24%	2001	38	86%	28%
1993	83	0	83	62%	1939	33	88%	24%
1994	39	0	39	29%	1992	32	89%	24%
1995	118	0	118	87%	1987	29	90%	22%
1996	98	0	98	73%	1961	29	91%	21%
1997	114	0	114	85%	1931	27	93%	20%
1998	126	0	126	94%	1929	25	94%	18%
1999	90	0	90	67%	1924	24	95%	18%
2000	96	0	96	72%	1991	22	96%	16%
2001	38	0	38	28%	1988	21	98%	15%
2002	59	0	59	44%	1990	19	99%	14%
2003	66	0	66	49%	1977	11	100%	8%
<b>Average</b>	<b>80</b>	<b>0</b>	<b>80</b>	<b>60%</b>		<b>80</b>		<b>60%</b>
<b>Maximum</b>	<b>135</b>	<b>0</b>	<b>135</b>	<b>100%</b>		<b>135</b>		<b>100%</b>
<b>Minimum</b>	<b>11</b>	<b>0</b>	<b>11</b>	<b>8%</b>		<b>11</b>		<b>8%</b>

Appendix E  
Groundwater Adjudication Judgments  
Bear Valley CSD Groundwater Management Plan



FILED MARCH 22, 1971

RECORDED MARCH 23, 1971

Book 226

Page 55

## SUPERIOR COURT OF THE STATE OF CALIFORNIA

## FOR THE COUNTY OF KERN

TEHACHAPI-CUMMINGS COUNTY WATER  
DISTRICT, a body corporate and  
politic.

Plaintiff,

vs.

NO. 97210

JUDGMENT

CITY OF TEHACHAPI, a municipal corporation,  
LEATTA M. ANDERSON, LESTER J. ANDERSON, FRANK  
ARMSTRONG, PHYLLIS ARMSTRONG, ESTHER ASSE,  
SAM ASHE, ASHTOWN WATER COMPANY, a corporation;  
BAKENSFIELD PRODUCTION CREDIT ASSOCIATION, as  
Trustee under deed of trust; BANK OF AMERICA,  
as Trustee under deeds of trust; ALVERDA  
BASSLER, GEORGE BASSLER, LEROY BASSLER,  
MARGARET BASSLER, ALLENE E. BECKHAM, CLYDE  
BECKHAM, CHRISTOPHER BREVIDORE, IDA BREVIDORE,  
J. G. BISSER, BOISE-CASCADE PROPERTIES OF  
DELAWARE, INC., a corporation (formerly known  
as Pacific Cascade Land Company), JOHN SPOOR  
BROOME, HASWELL BRIDGEMETT, DWANA M. BRIDGEMETT,  
BETTY JEAN BURGEIS, DONALD R. BURGEIS, KEITH  
F. BURINGTON, PATRICIA M. BURINGTON, MORRIS  
BURTON, VIRGINIA ELLEN BURTON, CLINTON A. BUSH,  
EVELYN BUSH, CALIFORNIA PROPERTIES FUND,  
CALIFORNIA RECONVEYANCE COMPANY, a corporation,  
(successor in interest to Sierra Reconveyance  
Company, a corporation), DON I. CARROLL,  
GERTRUDE D. CARROLL, CUB CAZACUS; CHARLES  
WEST RANCHES, INC., as trustee under deed of  
trust; BEN CHATOFF, EDGAR G. CHRISTIE, JOHN  
O. CHRISTOPHER, VIRGINIA E. CHRISTOPHER,  
HENRY D. CHURCH, MAXINE CHURCH, LEWIS A.  
COLVIN, NAN L. COLVIN; CONSOLIDATED ESCROW  
COMPANY, as Trustee under deed of trust;  
CORPORATION OF AMERICA, as Trustee under deeds  
of trust; MAX THELEN, JR., WELLS FARGO BANK  
and I. W. HELLMAN all as Co-Trustees of the  
S. H. COWELL FOUNDATION; JOHN D. COYSE, CHARLES  
DAVIS, MARGIE L. DAVIS, DEPARTMENT OF VETERANS  
AFFAIRS OF THE STATE OF CALIFORNIA; ALEX  
DEUTSCH, as Trustee for the GINA ELIZABETH

1 DEUTSCH Age 21 Trust; ALEX DEUTSCH, as Trustee  
 for the KRISTINE LOOF DEUTSCH Age 21 Trust; RAY  
 2 DICKINSON, ANNA L. DUGAN, PRESTON DUGAN, VERNE  
 DUPONT, LEWIS M. DYE, SR.; EAST KERN ESCROW  
 3 COMPANY, as Trustee under deeds of trust; MOLA  
 ELLSWORTH, REX ELLSWORTH; EQUITABLE TRUST  
 4 COMPANY, a corporation, as Trustee under deeds  
 of trust; LANCE ESTES, NAUCE M. FARRAR, ALAN M.  
 5 FIELDS, MARDELL S. FIELDS; FIRST AMERICAN TITLE  
 COMPANY, a corporation, as Trustee under deed  
 6 of trust; FIRST WESTERN BANK & TRUST COMPANY,  
 ROSE B. FORD, W. J. FORD, DOROTHY FOSTER, LEWIS  
 7 FOSTER, JULIA FOTIS, WILLIAM FOTIS, BILLIE J.  
 FOWLER, EDMOND FOWLER, KENNETH FREDERICK, FRED-  
 8 LITE BLOCKS, INC., a corporation, BETTY LOU  
 FREEMAN, ROBERT B. FREEMAN, JR., EMIL FRIETAG,  
 9 ESTHER M. FRIETAG, ALVIN GARY, WILMA J. GARY,  
 LORENE GILREATH, SIDNEY GILREATH, DOMENICO  
 10 GIRAUDO, KATHLEEN GOEBEL, LOUIS GOEBEL, GOLDEN  
 HILLS COMMUNITY SERVICES DISTRICT, a body cor-  
 11 porate and politic, GOLDEN OAKS, LTD., a limited  
 partnership; BANK OF CALIFORNIA, as Trustee for  
 12 GOLDEN OAKS, LTD., a limited partnership; FRANK  
 GOODRICK, MONETA M. GOODRICK, JOHN GORDIAN,  
 13 GRAND OAKS LAND COMPANY, a corporation, GRAND  
 OAKS WATER COMPANY, a corporation, JAMES GREENE,  
 14 HELEN GRIND, R. E. GRIND, J. C. HACKETT, HENRY  
 B. HANF, FRED W. HARRIS, GOLDIE HARRIS, AVIS E.  
 15 HAUN, THEODORE H. HAUN; GRANT D. SULLIVAN and  
 MORTIMER J. SULLIVAN as Co-trustees under Will  
 16 of PERCY J. HAYES; RUTH HEDBERG, W. C. HEDBERG,  
 GRACE B. HEDGE, HAROLD HEDGE, ALICE HEMPHILL,  
 17 HERB HEMPHILL; HERITAGE INVESTMENT CO., as  
 Trustee under deed of trust; BEATRICE HERNANDEZ,  
 18 F. G. HERNANDEZ, CHARLIE J. HONEYCUTT, KATHRYN  
 HONEYCUTT, JACK C. IRIART; JACK R. IRIART, ap-  
 19 pearing by and through his guardian ad litem JACK  
 C. IRIART; JOAQUINA IRIART, RONALD IRIART, JACOB-  
 20 SEN BROS. TURF FARMS, INC., a corporation, JACOB-  
 SEN ORCHARDS, INC., a corporation, THOMAS JAMES;  
 21 GERTRUDE T. HALL, COLIN HOUSTON, ARTHUR W. KIRK and  
 RUTH W. WEST, as Co-trustees of the trust in the IDA  
 22 MAY JAMESON ESTATE; BARBARA A. JOHNSON, EVA L. JOHNS-  
 SON, JOHN JOHNSON, WARREN D. JOHNSON, ELMER F. JURY,  
 23 aka E. F. JURY, MADELINE A. JURY, EARL E. KARNER,  
 EDITH KARNER, ROBERT W. KARPE, PHYLLIS J. KARPE,  
 24 ALICE R. KEEL, SIMON KEEL; KERN COUNTY TITLE  
 COMPANY, as Trustee under deeds of trust; GLEN  
 25 KILLINGSWORTH, MILDRED KILLINGSWORTH, MARION  
 KILLINGSWORTH, DORA KILLINGSWORTH, BESSIE  
 26 KOUTROULIS, ERIC J. KRAGENBRINK, MARGARET  
 KRAGENBRINK; LA CIENEGA ESCROW COMPANY, as  
 27 Trustee under deed of trust; L. F. LAKE, LORETTA  
 LAKE, BETTE LAMB, aka ELIZABETH LOUISE LAMB;  
 28 ELIZABETH LOUISE LAMB as Executrix of the Estate  
 of J. O. LAMB, deceased; LILLIAN LEES, SPENCER  
 29 LEES, A. F. LEIVA, MARGARET LEIVA, IDONNA LEIVA,  
 JOSEPH LEIVA, VERNE D. LOHMAN, CLAYTON LUCKNER,  
 30 RENA LUCKNER, FLOSSIE M. LUTGE, HAROLD T. LUTGE,  
 HELEN LUTGE, LYNCH-ESTES COMPANY, a corporation,  
 31 BEVERLY MAHER, JAMES F. MAHER, DOROTHY MARBLE,  
 HERB MARBLE, CLARA MARIKOLD, LEE MARIKOLD, ANITA  
 32 F. MARTIN, C. L. MARTIN, METTLER & ARMSTRONG, a

1 partnership, BYRON MERCHANT, CHARLES METZLER,  
2 MARGARET METZLER, MINARET INVESTMENTS, INC.,  
3 a corporation, MOJAVE PUBLIC UTILITY DISTRICT,  
4 a body corporate and politic, MONOLITH PORT-  
5 LAND CEMENT COMPANY, a corporation, MARY  
6 ALICE MONROE, ROBERT MONROE, MOTOR CENTER,  
7 a corporation, EARL MURRAY, EMALINE MUSSA,  
8 IRMA NORIEGA, JOSEPH F. NORIEGA, O. D. ODIN,  
9 RUTH M. ODIN, JEAN S. OSHANNESON, JOHN G.  
10 OSHANNESON, FRED S. OKEN, OKEN PROPERTIES,  
11 INC., PACIFIC PROPERTIES FUND, a limited  
12 partnership, FRED D. PATTERSON, LAVIECE  
13 PATTERSON, AGNES PEARSON, E. H. PEARSON,  
14 EDITH PETRIE, ROBERT PETRIE, EDNA C. PEY-  
15 TON, HUGH J. PEYTON, SUSAN PHILLIPS, PINE  
16 CANYON RANCHOS, a partnership, CHARLES  
17 POMEROY, BARBARA L. POMEROY, CHARLES  
18 POWELL, ELIZABETH POWELL, JOSEPH D.  
19 PRINTUP, ANNE REAVES, LAVONIA REEVES,  
20 WILLIAM REEVES, JOHN C. REEVES, JR.,  
21 ALICE KNOX REISWIG, R. JAMES REISWIG,  
22 VIRGINIA RICKETT, WILBUR RICKETT, JEFFERSON  
23 ROBBINS, LILLIAN ROBBINS, WILLIAM ROBINSON  
24 aka WILLIAM ROBISON, IMOGENE ROBINSON aka  
25 IMOGENE ROBISON, ALBERT ROSEN; ALBERT ROSEN,  
26 Trustee for the ALBERT ROSEN and RITA ROSEN  
27 TRUST No. 1, for MARTIN E. ROSEN, Trust of  
28 September 2, 1964; ALBERT ROSEN, Trustee  
29 for the ALBERT ROSEN and RITA ROSEN TRUST  
30 No. 2, for BRUCE E. ROSEN, Trust of Sep-  
31 tember 2, 1964; ALBERT ROSEN, Trustee for  
32 the ALBERT ROSEN and RITA ROSEN TRUST No.  
33 3, for SHEILA I. ROSEN, Trust of September  
34 2, 1964; RITA ROSEN, FRANK RUFF, RUTH  
35 RUFF, MELVIN RUFF, FRANCES RUFF, S. A.  
36 CAMP GINNING COMPANY, as Trustee under  
37 deed of trust, SVM INVESTMENTS, a cor-  
38 poration, SAND CANYON PROPERTIES, a part-  
39 nership, ELVIN SANDERS, JUANITA SANDERS,  
40 HAROLD SCHLOTTHAUER, MADGE O. SCHLOTTHAUER,  
41 ALBERT SCHMIDT, ETHEL E. SCHMIDT, ERNEST  
42 SCHNAIDT, HAROLD SCHNAIDT, SCHULTZ ENTER-  
43 PRISES, a corporation, ROBERT SCHULTZ,  
44 LEON SCHWARTZ; LEON SCHWARTZ, Trustee  
45 for the LEON SCHWARTZ TRUST No. 1; LEON  
46 SCHWARTZ, Trustee for the LEON SCHWARTZ  
47 TRUST No. 2; CHESTER SCOTT, NOREEN SCOTT,  
48 FRED SEAMES; SECURITY FIRST NATIONAL BANK  
49 & TRUST COMPANY, as Trustee under deed of  
50 Trust; SECURITY TITLE COMPANY, as Trustee  
51 under deeds of trust; ALICE CAZACUS  
52 SEEGER, SIESTA LANDS, a joint venture,  
53 WILLIAM SHERMAN, ALAN W. SMALL, WINI-  
54 FRED SMALL, BESSIE SMITH, EVELYN SMITH,  
55 SOUTHERN PACIFIC TRANSPORTATION COMPANY  
56 (formerly Southern Pacific Railroad Com-  
57 pany), a corporation, SPENCER CALIFORNIA,  
58 a corporation, VAUGHN SQUIRES, VIVIAN  
59 SQUIRES, DANIEL C. STEELMAN, FAULETTE C.  
60 STEELMAN, DANIEL J. STERNAD, EDNA S.  
61 STERNAD, DARRELL STEVENS, LOUISE E.  
62 STEVENS, GIDEON STREYLE, MARIE STREYLE,  
63 SUBSTANTIAL ESCROW COMPANY, a corporation,

1 COZETTE SULLIVAN, GRANT SULLIVAN,  
2 MORTIMER SULLIVAN, SUSAN SULLIVAN,  
3 SUMMIT LINE COMPANY, a corporation,  
4 G. M. SUMMY, SITA SUMMY, ANN B. SYDMOR,  
5 aka ANN B. SNYDER, WILLIAM D. SYDMOR,  
6 aka WILLIAM D. SNYDER, TECHNOLOGY  
7 DEVELOPMENT, INC., a corporation,  
8 TENNACHAPI LUMBER COMPANY, a corpora-  
9 tion, TENNACHAPI MOUNTAIN LAND AND  
10 ORCHARD CO., a corporation, TENNACHAPI  
11 ORCHARDS, INC., a corporation, TENNACHAPI  
12 PUBLIC CEMETERY DISTRICT, a  
13 political subdivision, TENNACHAPI  
14 UNIFIED SCHOOL DISTRICT, MANUEL  
15 TERRAZAS, MARIA TERRAZAS, TITLE  
16 INSURANCE & TRUST COMPANY, as Trustee  
17 under deeds of trust: EDWARD L. TOMPKINS  
18 HELEN TOMPKINS: TRANSAMERICA TITLE  
19 COMPANY, as Trustee under deeds of  
20 trust: ENDELVA TROY, VINCENT J. TROY,  
21 TUMBLIN COMPANY, a partnership, MARI  
22 TUMBLIN aka AMELIA TUMBLIN, C. R.  
23 TUMBLIN; UNITED CALIFORNIA BANK, as  
24 Trustee under deed of trust: RICHARD  
25 VAN BUREN, DICK VANDER MAYDEN, OPAL  
26 L. VANDER MAYDEN, MURIEL VAN MATRE,  
27 V. A. VAN MATRE, EDWIN J. VAN ZANDT,  
28 JENNIE B. VAN ZANDT, BARBARA G. VON  
29 PLATEN, W. G. VON PLATEN, JEWELL  
30 VUKICH, PETE VUKICH, JEROME WARNER,  
31 LAURA WARNER, WASCO DEVELOPMENT COM-  
32 PANY, a partnership, NORMAN WEINTRAUB,  
33 EMMA WELDEN aka ERMA WELDEN, HOWARD  
34 WELDEN, WEST TENNACHAPI MUTUAL WATER  
35 COMPANY, a corporation, M. R. WHITE,  
36 MILDRED WHITE, WHITE OAK KNOLLS WATER  
37 CORPORATION, a corporation, HARRY  
38 WEITSMAN, EDWARD M. WIGGINS, MARY  
39 ELLEN WIGGINS, ALEX WILLIAMSON, DANIEL  
40 WILLIAMSON, THOMAS WILLIAMSON, ASA Z.  
41 WILSON, ESTHER M. WILSON, LOMA M.  
42 WOODS, ELLIOTT S. WYMAN, ROSALIE J.  
43 WYMAN, LOUISE YEAGER aka LOUISE MON-  
44 TOTH, ILLA YRIBARREN, LOUIS YRIBARREN,  
45 ALBERT ZOENEK, MARILEE EDENEN.

1           The above entitled action duly and regularly came on  
2 for trial on November 23, 1970 at 9:30 o'clock A.M. in Department  
3 6 of the above entitled court, before the Honorable Jay R.  
4 Ballantyne, Judge specially assigned, having been duly transferred  
5 thereto from Department 1 of said Court the matter having trailed  
6 therein from the date originally assigned for trial namely  
7 November 16, 1970. Plaintiff was represented through its attorneys  
8 Martin E. Whelan, Jr., Inc. and Martin E. Whelan, Jr.. Certain of  
9 the defendants were represented through their respective attorneys  
10 as shown on the daily records prepared by the Clerk. The defaults  
11 of all defendants who did not enter appearances in the action had  
12 theretofore been entered. Notice of trial was theretofore  
13 properly and timely given. Evidence oral and documentary was  
14 received on November 23, 24, 25, 30 and December 1, 1970 and the  
15 trial concluded and the matter submitted on December 2, 1970.

16           In connection with the following Judgment, the follow-  
17 ing terms, words, phrases and clauses are used by the Court with  
18 the following meanings:

19           "Artificial Replenishment" is the replenishment of a  
20 basin achieved through the spreading of imported water which per-  
21 colates into said basin.

22           "Base Water Right" is the highest continuous extractions  
23 of water by a party from Tehachapi Basin for a beneficial use in  
24 any period of five consecutive years after the commencement of  
25 overdraft in Tehachapi Basin as to which there has been no cessa-  
26 tion of use by that party during any subsequent period of five  
27 consecutive years, both prior to the commencement of this action.  
28 As employed in the above definition, the words "extractions of  
29 water by a party" and "cessation of use by that party" include  
30 such extractions and cessations by any predecessor or predecessors  
31 in interest.

32           "Calendar Year" is the twelve month period commencing

1 January 1 of each year and ending December 31 of each year.

2           "Extraction", "Extractions", "Extracting", "Extracted",  
3 and other variations of the same noun and verb, mean pumping,  
4 taking or withdrawing ground water by any manner or means whatso-  
5 ever from Tehachapi Basin.

6           "Imported Water" means water which may be brought into  
7 Tehachapi Basin Area from a nontributary source by the Plaintiff  
8 DISTRICT.

9           "Natural Replenishment" means and includes all processes  
10 other than "Artificial Replenishment" by which water may become a  
11 part of the ground water supply of Tehachapi Basin, including  
12 return from applied waters.

13           "Natural Safe Yield" is the maximum quantity of ground  
14 water, not in excess of the long term average annual Natural Re-  
15 plenishment, which may be extracted annually from Tehachapi Basin  
16 without eventual depletion thereof or without otherwise causing  
17 eventual permanent damage to Tehachapi Basin as a source of ground  
18 water for beneficial use, said maximum quantity being determined  
19 without reference to such Artificial Replenishment of Tehachapi  
20 Basin as might be accomplished from time to time.

21           "Overdraft" is that condition of a ground water basin  
22 resulting from extractions in any given annual period or periods  
23 in excess of the long term average annual Natural Replenishment,  
24 or in excess of that lesser quantity which may be extracted  
25 annually without otherwise causing eventual permanent damage  
26 to the basin.

27           "Party" means a party to this action. Whenever the term  
28 "party" is used in connection with a quantitative water right,  
29 or any quantitative right, privilege or obligation, it shall  
30 be deemed to refer collectively to those parties to whom are  
31 attributed a Base Water Right in Appendix "G" to the Findings  
32 of Fact and Conclusions of law.

1           "Person" or "persons" includes individuals, partner-  
2 ships, associations, governmental agencies and corporations,  
3 and any and all types of entities.

4           "Sand Canyon Area" is that portion of Tehachapi Area  
5 not within Tehachapi Basin Area.

6           "Surface Diversion" is a diversion of waters flowing  
7 on the surface within Tehachapi Basin Watershed (including Teha-  
8 chapi Basin Area) which diversion is made principally for use  
9 of the water or storage for future use, and not primarily  
10 for some other purpose, e.g., flood control, drainage. "Use"  
11 includes impounding of water for aesthetic or recreational  
12 purposes. Notwithstanding the above, nothing in this definition  
13 or document contained shall be deemed to contain within "surface  
14 diversion" any diversion of surface waters for riparian uses  
15 on riparian lands.

16           "Tehachapi Area" consists of the territory within the  
17 exterior boundaries set forth in Appendix "1" to this Judgment,  
18 made a part hereof by reference.

19           "Tehachapi Basin" is that certain ground water basin  
20 underlying "Tehachapi Basin Area".

21           "Tehachapi Basin Area" consists of the territory within  
22 the boundaries set forth in Appendix "2" to this Judgment, made  
23 a part hereof by reference.

24           "Tehachapi Basin Watershed" is that territory constitue-  
25 ing the watershed of Tehachapi Basin and is that territory within  
26 the boundaries set forth in Appendix "3" to this Judgment, made  
27 a part hereof by reference.

28           "Water" includes only non-saline water, which is that  
29 having less than 1,000 parts of chlorides to 1,000,000 parts of  
30 water.

31           "Water Year" is the twelve month period commencing  
32 October 1 of each year and ending September 30 of the following

1 year.

2 In those instances where any of the above defined words,  
3 terms, phrases or clauses are utilized in the definition of any  
4 of the other above defined words, terms, phrases and clauses,  
5 such use is with the same meaning as is above set forth.

6 The Court having made its Findings of Fact and Conclu-  
7 sions of Law herein;

8 NOW, THEREFORE, IT IS ORDERED, DECLARED, ADJUDGED  
9 AND DECREED AS FOLLOWS:

10 1. Declaration and Determination of Water Rights  
11 of Parties\*

12 Each party whose name is hereinafter set forth in  
13 the tabulation at the end of paragraph 1 of this Judgment and  
14 after whose name there appears under the column "Base Water  
15 Right" a figure, is the owner of and has the right annually to  
16 extract ground water from Tehachapi Basin for beneficial use in  
17 the quantity in acre-feet so set forth after that party's name  
18 under said column "Base Water Right". Wherever in that tabulation  
19 there appears the name of a party in parenthesis after the name  
20 of another party, the first such party has an interest in the  
21 Base Water Right of the other party of the nature, if any, listed  
22 within said parenthesis. All of the rights listed thereon are of  
23 the same legal force and effect and are without priority with  
24 reference to each other, except as otherwise specifically pro-  
25 vided. They are subject in any event to (i) subsequent cur-  
26 tailment in the exercise of the continuing jurisdiction of the  
27 court hereinafter provided, and (ii) all of the other provisions  
28 of this Judgment hereinafter provided. No party to this action  
29 is the owner of any right to extract ground water from Tehachapi  
30 -----

31 \*Headings in this Judgment are for purposes of reference and the  
32 language of said headings do not constitute, other than for such  
purpose, a portion of this Judgment.



1 Basin, except as set forth in the tabulation following this para-  
2 graph 1 of this Judgment, except insofar as any such party may be  
3 the tenant of any other party, have an interest under a Deed of  
4 Trust, or establish rights as a transferee, and except as provided  
5 following the tabulation of rights hereafter. Except as here-  
6 inafter otherwise provided, no party to this action has any right  
7 to export outside of Tehachapi Basin Area any ground water extract-  
8 ed from that basin. Except to the extent of any surface diver-  
9 sions which were being made within the water year preceding  
10 commencement of this action within the Tehachapi Basin Watershed,  
11 no party to this action has the right to divert surface waters  
12 within the Tehachapi Basin Watershed. To the extent of its Base  
13 Water Right set forth in the following tabulation and subject to  
14 subsequent curtailment in the exercise of the continuing jurisd-  
15 iction of the court and other provisions of this Judgment,  
16 defendant Southern Pacific Transportation Company (formerly South-  
17 ern Pacific Railroad Company) has the right to export ground  
18 water extracted from Tehachapi Basin. It is presently unnecessary  
19 to determine whether said right to export is or is not limited to  
20 exports to any area or areas. Defendant Golden Hills Community  
21 Services District has a right to export ground water extracted  
22 from Tehachapi Basin, subject to the following limitations as to  
23 quantity and area of export. The quantity limitation is the sum  
24 in any water year of (i) the amount of water which it pumps in any  
25 such year pursuant to the salvage provision hereinafter set forth  
26 plus, (ii) the amount of imported water which it uses or sells  
27 for use within Tehachapi Basin Area in each year, but not in  
28 excess of its Base Water Right as the said Base Water Right may  
29 be curtailed in the exercise of the continuing jurisdiction of  
30 the court, and subject to other provisions of this Judgment.  
31 The area to which Golden Hills Community Services District may  
32 so export is that part of said District outside of Tehachapi Basin

1 Area as of December 31, 1969, consisting of a portion of the  
 2 South Half of Section 6 and portions of Section 7, both in Town-  
 3 ship 12 South, Range 13 East, M.D.B.M. Except to the extent of  
 4 surface diversions of water within the Tehachapi Basin Watershed  
 5 having been made as of commencement of this action, no party to  
 6 this action has any right to divert surface waters within Teha-  
 7 chapi Basin Watershed.

<u>PARTY</u>	<u>Base Water Right</u> (Acre-feet per year)
Frank Armstrong, Phyllis Armstrong (Mettler & Armstrong, a partnership, tenant)	177
Ashtown Water Company, a corporation	42
Leroy Bassler and Margaret Bassler	4
J. G. Bisbee	701
Christopher C. Brevidore and Ida Brevidore	43
Donald R. Burgeis and Betty Jean Burgeis* (Department of Veterans Affairs of the State of California as holder of legal title under Cal Vet loan)	24
John O. Christopher and Virginia E. Christopher Harold Schlotthauer and Madge Q. Schlotthauer	27
Lewis M. Dye, Sr.*	3
Alan M. Fields, Mardell S. Fields, Norman Weintraub, Albert Zdesek and Marilee Zdesek	77
Sidney Gilreath and Lorene Gilreath	3
Domenicio Girauo, aka Domenico Girauo*	3
Golden Hills Community Services District,** a body corporate and politic	159
Frank Goodrick and Moneta M. Goodrick	19
<del>Grand Oaks Land Company, a corporation,</del> Grand Oaks Water Company, a corporation	6
Henry B. Hand	40

\* See listing also under "Party-Domestic Wells"  
 \*\* In addition to salvage provision

1	Edwin J. Van Zandt and Jennie B. Van Zandt (successors in interest to Ewald Handel and Ethel M. Handel)	26
2		
3	F. G. Hernandez, aka Frank G. Hernandez, and Beatrice Hernandez	4
4		
5	Joaquina Iriart for life, then to Jack Iriart (to be distinguished from Jack R. Iriart) as to remainder	315
6		
7	Jacobsen Bros. Turf Farms, Inc., a cor- poration, former name Jacobsen Bros., Inc.	579
8		
9	Jacobsen Orchards, Inc., a corporation	266
10	Einer J. Jury, aka E. F. Jury, and Madeline A. Jury	47
11		
12	Robert W. Karpe and Phyllis J. Karpe*	3
13	Simon Keel and Alice Keel	3
14	A. F. Leiva and Margaret Leiva*	3
15	Allan W. Small and Winifred Small (successors in interest to Wallace K. Love and Gloria D. Love)	3
16		
17	Harold T. Lutge and Helen Lutge (successors in interest to Bette Lamb, aka Elizabeth Louise Lamb as Executrix of Estate of J. O. Lamb, deceased)	3
18		
19		
20	White Oak Knolls Water Corporation, a corporation	3
21	Mojave Public Utility District	75
22	Monolith Portland Cement Company, a corporation	1,487
23	Robert Monroe and Mary Alice Monroe	60
24	Joseph F. Noriega and Irma Noriega (successors in interest to Masley H. Reitz and Janet Reitz)	451
25		
26	Fred D. Patterson and Laviece Patterson	188
27	E. H. Pearson	20
28	Susan Phillips	7
29	Anne Reeves, John C. Reeves, Jr., Virginia Rickett, Wilbur Rickett, C. R. Tumblin, Nell Tumblin, aka Amelia Tumblin, Tumblin Company, a partnership	288
30		
31		
32	Melvin Ruff and Frances Ruff*	4

\* See listing also under "Party-Domestic Wells"

1	Tehachapi Orchards, Inc., a corporation (successor in interest to Ernest Schnaidt)	625
2		
3	Evelyn Smith	36
4	Southern Pacific Transportation Company (formerly Southern Pacific Railroad Co.), a corporation	98
5		
6	Vaughn Squires and Vivian Squires	13
7	Darrell Stevens and Louise E. Stevens	19
8	Grant Sullivan and Cozette Sullivan, Mortimer Sullivan and Susan Sullivan	535
9		
10	Grant D. Sullivan and Mortimer J. Sullivan as Co-trustees under the Will of Percy J. Hayes, and Gertrude D. Carroll (successors in interest to Kiethley-McPherrin, Inc.)	355
11		
12		
13	G. M. Sunny and Nita Sunny	9
14	City of Tehachapi, a municipal corporation	753
15	Tehachapi Public Cemetery District, a political subdivision	11
16		
17	Tehachapi Unified School District	30
18	Max Thelen, Jr., Wells Fargo Bank and I. W. Bellman all as Co-trustees of the S. M. Cowell Foundation	340
19		
20	West Tehachapi Mutual Water Company, a corporation	3
21	M. R. White and Mildred White*	4
22	Harry Wietema	3
23	Louise Yeager	3
24	<u>PARTY DOMESTIC WELLS</u>	
25	Lester J. Anderson and Leatta M. Anderson	3
26	Sam Ashe and Esther Ashe	3
27	Alverda Bassler and George Bassler	3
28	Endelva Troy and Vincent J. Troy (successors in interest to Vance Brite and Hattie Brite)	3
29		
30	John Spoor Broome	3
31	Haskell Brunnett and Dwana M. Brunnett	3
32	Morris Burton and Virginia Ellen Burton	3

\* See listing also under "Party-Domestic Wells"

1	Gertrude D. Carroll	3
2	Alice Cazacus Seeger	3
3	Henry D. Church, Maxine Church, Edmond	3
4	Fowler, Billie J. Fowler, Glen Killings-	
5	worth and Mildred Killingsworth, Marion	
6	Killingsworth and Dora Killingsworth	
7		
8	Lewis A. Colvin and Nan L. Colvin	3
9	Lewis M. Dye, Sr.	3
10	W. J. Ford and Rose B. Ford	3
11	Lewis Foster and Dorothy Foster	3
12	Fred-Lite Blocks, Inc., a corporation	3
13	Kenneth Frederick	3
14	Robert B. Freeman, Jr. and Betty Lou Freeman	3
15	Alvin Gary and Wilma J. Gary	3
16	Domenico Giraudó aka Domenico Giraudó	3
17	Louis Goebel and Kathleen Goebel	3
18	R. E. Grind and Helen Grind	3
19	Theodore H. Haun and Avis E. Haun	3
20	W. C. Hedberg and Ruth Hedberg	3
21	Harold Hedge and Grace B. Hedge	3
22	Herb Hemphill and Alice Hemphill, aka Herb	3
23	Hemphill and Alice Hemphill	
24		
25	Charlie J. Honeycutt and Kathryn Honeycutt	3
26	Leroy Bassler and Margaret Bassler	3
27	John Johnson and Eva L. Johnson	3
28	Robert W. Karpe and Phyllis J. Karpe	3
29	Beverly Maher and James P. Maher (successors	3
30	in interest to Carl Ledyard and Christine M.	
31	Ledyard)	
32	A. F. Leiva and Margaret Leiva	3
33		
34	Herb Marble and Dorothy Marble (Department	3
35	of Veterans Affairs of the State of Cali-	
36	fornia as holder of legal title under Cal	
37	Vet Loan, First Western Bank and Trust Co.,	
38	assignee of rentals)	
39		
40	Lee Marigold and Clara Marigold	3

1	Charles Metzler and Margaret Metzler	3
2	Motor Center, a corporation	3
3	O. D. Odin and Ruth M. Odin	3
4	Charles Powell and Elizabeth Powell	3
5	Joseph D. Fristup	3
6	William Reeves and Lavonia Reeves	3
7	R. James Reiswig and Alice Knox Reiswig	3
8	William Robinson and Imogene Robinson	3
9	Melvin Ruff and Frances Ruff	3
10	Frank Ruff and Ruth Ruff	3
11	Elvin Sanders and Juanita Sanders	3
12	Albert Schmidt and Ethel E. Schmidt	3
13	Chester Scott and Moreen Scott	3
14	Dessie Smith	3
15	Daniel J. Sternad and Edna E. Sternad	3
16	Gideon Streyle and Marie Streyle	3
17	William D. Sydnor aka William D. Snyder and Ann B. Sydnor aka Ann B. Snyder	3
18		
19	Tehachapi Unified School District	3
20	Richard Van Burklee	3
21	Dick Vander Mayden and Opal L. Vander Mayden	3
22	Pete Vukich and Jewell Vukich	3
23	Jerome Warner and Laura Warner	3
24	Howard Welden and Emma Welden aka Erna Welden	3
25	M. R. White and Mildred White	3
26	Edward M. Wiggins and Mary Ellen Wiggins	3
27	Iora M. Woods	3
28		
29		
30		
31		
32		

1 Defendant Golden Hills Community Services District may  
2 pump such quantities of water as it is able to obtain in addition  
3 to any other rights in this Judgment from that area within Teha-  
4 chapi Basin Area lying east of the crossing of the Range Line  
5 between Range 12 East and Range 13 East, in the Canyon of Brito  
6 Creek, which portion of said Canyon is generally described in  
7 Appendix "4" hereto ("salvage provision" hereinafter), subject  
8 to modification of this provision as hereinafter provided for.

9 Notwithstanding the foregoing, the Base Water Right of  
10 Mojave Public Utility District is subject to the following pro-  
11 visions:

12 (A) Pumping pursuant to said Base Water Right may be  
13 used only on property in that portion of Mojave Public Utility  
14 District, as presently constituted, within Tehachapi Basin Area  
15 consisting of that portion of the Southeast Quarter of Section  
16 28, Township 12 South, Range 14 East within Tehachapi Basin Area  
17 ("Mojave's said present area within Tehachapi Basin Area" some-  
18 times hereinafter).

19 (B) There shall be no sale or lease by Mojave Public  
20 Utility District of said Base Water Right, including through  
21 any exchange pool provisions later adopted, except as may be  
22 agreed upon between the Watermaster and Mojave Public Utility  
23 District, subject to all remedies by appeal to the Court which  
24 any party may have from a decision of the Watermaster, and in  
25 no event without the approval of the Plaintiff.

26 Defendant Mojave Public Utility District has waived any  
27 future claim of surplus in the Tehachapi Basin and may not in  
28 the future make any claim thereof.

29 Nothing contained in this Judgment shall prevent Plaintiff  
30 and Mojave Public Utility District from exchanging water, pur-  
31 suant to agreement, upon determination by the Watermaster that  
32 such will not adversely affect any other party, which determination

1 shall be subject to Court review upon appeal therefrom.

2 Defendant Mojave Public Utility District retains what-  
3 ever its statutory jurisdiction is to control its use of water  
4 within Mojave's said present area within Tehachapi Basin Area,  
5 subject to the provisions of this Judgment.

6 2. Parties Enjoined as to Surface Diversions, Exports and  
7 Other Matters.

8 Except as provided or recognized in paragraph 1 above,  
9 of this Judgment, each party (other than the Department of  
10 Veterans Affairs of the State of California) and the officials,  
11 agents and employees from time to time of said Department are  
12 enjoined and restrained from hereafter exporting outside of the  
13 area of Tehachapi Basin Area any ground water extracted from  
14 Tehachapi Basin and from exporting outside Tehachapi Basin  
15 Watershed any surface waters diverted from within Tehachapi  
16 Basin Watershed and each of said parties and persons is en-  
17 joined and restrained from hereafter making any diversions of  
18 surface waters within Tehachapi Basin Watershed, except to the  
19 extent of diversions having been made by that party as of the  
20 water year prior to the commencement of this action. Defendant  
21 Mojave Public Utility District is enjoined and restrained from  
22 exercising its Base Water Right contrary to the provisions  
23 set forth in subparagraphs A and B above, of paragraph 1 of this  
24 Judgment.

25 The parties are enjoined and restrained from transport-  
26 ing water pumped from the underground within Mojave's said  
27 present area within Tehachapi Basin Area to another portion of  
28 said Tehachapi Basin Area without consent of Mojave Public  
29 Utility District.

30 3. Court Retains Continuing Jurisdiction/Physical Solution.

31 The Court retains continuing jurisdiction for all  
32 purposes including but not limited to: the imposition of a



1 physical solution in the Tehachapi Basin, including a restric-  
2 tion on ground water pumping to quantities which will not exceed  
3 the safe yield of Tehachapi Basin, to-wit, 5,500 acre-feet; en-  
4 joining extractions of ground water from Tehachapi Basin except  
5 to the extent of the parties' rights proportional to the safe  
6 yield of Tehachapi Basin from time to time and except as may be  
7 provided under the physical solution adopted pursuant to said  
8 continuing jurisdiction; and determining any and all other  
9 matters which might become material under this Judgment. In-  
10 cluded in the foregoing is the power of the Court to determine  
11 whether the Sand Canyon Area is or is not a basin or sub-basin  
12 and if the same is a basin or sub-basin the rights of those  
13 pumping ground water from said area, and the rights as between  
14 the Sand Canyon Area and Tehachapi Basin if and when any further  
15 determinations are required. Included in the foregoing is the  
16 power of the Court to modify the salvage provision contained  
17 in this Judgment if and to the extent necessary (including  
18 elimination or suspension) so that the exercise thereof does  
19 not adversely affect the water supply or the pumping rights of  
20 other parties in the remainder of the Tehachapi Basin. Not-  
21 withstanding anything above, the Base Water Right of Mojave  
22 Public Utility District shall not be restricted in its exer-  
23 cise to a quantity less than 50 acre-feet per annum. Upon ap-  
24 pointment of a Watermaster under this Judgment, Defendant Mojave  
25 Public Utility District shall be required to: (a) install water  
26 meters directly measuring water production on all wells at its  
27 expense and make periodic reports under the Watermaster Rules  
28 to the Watermaster, and (b) engage in joint calibration and  
29 other meter and well tests and measurements with the Watermaster  
30 at reasonable times and upon reasonable notice from the Water-  
31 master so that both may be represented in any tests and measure-  
32 ments.

1           4. Inter se Adjudication.

2           The provisions of this Judgment constitute an inter se  
3 adjudication with respect to the rights of the parties.

4           5. Rights of Plaintiff District.

5           Plaintiff DISTRICT is an interested party in all matters  
6 subject to the continuing jurisdiction of this Court. Nothing  
7 in this Judgment contained shall constitute a determination or  
8 adjudication which will foreclose the Plaintiff DISTRICT from  
9 exercising such rights, powers and prerogatives as it may now  
10 have or may hereafter have by reason of provisions of law. Ex-  
11 cept as Mojave Public Utility District has no future right in  
12 any surplus in Tehachapi Basin, nothing in this Judgment con-  
13 tained shall be deemed a determination whether the Plaintiff or  
14 any other party will or will not have any rights in any return  
15 flow from water subsequently imported, which matter shall be  
16 within the continuing jurisdiction of the Court.

17           6. New Pumps.

18           Persons who may later be found to, or commence, pump-  
19 ing within Tehachapi Basin may be added to this Judgment upon  
20 such stipulation as may be approved by the Court upon prior  
21 ten (10) days written notice of the date of hearing to the  
22 parties.

23           7. Transfer of Rights - Domestic Wells.

24           With regard to those parties listed in paragraph 1  
25 under the tabulation of water rights as having a domestic well  
26 and three (3) acre-feet of Base Water Right with respect thereto,  
27 said Base Water Right shall be transferable only in connection  
28 with a transfer of the property on which the right was developed.

29           8. No Effect on Other Actions.

30           None of the provisions of Findings of Fact, Conclusions  
31 of Law or this Judgment insofar as they concern the relationship  
32 hydrologically, geologically or otherwise of Tehachapi Basin and

1 the underground of Sand Canyon Area shall have any effect as  
2 collateral estoppel or res adjudicata in any other action now  
3 pending or heretofore concluded between Defendants Mosolith  
4 Portland Cement Company and Mojave Public Utility District.

5 9. Judgment Binding on Successors.

6 This Judgment and the provisions hereof are all appli-  
7 cable to and binding upon not only the parties hereto, but as  
8 well upon their respective heirs, executors, administrators,  
9 successors, assigns, lessees, licensees and to the agents,  
10 employees and attorneys in fact of any such persons having  
11 actual or constructive notice of said Judgment or of this action  
12 from the date of its filing. The injunctive provisions herein  
13 contained run equally against all such persons.

14 10. Costs.

15 No party shall recover its costs herein as against any  
16 other party.

17 The Clerk shall enter this Judgment forthwith.

18 DATED: MAR 15 1971, 1971.

19  
20 JAMES D. DALLAS  
21 Judge of the Superior Court  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32

TEHACHAPE AREA

That territory described in Appendix 3 and in addition thereto the following described territory:

All those portions of T. 31 S., R. 34 E., and T. 32 S., R. 34 E., M.D.M., Kern County, California, bounded as follows:

Beginning at the S $\frac{1}{2}$  corner of Section 34, T. 32 S., R. 34 E., M.D.M.;

thence Easterly to the SE corner of said Section 34;

thence Northerly to the SE corner of Section 27, T. 32 S., R. 34 E., M.D.M.;

thence Westerly to the SW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said Section 27;

thence Northerly to the NW corner of said SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 27;

thence Westerly to the SW corner of the NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said Section 27;

thence Northerly to the center  $\frac{1}{4}$  corner of said Section 27;

thence Easterly to the East  $\frac{1}{4}$  corner of said Section 27;

thence Northerly to the SE corner of Section 22, T. 32 S., R. 34 E., M.D.M.;

thence Westerly to the SW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said Section 22;

thence Northerly to the NW corner of said SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 22;

thence Easterly to the NW corner of the S $\frac{1}{2}$  of the SW $\frac{1}{4}$  of Section 23, T. 32 S., R. 34 E., M.D.M.;

thence Easterly to the NE corner of said S $\frac{1}{2}$  of the SW $\frac{1}{4}$  of Section 23;

thence Northerly to the SE corner of the NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said Section 23;

thence Westerly to the SW corner of said NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 23;

thence Northerly to the SW corner of the SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 14,  
T. 32 S., R. 34 E., M.D.M.;

thence Northerly to the NW corner of said SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 14;

thence Easterly to the SW corner of the NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said Section  
14;

thence Northerly to the NW corner of said NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 14;

thence Easterly to the East  $\frac{1}{4}$  corner of said Section 14;

thence Northerly to the SE corner of the NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said  
Section 14;

thence Westerly to the SW corner of said NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 14;

thence Northerly to the NW corner of said NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 14;

thence Westerly to the S $\frac{1}{2}$  corner of Section 11, T. 32 S., R. 34 E.,  
M.D.M.;

thence Northerly to the center  $\frac{1}{2}$  corner of said Section 11;

thence Easterly to the East  $\frac{1}{4}$  corner of said Section 11;

thence Northerly to the NW corner of said Section 11;

thence Northerly to the West  $\frac{1}{4}$  corner of Section 1, T. 32 S., R. 34 E.,  
M.D.M.;

thence Easterly to the SE corner of the West  $\frac{1}{2}$  of the NW $\frac{1}{4}$  of said  
Section 1;

thence Northerly to the NE corner of said West  $\frac{1}{2}$  of the NW $\frac{1}{4}$  of Section 1;

thence Westerly to the SW corner of Section 36, T. 31 S., R. 34 E.,  
M.D.M.;

thence Northerly to the NW corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said  
Section 36;

thence Easterly to the NE corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 36;

thence Northerly to the NE corner of the West  $\frac{1}{2}$  of the NW $\frac{1}{4}$  of said  
Section 36;

thence Westerly to the NW corner of said Section 36;  
thence Westerly to the NW corner of the East  $\frac{1}{2}$  of the East  $\frac{1}{2}$  of  
Section 35, T. 31 S., R. 34 E., M.D.M.;  
thence Southerly to the SW corner of said East  $\frac{1}{2}$  of the East  $\frac{1}{2}$   
of Section 35;  
thence Westerly to the NW corner of the East  $\frac{1}{2}$  of the East  $\frac{1}{2}$  of  
Section 2, T. 32 S., R. 34 E., M.D.M.;  
thence Southerly to the SW corner of said East  $\frac{1}{2}$  of the East  $\frac{1}{2}$  of  
Section 2;  
thence Westerly to the North  $\frac{1}{2}$  corner of Section 11, T. 32 S.,  
R. 34 E., M.D.M.;  
thence Southerly to the NE corner of the SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said  
Section 11;  
thence Westerly to the NW corner of said SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 11;  
thence Southerly to the NE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said  
Section 11;  
thence Westerly to the SW corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 11;  
thence Westerly to the NW corner of the South  $\frac{1}{2}$  of the SE $\frac{1}{4}$  of Section  
10, T. 32 S., R. 34 E., M.D.M.;  
thence Northerly to the North  $\frac{1}{2}$  corner of said Section 10;  
thence Westerly to the SE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section  
3, T. 32 S., R. 34 E., M.D.M.;  
thence Northerly to the NE corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 3;  
thence Westerly to the NW corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 3;  
thence Westerly to the NW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 4,  
T. 32 S., R. 34 E., M.D.M.;  
thence Northerly to the SE corner of the NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said  
Section 4;

thence Westerly to the SW corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 4;  
 thence Northerly to the North  $\frac{1}{2}$  corner of said Section 4;  
 thence Westerly to the SW corner of the SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section  
 33, T. 31 S., R. 34 E., M.D.M.;  
 thence Northerly to the NW corner of said SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 33;  
 thence Easterly to the NE corner of said SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 33;  
 thence Northerly to the SW corner of the North  $\frac{1}{2}$  of the NE $\frac{1}{4}$  of said  
 Section 33;  
 thence Easterly to the SE corner of said North  $\frac{1}{2}$  of the NE $\frac{1}{4}$  of Section 33;  
 thence Northerly to the NE corner of said Section 33;  
 thence Easterly to the South  $\frac{1}{2}$  corner of Section 27, T. 31 S., R. 34 E.,  
 M.D.M.;  
 thence Northerly to the NE corner of the South  $\frac{1}{2}$  of the SW $\frac{1}{4}$  of said  
 Section 27;  
 thence Westerly to the NW corner of said South  $\frac{1}{2}$  of the SW $\frac{1}{4}$  of Section 27;  
 thence Westerly to the SW corner of the NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 28,  
 T. 31 S., R. 34 E., M.D.M.;  
 thence Northerly to the NW corner of said NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 28;  
 thence Westerly to the SE corner of the West  $\frac{1}{2}$  of the NW $\frac{1}{4}$  of said  
 Section 28;  
 thence Northerly to the NE corner of said West  $\frac{1}{2}$  of the NW $\frac{1}{4}$  of  
 Section 28;  
 thence Westerly to the NW corner of said Section 28;  
 thence Southerly to the SE corner of the NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 29,  
 T. 31 S., R. 34 E., M.D.M.;  
 thence Westerly to the SW corner of said NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 29;  
 thence Southerly to the NE corner of the SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said  
 Section 29;

thence Westerly to the NW corner of said SW $\frac{1}{2}$  of the SE $\frac{1}{4}$  of Section 29;  
thence Northerly to the center  $\frac{1}{2}$  corner of said Section 29;  
thence Westerly to the NE corner of the West  $\frac{1}{2}$  of the SW $\frac{1}{2}$  of said  
Section 29;  
thence Southerly to the SE corner of said West  $\frac{1}{2}$  of the SW $\frac{1}{2}$  of  
Section 29;  
thence Southerly to the SE corner of the NW $\frac{1}{2}$  of the NW $\frac{1}{2}$  of Section  
32, T. 31 S., R. 34 E., M.D.M.;  
thence Westerly to the SW corner of said NW $\frac{1}{2}$  of the NW $\frac{1}{2}$  of  
Section 32;  
thence Southerly to the NW corner of the S $\frac{1}{2}$  of the SW $\frac{1}{2}$  of said  
Section 32;  
thence Easterly to the NW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said  
Section 32;  
thence Southerly to the SW corner of said SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of  
Section 32;  
thence Easterly to the NE corner of Section 5, T. 32 S., R. 34 E.,  
M.D.M.;  
thence Southerly to the SE corner of the North  $\frac{1}{2}$  of the NE $\frac{1}{4}$  of  
said Section 5;  
thence Westerly to the SE corner of the NW $\frac{1}{2}$  of the NW $\frac{1}{2}$  of said  
Section 5;  
thence Northerly to the NE corner of said NW $\frac{1}{2}$  of the NW $\frac{1}{2}$  of Section 5;  
thence Westerly to the NE corner of Section 6, T. 32 S., R. 34 E.,  
M.D.M.;  
thence Southerly to the SE corner of the North  $\frac{1}{2}$  of the NE $\frac{1}{4}$  of said  
Section 6;



thence Westerly to the SW corner of said North  $\frac{1}{2}$  of the NE $\frac{1}{4}$  of Section 6;  
 thence Northerly to the North  $\frac{1}{2}$  corner of said Section 6;  
 thence Westerly along the North line of said Section 6 to a point, said point lying 1725 feet Easterly from the NW corner of said Section 6;  
 thence Southeasterly a distance of 700 feet, to a point lying 940 feet West of the East line of the NW $\frac{1}{4}$  of said Section 6;  
 thence Southwesterly a distance of 1900 feet to a point on the South line of the NW $\frac{1}{4}$  of said Section 6;  
 thence Easterly 1210 feet to the center  $\frac{1}{2}$  corner of said Section 6;  
 thence Southerly to the NW corner of the SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said Section 6;  
 thence Easterly to the NE corner of said SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 6;  
 thence Southerly to the SE corner of said SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 6;  
 thence Easterly to the SE corner of said Section 6;  
 thence Easterly to the NW corner of the NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 8, T. 32 S., R. 34 E., M.O.M.;  
 thence Southerly to the SW corner of said NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 8;  
 thence Easterly to the SE corner of said NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 8;  
 thence Northerly to the NE corner of said Section 8;  
 thence Easterly to the North  $\frac{1}{2}$  corner of Section 9, T. 32 S., R. 34 E., M.O.M.;  
 thence Southerly to the center  $\frac{1}{2}$  corner of said Section 9;  
 thence Westerly to the NW corner of the NE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said Section 9;  
 thence Southerly to the SW corner of said NE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 9;  
 thence Easterly to the NE corner of the S $\frac{1}{2}$  of the SE $\frac{1}{4}$  of said Section 9;

thence Southerly to the SE corner of said Section 9;  
thence Southerly to the NW corner of the South  $\frac{1}{2}$  of the NW $\frac{1}{4}$   
of Section 15, T. 32 S., R. 34 E., M.D.M.;  
thence Easterly to the NE corner of the SW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said  
Section 15;  
thence Southerly to the SE corner of the NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said  
Section 15;  
thence Westerly to the NW corner of the South  $\frac{1}{2}$  of the SW $\frac{1}{4}$  of said  
Section 15;  
thence Southerly to the SW corner of said Section 15;  
thence Westerly to the NE corner of the NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 21,  
T. 32 S., R. 34 E., M.D.M.;  
thence Southerly to the SE corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of  
Section 21;  
thence Westerly to the SW corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 21;  
thence Southerly to the center  $\frac{1}{4}$  corner of said Section 21;  
thence Easterly to the East  $\frac{1}{4}$  corner of said Section 21;  
thence Southerly to the SE corner of said Section 21;  
thence Westerly along the North line of Section 28, T. 32 S., R. 34 E.,  
M.D.M., a distance of 1110 feet;  
thence Southeasterly a distance of 3450 feet to a point 275 feet  
West of the East line of said Section 28;  
thence Southwesterly a distance of 2080 feet to a point on the  
South line of said Section 28, said point lying 1110 feet Westerly  
of the SE corner of said Section 28;  
thence Westerly to the NW corner of the NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 33,  
T. 32 S., R. 34 E., M.D.M.)

thence Southerly to the SW corner of said NE $\frac{1}{2}$  of the NE $\frac{1}{4}$  of Section 33;  
thence Easterly to the SE corner of said NE $\frac{1}{2}$  of the NE $\frac{1}{4}$  of Section 33;  
thence Southerly to the East  $\frac{1}{2}$  corner of said Section 33;  
thence Easterly to the NE corner of the NW $\frac{1}{2}$  of the SW $\frac{1}{2}$  of Section 34, T. 32 S., R. 34 E., M.D.M.;  
thence Southerly to the SE corner of said NW $\frac{1}{2}$  of the SW $\frac{1}{2}$  of Section 34; thence Easterly to the NE corner of the South  $\frac{1}{2}$  of the SW $\frac{1}{2}$  of said Section 34;  
thence Southerly to the South  $\frac{1}{2}$  corner of said Section 34, being the point of beginning for this description.

TEHACHAPI BASIN AREA

All those portions of T. 31 S., R. 33 E.; T. 32 S., R. 32 E.; T. 32 S., R. 33 E.; and T. 32 S., R. 34 E., M.D.M.; and T. 12 N., R. 14 W.; T. 12 N., R. 15 W.; T. 11 N., R. 15 W., and T. 11 N., R. 14 W., S.B.M., Kern County, California, bounded as follows:

Beginning at the Southwest corner of Section 33, T. 32 S., R. 34 E., M.D.M.;

thence Easterly to the Southeast corner of the  $W\frac{1}{2}$  of the  $SW\frac{1}{4}$  of said Section 33;

thence Northerly to the Northeast corner of said  $W\frac{1}{2}$  of the  $SW\frac{1}{4}$  of Section 33;

thence Easterly to the center  $\frac{1}{2}$  corner of said Section 33;

thence Northerly to the  $N\frac{1}{2}$  corner of said Section 33;

thence Easterly along the North line of said Section 33 to a point lying 1110 feet Westerly of the Northeast corner of said Section 33;

thence Northeasterly 2080 feet to a point lying 275 feet West of the East line of Section 26, T. 32 S., R. 34 E., M.D.M.;

thence Northwesterly 3450 feet to a point on the North line of said Section 26, said point lying 1110 feet Westerly of the NE corner of said Section 26;

thence Westerly to the  $S\frac{1}{2}$  corner of Section 21, T. 32 S., R. 34 E., M.D.M.;

thence Northerly to the NE corner of the  $S\frac{1}{2}$  of the  $SW\frac{1}{4}$  of said Section 21;

thence Westerly to the NW corner of said  $S\frac{1}{2}$  of the  $SW\frac{1}{4}$  of Section 21;

thence Westerly to the NW corner of the  $S\frac{1}{2}$  of the  $SW\frac{1}{4}$  of Section 20, T. 32 S., R. 34 E., M.D.M.;

thence Northerly to the NE corner of the  $SE\frac{1}{4}$  of the  $NE\frac{1}{4}$  of Section 19, T. 32 S., R. 34 E., M.D.M.;

thence Westerly to the NW corner of said  $SE\frac{1}{4}$  of  $NE\frac{1}{4}$  of Section 19;

thence Southerly to the SW corner of said  $SE\frac{1}{4}$  of  $NE\frac{1}{4}$  of Section 19;

thence Westerly to the SE corner of the  $W\frac{1}{2}$  of the  $NW\frac{1}{4}$  of said Section 19;  
 thence Northerly to the NE corner of said  $W\frac{1}{2}$  of the  $NW\frac{1}{4}$  of Section 19;  
 thence Westerly to the NW corner of said Section 19;  
 thence Northerly to the SW corner of the  $NW\frac{1}{2}$  of the  $SW\frac{1}{4}$  of Section  
 18, T. 32 S., R. 34 E., M.D.M.;  
 thence Easterly to the SE corner of said  $NW\frac{1}{2}$  of the  $SW\frac{1}{4}$  of Section 18;  
 thence Northerly to the NE corner of said  $NW\frac{1}{2}$  of the  $SW\frac{1}{4}$  of Section 18;  
 thence Easterly to the center  $\frac{1}{4}$  corner of said Section 18;  
 thence Northerly to the SW corner of the  $NW\frac{1}{2}$  of the  $NE\frac{1}{4}$  of said  
 Section 18;  
 thence Easterly to the SE corner of said  $NW\frac{1}{2}$  of the  $NE\frac{1}{4}$  of Section 18;  
 thence Northerly to the NE corner of said  $NW\frac{1}{2}$  of the  $NE\frac{1}{4}$  of Section 18;  
 thence Northerly to the NE corner of the  $W\frac{1}{2}$  of the  $SE\frac{1}{4}$  of Section 7,  
 T. 32 S., R. 34 E., M.D.M.;  
 thence Westerly to the SE corner of the  $SW\frac{1}{2}$  of the  $NW\frac{1}{2}$  of said Section 7;  
 thence Northerly to the NE corner of said  $SW\frac{1}{2}$  of the  $NW\frac{1}{2}$  of Section 7;  
 thence Westerly to the NW corner of said  $SW\frac{1}{2}$  of the  $NW\frac{1}{2}$  of Section 7;  
 thence Northerly to the NW corner of said Section 7;  
 thence Northerly to the  $W\frac{1}{2}$  corner of Section 6, T. 32 S., R. 34 E.,  
 M.D.M.;  
 thence Easterly along the South line of the  $NW\frac{1}{2}$  of said Section 6  
 to a point lying 1210 feet Westerly of the center  $\frac{1}{4}$  corner of Section 6;  
 thence Northeasterly 1900 feet to a point lying 940 feet West of the  
 East line of said  $NW\frac{1}{2}$  of said Section 6;  
 thence Northwesterly 700 feet to a point on the North line of said  
 Section 6;  
 thence Westerly 1725 feet to the NW corner of said Section 6;  
 thence Westerly to the  $S\frac{1}{4}$  corner of Section 36, T. 31 S., R. 33 E.,  
 M.D.M.;  
 thence Northerly to the NE corner of the  $SE\frac{1}{4}$  of the  $SW\frac{1}{2}$  of said  
 Section 36;

thence Westerly to the NW corner of said SE $\frac{1}{2}$  of the SW $\frac{1}{2}$  of Section 36;  
 thence Northerly to the SE corner of the SW $\frac{1}{2}$  of the NW $\frac{1}{2}$  of said  
 Section 36;  
 thence Westerly to the SW corner of said SW $\frac{1}{2}$  of the NW $\frac{1}{2}$  of Section 36;  
 thence Northerly to the NW corner of said SW $\frac{1}{2}$  of the NW $\frac{1}{2}$  of Section 36;  
 thence Westerly to the SW corner of the NE $\frac{1}{2}$  of the NE $\frac{1}{2}$  of Section 35,  
 T. 31 S., R. 33 E., M.D.M.;  
 thence Southerly to the SW corner of the E $\frac{1}{2}$  of the SE $\frac{1}{2}$  of said  
 Section 35;  
 thence Easterly to the SE corner of said Section 35;  
 thence Easterly to the NE corner of the W $\frac{1}{2}$  of the NW $\frac{1}{2}$  of Section 1,  
 T. 32 S., R. 33 E., M.D.M.;  
 thence Southerly to the SE corner of said W $\frac{1}{2}$  of the NW $\frac{1}{2}$  of Section 1;  
 thence Westerly to the W $\frac{1}{4}$  corner of said Section 1;  
 thence Southerly to the NW corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said  
 Section 1;  
 thence Easterly to the NE corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 1;  
 thence Southerly to the SE corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 1;  
 thence Southerly to the SE corner of the W $\frac{1}{2}$  of the SW $\frac{1}{4}$  of Section 12,  
 T. 32 S., R. 33 E., M.D.M.;  
 thence Easterly to the S $\frac{1}{4}$  corner of said Section 12;  
 thence Southerly to the NE corner of the SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 13,  
 T. 32 S., R. 33 E., M.D.M.;  
 thence Westerly to the NW corner of said SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 13;  
 thence Southerly to the SW corner of said SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 13;  
 thence Westerly to the SW corner of said Section 13;  
 thence Westerly to the SE corner of the SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 14,  
 T. 32 S., R. 33 E., M.D.M.;  
 thence Northerly to the NE corner of said SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 14;  
 thence Westerly to the NW corner of said SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 14;  
 thence Southerly to the S $\frac{1}{4}$  corner of said Section 14;  
 thence Southerly to the center  $\frac{1}{4}$  corner of Section 23, T. 32 S.,  
 R. 33 E., M.D.M.;

thence Westerly to the SE corner of the SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said Section 23;

thence Northerly to the NE corner of said SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 23;

thence Westerly to the NW corner of said SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 23;

thence Northerly to the NW corner of said Section 23;

thence Northerly to the E $\frac{1}{2}$  corner of Section 15, T. 32 S., R. 33 E., M.D.M.,

thence Westerly to the W $\frac{1}{2}$  corner of said Section 15;

thence Northerly to the SW corner of the NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said Section 15;

thence Easterly to the SE corner of said NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 15;

thence Northerly to the NE corner of said NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 15;

thence Northerly to the NE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 10, T. 32 S., R. 33 E., M.D.M.;

thence Westerly to the SW corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 10;

thence Northerly to the E $\frac{1}{2}$  corner of Section 9, T. 32 S., R. 33 E., M.D.M.;

thence Westerly to the SE corner of the NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said Section 9;

thence Southerly to the SE corner of said NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 9;

thence Westerly to the SW corner of the S $\frac{1}{2}$  of the SW $\frac{1}{4}$  of said Section 9;

thence Westerly to the NW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 8, T. 32 S., R. 33 E., M.D.M.;

thence Southerly to the SW corner of said SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 8;

thence Southerly to the SE corner of the NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 17; T. 32 S., R. 33 E., M.D.M.;

thence Westerly to the SW corner of said NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 17;

thence Southerly to the center  $\frac{1}{4}$  corner of said Section 17;

thence Westerly to the W $\frac{1}{2}$  corner of said Section 17;

thence Westerly to the SW corner of the E $\frac{1}{2}$  of the NE $\frac{1}{4}$  of Section 18; T. 32 S., R. 33 E., M.D.M.;

thence Northerly to the NW corner of said E $\frac{1}{2}$  of the NE $\frac{1}{4}$  of Section 18;

thence Northerly to the NW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 7, T. 32 S., R. 33 E., M.D.M.;

thence Westerly to the SE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said Section 7;

thence Northerly to the SE corner of the NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said  
 Section 7;  
 thence Westerly to the SW corner of said NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 7;  
 thence Westerly to the SW corner of the N $\frac{1}{2}$  of the NE $\frac{1}{4}$  of Section 12;  
 T. 32 S., R. 32 E., M.D.M.;  
 thence Northerly to the N $\frac{1}{2}$  corner of said Section 12;  
 thence Westerly to the NW corner of said Section 12;  
 thence Southerly to the SE corner of the N $\frac{1}{2}$  of the NE $\frac{1}{4}$  of Section 11,  
 T. 32 S., R. 32 E., M.D.M.;  
 thence Westerly to the SW corner of said N $\frac{1}{2}$  of the NE $\frac{1}{4}$  of Section 11;  
 thence Southerly to the center  $\frac{1}{4}$  corner of said Section 11;  
 thence Westerly to the NW corner of the NE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said Section 11;  
 thence Southerly to the SW corner of said NE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 11;  
 thence Easterly to the NW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said Section 11;  
 thence Southerly to the SW corner of said SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 11;  
 thence Southerly to the NW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 14,  
 T. 32 S., R. 32 E., M.D.M.;  
 thence Westerly to the NE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said Section 14;  
 thence Southerly to the SE corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 14;  
 thence Southerly to the SW corner of the NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 23,  
 T. 32 S., R. 32 E., M.D.M.;  
 thence Easterly to the SE corner of said NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 23;  
 thence Southerly to the center  $\frac{1}{4}$  corner of said Section 23;  
 thence Westerly to the NE corner of the W $\frac{1}{2}$  of the SW $\frac{1}{4}$  of said Section 23;



thence Southerly to the SE corner of said  $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 23;  
 thence Southerly to the SE corner of the  $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 26,  
 T. 32 S., R. 32 E., M.D.M.;  
 thence Westerly to the W $\frac{1}{4}$  corner of said Section 26;  
 thence Southerly to the SW corner of said Section 26;  
 thence Southerly to the SW corner of the NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section  
 35, T. 32 S., R. 32 E., M.D.M.;  
 thence Easterly to the NW corner of the SE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 35,  
 T. 32 S., R. 32 E., M.D.M.;  
 thence Southerly to the SW corner of said SE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 35;  
 thence Easterly to the E $\frac{1}{4}$  corner of said Section 35;  
 thence Easterly to the center  $\frac{1}{4}$  corner of Section 36, T. 32 S.,  
 R. 32 E., M.D.M.;  
 thence Southerly to the SE corner of the NE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said Section 36;  
 thence Easterly to the NE corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said Section 36;  
 thence Easterly to the NE corner of the S $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 31.  
 T. 32 S., R. 33 E., M.D.M.;  
 thence Southerly to the SE corner of said Section 31;  
 thence Easterly to the S $\frac{1}{4}$  corner of Section 34, T. 12 N., R. 15 W.,  
 S.B.M.;  
 thence Southerly to the NW corner of the SW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said  
 Section 34;  
 thence Easterly to the NE corner of said SW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 34;  
 thence Southerly to the SE corner of said SW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 34;  
 thence Easterly to the E $\frac{1}{4}$  corner of said Section 34;  
 thence Southerly to the NW corner of the S $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 35,  
 T. 12 N., R. 15 W., S.B.M.;  
 thence Easterly to the NE corner of said S $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 35;  
 thence Southerly to the S $\frac{1}{4}$  corner of said Section 35;  
 thence Easterly to the NW corner of the NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 2,  
 T. 11 N., R. 15 W., S.B.M.;

thence Southerly to the SW corner of said NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 2;  
 thence Easterly to the SE corner of said NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 2;  
 thence Easterly to the SE corner of the NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 1,  
 T. 11 N., R. 15 W., S.B.M.;  
 thence Northerly to the NE corner of said NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 1;  
 thence Easterly to the NW corner of the NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said  
 Section 1;  
 thence Southerly to the NE corner of the SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said  
 Section 1;  
 thence Westerly to the NW corner of said SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of section 1;  
 thence Southerly to the S $\frac{1}{2}$  corner of said Section 1;  
 thence Southerly to the SE corner of the NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 12,  
 T. 11 N., R. 15 W., S.B.M.;  
 thence Westerly to the SW corner of said NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 12;  
 thence Southerly to the SE corner of the W $\frac{1}{2}$  of the SW $\frac{1}{4}$  of said Section 12;  
 thence Westerly to the SW corner of said Section 12,  
 thence Southerly to the SE corner of the SE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 14,  
 T. 11 N., R. 15 W., S. B.M.  
 thence Westerly to the NW corner of said SE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 14;  
 thence Southerly to the SW corner of said SE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 14,  
 thence Westerly to the SE corner of the SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said  
 Section 14;  
 thence Northerly to the NE corner of said SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 14;  
 thence Westerly to the NW corner of said SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 14;  
 thence Southerly to the SE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said  
 Section 14;  
 thence Easterly to the NE corner of the S $\frac{1}{2}$  of the SE $\frac{1}{4}$  of said Section 14;  
 thence Easterly to the NE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 13,  
 T. 11 N., R. 15 W., S.B.M.;

thence Northerly to the SW corner of the NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said Section 13;  
 thence Easterly to the SE corner of said NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 13;  
 thence Northerly to the N $\frac{1}{2}$  corner of said Section 13;  
 thence Northerly to the center  $\frac{1}{4}$  corner of Section 12, T. 11 N., R. 13 W.,  
 S.B.M.;  
 thence Easterly to the E $\frac{1}{2}$  corner of said Section 12;  
 thence Northerly to the SW corner of the NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 7,  
 T. 11 N., R. 14 W., S.B.M.;  
 thence Easterly to the SE corner of said NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 7;  
 thence Southerly to the SW corner of the SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said  
 Section 7;  
 thence Easterly to the E $\frac{1}{2}$  corner of Section 7;  
 thence Northerly to the NW corner of the S $\frac{1}{2}$  of the SE $\frac{1}{4}$  of said  
 Section 7;  
 thence Easterly to the NE corner of said S $\frac{1}{2}$  of the SE $\frac{1}{4}$  of Section 7;  
 thence Northerly to the NE corner of said Section 7;  
 thence Easterly to the SE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 5,  
 T. 11 N., R. 14 W., S.B.M.;  
 thence Northerly to the SW corner of the NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said  
 Section 5;  
 thence Easterly to the SE corner of said NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 5;  
 thence Northerly to the N $\frac{1}{2}$  corner of said Section 5;  
 thence Northerly to the center  $\frac{1}{4}$  corner of Section 32, T. 12 N.,  
 R. 14 W., S.B.M.;  
 thence Westerly to the SW corner of the SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said  
 Section 32;  
 thence Northerly to the NW corner of said SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 32;  
 thence Easterly to the NE corner of said SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 32;  
 thence Northerly to the N $\frac{1}{2}$  corner of said Section 32;  
 thence Easterly to the NW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said  
 Section 32;

thence Southerly to the SW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said Section 32;

thence Easterly to the NE corner of said SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 32;

thence Southerly to the SE corner of said Section 32;

thence Easterly to the SE corner of the W $\frac{1}{2}$  of the SW $\frac{1}{4}$  of Section 33, T. 12 N., R. 14 W., S.B.M.;

thence Northerly to the SE corner of said W $\frac{1}{2}$  of the SW $\frac{1}{4}$  of Section 33;

thence Easterly to the center  $\frac{1}{4}$  corner of said Section 33;

thence Northerly to the SW corner of the NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said Section 33;

thence Easterly to the SE corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 33;

thence Northerly to the NE corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 33;

thence Easterly to the NE corner of said Section 33;

thence Easterly to the SW corner of Section 32, T. 32 S., R. 34 E., M.D.M.;

thence Easterly to the N $\frac{1}{2}$  corner of Section 34, T. 12 N., R. 14 W., S.B.M.

thence Southerly to the SW corner of the NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said Section 34;

thence Easterly to the SE corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 34;

thence Northerly to the NE corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 34;

thence Easterly to the NE corner of said Section 34;

thence Easterly to the SW corner of Section 33, T. 32 S., R. 34 E., M.D.M. said SW corner being the point of beginning of this description.

TEHACHAPE BASIN WATERSHED

All those portions of T. 31 S., R. 34 E.; T. 31 S., R. 33 E.; T. 32 S., R. 32 E.; T. 32 S., R. 33 E.; and T. 32 S., R. 34 E., M.D.M.; and T. 12 N., R. 14 W.; T. 12 N., R. 15 W.; T. 11 N., R. 15 W., and T. 11 N., R. 14 W., S.B.M., Kern County, California, bounded as follows:

Beginning at the E $\frac{1}{2}$  corner of Section 34, T. 12 N., R. 14 W., S.B.M.;

thence Easterly to the SE corner of the SW $\frac{1}{2}$  of the NW $\frac{1}{2}$  of Section 35, T. 12 N., R. 14 W., S.B.M.;

thence Northerly to the NE corner of the NW $\frac{1}{2}$  of the NW $\frac{1}{2}$  of said Section 35;

thence Easterly to the N $\frac{1}{2}$  corner of Section 35;

thence Northerly to the NE corner of the NW $\frac{1}{2}$  of the SW $\frac{1}{2}$  of Section 33, T. 32 S., R. 34 E., M.D.M.;

thence Easterly to the center  $\frac{1}{2}$  corner of said Section 33;

thence Northerly to the SW corner of the NW $\frac{1}{2}$  of the NE $\frac{1}{2}$  of said Section 33;

thence Easterly to the SE corner of said NW $\frac{1}{2}$  of the NE $\frac{1}{2}$  of Section 33;

thence Northerly to the NE corner of said NW $\frac{1}{2}$  of the NE $\frac{1}{2}$  of Section 33;

thence Easterly to a point on the North line of said Section 33, said point lying 1110 feet Westerly of the NE corner of said Section 33;

thence Northeasterly a distance of 2080 feet to a point 275 feet West of the East line of Section 28, T. 32 S., R. 34 E., M.D.M.;

thence Northwesterly 3450 feet to a point on the North line of said Section 28, said point lying 1110 feet West of the NE corner of said Section 28;

thence Westerly to the SE corner of the SW $\frac{1}{2}$  of the SE $\frac{1}{2}$  of Section 21, T. 32 S., R. 34 E., M.D.M.;

thence Northerly to the NE corner of said SW $\frac{1}{2}$  of the SE $\frac{1}{2}$  of Section 21;

thence Westerly to the NW corner of said SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 21;  
thence Northerly to the N $\frac{1}{2}$  corner of said Section 21;  
thence Westerly to the SE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 16,  
T. 32 S., R. 34 E., M.D.M.;  
thence Northerly to the NE corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of  
Section 16;  
thence Westerly to the NW corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 16;  
thence Northerly to the W $\frac{1}{2}$  corner of said Section 16;  
thence Westerly to the NE corner of the NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section  
17, T. 32 S., R. 34 E., M.D.M.;  
thence Northerly to the NE corner of the NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said  
Section 17;  
thence Westerly to the N $\frac{1}{2}$  corner of said Section 17;  
thence Northerly to the center  $\frac{1}{4}$  corner of Section 8, T. 32 S.,  
R. 34 E., M.D.M.;  
thence Westerly to the W $\frac{1}{2}$  corner of said Section 8;  
thence Westerly to the NE corner of the NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 7,  
T. 32 S., R. 34 E., M.D.M.;  
thence Northerly to the NE corner of the NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said  
Section 7;  
thence Westerly to the N $\frac{1}{2}$  corner of said Section 7;  
thence Northerly to the center  $\frac{1}{4}$  corner of Section 6, T. 32 S.,  
R. 34 E., M.D.M.;  
thence Westerly along the North line of the SW $\frac{1}{4}$  of said Section 6,  
1210 feet;  
thence Northeasterly 1500 feet to a point lying 940 feet West of the  
East line of the NW $\frac{1}{4}$  of said Section 6;  
thence Northwesterly 700 feet to a point on the North line of said  
Section 6, said point lying 1725 feet Easterly of the NW corner of  
said Section 6;  
thence Westerly to the SE corner of the W $\frac{1}{2}$  of the SW $\frac{1}{4}$  of Section 31,  
T. 31 S., R. 34 E., M.D.M.;

thence Northerly to the NE corner of said  $\frac{N}{2}$  of the  $\frac{SW}{2}$  of Section 31;  
thence Westerly to the  $\frac{N}{2}$  corner of said Section 31;  
thence Northerly to the SE corner of the  $\frac{NE}{2}$  of the  $\frac{NE}{2}$  of Section  
36, T. 31 S., R. 33 E., M.D.M.;  
thence Westerly to the SW corner of said  $\frac{NE}{2}$  of the  $\frac{NE}{2}$  of Section 36;  
thence Northerly to the NW corner of said  $\frac{NE}{2}$  of the  $\frac{NE}{2}$  of Section 36;  
thence Westerly to the  $\frac{N}{2}$  corner of said Section 36;  
thence Northerly to the  $\frac{N}{2}$  corner of Section 25, T. 31 S., R. 33 E.,  
M.D.M.;  
thence Westerly to the NW corner of said Section 25;  
thence Westerly to the NW corner of Section 26, T. 31 S., R. 33 E.,  
M.D.M.;  
thence Southerly to the E  $\frac{1}{2}$  corner of Section 27, T. 31 S., R. 33 E.,  
M.D.M.;  
thence Westerly to the center  $\frac{1}{2}$  corner of said Section 27;  
thence Southerly to the S  $\frac{1}{2}$  corner of said Section 27;  
thence Westerly to the SW corner of said Section 27;  
thence Westerly to the  $\frac{N}{2}$  corner of Section 33, T. 31 S., R. 33 E.,  
M.D.M.;  
thence Southerly to the S  $\frac{1}{2}$  corner of said Section 33;  
thence Easterly to the SE corner of said Section 33;  
thence Southerly to the NE corner of Section 9, T. 32 S., R. 33 E.,  
M.D.M.;  
thence Westerly to the  $\frac{N}{2}$  corner of said Section 9;  
thence Southerly to the center  $\frac{1}{2}$  corner of said Section 9;  
thence Westerly to the  $\frac{N}{2}$  corner of said Section 9;  
thence Westerly to the center  $\frac{1}{2}$  corner of Section 8, T. 32 S.,  
R. 33 E., M.D.M.;  
thence Southerly to the S  $\frac{1}{2}$  corner of said Section 8;  
thence Southerly to the center  $\frac{1}{2}$  corner of Section 17, T. 32 S.,  
R. 33 E., M.D.M.;

thence Westerly to the  $W\frac{1}{2}$  corner of said Section 17;  
thence Northerly to the NW corner of said Section 17;  
thence Westerly to the  $S\frac{1}{2}$  corner of Section 7, T. 32 S., R. 33 E.,  
M.D.M.;  
thence Northerly to the center  $\frac{1}{2}$  corner of said Section 7;  
thence Westerly to the  $W\frac{1}{2}$  corner of said Section 7;  
thence Northerly to the NW corner of said Section 7;  
thence Northerly to the  $E\frac{1}{2}$  corner of Section 1, T. 32 S., R. 32 E.,  
M.D.M.;  
thence Westerly to the  $W\frac{1}{2}$  corner of said Section 1;  
thence Westerly to the center  $\frac{1}{2}$  corner of Section 2, T. 32 S.,  
R. 32 E., M.D.M.;  
thence Southerly to the  $S\frac{1}{2}$  corner of said Section 2;  
thence Westerly to the SW corner of said Section 2;  
thence Southerly to the  $E\frac{1}{2}$  corner of Section 10, T. 32 S., R. 32 E.,  
M.D.M.;  
thence Westerly to the center  $\frac{1}{2}$  corner of said Section 10;  
thence Southerly to the  $S\frac{1}{2}$  corner of said Section 10;  
thence Southerly to the center  $\frac{1}{2}$  corner of Section 15, T. 32 S.,  
R. 32 E., M.D.M.;  
thence Westerly to the  $W\frac{1}{2}$  corner of said Section 15;  
thence Southerly to the SW corner of said Section 15;  
thence Southerly to the  $W\frac{1}{2}$  corner of Section 22, T. 32 S., R. 32 E.,  
M.D.M.;  
thence Easterly to the center  $\frac{1}{2}$  corner of said Section 22;  
thence Southerly to the  $S\frac{1}{2}$  corner of said Section 22;  
thence Southerly to the  $S\frac{1}{2}$  corner of Section 27, T. 32 S., R. 32 E.,  
M.D.M.;  
thence Southerly to the  $S\frac{1}{2}$  corner of Section 34, T. 32 S., R. 32 E.,  
M.D.M.;  
thence Easterly to the SE corner of said Section 34;  
thence Southerly to SW corner of Section 31, T. 12 N., R. 15 W.,  
S.B.M.;



thence Southerly to the SW corner of Section 6, T. 11 N., R. 15 W.,  
S.B.M.;  
thence Southerly to the SW corner of Section 7, T. 11 N., R. 15 W.,  
S.B.M.;  
thence Southerly to the W $\frac{1}{2}$  corner of Section 18, T. 11 N., R. 15 W.,  
S.B.M.;  
thence Easterly to the E $\frac{1}{2}$  corner of Section 18, T. 11 N., R. 15 W.,  
S.B.M.;  
thence Easterly to the center  $\frac{1}{4}$  corner of Section 17, T. 11 N.,  
R. 15 W., S.B.M.;  
thence Southerly to the S $\frac{1}{2}$  corner of said Section 17;  
thence Easterly to the SE corner of said Section 17;  
thence Northerly to the E $\frac{1}{2}$  corner of said Section 17;  
thence Easterly to the E $\frac{1}{2}$  corner of Section 16, T. 11 N., R. 15 W.,  
S.B.M.;  
thence Easterly to the center  $\frac{1}{4}$  corner of Section 15, T. 11 N.,  
R. 15 W., S.B.M.;  
thence Southerly to the S $\frac{1}{2}$  corner of said Section 15;  
thence Easterly to the SE corner of said Section 15;  
thence Easterly to the SE corner of Section 14, T. 11 N., R. 15 W.,  
S.B.M.;  
thence Easterly to the SE corner of Section 13, T. 11 N., R. 15 W.,  
S.B.M.;  
thence Easterly to the S $\frac{1}{2}$  corner of Section 18, T. 11 N., R. 14 W.,  
S.B.M.;  
thence Northerly to the center  $\frac{1}{4}$  corner of said Section 18;  
thence Easterly to the E $\frac{1}{2}$  corner of said Section 18;  
thence Northerly to the NE corner of said Section 18;  
thence Easterly to the S $\frac{1}{2}$  corner of Section 8, T. 11 N., R. 14 W.,  
S.B.M.;

thence Northerly to the center  $\frac{1}{2}$  corner of said Section 8;  
thence Easterly to the E $\frac{1}{2}$  corner of said Section 8;  
thence Northerly to the NE corner of said Section 8;  
thence Easterly to the S $\frac{1}{2}$  corner of Section 4, T. 11 N., R. 14 W.,  
S.B.M.;  
thence Northerly to the center  $\frac{1}{2}$  corner of said Section 4;  
thence Easterly to the E $\frac{1}{2}$  corner of said Section 4;  
thence Northerly to the NE corner of said Section 4;  
thence Easterly to the SE corner of Section 34, T. 12 N., R. 14 W.,  
S.B.M.;  
thence Northerly to the E $\frac{1}{2}$  corner of said Section 34, said  $\frac{1}{2}$  corner  
being the point of beginning for this description.

1  
2  
3 BRITE CREEK CANYON SALVAGE AREA

4 The area designated Brite Creek Canyon referred  
5 to in paragraph 1 of the Judgment commences in the North-  
6 west Quarter of Section 18, Township 32 South, Range 33 East,  
7 M.D.B.M and meanders Northeasterly through portions of the  
8 South Half of the Southwest Quarter of Section 7, Township 32  
9 South, Range 33 East, M.D.B.M., to the place where Brite Creek  
10 Canyon joins Tehachapi Creek near the dividing line between  
11 said South Half of said Southwest Quarter and the South Half  
12 of the Southeast Quarter of said Section 7. Said canyon  
13 ranges in width up to a maximum of not more than 500 feet  
14 at its widest point.  
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31  
32

(VERIFICATION -- 446, 20155 C. C. P.)

STATE OF CALIFORNIA  
COUNTY OF

}=

I am the \_\_\_\_\_

in the above entitled action; I have read the foregoing \_\_\_\_\_

and know the contents thereof; and I certify that the same is true of my own knowledge, except as to those matters which are therein stated upon my information or belief, and as to those matters I believe it to be true.

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

Executed on \_\_\_\_\_ at \_\_\_\_\_, California

(Date)

(Place)

\_\_\_\_\_  
Signature

(PROOF OF SERVICE BY MAIL -- 10126, 20115 C. C. P.)

STATE OF CALIFORNIA  
COUNTY OF LOS ANGELES

}=

I am a citizen of the United States and a resident of the county aforesaid; I am over the age of eighteen years and not a party to the within entitled action; my business address is:

Third Floor, 7624 South Painter Avenue, Whittier, Ca 90608

On February, 1971, I served the within PROPOSED JUDGMENT

on the attorneys of record for Defendants, and parties pro per in said action, by placing a true copy thereof enclosed in a sealed envelope with postage thereon fully prepaid, in the United States mail at Whittier, California addressed as follows:

As per attached Exhibit "A"

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

Executed on February, 1971 at Whittier, California

(Date)

(Place)

\_\_\_\_\_  
Signature  
ANN M. PERRIN

\*Both the verification and proof of service by mail forms, being signed under penalty of perjury, do not require notarization.

## Exhibit "A"

TEHACHAPI BASIN  
 LIST OF ATTORNEYS AND THE PARTIES EACH REPRESENTS  
 AND PARTIES APPEARING IN PRO PER

Name and Address of Attorney  
 of Record

Names of Parties Represented

RICHARD A. BERGER  
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 Ben Chatoff

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 Esther M. Wilson

WILLIAM KUIS  
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 Wetteroth & Hitchcock  
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Southern Pacific Transportation  
 Company (formerly Southern Pacific  
 Railroad Company), a corporation

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Anne Reeves  
 John C. Reeves, Jr.  
 Virginia Rickett  
 Wilbur Rickett  
 Tumblin Company, a partnership  
 C. E. Tumblin  
 Mali Tumblin aka Amelia Tumblin

CONNOR, HEARD & JAMES  
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 (805) 324-4924

Elizabeth Louise Lamb as Executrix  
 of the Estate of J. O. Lamb,  
 deceased  
 Bette Lamb aka Elizabeth Louise  
 Lamb

CHARLES COOK, JR.  
 Sandocci Road  
 Tehachapi, Ca 93561  
 (805) 822-4823

Alan M. Fields  
 Mardell S. Fields  
 Elmer F. Jury aka E. F. Jury  
 Madeline A. Jury  
 Edith Petrie  
 Robert Petrie  
 Tehachapi Mountain Land and  
 Orchard Co., a corporation  
 Dick Vander Maydes  
 Opal L. Vander Maydes  
 Barbara G. Von Platen  
 W. G. Von Platen  
 Norman Weintraub  
 Albert Zdenek  
 Marilee Zdenek

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Holtzman, Saper & Keel  
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M. DWAIN SMITH  
Hourigan & Smith  
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Belano, Ca 93215  
(805) 725-3522

Tehachapi Unified School District

East Kern Escrow Company, as Trustee  
under deeds of trust  
Tehachapi Public Cemetery District,  
a political subdivision  
(Copy also served on East Kern  
Escrow Company, 106 S. Green Street,  
Tehachapi, California, and on  
Tehachapi Public Cemetery District  
at Old Town Road, Tehachapi, Ca.)

Kenneth Frederick  
Fred-Lite Blocks, Inc., a corporation

Wasco Development Company, a  
partnership  
Eric J. & Margaret Kragesbrink  
Ashtown Water Company, a corporation  
Sam Ashe  
W. J. and Rose B. Ford  
Clyde & Allene Beckham  
Clinton A. & Evelyn Bush

Gertrude T. Hall, Colin Houston,  
Arthur W. Kirk and Ruth W.  
West, as Co-Trustees of the  
trust in the Ida May Jameson  
Estate  
Monolith Portland Cement Company,  
a corporation

West Tehachapi Mutual Water Company,  
a corporation

Alice R. Keel  
Simon Keel

City of Tehachapi, a municipal  
corporation

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California Properties Fund  
Pacific Properties Fund, a limited  
partnership  
Jefferson & Lillian Robbins  
Albert Rosen  
Leon Schwartz  
Leon Schwartz, Trustee for the:  
Leon Schwartz Trust No. 1  
Leon Schwartz Trust No. 2  
Shasta Lands, a joint venture  
Technology Development, Inc., a  
corporation

SVH Investments, a corporation  
Boise-Cascade Properties of  
Delaware, Inc., a corporation  
(formerly known as Pacific  
Cascade Land Company)

J. G. Sisbee

Lynch-Estes Company, a corporation  
White Oak Knolls Water Corporation,  
a corporation

Schultz Enterprises, a corporation  
Robert Schultz

Summit Line Company, a corporation  
Elliott S. Wyman  
Rosalie J. Wyman

John G. Ohtaneseon  
Jean B. Ohtaneseon

California Reconveyance Company, a  
corporation (successors in interest  
to Sierra Reconveyance Company, a  
corporation)

Bank of California as Trustee for  
Golden Oaks, Ltd., a limited  
partnership  
Golden Oaks, Ltd., a limited partner-  
ship  
Substantial Escrow Company, a  
corporation

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Loretta Lake  
Mojave Public Utility District, a  
body corporate and politic  
Motor Center, a corporation

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Golden Hills Community Services  
District, a body corporate and  
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Max Thelen, Jr., Wells Fargo Bank  
and I. W. Hellman all as Co-  
Trustees of the S. H. Cowell  
Foundation

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Robert Monroe  
Mary Alice Monroe

WILLIAM A. HOWELL  
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Ray Dickinson



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Monolith, Ca

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Mojave, Ca

W. C. and Ruth Hedberg  
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Grace B. Hedge  
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Long Beach, Ca

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 Ila Yribarren  
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Harry Wietasa  
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FILED NOVEMBER 20, 1973  
RECORDED NOVEMBER 20, 1973  
BOOK 286, PAGE 122 et. seq.  
of Judgment Book

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

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT, a Body corporate and politic,

Plaintiff,

vs.

(A) CITY OF TEHACHAPI, a municipal corporation, et al.,

Defendants.

NO. 97210

AMENDMENT TO JUDGMENT

(Enjoining extractions in excess of specified quantity, appointing Watermaster and otherwise establishing physical solution)

The application of TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT, a county water district, Plaintiff herein pursuant to the continuing jurisdiction of this Court as reserved in paragraph 3 of the Judgment herein (entered March 23, 1971 in Book 226, Pages 55 et seq. of Judgments and recorded April 13, 1971 in Book 4513, Pages 234 et seq., Official Records of Kern County Recorder), for an injunction with respect to ground water pumping from Tehachapi Basin (as defined in said Judgment) and the imposition of a physical solution to meet the parties' water needs, including appointment of a Watermaster, duly and regularly came on for hearing in Department 5 of the above-entitled Court, at

JOHN E. SMITH, JR., INC.  
ATTORNEYS AT LAW  
1118 N. PALMER AVE.  
POST OFFICE BOX 452  
WATSON,  
CALIFORNIA 95777

1 10:00 o'clock A.M., on October 12, 1973 before the Honorable Jay  
2 R. Ballantyne Judge assigned, after various continuances. Plaintiff  
3 was represented through its attorneys Martin E. Whelan, Jr., Inc.  
4 and Martin E. Whelan, Jr. Certain of the defendants were re-  
5 presented through their respective attorneys as shown in the  
6 records of the Clerk. Notice of hearing was properly and timely  
7 given. Evidence was received on October 12, 1973, the hearing  
8 concluded and the matter submitted on October 12, 1973. The  
9 Court has heretofore made its "Further Findings of Fact and Con-  
10 clusions of Law" herein.

11 As used herein, all terms as defined in said Judgment  
12 at pages 5-8, lines 19-1 shall have the same meanings therein  
13 set forth, with such modification as shall be elsewhere stated  
14 hereafter. The words "Allowed Pumping Allocation for the  
15 calendar year" or like words shall have the meaning set forth  
16 commencing at page 21, line 7 hereof.

17 The Court, pursuant to its reserved jurisdiction under  
18 paragraph 3 of said Judgment, pursuant to said original Findings  
19 of Fact and Conclusions of Law and pursuant to the evidence  
20 adduced at said hearing, and the Further Findings of Fact and  
21 Conclusions of Law heretofore made, does hereby amend said  
22 Judgment by adding thereto the following provisions, numbered  
23 for convenience as paragraphs 11 et seq., to follow in numbered  
24 order the paragraphs in said Judgment as originally entered, the  
25 last paragraph of which is number 10. Appendices are likewise  
26 numbered consecutively to those in said Judgment, the last of  
27 which was Appendix "4". Appendix "2" to said Judgment ("Tehachapi  
28 Basin Area") is again appended and made a part hereof.

1 NOW THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED AS FOLLOWS:

2 11. Injunction Against Extractions in Excess of Certain  
3 Quantities. Subject to the succeeding provisions and paragraphs  
4 hereof, each party defendant to this action (other than the Depart-  
5 ment of Veterans Affairs of the State of California) and the officials,  
6 agents and employees from time to time of said Department of Veterans  
7 Affairs of the State of California is and are hereby enjoined and  
8 restrained in each calendar year commencing with the calendar year  
9 1974 from extracting from Tehachapi Basin ground water in excess of  
10 the annual quantities in acre feet next set forth, which quantity is  
11 hereinafter referred to as "Allowed Pumping Allocation."

12	<u>Party</u>	<u>Allowed Pumping Allocation</u> <u>Acre-Feet</u>
13	Frank Armstrong, Phyllis Armstrong	118
14	(Mettler & Armstrong, a partnership, tenant)	
15	Ashtown Water Company, a corporation	28
16	Leroy Bassler and Margaret Bassler	3
17	J. G. Bisbee	467 1/3
18	Christopher C. Brevidore and Ida Brevidore	28 2/3
19	Donald R. Burgeis and Betty Jean Burgeis	16
20	(Department of Veterans Affairs of the State of California as holder of legal title under Cal Vet loan)	
21	John O. Christopher and Virginia E. Christopher	18
22	Harold Schlotthauer and Madge Q. Schlotthauer	
23	Alan M. Fields, Mardell S. Fields, Norman Weintraub, Albert Zdenek and Marilee Zdenek	51 1/3
24	Golden Hills Community Services District, a body corporate and politic	106
25	Frank Goodrick and Moneta M. Goodrick	12 2/3
26	Grand Oaks Water Company, a corporation	4
27	Henry B. Hand	26 2/3

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1	Edwin J. Van Zandt and Jennie B. Van Zandt (successors in interest to Ewald Handel and Ethel M. Handel)	17 1/3
2		
3	F. G. Hernandez, aka Frank G. Hernandez, and Beatrice Hernandez	3
4		
5	Joaquina Iriart for life, then to Jack Iriart (to be distinguished from Jack R. Iriart) as to remainder	223 1/3
6		
7	Jacobsen Bros. Turf Farms, Inc. a cor- poration, former name Jacobsen Bros., Inc.	386
8	Jacobsen Orchards, Inc., a corporation	177 1/3
9	Elmer J. Jury, aka E. F. Jury, and Madeline A. Jury	31 1/3
10		
11	Mojave Public Utility District	50
12	Monolith Portland Cement Company, a corporation	991 1/3
13	Robert Monroe and Mary Alice Monroe	40
14	Joseph F. Noriega and Irma Noriega (successors in interest to Manley H. Reitz and Janet Reitz)	300 2/3
15		
16	Fred D. Patterson and Laviece Patterson	125 1/3
17	E. H. Pearson	13 1/3
18	Susan Phillips	4 2/3
19	Anne Reaves, John C. Reaves, Jr., Virginia Rickett, Wilbur Rickett, C. R. Tumblin, Mali Tumblin, aka Amelia Tumblin, Tumblin Company, a partnership	192
20		
21	Melvin Ruff and Frances Ruff*	3
22	Tehachapi Orchards, Inc., a corporation (successor in interest to Ernest Schnaidt)	416 2/3
23		
24	Evelyn Smith	24
25	Southern Pacific Transportation Company (formerly Southern Pacific Railroad Co.), a corporation	65 1/3
26		
27	Vaughn Squires and Vivian Squires	8 2/3
28	*See listing also under "Party-Domestic Wells"	



1	Darrell Stevens and Louise E. Stevens	12 2/3
2	Grant Sullivan and Cozette Sullivan, Mortimer Sullivan and Susan Sullivan	356 2/3
3	Grant D. Sullivan and Mortimer J. Sullivan	236 2/3
4	as Co-trustees under the Will of Percy J. Hayes, and Gertrude D. Carroll (successors in interest to Kiethly-McPherrin, Inc.)	
5		
6	G. M. Sunny and Nita Sunny	6
7	City of Tehachapi, a municipal corporation	502
8	Tehachapi Public Cemetery District, a political subdivision	7 1/3
9	Tehachapi Unified School District	20
10	Ma: Thelen, Jr., Wells Fargo Bank and I. W. Hellman all as Co-trustees of the S. H. Cowell Foundation	226 2/3
11		
12	M. R. White and Mildred White*	3
13		
14	Lewis M. Dye, Sr.*	3
15		
16	Sidney Gilreath and Lorene Gilreath	3
17		
18	Domenicio Giraudo, aka Domenico Giraudo*	3
19		
20	Robert W. Karpe and Phyllis J. Karpe*	3
21		
22	Simon Keel and Alice Keel	3
23		
24	A. F. Leiva and Margaret Leiva*	3
25		
26	Allan W. Small and Winifred Small (successors in interest to Wallace K. Love and Gloria D. Love)	3
27		
28	Harold T. Lutge and Helen Lutge (successors in interest to Bette Lamb, aka Elizabeth Louise Lamb as Executrix of Estate of J. O. Lamb, deceased)	3
29		
30	White Oak Knolls Water Corporation, a corporation	3
31		
32	West Tehachapi Mutual Water Company, a corporation	3
33		
34	Harry Wietsma	3
35		
36	Louise Yeager	3
37		
38	*See listing also under "Party-Domestic Wells"	

1	<u>PARTY DOMESTIC WELLS</u>	
2	Lester J. Anderson and Leatta M. Anderson	3
3	Sam Ashe and Esther Ashe	3
4	Alverda Bassler and George Bassler	3
5	Endelva Troy and Vincent J. Troy (successors in interest to Vance Brite and Hattie Brite)	3
6	John Spoor Broome	3
7	Haskell Brunnett and Dwana M. Brunnett	3
8	Morris Burton and Virginia Ellen Burton	3
9	Gertrude D. Carroll	3
10	Alice Cazacus Seeger	3
11	Henry D. Church, Maxine Church, Edmond	3
12	Fowler, Billie J. Fowler, Glen Killings- worth and Mildred Killingsworth, Marion	
13	Killingsworth and Dora Killingsworth	
14	Lewis A. Colvin and Nan L. Colvin	3
15	Lewis M. Dye, Sr.	3
16	W. J. Ford and Rose B. Ford	3
17	Lewis Foster and Dorothy Foster	3
18	Fred-Lite Blocks, Inc., a corporation	3
19	Kenneth Frederick	3
20	Robert B. Freeman, Jr. and Betty Lou Freeman	3
21	Alvin Gary and Wilma J. Gary	3
22	Domenico Giraudo aka Domenico Giraudo	3
23	Louis Goebel and Kathleen Goebel	3
24	R. E. Grind and Helen Grind	3
25	Theodore H. Haun and Avis E. Haun	3
26	W. C. Hedberg and Ruth Hedberg	3
27	Harold Hedge and Grace B. Hedge	3
28	Herb Hemphil and Alice Hemphil, aka Herb Hemphill and Alice Hemphill	3

Page 1

1	Charlie J. Honeycutt and Kathryn Honeycutt	3
2	Leroy Bassler and Margaret Bassler	3
3	John Johnson and Eva L. Johnson	3
4	Robert W. Karpe and Phyllis J. Karpe	3
5	Beverly Maher and James P. Maher (successors in interest to Carl Ledyard and Christine M. Ledyard)	3
6		
7	A. F. Leiva and Margaret Leiva	3
8	Herb Marble and Dorothy Marble (Department of Veterans Affairs of the State of Cali- 9 fornia as holder of legal title under Cal 10 Vet Loan, First Western Bank and Trust Co., assignee of rentals)	3
11	Lee Marigold and Clara Marigold	3
12	Charles Metzler and Margaret Metzler	3
13	Motor Center, a corporation	3
14	O. D. Odin and Ruth M. Odin	3
15	Charles Powell and Elizabeth Powell	3
16	Joseph D. Printup	3
17	William Reeves and Lavonia Reeves	3
18	R. James Reiswig and Alice Knox Reiswig	3
19	William Robinson and Imogene Robinson	3
20	Melvin Ruff and Frances Ruff	3

1	Tehachapi Unified School District	3
2	Richard Van Burklee	3
3	Dick Vander Mayden and Opal L. Vander Mayden	3
4	Pete Vukich and Jewell Vukich	3
5	Jerome Warner and Laura Warner	3
6	Howard Welden and Emma Welden aka Erna Welden	3
7	M. R. White and Mildred White	3
8	Edward M. Wiggins and Mary Ellen Wiggins	3
9	Lora M. Woods	3
10	All other parties	0
11	(See definition of "party" as including	
12	successors in interest, agents, etc.,	
	paragraph 24 hereafter.)	

13           The foregoing injunction as to Defendant GOLDEN HILLS  
14 COMMUNITY SERVICES DISTRICT is subject to the exception set forth  
15 in paragraph 1 of the Judgment, page 15, lines 1-8.

16           To the extent any party is listed with an Allowed Pumping  
17 Allocation above the caption "PARTY DOMESTIC WELLS" and below  
18 that caption, the same constitute separate Allowed Pumping  
19 Allocations. The wells from which the pumping occurred whereby  
20 the Base Water Rights of the parties labeled "PARTY DOMESTIC  
21 WELLS" were established are as set forth in Appendix "5" hereto.

22           12. Carry-over of Portion of Allowed Pumping Allocation.  
23 In order to add flexibility to the Judgment and assist in the  
24 physical solution to the problems of Tehachapi Basin, each  
25 party whose Allowed Pumping Allocation is less than its Base  
26 Water Right, and who, during a particular calendar year  
27 commencing with calendar year 1974, does not extract from  
28 Tehachapi Basin a total quantity equal to such party's Allowed

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1 Pumping Allocation, is permitted to carry over from such calendar  
2 year for a period not in excess of the two next succeeding calendar  
3 years the right to extract from Tehachapi Basin so much of said  
4 total quantity as it did not extract in the particular calendar  
5 year, not to exceed 25% of such party's Allowed Pumping Allocation.

6 For purposes of this paragraph and paragraph 16, the  
7 following shall be deemed the order in which water is pumped by an  
8 Exchangee in a calendar year: first, any carry-over of Exchange  
9 Pool purchases pursuant to paragraph 16(i); next, that party's  
10 Allowed Pumping Allocation without regard to the carry-over pro-  
11 vided by this paragraph; next, such carry-over with the oldest  
12 portion thereof being deemed first pumped; and finally, that party's  
13 Exchange Pool purchases during the calendar year. Quantities sub-  
14 scribed to the Exchange Pool by any Exchanger during a particular  
15 calendar year and allocated among Exchangees shall be deemed  
16 pumped by the Exchanger during that calendar year, to the extent  
17 imported water is taken by the Exchanger pursuant to paragraph  
18 16.

19 13. When Over-extractions May be Permitted.

20 (a) Underestimation of Requirements for Water. Any  
21 party hereto either having an Allowed Pumping Allocation or not,  
22 who, in good faith, underestimates its requirements for water  
23 and, accordingly purchases from the Exchange Pool a lesser  
24 quantity than it should have purchased, may extract in a water  
25 year an additional quantity of water not to exceed: (i) 10% of  
26 such party's Allowed Pumping Allocation or 5 acre feet, whichever  
27 is greater, and (ii) any amount in addition thereto which may be  
28 approved in advance by the Watermaster, which may be on such

1 conditions as the Watermaster shall impose additional to those  
2 hereafter provided, as for example, a deposit to assure adequate  
3 Exchange Pool purchases during the ensuing calendar year.

4 (b) Reductions in Allowed Pumping Allocations in  
5 Succeeding Years to Compensate for Permissible Over-extractions.

6 Any such party's Allowed Pumping Allocation for the following  
7 calendar year shall be reduced by the amount over-extracted pur-  
8 suant to subparagraph (a) provided that if the Watermaster  
9 determines that such reduction in the party's Allowed Pumping  
10 Allocation in one calendar year will impose upon such a party an  
11 unreasonable hardship, the said reduction in said party's Allowed  
12 Pumping Allocation shall be prorated over a period of two  
13 calendar years succeeding that in which the excessive extractions  
14 by the party occurred. Application for such relief to the  
15 Watermaster must be made not later than the February 10 after the  
16 end of the calendar year in which such excessive pumping occurred.

17 (c) Reductions in Allowed Pumping Allocations for the  
18 Next Succeeding Calendar Year to Compensate for Non-Permitted  
19 Overpumping. Whenever a party over-extracts in excess of 10% of  
20 such party's Allowed Pumping Allocation, or 5 acre feet, whichever  
21 is greater, and such excess has not been approved in advance by  
22 the Watermaster, then such party's Allowed Pumping Allocation  
23 for the following calendar year shall be reduced by an amount  
24 equivalent to its total over-extractions in the particular  
25 calendar year in which it occurred.

26 (d) Exchangors For a Particular Calendar Year May Over-  
27 extract in Certain Instances. Where a party has been designated  
28 as an Exchangor for a particular calendar year, and is unable

1 by reason of interruption of Plaintiff DISTRICT'S deliveries to  
2 comply with its required subscription under paragraph 16, such  
3 Exchanger may extract from Tehachapi Basin such additional  
4 requirement, but the Exchanger shall then make additional payments  
5 for imported water taken as provided in subparagraph (b) of  
6 paragraph 16 and the Watermaster in the succeeding year shall apply  
7 the provisions of subparagraph (j) of paragraph 16.

8 (e) Reports of Certain Over-extractions to the Court.

9 Whenever a party over-extracts in excess of 10% of such party's  
10 Allowed Pumping Allocation, or 5 acre feet, whichever is greater,  
11 without having obtained prior approval of the Watermaster,  
12 such shall constitute a violation of the Judgment and the Water-  
13 master shall make a written report to the Court for such action  
14 as the Court may deem necessary. Such party shall be subject  
15 to such injunctive and other processes and action as the Court  
16 might otherwise take with regard to any other violation of such  
17 Judgment.

18 (f) Effect of Over-extractions on Rights. No party who

19 extracts from Tehachapi Basin in any calendar year a greater  
20 quantity than its Allowed Pumping Allocation shall acquire any  
21 additional rights by reason of such additional extractions.

22 (g) Effect of Negative Allowed Pumping Allocation.

23 Any party who over-extracts in any calendar year so as to  
24 result in a negative Allowed Pumping Allocation for the next  
25 succeeding calendar year shall in the next succeeding calendar  
26 year purchase sufficient Exchange Pool water to meet its  
27 deficit and anticipated needs for the next succeeding calendar  
28 year.

1           14. Appointment of Watermaster. The Court hereby  
2 appoints Plaintiff DISTRICT as Watermaster to administer the  
3 Judgment as amended from time to time, with the powers, duties  
4 and responsibilities set forth in paragraph 15 hereof and else-  
5 where in this Judgment as so amended from time to time. Plaintiff  
6 DISTRICT by appropriate resolution of its Board of Directors,  
7 filed with this Court, may delegate the various Watermaster  
8 functions, or such thereof as it shall determine, to its General  
9 Manager and/or Assistant Manager. In addition, the Watermaster  
10 may utilize such of Plaintiff DISTRICT'S hired personnel and  
11 contracted personnel as it shall deem appropriate in carrying out  
12 its said Watermaster functions.

13           15. WATERMASTER ADMINISTRATION PROVISIONS.

14           (a) Duties, Powers and Responsibilities of Watermaster.

15 In order to assist the Court in the administration and enforcement  
16 of the provisions of this Judgment and to keep the Court fully  
17 advised in the premises, the Watermaster shall have the following  
18 duties, powers and responsibilities in addition to those before  
19 or hereafter provided in this Judgment:

20           (i) Watermaster May Require Reports, Information  
21 and Records. To require of parties the furnishing of such  
22 reports, information and records as may be reasonably necessary  
23 to determine compliance or lack of compliance by any party with  
24 the provisions of this Judgment, and to implement the provisions  
25 of the Exchange Pool provided for in paragraph 16, including  
26 payments to be made pursuant thereto.

27           (ii) Certain Parties Required to Install Measuring  
28 Devices; Watermaster to Interpret and Enforce. Other than



1 hereinafter provided each party shall install on each well a  
2 water measuring device of a type prescribed by Watermaster rules  
3 on each well. Such devices shall be installed prior to extracting  
4 any ground water from Tehachapi Basin on or after January 1, 1974.  
5 There shall be excepted from the foregoing purely domestic wells  
6 and those wells which in the judgment of the Watermaster will not  
7 collectively with any other wells on the same parcel or contiguous  
8 parcels, produce 25 acre feet or more in a calendar year, provided  
9 that the above exception shall not apply to any party who requests  
10 the purchase of Exchange Pool water. Any such exception granted  
11 may be later revoked by the Watermaster. The parties shall  
12 install and maintain such devices at their own expense.

13 (iii) Inspections by Watermaster. To make inspec-  
14 tions of ground water production facilities and measuring devices  
15 at such times and as often as may be reasonable under the cir-  
16 cumstances, to calibrate or test such devices, and require the  
17 parties to provide such maintenance, repairs or replacements  
18 as are reasonably necessary to provide accurate water measurement.

19 (iv) Annual Report. The Watermaster shall prepare,  
20 file with the Court and mail to each of the parties on or before  
21 April 15, 1975 and each year thereafter an annual report for  
22 the preceding calendar year, the scope of which shall include  
23 but not be limited to the following:

- 24 a. Ground Water Extractions  
25 b. Exchange Pool Operation  
26 c. Use of Imported Water  
27 d. Violations of Judgment and Corrective  
28 Action Taken

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- e. Change of Ownership of Water Rights,  
Leases and Licenses Thereof
- f. Watermaster Administration Costs
- g. A statement, in a separate section, of those matters in the report which constitute written findings, orders or determinations as provided for in subparagraph (c) of this paragraph 15.
- h. Recommendations, if any

(v) Annual Budget and Appeal Procedure in Relation Thereto. The Watermaster shall annually prepare a tentative budget for each calendar year stating the anticipated expense for administering the provisions of this Judgment. The Watermaster shall mail a copy of said tentative budget to each of the parties hereto at least 75 days before the beginning of each calendar year. For the first calendar year of operation under this Judgment, if the Watermaster is unable to meet the above time requirement, the Watermaster shall mail said copies as soon as possible. If any party hereto has any objection to said tentative budget, it shall present the same in writing to the Watermaster within 30 days after the date of mailing of said tentative budget by the Watermaster. If no objections are received within said period, the tentative budget shall become the final budget. If objections are received, the Watermaster shall within 20 days thereafter, consider such objections, prepare a final budget and mail a copy thereof to each party hereto, together with a statement of the amount assessed to each party. Any party may apply to the Court within 30 days

1 after the mailing of such final budget for a revision thereof  
2 based on specific objections thereto. The parties hereto shall  
3 make the payments otherwise required of them to the Watermaster,  
4 even though such a request for revision has been filed with the  
5 Court. Upon any revision by the Court the Watermaster shall  
6 either remit to the parties their prorata portions of any re-  
7 duction in the budget, or credit their accounts with respect  
8 to their budget assessments for the next ensuing calendar year,  
9 as the Court shall direct.

10 The final budget (after deduction of any portion thereof  
11 which Plaintiff DISTRICT shall elect to assume) shall be assessed  
12 among the parties having an Allowed Pumping Allocation under  
13 this Judgment in the ratio of the quantities of their respective  
14 Allowed Pumping Allocations, after first excluding (i) any  
15 party having an Allowed Pumping Allocation of 10 acre feet or  
16 less and (ii) any party who has not extracted water from Tehachapi  
17 Basin for a period of two (2) successive calendar years prior to  
18 the calendar year in which the tentative budget should be mailed  
19 by the Watermaster under the provisions of this subparagraph (v),  
20 and whose Allowed Pumping Allocation has not been utilized in  
21 whole or in part during that period, whether by subscription to  
22 the Exchange Pool as an Exchanger or otherwise.

23 Payment of the assessment provided for herein, subject  
24 to adjustment by the Court as provided, shall be made by each  
25 such party prior to beginning of the calendar year to which  
26 the assessment relates, or within 90 days after the mailing of  
27 the tentative budget, whichever is later. If such payment by  
28 any party is not made on or before said date, the Watermaster

1 shall add an administrative charge of 5% thereof to such party's  
2 statement plus interest at 1% for each month or part thereof that  
3 the payment is delinquent. Payment required of any party here-  
4 under may be enforced by execution issued out of the Court, or  
5 as may be provided by any order hereinafter made by the Court,  
6 or by other proceedings by the Watermaster, or by any party  
7 hereto on the Watermaster's behalf. Each party is hereby  
8 ordered to pay any such budget assessment within the time herein  
9 provided.

10 Any money unexpended at the end of any calendar year  
11 shall be applied to the budget of the next succeeding calendar  
12 year.

13 (vi) Rules. The Watermaster may adopt and amend  
14 from time to time such rules as may be reasonably necessary to  
15 carry out its duties, powers and responsibilities under the  
16 provisions of this Judgment. The rules shall be effective on  
17 such date after the mailing thereof to the parties as is speci-  
18 fied by the Watermaster, but not sooner than 30 days after such  
19 mailing.

20 (b) Use of Facilities and Data Collected by Other  
21 Governmental Agencies. The Watermaster is directed not to  
22 duplicate the collection of data relative to conditions of the  
23 Tehachapi Basin which is then being collected by one or more  
24 governmental agencies, but where necessary the Watermaster may  
25 collect supplemental data. Where it appears more economical to  
26 do so, the Watermaster is directed to use such facilities or  
27 other governmental agencies as are available to it under either  
28 no cost or cost agreements with respect to the receipt of

1 reports, billings to parties, mailings to parties, and similar  
2 matters.

3           (c) Appeal from Watermaster Decisions Other Than With  
4 Respect to Budget. Any party interested therein who has objection  
5 to any rule, determination, order or finding made by the Water-  
6 master, may make objection thereto in writing delivered to the  
7 Watermaster within 30 days after the date the Watermaster mails  
8 written notice of the making of such rule, determination, order  
9 or finding, and within 30 days after such delivery the Water-  
10 master shall consider said objection and shall amend or affirm  
11 his rule, determination, order or finding and shall give notice  
12 thereof to all parties. Any such party may file with the Court  
13 within 30 days from the date of said notice any objection to such  
14 rule, determination, order or finding of the Watermaster and  
15 bring the same on for hearing before the Court at such time as  
16 the Court may direct, after first having served said objections  
17 upon all other parties. The Court may affirm, modify, amend  
18 or overrule any such rule, determination, order or finding of  
19 the Watermaster. The provisions of this paragraph shall not  
20 apply to budgetary matters, as to which the appellate procedure  
21 has heretofore been set forth. Any objection under this paragraph  
22 shall not stay the rule, determination, order or finding of the  
23 Watermaster. However, the Court, by ex parte order, may provide  
24 for a stay thereof on application of any interested party on  
25 or after the date that any such party delivers to the Water-  
26 master any written objection. Any matter stated in the annual  
27 Watermaster report, affecting the rights of any party, as to  
28 which a written determination, order or finding has not

1 theretofore been made shall constitute a written determination,  
2 order or finding as the case may be to the extent so stated  
3 pursuant to subparagraph (a)(iv)g of this Paragraph 15.

4 (d) Effect of Non-Compliance by Watermaster with  
5 Time Provisions. Failure of the Watermaster to perform any  
6 duty, power or responsibility set forth in this Judgment within  
7 the time limitation herein set forth shall not deprive the  
8 Watermaster of authority to subsequently discharge such duty,  
9 power or responsibility, except to the extent that any such  
10 failure by the Watermaster may have rendered some otherwise  
11 required act by a party impossible.

12 (e) Effect of Watermaster Rules, Determinations, Etc.  
13 All assessments, rules, requirements, determinations, orders  
14 and findings of the Watermaster under this paragraph 15 or other  
15 provisions of this Judgment as amended, when final, shall have  
16 the same effect as if the Court had ordered and enjoined the  
17 parties to do or refrain from doing the particular act involved  
18 or to pay the assessment or other payment in this Judgment  
19 as amended.

20 16. "Exchange Pool". It is necessary and desirable  
21 that a further physical solution be adopted whereby Tehachapi  
22 Basin may in effect be utilized to serve the supplemental needs  
23 for water of as many of the parties as feasible, consistent with  
24 the preservation of that basin, the rights of the parties and  
25 contractual restrictions upon Plaintiff DISTRICT with respect to  
26 its imported water project. Such can be accomplished through an  
27 exchange of water whereby certain parties ("Exchangers") who  
28 might not need imported water, but who adjoin or are in economic

1 proximity to Plaintiff DISTRICT's pipeline, are required to take  
2 imported water therefrom and reduce their otherwise permitted  
3 ground water pumping accordingly to the extent necessary to allow  
4 other parties ("Exchangees") to pump their additional needs from  
5 Tehachapi Basin, rather than necessitate the construction of  
6 expensive distribution facilities. The succeeding provisions,  
7 termed the "Exchange Pool" provisions provide for the above  
8 objective while providing the necessary monetary adjustments to  
9 make the Exchangors economically whole as nearly as feasible.  
10 As a result, the Exchangor by taking imported water in lieu of  
11 exercising otherwise permitted pumping rights, is in effect  
12 exercising that pumping right and the Exchangee, to the extent  
13 of pumping pursuant to Exchange Pool purchases, is in effect  
14 obtaining imported water.

15 (a) Definitions.

16 (1) "Exchangor" is a party who may be required to  
17 reduce its annual ground water extractions below its Allowed  
18 Pumping Allocation for the particular calendar year, whereby it  
19 will take all or part of what it would otherwise extract from  
20 Tehachapi Basin from Plaintiff DISTRICT's imported water supply.  
21 Until further amendment hereof, "Exchangor" shall include only  
22 the following parties whose pumping rights have heretofore been  
23 devoted to agricultural usage, so long as the same are so devoted,  
24 with respect to the lands generally shown on Appendix "6":

- 25 (1) Frank Armstrong, Phyllis Armstrong (Mettler  
26 & Armstrong, a partnership, tenant)  
27 (2) Jacobsen Bros. Turf Farms, Inc.,  
28 a corporation  
(3) Jacobsen Orchards, Inc., a  
corporation

- 1 (4) Joseph F. Noriega and Irma Noriega  
2 (5) Yehachapi Orchards, Inc.,  
a corporation  
3  
4 (6) Fred Patterson  
5 (7) Grant Sullivan and Cozette Sullivan,  
Mortimer Sullivan and Susan Sullivan

6 (See definition of party as including successors in  
7 interest, agents, etc., paragraph 24 hereafter.)

8 In addition, any party who by stipulation with the  
9 Watermaster agrees to be an "Exchangor" shall be deemed added to  
10 the list contained hereinabove. Any such additional Exchangor  
11 shall be a party whose pumping rights have heretofore been devoted  
12 to agricultural usage, and such party shall be deemed an Ex-  
13 changor only so long as the same are so devoted with respect to  
14 lands described or shown by map in the said stipulation.

15 (ii) "Exchangor for the calendar year" shall  
16 include one or more Exchangors designated by the Watermaster to  
17 so reduce their ground water extractions during a particular  
18 calendar year. The Watermaster shall not so designate any Ex-  
19 changor unless such party already has a connection to take im-  
20 ported water from Plaintiff DISTRICT, or Plaintiff DISTRICT  
21 concurrently advises the Exchangor that it will forthwith install  
22 at Plaintiff DISTRICT's expense, a connection which will allow  
23 that Exchangor to take imported water at such place on its prop-  
24 erty so that it can be effectively distributed through any exist-  
25 ing distribution system, and Plaintiff DISTRICT does so connect.

26 (iii) "Exchangee" is any party, other than an  
27 Exchangor for the calendar year, who qualifies under the succeed-  
28 ing provisions of this paragraph 16, and timely files a request



1 to purchase Exchange Pool water so as to permit it to extract from  
2 Tohachapi Basin during that year quantities additional to its  
3 otherwise Allowed Pumping Allocation for the particular calendar  
4 year, without application of the provisions of paragraph 13.

5 (iv) "Allowed Pumping Allocation for the calendar  
6 year" is the Allowed Pumping Allocation of the party as increased  
7 or reduced by acquisitions or dispositions, including in both  
8 cases but not limited to sales, leases and licenses, and as in-  
9 creased or reduced from time to time after calendar year 1974 on  
10 account of permitted carry-overs under paragraph 12 and on account  
11 of over-extractions under paragraph 13 or otherwise. Permitted  
12 increases in extractions by reason of operation of the Exchange  
13 Pool, and permitted carry-overs resulting therefrom, shall not  
14 be considered in computing "Allowed Pumping Allocation for the  
15 calendar year", but shall be accounted for by the Watermaster  
16 separately. Reductions in extractions by Exchangers for the  
17 calendar year pursuant to Exchange Pool subscriptions, to the  
18 extent of imported water taken, shall be accounted for by the  
19 Watermaster as "imported water in lieu of pumping" and shall be  
20 considered as having been pumped by that Exchanger. Non-permitted  
21 over-extractions (as well as permitted over-extractions) shall  
22 reduce the Allowed Pumping Allocation for the following calendar  
23 year, but such non-permitted over-extractions shall not prevent  
24 invoking any appropriate remedy against such party so over-  
25 extracting. An Allowed Pumping Allocation for a particular cal-  
26 endar year may be a negative figure.

27 (v) "Term M&I Exchangee" is a party who enters into  
28 a term M&I agreement with the Plaintiff DISTRICT as with respect to

1 Exchange Pool water for municipal and industrial use. The Plaintiff  
2 DISTRICT shall not be obligated to offer such agreements unless it  
3 then offers substantially similar agreements to municipal and  
4 industrial users purchasing imported water directly from it.

5 (vi) "Agricultural use" of water is that water used  
6 primarily in the commercial production of agricultural crops or  
7 livestock, including domestic use incidental thereto, on tracts  
8 of land operated in units of more than two (2) acres.

9 (vii) "Municipal and industrial use" or "M&I use"  
10 is that use of water for any use that does not come within the  
11 definition of agricultural use above.

12 (viii) "Undue hardship" means unusual and severe  
13 economic or operational hardship, other than that arising by reason  
14 of any differences in cost to a party then having an existing  
15 connection for the taking of imported water, or who may economic-  
16 ally obtain such a connection as provided in subparagraph (d)(iii),  
17 as compared to taking an equivalent quantity from the Exchange Pool  
18 as an Exchangee. "Cost" as used in this definition includes all  
19 costs including but not limited to drilling and maintaining wells  
20 and obtaining a connection for and delivery of imported water.

21 (b) Qualifications for Water Service from Plaintiff  
22 DISTRICT: Exchangers and Exchangees. Each Exchanger, upon being  
23 designated as an Exchanger for the calendar year, shall, if it is  
24 not then so qualified, qualify through appropriate application with  
25 Plaintiff DISTRICT for imported water service and shall at all  
26 times be subject to and comply with the rules and regulations  
27 of Plaintiff DISTRICT as amended from time to time (collectively  
28 hereafter in this paragraph 16 referred to as "said rules and

1 regulations") with respect to imported water service, subject to  
 2 the succeeding provisions and those contained in subparagraph (f).  
 3 Each party desiring to be an Exchanger shall, prior to being allo-  
 4 cated Exchange Pool water, so qualify with Plaintiff DISTRICT and  
 5 shall be subject to and comply with said rules and regulations,  
 6 provided that its payments for Exchange Pool water and reports  
 7 shall be made to the Watermaster rather than directly to Plaintiff  
 8 DISTRICT.

9           To the extent imported water is taken by an  
 10 Exchanger for a calendar year up to the amount of its "required  
 11 subscription" to the Exchange Pool as hereafter defined, and in  
 12 the amount said Exchanger reduces its pumping below its otherwise  
 13 Allowed Pumping Allocation for the calendar year, such Exchanger  
 14 shall not be required to make payments to Plaintiff DISTRICT for  
 15 such quantity, but shall pay the Watermaster in accordance with  
 16 the provisions of subparagraphs (h) and (i) of this paragraph 16. Non-  
 17 payment to the Watermaster shall have the same effect as  
 18 non-payment to the Plaintiff DISTRICT for purposes of the rights  
 19 of Plaintiff DISTRICT to disconnect for non-payment, to collect  
 20 reconnection charges and related matters. So long as such  
 21 Exchanger is in compliance with said required subscription, the  
 22 first imported water taken by it shall be deemed in lieu of  
 23 exercising its otherwise Allowed Pumping Allocation for the  
 24 calendar year, for which payment will be made to the Watermaster  
 25 under said subparagraphs (h) and (i). If it should later pump or permit  
 26 pumping in excess of its Allowed Pumping Allocation for the  
 27 calendar year less the quantity of its required subscription, it  
 28 shall to that extent forthwith pay to the Plaintiff DISTRICT the

1 amount which would have been owing thereto as a customer of  
2 Plaintiff DISTRICT apart from the provisions of this paragraph 16  
3 less the sums theretofore paid to the Watermaster with respect to  
4 such quantity, and such late charges as may be provided by said  
5 rules and regulations; provided such late charges shall not be  
6 applicable if such excess pumping is permitted under subparagraph  
7 (d) of paragraph 13 and the Exchangor makes any required payment  
8 within thirty (30) days. Any such payment shall not relieve such  
9 Exchangor from appropriate remedies for violation of this Judgment.  
10 For all other imported water taken, such Exchangor shall pay the  
11 Plaintiff DISTRICT directly at its applicable rates.

12 (c) Restrictions on Use of Water Purchased From Exchange  
13 Pool; Conversion of Use and Additional Payment. Notwithstanding  
14 any other provision of this paragraph 16, no party may be an  
15 Exchangee with respect to water, nor shall any Exchangee use or  
16 permit the use of Exchange Pool water, where by reason of the  
17 intended use thereof or place of use such would be contrary to  
18 said rules and regulations or no rate therefor has been established  
19 under said rules and regulations, or such would be in violation of  
20 Plaintiff DISTRICT'S Contract No. 14-06-200-5514A with the United  
21 States Department of Interior, Bureau of Reclamation. If any  
22 party who shall have ordered Exchange Pool water for agricultural  
23 use shall convert the same to municipal and industrial use, that  
24 party's Exchange Pool payments to that extent shall be made based  
25 on Plaintiff DISTRICT'S rates for municipal and industrial water,  
26 and if any such party violates said rules and regulations, it  
27 shall pay to the Watermaster, in addition to the Exchange Pool  
28 price as hereafter provided, such other charges as would be payable

1 to Plaintiff DISTRICT under its said rules and regulations were the  
2 water taken by the Exchange from Plaintiff DISTRICT as a customer  
3 without regard to this paragraph 16. Provided a party makes full  
4 disclosure to the Watermaster of all facts pertaining thereto, if  
5 the Watermaster makes an erroneous determination that the proposed  
6 use does not violate the provisions of this subparagraph, and allo-  
7 cates the requested Exchange Pool water to the Exchangee, such  
8 determination shall be considered final for that calendar year  
9 insofar as the Exchangee is concerned.

10 (d) Parties Who May Purchase Water From Exchange Pool:

11 Restriction on Use. Any party may purchase water from the Exchange  
12 Pool except: (i) an Exchanger for the particular calendar year with  
13 respect to the lands generally shown on Appendix "6"; (ii) a party  
14 with respect to water required for agricultural use on lands conti-  
15 guous to Plaintiff's pipeline or lines for delivery of imported  
16 water, and (iii) a party with respect to water required for agri-  
17 cultural use on lands in such proximity to Plaintiff's pipeline or  
18 lines that such party, in relation to the quantity of water needed,  
19 can economically obtain a connection thereto, as determined by the  
20 Watermaster - unless and to the extent that such party is able to  
21 establish to the satisfaction of the Watermaster that there would  
22 be an undue hardship to require that party to take all of its  
23 supplemental needs for that land, over and above its Allowed Pumping  
24 Allocation for the particular calendar year, directly from the im-  
25 ported water supply. Any request from such a party having such a  
26 connection or who can so obtain a connection, with respect to the  
27 lands capable of being serviced therefrom, shall contain facts upon  
28 which the undue hardship is claimed, and the Watermaster shall limit

1 Exchange Pool participation to the quantities reasonably required to  
2 eliminate such undue hardship. Notwithstanding the foregoing, no  
3 party who is then in default on payment of any prior Exchange Pool  
4 purchase or any Watermaster administration assessment or who is not  
5 then qualified to obtain imported water from Plaintiff DISTRICT may  
6 purchase water from the Exchange Pool. Notwithstanding the fore-  
7 going, the owner from time to time of the "Bisbee" property shown on  
8 Appendix "6" hereto shall not be an Exchangee unless a stipulation  
9 with the Watermaster is entered into adding that owner as an "Ex-  
10 changer" under subparagraph (a)(i) above of this paragraph 16. Such  
11 stipulation shall be entered into by the Watermaster upon request by  
12 such owner, whereupon such owner shall be entitled to be an Ex-  
13 changee with respect to said Bisbee property, except to the extent  
14 such owner as to any calendar year has been designated as an  
15 Exchanger for the particular calendar year. Any such owner who is a  
16 successor in interest of Defendant J. G. BISBEE shall first become  
17 a party of record.

18 (e) Reports by Exchanger and Requests by Exchangees. No  
19 later than February 1 of each calendar year, commencing with 1974,  
20 each Exchanger shall file with the Watermaster an estimate of its  
21 agricultural water requirements for that calendar year with respect  
22 to the property as shown on Appendix "6" by reason of which it is an  
23 Exchanger. By the same date each party desiring to purchase water  
24 from the Exchange Pool as an Exchangee shall file with the Watermaster  
25 a request to so purchase, setting forth, in addition to any infor-  
26 mation required under subparagraphs (c) and (d), the amount of water  
27 in acre feet that such party estimates it will require during the  
28 then current calendar year in excess of its Allowed Pumping

1 Allocation for that particular calendar year. In addition, the  
2 request, which shall be on a form provided by the Watermaster, shall  
3 contain such other information as the Watermaster shall require,  
4 including but not limited to the place of use and whether the water  
5 will be used for agricultural use or M&I use, or partially for each,  
6 and if so the quantity to be employed for each such use. No such  
7 request to purchase Exchange Pool water shall be honored with respect  
8 to any water to be used contrary to the restrictions in subparagraph  
9 (c). No quantity designated for agricultural use shall be employed  
10 for M&I use. By the same date each Exchanger shall likewise file  
11 a contingent request to purchase Exchange Pool water, containing  
12 the same information, to be applicable in the event that that  
13 Exchanger is not designated by the Watermaster as an Exchanger for  
14 that calendar year.

15           Each Exchange Pool request shall contain the offer  
16 by the Exchangee to pay to the Watermaster the Exchange Pool price  
17 for each acre foot so requested, which upon notification from the  
18 Watermaster pursuant to subparagraph (g) shall constitute an  
19 agreement to so pay. Such application shall also contain the  
20 agreement of the party to comply with all other provisions of this  
21 paragraph 16 and with such other provisions not inconsistent with  
22 this Judgment as amended, as the Watermaster shall insert therein.

23           (f) Designation of Exchangers for Calendar Year. On or  
24 prior to March 1 of each calendar year, the Watermaster shall  
25 designate those Exchangers who shall serve as Exchangers for  
26 that calendar year by written notice to them. In selecting  
27 such Exchangers the Watermaster shall attempt to utilize the  
28 least number of Exchangers necessary and apply such other

1 criteria as may be relevant. No Exchanger shall be designated  
2 as an Exchanger for a calendar year unless to the extent it  
3 already has an adequate connection for the taking of imported  
4 water or concurrently with its designation Plaintiff DISTRICT  
5 notifies that Exchanger that upon application for water service  
6 it will install the necessary facilities in accordance with  
7 subparagraph (a)(ii) of this paragraph 16 at Plaintiff DISTRICT'S  
8 own expense but otherwise in accordance with Plaintiff DISTRICT'S  
9 rules and regulations. No Exchanger shall be designated as an  
10 Exchanger for a calendar year if the same will result in "undue  
11 hardship" (see subparagraph (a)(viii)). If an Exchanger is so  
12 designated and such undue hardship later appears, the Watermaster  
13 shall rescind that designation with the same effect and conse-  
14 quences as set forth in paragraph 13(6).

15 (g) Notification of Honoring of Exchange Pool Requests  
16 and Allocation of Subscriptions Among Exchangers for Calendar  
17 Year. On or before March 1 of each calendar year the Watermaster  
18 shall notify each Exchanger of the quantity of Exchange Pool  
19 water which it has purchased, and shall notify each Exchanger  
20 for the calendar year of the quantity by which it is required to  
21 reduce its pumping below its otherwise Allowed Pumping Allocation  
22 for that calendar year, sometimes in this paragraph 16 referred to  
23 as the Exchanger's "required subscription." Every request to  
24 purchase Exchange Pool water by a party entitled to request to  
25 purchase the same under the foregoing provisions of this paragraph  
26 16, and where the use or place of use will not violate any of  
27 said foregoing provisions, shall be honored by the Watermaster.  
28 In the event that the party is then in default under any other



1 provision of this Judgment as amended other than as related to  
2 payment, the Watermaster may honor such request on such conditions  
3 as the Watermaster may impose, which shall be stated in the  
4 notice sent. At the same time the Watermaster shall allocate  
5 such Exchange Pool requests so honored among the Exchangers for  
6 the particular calendar year in such quantities as the Watermaster  
7 shall determine. Along with the notices provided for by this  
8 subparagraph, the Watermaster shall notify each Exchangee of  
9 the price to be paid for Exchange Pool water by that Exchangee  
10 and the schedule for payments, and shall notify each Exchanger,  
11 for the calendar year of schedule of payments from that Exchanger  
12 with respect to its required subscription.

13           (h) Exchange Pool Price to be Paid by Exchangees;  
14 Amounts to be Paid by Exchangers for Calendar Year and to  
15 Plaintiff DISTRICT. The price to be paid by Exchangees for  
16 Exchange Pool water shall be determined as follows. The appli-  
17 cable rate of the Plaintiff DISTRICT for the classification of  
18 use by each Exchangee (e.g. agricultural, normal M&I, Term M&I)  
19 shall be determined. If as of January 1 in a calendar year  
20 there is a scheduled rate increase to take effect during the  
21 calendar year, the applicable rates for that classification shall  
22 be averaged based on the number of months April through September,  
23 inclusive, that each such rate is scheduled to be in effect. To  
24 the resulting rate or average rate so determined as to each  
25 Exchangee, there shall be added the amount of Watermaster  
26 administration assessment per acre foot for that calendar year  
27 (paragraph 15(a)(v)) and then there shall be deducted the "cost  
28 of pumping" and the resulting figure shall be the Exchange Pool

1 price to be paid by the Exchangee to the Watermaster on account  
2 of each acre foot (or proportionate amount for a partial acre  
3 foot) of Exchange Pool water ordered for the calendar year.

4 "Cost of pumping" shall mean the sum of Fifteen  
5 Dollars (\$15.00) per acre foot as increased by the Watermaster  
6 to reflect the percentage increase in applicable Southern  
7 California Edison Company rates for electrical energy effective  
8 as of the January 1 of the calendar year involved as compared to  
9 those in effect as of August 15, 1973. The Watermaster shall  
10 annually determine "cost of pumping" in accordance with the  
11 above. Said "cost of pumping" formula is hereby determined to  
12 yield a dollar figure per acre foot which fairly represents the  
13 saving to an Exchanger for a calendar year in taking imported  
14 water from Plaintiff DISTRICT in lieu of pumping that quantity  
15 as a part of its Allowed Pumping Allocation for that calendar  
16 year.

17 Example No. 1 (based on current Plaintiff  
18 DISTRICT rate for agricultural rate of \$35.00 and  
19 an Exchangee using water for agricultural use):

	<u>Per Acre Foot</u>
21 a) Plaintiff DISTRICT rate	\$ 35.00
22 b) Watermaster administration	
23 assessment (assumed)	1.00
	<u>\$ 36.00</u>
24 c) Less cost of pumping	<u>15.00</u>
25 d) Exchange Pool Price	<u>\$ 21.00</u>

26  
27 Example No. 2 (based on current Plaintiff  
28 DISTRICT rate of \$90.00 for "Term M&I" water,

1 with an Exchangee utilizing the water for  
2 municipal and industrial purposes and having  
3 a Term M&I Agreement with Plaintiff DISTRICT):

	<u>Per Acre Foot</u>
4	
5 a) Plaintiff DISTRICT rate	\$ 90.00
6 b) Watermaster administration	
7 assessment (assumed)	1.00
	<u>\$ 91.00</u>
8 c) Less cost of pumping	15.00
9 d) Exchange Pool Price to Exchangee	<u>\$ 76.00</u>
10	

11 There shall be paid by each Exchangor for the calendar  
12 year to the Watermaster a sum equal to the "cost of pumping" for  
13 that calendar year less the Watermaster administration assessment,  
14 both computed for each acre foot (or a proportionate amount for  
15 any partial acre foot) of imported water taken by that Exchangor  
16 up to the amount of its required subscription to the Exchange  
17 Pool. The Watermaster may delegate the billing function to  
18 Plaintiff DISTRICT in its capacity as a district, and payments  
19 may be received by Plaintiff DISTRICT in that capacity and  
20 credited to the Watermaster.

21 Payments made to the Watermaster by Exchangors for  
22 the calendar year and by Exchangees shall be paid by the  
23 Watermaster to the Plaintiff DISTRICT to be utilized by it  
24 in the same manner as moneys received by Plaintiff DISTRICT  
25 for the direct delivery of water from its imported water  
26 facility.

27 (i) Timing and Amounts of Payments to be Made by  
28 Exchangees and By Exchangors for a Calendar Year. Exchangees must

1 pay the Watermaster for all Exchange Pool water ordered for the  
2 calendar year, whether or not utilized, but any quantity not  
3 utilized shall be credited to that party and may be used in sub-  
4 sequent calendar years provided that the Exchangees shall in the  
5 subsequent calendar year in which utilized pay any increase in  
6 the then Exchange Pool price. Payments by Exchangees shall be  
7 made in six (6) equal monthly installments to the Watermaster on  
8 or before the last day of April and on or before the last day of  
9 each five (5) succeeding calendar months to and inclusive of  
10 September. Payments from Exchangors to the Watermaster shall be  
11 made within the time provided in Plaintiff DISTRICT'S said rules  
12 and regulations for delivery of imported water, based on the  
13 provisions of subparagraph (b), and subject to those provisions.

14 (j) Procedure if Requests Honored Exceed Subscriptions.  
15 If Exchange Pool requests entitled to be honored exceed available  
16 subscriptions from Exchangors during the particular calendar year,  
17 such requests shall nonetheless be honored. The Watermaster  
18 shall attempt to enlist on a voluntary basis additional Exchangors  
19 for that particular calendar year in order to balance the Exchange  
20 Pool. Any deficit in subscriptions shall be carried over to the  
21 next ensuing calendar year and made up by an excess of subscrip-  
22 tions over requests in said next calendar year.

23 (k) Adjustment of Exchange Pool. The Watermaster may  
24 make such adjustments to Exchange Pool required subscriptions  
25 and purchases during the calendar year, at the request of parties,  
26 on such conditions as it determines will yield results consistent  
27 with what would have occurred had the Exchange Pool required  
28 subscriptions and purchases been initially allocated with such  
29 adjustments.

1           (1) Additional Pumping by Exchangees Pursuant to  
2 Exchange Pool Provisions. An Exchangee may extract from Tehachapi  
3 Basin in a particular calendar year, in addition to its Allowed  
4 Pumping Allocation for that calendar year, the quantity of water  
5 which it has requested to purchase from the Exchange Pool during  
6 that calendar year and which has been allocated to it pursuant  
7 to the provisions of subparagraph (g).

8           (m) Reduction in Pumping by Exchangers. Each Exchanger  
9 for a calendar year shall reduce its pumping from Tehachapi Basin  
10 during that calendar year to the quantity equal to its Allowed  
11 Pumping Allocation for that calendar year less its required  
12 Exchange Pool subscription, subject to the provisions of sub-  
13 paragraph (d) of paragraph 13.

14           (n) Certain Agricultural Uses to be Computed at M&I  
15 Rates. Notwithstanding the foregoing provisions of this paragraph  
16 16, to the extent that an Exchangee would, if taking water directly  
17 from Plaintiff DISTRICT'S imported water project, come within the  
18 provisions of Section 3 of Part B of Plaintiff DISTRICT'S said  
19 rules and regulations, a copy of which is attached as Appendix "7",  
20 Exchange Pool prices for each Exchangee shall be predicated upon  
21 the applicable M&I rate notwithstanding that the use may be  
22 agricultural.

23           (o) Watermaster to Make Certain Determinations Re  
24 Property on Which Water Rights were Developed. In applying the  
25 foregoing subparagraph, the Watermaster shall make the applicable  
26 determinations. In addition, the Watermaster as part of its first  
27 annual report shall include a designation of those water rights  
28 which originate from water production for agricultural use and the

1 parcel or parcels on which said rights were developed, either by  
2 map or appropriate legal description. Such determinations of  
3 the Watermaster shall be subject to appeal as provided in sub-  
4 paragraph (c) of paragraph 15 hereof.

5           17. Transfers, Leases, Etc., of Water Rights. As used  
6 in this paragraph the word "transfer" includes any conveyance,  
7 lease, license or other type of transaction of whatever kind or  
8 nature, whereby another person becomes entitled to exercise, for  
9 whatever period, any water rights of a per y.

10           Any transfer of water rights determined in this  
11 Judgment, as amended, other than a month-to-month lease of property  
12 to which a domestic well water right is appurtenant, shall be in  
13 writing. Each transfer required to be in writing and any other  
14 which is in writing shall contain substantially the following  
15 provision:

16                           "Pumping from the underground, surface  
17                           diversions, and any water rights involved  
18                           in this transaction, are subject to the  
19                           provisions and limitations contained in  
20                           the Judgment, as amended from time to time,  
21                           in the case of 'Tehachapi-Cummings County  
22                           Water District, etc., Plaintiff vs. City  
23                           of Tehachapi, et al., Defendants', Kern  
24                           County Superior Court No. 97210."

25           The transferor shall comply with the provisions of  
26 this paragraph and shall file a copy of the instrument of transfer  
27 with the Watermaster within ten (10) days after its effective  
28 execution. Any transfer apart from land or a portion thereof on

1 which a water right was theretofore exercised must be filed with  
2 the Watermaster on or before March 1 of a calendar year to be  
3 effective for that year.

4 18. Prior Approval of Watermaster for Extraction of Water  
5 Under Water Rights at Different Location Than Where Developed.

6 Any water rights adjudicated in this Judgment, as amended, shall  
7 not be exercised by extraction of ground water other than on a  
8 parcel of land on which some or all of the party's right was  
9 originally developed, or on land contiguous thereto, without the  
10 prior written approval of the Watermaster. No disapproval shall  
11 be made except upon a determination and finding in writing by the  
12 Watermaster that the exercise at such different location will sub-  
13 stantially and adversely affect other persons entitled to pump  
14 from the underground or will transfer increased pumping to an area  
15 with a serious cone of depression. Nothing contained in paragraph  
16 17 or this paragraph renders transferable to any other location any  
17 water rights determined by other provisions of this judgment, as  
18 amended, to be exerciseable or useable only on specific property,  
19 or transferable only with specific property.

20 19. Various Provisions Constitute Portions of Injunction.

21 Each and every provision of this Judgment as amended, directed  
22 against any party defendant to the extent that it requires any  
23 party to do or to refrain from doing any act or to make any payment,  
24 shall be deemed injunctive provisions regardless of the terminology  
25 employed.

26 20. Scope of Injunction; Enforcement of Judgment. Every  
27 provision of this Judgment as amended requiring any party to do  
28 or to refrain from doing any act, or providing that any party

1 shall do or refrain from doing any act, or to pay any sum of  
2 money, including those deemed a part of this Judgment as amended  
3 pursuant to subparagraph (e) of paragraph 15, shall be deemed  
4 worded as a direct order and injunction, and shall be enforceable  
5 by contempt proceedings issuing from this Court at the instance  
6 of Plaintiff DISTRICT, the Watermaster as officer of the Court,  
7 or at the instance of any other party. Any such injunctive  
8 proceedings need only be served upon the party affected thereby.  
9 In addition, the Watermaster may use any other legal means of  
10 collection of any sums provided to be paid by or pursuant to this  
11 Judgment as amended. Subject to the appeal provisions hereinbefore  
12 provided, the rules of the Watermaster and the findings, orders  
13 and determinations of the Watermaster shall be deemed a part of  
14 this Judgment as amended for purposes of this paragraph.

15           21. Designees of Parties for Service, Etc. Each party  
16 shall, within thirty (30) days after service of written notice  
17 to do so, file with the Court, with proof of service of a copy  
18 upon the Watermaster, a written designation of the person to  
19 whom and the address at which all future notices, determinations,  
20 requests, demands, objections, reports and other papers and  
21 processes to be served upon that party or delivered to that party  
22 are to be so served or delivered.

23           A later substitute designation filed and served  
24 in the same manner by any party shall be effective five (5) days  
25 from the date of filing as to the then future notices, determinations  
26 requests, demands, objections, reports and other papers and  
27 processes to be served upon or delivered to that party.

28           Delivery to or service upon any party by the

ARTHUR S. WHELAN, JR., INC.  
ATTORNEYS AT LAW  
1000 S. FLORENCE AVE.  
POST OFFICE BOX 6100  
WHITTIER,  
CALIFORNIA 90608



1 Watermaster, by any other party, or by the Court, of any item  
2 required to be, or which may be, served upon or delivered to a  
3 party under or pursuant to the Judgment may be by deposit in the  
4 mail, first class, postage prepaid, addressed to the designee  
5 and at the address in the latest designation filed by that party.

6           22. No Loss of Rights by Non-Use. It is in the interest  
7 of reasonable beneficial use of the Basin and its water supply  
8 that no party be encouraged to take and use more water in any  
9 calendar year than is actually required. Failure to produce all  
10 of the water to which a party is entitled hereunder, for whatever  
11 period, shall not, in and of itself, be deemed or constitute an  
12 abandonment or loss of such party's right, in whole or in part.  
13 Abandonment and extinction of any right herein adjudicated shall  
14 be accomplished only by (1) a written election by the party,  
15 filed in this case, or (2) upon noticed motion of Watermaster, or  
16 another party, and after hearing. In either case, such abandonment  
17 shall be confirmed by express subsequent order of this Court.  
18 Non-use pursuant to a prior written agreement with the Watermaster  
19 therefor shall be deemed a beneficial use by way of replenishment  
20 of Tehachapi Basin.

21           23. Continuing Jurisdiction of the Court. In addition  
22 to the continuing jurisdiction provided in paragraph 3 of said  
23 Judgment, which includes the power to redetermine safe yield  
24 from time to time, the Court retains continuing jurisdiction to  
25 amend, modify, delete and revise all provisions of these amendments  
26 to said Judgment, and in this regard to appoint a substitute  
27 Watermaster from time to time, either on the Court's own motion  
28 with appropriate notice to the parties, or on motion of any party



TEHACHAPI BASIN AREA

All those portions of T. 31 S., R. 33 E.; T. 32 S., R. 32 E.; T. 32 S., R. 33 E.; and T. 32 S., R. 34 E., M.D.M.; and T. 12 N., R. 14 W.; T. 12 N., R. 15 W.; T. 11 N., R. 15 W., and T. 11 N., R. 14 W., S.B.M., Kern County, California, bounded as follows:

Beginning at the Southwest corner of Section 33, T. 32 S., R. 34 E., M.D.M.;

thence Easterly to the Southeast corner of the  $W\frac{1}{2}$  of the  $SW\frac{1}{4}$  of said Section 33;

thence Northerly to the Northeast corner of said  $W\frac{1}{2}$  of the  $SW\frac{1}{4}$  of Section 33;

thence Easterly to the center  $\frac{1}{4}$  corner of said Section 33;

thence Northerly to the  $N\frac{1}{2}$  corner of said Section 33;

thence Easterly along the North line of said Section 33 to a point lying 1110 feet Westerly of the Northeast corner of said Section 33;

thence Northeasterly 2080 feet to a point lying 275 feet West of the East line of Section 28, T. 32 S., R. 34 E., M.D.M.;

thence Northwesterly 3450 feet to a point on the North line of said Section 28, said point lying 1110 feet Westerly of the NE corner of said Section 28;

thence Westerly to the  $S\frac{1}{2}$  corner of Section 21, T. 32 S., R. 34 E., M.D.M.;

thence Northerly to the NE corner of the  $S\frac{1}{2}$  of the  $SW\frac{1}{4}$  of said Section 21;

thence Westerly to the NW corner of said  $S\frac{1}{2}$  of the  $SW\frac{1}{4}$  of Section 21;

thence Westerly to the NW corner of the  $S\frac{1}{2}$  of the  $SW\frac{1}{4}$  of Section 20,

T. 32 S., R. 34 E., M.D.M.;

thence Northerly to the NE corner of the SE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 19, T. 32 S., R. 34 E., M.D.M.;

thence Westerly to the NW corner of said SE $\frac{1}{4}$  of NE $\frac{1}{4}$  of Section 19;

thence Southerly to the SW corner of said SE $\frac{1}{4}$  of NE $\frac{1}{4}$  of Section 19;

thence Westerly to the SE corner of the W $\frac{1}{2}$  of the NW $\frac{1}{4}$  of said Section 19;

thence Northerly to the NE corner of said W $\frac{1}{2}$  of the NW $\frac{1}{4}$  of Section 19;

thence Westerly to the NW corner of said Section 19;

thence Northerly to the SW corner of the NW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 18, T. 32 S., R. 34 E., M.D.M.;

thence Easterly to the SE corner of said NW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 18;

thence Northerly to the NE corner of said NW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 18;

thence Easterly to the center  $\frac{1}{4}$  corner of said Section 18;

thence Northerly to the SW corner of the NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said Section 18;

thence Easterly to the SE corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 18;

thence Northerly to the NE corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 18;

thence Northerly to the NE corner of the W $\frac{1}{2}$  of the SE $\frac{1}{4}$  of Section 7,

T. 32 S., R. 34 E., M.D.M.;

thence Westerly to the SE corner of the SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said Section 7;

thence Northerly to the NE corner of said SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 7;

thence Westerly to the NW corner of said SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 7;

thence Northerly to the NW corner of said Section 7;

thence Northerly to the W $\frac{1}{2}$  corner of Section 6, T. 32 S., R. 34 E., M.D.M.;

thence Easterly along the South line of the NW $\frac{1}{4}$  of said Section 6

to a point lying 1210 feet Westerly of the center  $\frac{1}{4}$  corner of Section 6;  
thence Northeasterly 1900 feet to a point lying 940 feet West of the  
East line of said NW $\frac{1}{4}$  of said Section 6;  
thence Northwesterly 700 feet to a point on the North line of said  
Section 6;  
thence Westerly 1725 feet to the NW corner of said Section 6;  
thence Westerly to the S $\frac{1}{2}$  corner of Section 36, T. 31 S., R. 33 E.,  
M.D.M.;  
thence Northerly to the NE corner of the SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said  
Section 36;  
thence Easterly to the NW corner of said SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 36;  
thence Northerly to the SE corner of the SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said  
Section 36;  
thence Westerly to the SW corner of said SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 36;  
thence Northerly to the NW corner of said SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 36;  
thence Westerly to the SW corner of the NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 35,  
T. 31 S., R. 33 E., M.D.M.;  
thence Southerly to the SW corner of the E $\frac{1}{2}$  of the SE $\frac{1}{4}$  of said  
Section 35;  
thence Easterly to the SE corner of said Section 35;  
thence Easterly to the NE corner of the W $\frac{1}{2}$  of the NW $\frac{1}{4}$  of Section 1,  
T. 32 S., R. 33 E., M.D.M.;  
thence Southerly to the SE corner of said W $\frac{1}{2}$  of the NW $\frac{1}{4}$  of Section 1;  
thence Westerly to the W $\frac{1}{4}$  corner of said Section 1;  
thence Southerly to the NW corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said  
Section 1;

thence Easterly to the NE corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 1;  
thence Southerly to the SE corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 1;  
thence Southerly to the SE corner of the W $\frac{1}{2}$  of the SW $\frac{1}{4}$  of Section 12,  
T. 32 S., R. 33 E., M.D.M.;

thence Easterly to the S $\frac{1}{4}$  corner of said Section 12;  
thence Southerly to the NE corner of the SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 13,  
T. 32 S., R. 33 E., M.D.M.;

thence Westerly to the NW corner of said SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 13;  
thence Southerly to the SW corner of said SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 13;  
thence Westerly to the SW corner of said Section 13;  
thence Westerly to the SE corner of the SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 14;  
T. 32 S., R. 33 E., M.D.M.;

thence Northerly to the NE corner of said SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 14;  
thence Westerly to the NW corner of said SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 14;  
thence Southerly to the S $\frac{1}{4}$  corner of said Section 14;  
thence Southerly to the center  $\frac{1}{4}$  corner of Section 23, T. 32 S.,  
R. 33 E., M.D.M.;

thence Westerly to the SE corner of the SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said  
Section 23;  
thence Northerly to the NE corner of said SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 23;  
thence Westerly to the NW corner of said SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 23;  
thence Northerly to the NW corner of said Section 23;  
thence Northerly to the E $\frac{1}{4}$  corner of Section 15, T. 32 S., R. 33 E.,  
M.D.M.

thence Westerly to the  $W\frac{1}{4}$  corner of said Section 15;  
thence Northerly to the SW corner of the  $NW\frac{1}{4}$  of the  $NW\frac{1}{4}$  of said Section 15;  
thence Easterly to the SE corner of said  $NW\frac{1}{4}$  of the  $NW\frac{1}{4}$  of Section 15;  
thence Northerly to the NE corner of said  $NW\frac{1}{4}$  of the  $NW\frac{1}{4}$  of Section 15;  
thence Northerly to the NE corner of the  $SW\frac{1}{4}$  of the  $SW\frac{1}{4}$  of Section 10.  
T. 32 S., R. 33 E., M.D.M.;

thence Westerly to the NW corner of said  $SW\frac{1}{4}$  of the  $SW\frac{1}{4}$  of Section 10;  
thence Northerly to the  $E\frac{1}{4}$  corner of Section 9, T. 32 S., R. 33 E., M.D.M.;

thence Westerly to the NE corner of the  $NW\frac{1}{4}$  of the  $SE\frac{1}{4}$  of said Section 9;  
thence Southerly to the SE corner of said  $NW\frac{1}{4}$  of the  $SE\frac{1}{4}$  of Section 9;  
thence Westerly to the NW corner of the  $S\frac{1}{4}$  of the  $SW\frac{1}{4}$  of said Section 9;  
thence Westerly to the NW corner of the  $SE\frac{1}{4}$  of the  $SE\frac{1}{4}$  of Section 8.  
T. 32 S., R. 33 E., M.D.M.;

thence Southerly to the SW corner of said  $SE\frac{1}{4}$  of the  $SE\frac{1}{4}$  of Section 8;  
thence Southerly to the SE corner of the  $NW\frac{1}{4}$  of the  $NE\frac{1}{4}$  of Section 17;  
T. 32 S., R. 33 E., M.D.M.;

thence Westerly to the SW corner of said  $NW\frac{1}{4}$  of the  $NE\frac{1}{4}$  of Section 17.  
thence Southerly to the center  $\frac{1}{4}$  corner of said Section 17;  
thence Westerly to the  $W\frac{1}{4}$  corner of said Section 17;  
thence Westerly to the SW corner of the  $E\frac{1}{4}$  of the  $NE\frac{1}{4}$  of Section 18;  
T. 32 S., R. 33 E., M.D.M.;

thence Northerly to the NW corner of said  $E\frac{1}{4}$  of the  $NE\frac{1}{4}$  of Section 18;  
thence Northerly to the NW corner of the  $SE\frac{1}{4}$  of the  $SE\frac{1}{4}$  of Section 7,  
T. 32 S., R. 33 E., M.D.M.;

thence Westerly to the NE corner of the  $SW\frac{1}{4}$  of the  $SW\frac{1}{4}$  of said Section 7;

thence Northerly to the SE corner of the NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said Section 7;

thence Westerly to the SW corner of said NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 7;

thence Westerly to the SW corner of the N $\frac{1}{2}$  of the NE $\frac{1}{4}$  of Section 12;

T. 32 S., R. 32 E., M.D.M.;

thence Northerly to the N $\frac{1}{2}$  corner of said Section 12;

thence Westerly to the NW corner of said Section 12;

thence Southerly to the SE corner of the N $\frac{1}{2}$  of the NE $\frac{1}{4}$  of Section 11,

T. 32 S., R. 32 E., M.D.M.;

thence Westerly to the SW corner of said N $\frac{1}{2}$  of the NE $\frac{1}{4}$  of Section 11;

thence Southerly to the center  $\frac{1}{4}$  corner of said Section 11;

thence Westerly to the NW corner of the NE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said Section 11;

thence Southerly to the SW corner of said NE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 11;

thence Easterly to the NW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said Section 11;

thence Southerly to the SW corner of said SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 11;

thence Southerly to the NW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 14,

T. 32 S., R. 32 E., M.D.M.;

thence Westerly to the NE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said Section 14

thence Southerly to the SE corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 14;

thence Southerly to the SW corner of the NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 23,

T. 32 S., R. 32 E., M.D.M.;

thence Easterly to the SE corner of said NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 23;

thence Southerly to the center  $\frac{1}{4}$  corner of said Section 23;

thence Westerly to the NE corner of the W $\frac{1}{2}$  of the SW $\frac{1}{4}$  of said Section 23;



thence Southerly to the SE corner of said  $W\frac{1}{2}$  of the  $SW\frac{1}{4}$  of Section 23;  
 thence Southerly to the SE corner of the  $W\frac{1}{2}$  of the  $NW\frac{1}{4}$  of Section 26,  
 T. 32 S., R. 32 E., M.D.M.;  
 thence Westerly to the  $W\frac{1}{2}$  corner of said Section 26;  
 thence Southerly to the SW corner of said Section 26;  
 thence Southerly to the SW corner of the  $NW\frac{1}{4}$  of the  $NW\frac{1}{4}$  of Section  
 35, T. 32 S., R. 32 E., M.D.M.;  
 thence Easterly to the NW corner of the  $SE\frac{1}{4}$  of the  $NE\frac{1}{4}$  of Section 35,  
 T. 32 S., R. 32 E., M.D.M.;  
 thence Southerly to the SW corner of said  $SE\frac{1}{4}$  of the  $NE\frac{1}{4}$  of Section 35;  
 thence Easterly to the  $E\frac{1}{4}$  corner of said Section 35;  
 thence Easterly to the center  $\frac{1}{4}$  corner of Section 36, T. 32 S.,  
 R. 32 E., M.D.M.;  
 thence Southerly to the SE corner of the  $NE\frac{1}{4}$  of the  $SW\frac{1}{4}$  of said Section 36;  
 thence Easterly to the NE corner of the  $SE\frac{1}{4}$  of the  $SE\frac{1}{4}$  of said Section 36;  
 thence Easterly to the NE corner of the  $S\frac{1}{2}$  of the  $SE\frac{1}{4}$  of Section 31.  
 T. 32 S., R. 33 E., M.D.M.;  
 thence Southerly to the SE corner of said Section 31;  
 thence Easterly to the  $N\frac{1}{2}$  corner of Section 34, T. 12 N., R. 15 W.,  
 S.B.M.;  
 thence Southerly to the NW corner of the  $SW\frac{1}{4}$  of the  $NE\frac{1}{4}$  of said  
 Section 34;  
 thence Easterly to the NE corner of said  $SW\frac{1}{4}$  of the  $NE\frac{1}{4}$  of Section 34;  
 thence Southerly to the SE corner of said  $SW\frac{1}{4}$  of the  $NE\frac{1}{4}$  of Section 34;  
 thence Easterly to the  $E\frac{1}{4}$  corner of said Section 34;

thence Southerly to the NW corner of the S $\frac{1}{2}$  of the SW $\frac{1}{4}$  of Section 35,  
T. 12 N., R. 15 W., S.B.M.;

thence Easterly to the NE corner of said S $\frac{1}{2}$  of the SW $\frac{1}{4}$  of Section 35;  
thence Southerly to the S $\frac{1}{2}$  corner of said Section 35;

thence Easterly to the NW corner of the NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 2,  
T. 11 N., R. 15 W., S.B.M.;

thence Southerly to the SW corner of said NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 2;

thence Easterly to the SE corner of said NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 2;

thence Easterly to the SE corner of the NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 1,  
T. 11 N., R. 15 W., S.B.M.;

thence Northerly to the NE corner of said NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 1;

thence Easterly to the NW corner of the NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said  
Section 1;

thence Southerly to the NE corner of the SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said  
Section 1;

thence Westerly to the NW corner of said SW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of section 1;

thence Southerly to the S $\frac{1}{2}$  corner of said Section 1;

thence Southerly to the SE corner of the NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 12,  
T. 11 N., R. 15 W., S.B.M.;

thence Westerly to the SW corner of said NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 12;

thence Southerly to the SE corner of the W $\frac{1}{2}$  of the SW $\frac{1}{4}$  of said Section 12;

thence Westerly to the SW corner of said Section 12,

thence Southerly to the NE corner of the SE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 14,

T. 11 N., R. 15 W., S. B.M.

thence Westerly to the NW corner of said SE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 14;

thence Southerly to the SW corner of said SE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 14,  
thence Westerly to the SE corner of the SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said  
Section 14;

thence Northerly to the NE corner of said SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 14;  
thence Westerly to the NW corner of said SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 14;  
thence Southerly to the NE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said  
Section 14;

thence Easterly to the NE corner of the S $\frac{1}{2}$  of the SE $\frac{1}{4}$  of said Section 14;  
thence Easterly to the NE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 13,  
T. 11 N., R. 15 W., S.B.M.;

thence Northerly to the SW corner of the NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said Section 13;  
thence Easterly to the SE corner of said NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 13;  
thence Northerly to the N $\frac{1}{2}$  corner of said Section 13;  
thence Northerly to the center  $\frac{1}{4}$  corner of Section 12, T. 11 N., R. 15 W.,  
S.B.M.;

thence Easterly to the E $\frac{1}{2}$  corner of said Section 12;  
thence Northerly to the SW corner of the NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 7,  
T. 11 N., R. 14 W., S.B.M.;

thence Easterly to the SE corner of said NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 7;  
thence Southerly to the SW corner of the SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said  
Section 7;

thence Easterly to the S $\frac{1}{2}$  corner of Section 7;  
thence Northerly to the NW corner of the S $\frac{1}{2}$  of the SE $\frac{1}{4}$  of said  
Section 7;

thence Easterly to the NE corner of said S $\frac{1}{2}$  of the SE $\frac{1}{4}$  of Section 7;

thence Northerly to the NE corner of said Section 7;  
thence Easterly to the SE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 5,  
T. 11 N., R. 14 W., S.B.M.;

thence Northerly to the SW corner of the NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said  
Section 5;  
thence Easterly to the SE corner of said NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 5;  
thence Northerly to the N $\frac{1}{4}$  corner of said Section 5;  
thence Northerly to the center  $\frac{1}{4}$  corner of Section 32, T. 12 N.,  
R. 14 W., S.B.M.;

thence Westerly to the SW corner of the SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said  
Section 32;  
thence Northerly to the NW corner of said SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 32;  
thence Easterly to the NE corner of said SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 32;  
thence Northerly to the N $\frac{1}{4}$  corner of said Section 32;  
thence Easterly to the NW corner of the NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said  
Section 32;  
thence Southerly to the NW corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said  
Section 32;  
thence Easterly to the NE corner of said SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of  
Section 32;  
thence Southerly to the SE corner of said Section 32;  
thence Easterly to the SE corner of the W $\frac{1}{2}$  of the SW $\frac{1}{4}$  of  
Section 33, T. 12 N., R. 14 W., S.B.M.;

thence Northerly to the NE corner of said W $\frac{1}{2}$  of the SW $\frac{1}{4}$  of  
Section 33;

thence Easterly to the center  $\frac{1}{4}$  corner of said Section 33;  
thence Northerly to the SW corner of the NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said  
Section 33;  
thence Easterly to the  $\frac{1}{4}$  corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of  
Section 33;  
thence Northerly to the NE corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of  
Section 33;  
thence Easterly to the NE corner of said Section 33;  
thence Easterly to the SW corner of Section 32, T. 32 S., R. 34 E.,  
M.D.M.;  
thence Easterly to the N $\frac{1}{4}$  corner of Section 34, T. 12 N., R. 14 W.,  
S.B.M.  
thence Southerly to the SW corner of the NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said  
Section 34;  
thence Easterly to the SE corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section  
34;  
thence Northerly to the NE corner of said NW $\frac{1}{4}$  of the NE $\frac{1}{4}$  of  
Section 34;  
thence Easterly to the NE corner of said Section 34;  
thence Easterly to the SW corner of Section 33, T. 32 S. R. 34 E.,  
M.D.M. said SW corner being the point of beginning of this  
description.

Public Artesian Wells

	<u>WELL NUMBER</u>
Lester J. Anderson and Leatta H. Anderson	32S/33E - 30B1
Sara Adam and Esther Ashe	32S/33E - 22C1
Alverda Bessler and George Bessler	32S/33E - 26B1
Endelva Troy and Vincent J. Troy (successors in interest to Vance Brite & Hattie Brite)	32S/32E - 26B1
John Spoor Broome	32S/33E - 8B1
Haskell Brumett & Dwana H. Brumett	32S/33E - 22D1, 22D2
Morris Burton & Virginia Ellen Burton	32S/32E - 36A1
Gertrude D. Carroll	32S/32E - 26P1
Alice Cazacus Seeger	32S/33E - 19K2
Henry D. Church, Maxine Church, Edmond Fowler, Billie J. Fowler, Glen Killingsworth and Mildred Killingsworth, Marion Killingsworth and Dora Killingsworth	32S/33E - 19J2
Lewis A. Colvin and Nan L. Colvin	32S/32E - 25K2
Lewis H. Dye, Sr.	32S/33E - (29C1), 29C4
W. J. Ford and Rose B. Ford	32S/33E - 20P5
Lewis Foster and Dorothy Foster	32S/32E - 23H1, 23H2
Fred-Lite Blocks, Inc., a corporation	32 S/33E - 19H3
Kenneth Frederick	32S/32E - 23Q1
Robert B. Freeman, Jr. & Betty Lou Freeman	32S/33E - (22H1) (22H2)
Alvin Gary and Wilma J. Gary	32S/33E - 19R5
Domenico Giraudo aka Domenico Giraudo	32S/32E - 35G1, 35H1
Louis Goebel and Kathleen Goebel	32S/32E - 26G1, 26G2, 26H1
R. E. Grind and Helen Grind	32S/32E - 23Q3
Theodore H. Haun and Avis E. Haun	32S/33E - 19P1, 19P2, 19Q3, 30C1

where water rights adjudicated to a particular person in a particular case were developed on two (2) or more parcels if any such transfer of water rights involves only the parcels on which the total water right quantities were developed.

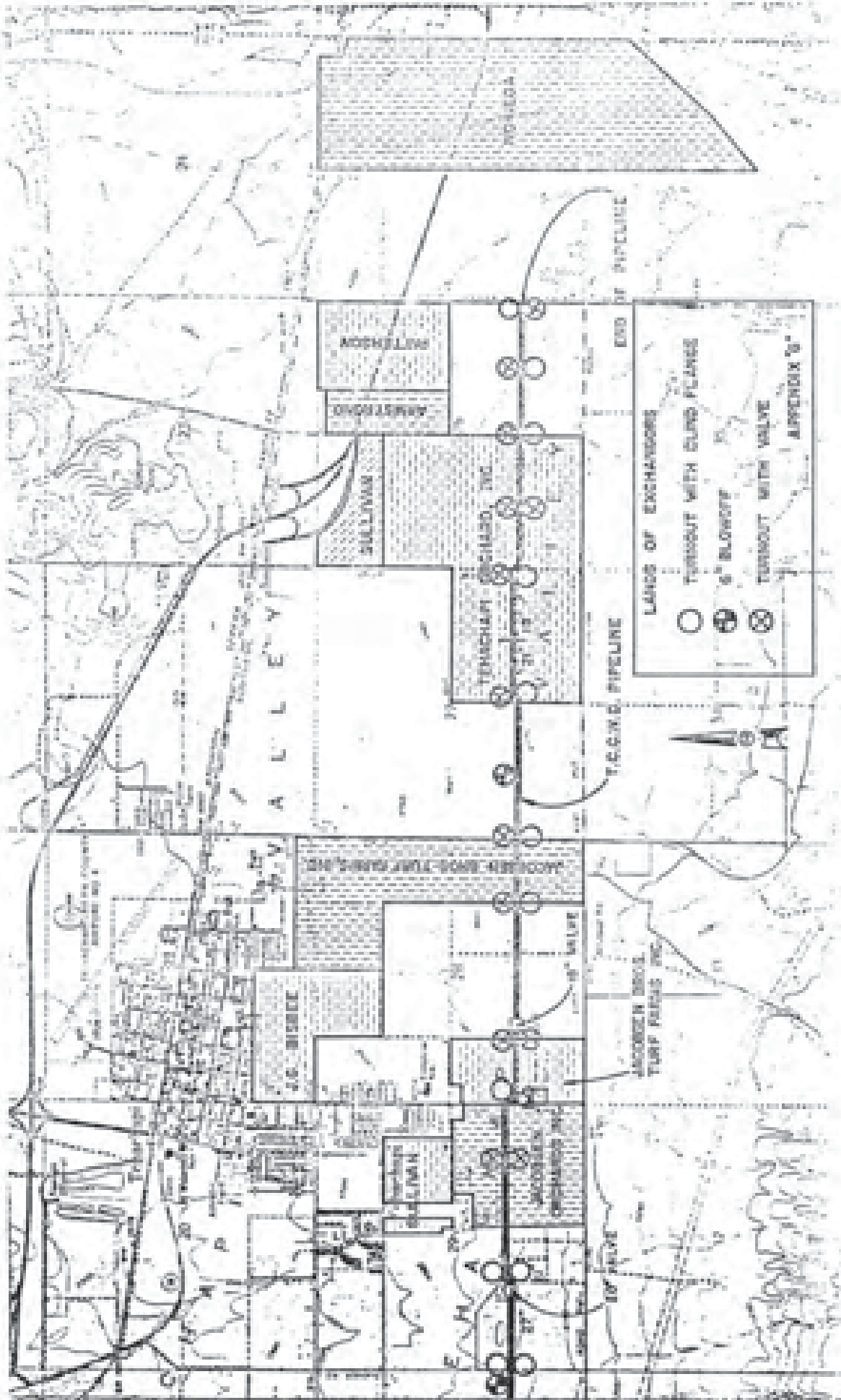
PARTY

WELL NUMBER

Dessie Smith	32S, 33E - 2904
Daniel J. Sternad & Edna E. Sternad	11N/15W - 1J1
Gideon Stroyle & Marie Stroyle	32S/33E - 19Q2
William D. Sydnor aka William D. Snyder and Ann B. Sydnor aka Ann B. Snyder	32S/32E - 26A1
Tehachapi Unified School District	32S/34E - 30E1
Richard Van Burkleo	32S/33E - 19Q4
Dick Vander Hayden & Opal Vander Hayden	32S/32E - 12G1
Pete Vukich & Jewell Vukich	32S/32E - 13M1
Jerome Warner & Laura Warner	32S/33E - 30B3
Harold Velden & Emma Velden aka Erna Velden	32S/32E - 26Q2, 26Q4
H. E. White & Hildred White	32S/33E - 20N5
Edward W. Wiggins & Mary Ellen Wiggins	32S/33E - 19R4
Lora M. Wood	32S/32E - 23A1, 23A2

( ) Well Destroyed





APPENDIX "6"

Section 3. Agricultural water replacing ground water rights to pay applicable M&I rate. Ground water rights in the three (3) principal ground water basins within District have been adjudicated in three (3) separate actions.<sup>3</sup> Certain of these rights originated from water production for agricultural use. Agricultural rates established by Section 1 of this part are established at a lower price than M&I rates because of a recognition of the cost of water that such users can bear, and the role that agriculture plays in the economy of the District. In relation to the cost of serving agricultural and M&I water, such rates are set lower than M&I rates. By reason of the differential in rates between water for agricultural use and M&I use, if the following restrictions were not imposed, there would be an economic incentive for owners under said judgments of ground water rights developed for agricultural use ("such rights" hereafter in this section) to sell, license or lease or otherwise dispose of the same for M&I uses on parcels of land other than those on which such rights were developed, and to purchase replacement water from District at the agricultural rate to the economic disadvantage of other water users and all property taxpayers within District. In order to achieve equity the following provisions are necessary and desirable. In the event that any such rights shall have been or shall be transferred (whether by sale, lease, license or assignment or whatever), either in perpetuity or for a limited period of time, for any use on a parcel or parcels of land other than where such rights were developed, to the extent of any such quantity so transferred, and for the period of time involved, the first imported water ordered for use on that property where such rights were developed in any calendar year shall be deemed ordered for M&I use, regardless of the actual use. In such event the water user shall be required to pay the applicable M&I rate. This section shall apply even though the transferee may exercise such transferred water rights for agricultural use, as he may in turn dispose of them for M&I uses, and the Board of Directors of District hereby finds that the administrative burden on such tracing would impose complex problems of administration and determination.

This section shall be applicable to any transfer that may have occurred subsequent to the date of the entry of the judgment in the particular case, other than pursuant to any written agreement entered into prior to such entry. This section shall not apply

3 Tehachapi-Cummings County Water District v. Frank Armstrong, et al., Kern County Superior Court No. 97209 (Cummings Basin); Tehachapi-Cummings County Water District v. City of Tehachapi, a municipal corporation, et al., Kern County Superior Court No. 97210 (Tehachapi Basin); and Tehachapi-Cummings County Water District v. Irving P. Austin, et al., Kern County Superior Court No. 97211 (Brite Basin).

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Resistor, Court of Appeal, Fifth Appellate District, State of California. The above-entitled cause having been fully argued, admitted and considered, it is ordered by the Court that the judgment of the Superior Court in and for the County of Kern be and the same is hereby reversed insofar as it declares that appellant is limited to pumping 300-acre feet per year for and on its land within the basin. The action is remanded to the trial court with directions to declare that appellant's right to pump water from the Cummings Basin is correlative and equal to the water rights of the other overlying owners in the basin.

MARTIN E. WHELAN, JR., INC.,  
Attorney at Law  
7624 S. Painter Avenue  
Whittier, California 90608  
(213) 698-8365

Attorney for Plaintiff,  
TEHACHAPI-CUMMINGS COUNTY  
WATER DISTRICT

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

TEHACHAPI-CUMMINGS COUNTY WATER  
DISTRICT, a body corporate and  
politic,

Plaintiff,

Vs.

FRANK ARMSTRONG; HEYLIS ARMSTRONG;  
CHESTER ASHFORD; RUBY TERRY ASHFORD;  
GERTRUDE E. AUSTIN; IRVING P. AUSTIN;  
MARY BANDUCCI; ROBERT C. BAUMBACH;  
AUDREY JEAN BEEFELD; MARCEL  
BERSATENE; MARGUERITE BERSATENE;  
BENQUET CALIFORNIA, INC. a corpora-  
tion; D. C. BURNS; CALIFORNIA  
CORRECTIONAL INSTITUTION AT TEHACHA-  
PI; DEPARTMENT OF CORRECTIONS OF THE  
YOUTH AND ADULT CORRECTIONS AGENCY  
OF THE STATE OF CALIFORNIA; STATE OF  
CALIFORNIA; YOUTH AND ADULT CORREC-  
TIONS AGENCY OF THE STATE OF  
CALIFORNIA; DON I. CARROLL; OWEN L.  
CARTER; VIOLA B. CARTER; CHARLES E.  
CHRISTOPHER; WINNIE CHRISTOPHER;  
CORPORATION OF AMERICA, a corpora-  
tion, as Trustee under deed of  
trust; DOROTHY COYNER; EDWARD J.  
CUMMINGS; MILDRED E. CUMMINGS;  
CUMMINGS RANCH CORP., a corporation;  
MARION A. CUMMINS; EAST KERN ESCROW  
CO., a corporation, as Trustee under  
deed of trust; ELLSWORTH FARMS, a  
corporation; ELLSWORTH FARMS, a  
partnership; SOLA F. ELLSWORTH;  
REE C. ELLSWORTH; FEDERAL LAND BANK  
OF BERKELEY, a corporation, as  
Trustee under deeds of trust; FIRE-  
MAN'S LAND INVESTMENT GROUP, a  
partnership; FIRST AMERICAN TITLE  
COMPANY, a corporation, as Trustee  
under deed of trust; JOSE L. GERMON;  
HELLIE GIUNTINI as Administratrix of

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VERA K. GIBSON, CLERK  
KERN COUNTY, CALIF.  
BY *[Signature]* DEPUTY

72 MAR 7 PM 1:05  
JULIA K. GIBSON, CLERK  
KERN COUNTY, CALIF.  
BY *[Signature]* DEPUTY

NO. 97209

JUDGMENT

Entered 239

Book 277  
Page 21  
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(cont. from first page) the basin as are consistent with the views expressed in this opinion. In all other respects the judgment is affirmed. Appellant to recover costs on appeal." filed October 7, 1979, Vera K. Gibson, Clark, Kern County, California, by L. Kaeling, Deputy.

1 the Estate of ISOLA MARCHETTI;  
2 CLYDA F. GUTHRIE; DELMAR W. GUTHRIE;  
3 JOHN R. HAYCOX; HERITAGE INVESTMENT  
4 CORP., a corporation, as Trustee  
5 under deed of trust; MABEL G. HOCKER;  
6 EVERETT D. KIEFER; VADA B. KIEFER;  
7 KATHLEEN KURLAND; WALLACE R. LA  
8 FLAMME; BETTE LAMB aka ELIZABETH  
9 LOUISE LAMB; ELIZABETH LAMB as  
10 Executrix of the Estate of J. O.  
11 LAMB, deceased; HAZEL A. MERRITT;  
12 ELSIE METTLER; EUGENE METTLER;  
13 METTLER & ARMSTRONG, a co-partnership;  
14 WADE D. MIDKIFF; MARY ALICE MONROE;  
15 ROBERT C. MONROS; MOUNTAIN VALLEY  
16 FARMS, a co-partnership; EVA LUCILLE  
17 NYLANDER aka E. L. NYLANDER; RALPH W.  
18 NYLANDER; VIRGINIA BAKER PALANCE;  
19 WALTER JACK PALANCE; DOROTHY PORTER;  
20 WILLIAM PORTER; JEAN PREL; SAN MARINO  
21 ESCROW COMPANY, a corporation, as  
22 Trustee under deed of trust; BERNARD  
23 SASIA; ETHEL E. SCHMIDT; SECURITY  
24 FIRST NATIONAL BANK, a corporation,  
25 as Trustee under deed of trust; BILLIE  
26 JEAN SIEMEN; SHERMAN PAUL SIEMEN;  
27 VIRGINIA HUNTER SMITH; H. M. SPRINKLE  
28 aka NILO SPRINKLE; W. F. SPRINKLE, JR.;  
29 STABEN LAND COMPANY; FRANK PAUL STABEN;  
30 JEANNE P. STABEN; WILLIAM PAUL STABEN,  
31 JR.; WILLIAM PAUL STABEN, SR.; STERN  
32 REALTY COMPANY; TENACHAPI UNIFIED SCHOOL  
DISTRICT; TITLE INSURANCE AND TRUST  
COMPANY, a corporation, as Trustee under  
deed of trust; WESTERN MUTUAL CORPOR-  
ATION, a corporation, as Trustee under  
deed of trust; WILSHIRE ESCROW CO., a  
corporation, as Trustee under deed of  
trust.

24 The above-entitled action duly and regularly came on for  
25 trial for argument as to certain legal issues on December 18,  
26 1970, at 9:30 o'clock A.M., in Department 3 of the above-entitled  
27 Court, before the Honorable Jay R. Ballantyne, Judge specially  
28 assigned, having been duly transferred thereto from Department 1  
29 of said Court; whereupon, after argument on certain legal issues,  
30 the case was duly and regularly continued for further trial to  
31 March 1, 1971, at 9:30 o'clock A.M., in Department 1 of the above-  
32 entitled Court, on which date the same was transferred from said

1 Department 1 to Department 4, the said Honorable Jay R. Ballantyne,  
2 Judge presiding. On said date certain limited evidence was taken,  
3 in addition to the disposition of certain motions, whereupon the  
4 matter was further continued for the remainder of trial to June 14,  
5 1971, at 10:00 o'clock A.M., in Department 1 of the above-entitled  
6 Court. On that date and time the matter was duly and regularly  
7 transferred to Department 2, the Honorable Jay R. Ballantyne,  
8 Judge presiding. Plaintiff was represented through its attorneys,  
9 MARTIN E. WHEELAN, JR., INC. and MARTIN E. WHEELAN, JR. Certain of  
10 the defendants were represented through their respective attorneys  
11 as shown on the daily records prepared by the Clerk. The defaults  
12 of all defendants who did not enter appearances in the action had  
13 been entered prior to the initial commencement of trial. Notice  
14 of trial was properly and timely given. In addition to the evi-  
15 dence taken on March 1, 1971, evidence oral and documentary was  
16 received on June 14, 15, 16, 17, 18, 21 and 22, 1971. After  
17 final argument, the Court ordered points and authorities, all of  
18 which were submitted.

19 In connection with the following Judgment, the follow-  
20 ing terms, words, phrases and clauses are used by the Court with  
21 the following meanings:

22 "Artificial Replenishment" is the replenishment of a basin  
23 achieved through the spreading of imported water which percolates  
24 into said basin.

25 "Base Water Right" is the highest continuous extractions  
26 of water by a party from the Cummings Basin for a beneficial use  
27 in any period of five consecutive years after the commencement of  
28 overdraft in Cummings Basin as to which there has been no cessation  
29 of use by that party during any subsequent period of five consecu-  
30 tive years, both prior to the commencement of this action. As  
31 employed in the above definition, the words "extractions of water  
32 by a party" and "cessation of use by that party" include such

1 extractions and cessations by any predecessor or predecessors in  
2 interest.

3 "Calendar Year" is the twelve month period commencing  
4 January 1 of each year and ending December 31 of each year.

5 "Cummings Basin" is that certain ground water basin under-  
6 lying "Cummings Basin Area".

7 "Cummings Basin Area" consists of the territory within the  
8 boundaries set forth in Appendix "1" to this Judgment, made a  
9 part hereof by reference.

10 "Cummings Basin Watershed" is that territory constituting  
11 the watershed of Cummings Basin and is that territory within the  
12 boundaries set forth in Appendix "2" to this Judgment, made a  
13 part hereof by reference.

14 "Extraction", "Extractions", "Extracting", "Extracted", and  
15 other variations of the same noun and verb, mean pumping, taking  
16 or withdrawing ground water by any manner or means whatsoever  
17 from Cummings Basin.

18 "Imported Water" means water which may be brought into  
19 Cummings Basin area from a non-tributary source by the Plaintiff  
20 DISTRICT.

21 "Natural Replenishment" means and includes all processes  
22 other than "Artificial Replenishment" by which water may become a  
23 part of the ground water supply of Cummings Basin, including return  
24 from applied waters.

25 "Natural Safe Yield" is the maximum quantity of ground  
26 water, not in excess of the long term average annual Natural  
27 Replenishment, which may be extracted annually from Cummings Basin  
28 without eventual depletion thereof or without otherwise causing  
29 eventual permanent damage to Cummings Basin as a source of ground  
30 water for beneficial use, said maximum quantity being determined  
31 without reference to such Artificial Replenishment of Cummings  
32 Basin as might be accomplished from time to time.

1        "Overdraft" is that condition of a ground water basin  
 2 resulting from extractions in any given annual period or periods  
 3 in excess of the long term average annual Natural Replenishment,  
 4 or in excess of that lesser quantity which may be extracted  
 5 annually without otherwise causing eventual permanent damage to  
 6 the basin.

7        "Party" means a party to this action. Whenever the term  
 8 "party" is used in connection with a quantitative water right, or  
 9 any quantitative right, privilege or obligation, it shall be  
 10 deemed to refer collectively to those parties to whom are attri-  
 11 buted a Base Water Right in this Judgment.

12        "Person" or "persons" include individuals, partnerships,  
 13 associations, governmental agencies and corporations, and any  
 14 and all types of entities.

15        "Surface Diversion" is a diversion of waters flowing on  
 16 the surface within Cummings Basin Watershed (including Cummings  
 17 Basin Area), which diversion is made principally for use of the  
 18 water or storage for future use, and not primarily for some other  
 19 purpose, e.g., flood control, drainage. "Use" includes impounding  
 20 of water for aesthetic or recreational purposes.

21        "Water" includes only non-saline water, which is that having  
 22 less than 1,000 parts of chlorides to 1,000,000 parts of water.

23        "Water Year" is the 12 month period commencing October 1 of  
 24 each year and ending September 30th of the following year.

25        In those instances where any of the above defined words,  
 26 terms, phrases or clauses are utilized in the definition of any  
 27 of the other above defined words, terms, phrases and clauses,  
 28 such use is with the same meaning as is above set forth.

29        The Court having made its Findings of Fact and Conclu-  
 30 sions of Law herein:

31        NOW, THEREFORE, IT IS ORDERED, DECLARED, ADJUDGED

32        X X X X X

1 AND DECREED AS FOLLOWS:

2 1. Declaration and Determination of Water Rights of  
3 Parties\*

4 Each party whose name is hereinafter set forth in  
5 the tabulation at the end of paragraph 1 of this Judgment and  
6 after whose name there appears under the column "Base Water Right"  
7 a figure, is the owner of and has the right annually to extract  
8 ground water from Cummings Basin for beneficial use in the quan-  
9 tity in acre-feet so set forth after that party's name under said  
10 column "Base Water Right". Wherever in that tabulation there  
11 appears the name of a party in parenthesis after the name of  
12 another party, the first such party has an interest in the Base  
13 Water Right of the other party of the nature, <sup>if any,</sup> listed within said  
14 parenthesis. All of the rights listed thereon are of the same  
15 legal force and effect and are without priority with reference  
16 to each other, except as hereinafter specifically provided. They  
17 are subject in any event to (i) subsequent curtailment in the  
18 exercise of the continuing jurisdiction of the court hereinafter  
19 provided, and (ii) all of the other provisions of this Judgment  
20 hereinafter provided. No party to this action is the owner of  
21 any right to extract ground water from Cummings Basin, except as  
22 set forth in the tabulation following this paragraph 1 of this  
23 Judgment, except insofar as any such party may be the tenant of  
24 any other party, have an interest under a Deed of Trust, or  
25 establish rights as a transferee. No party to this action has any  
26 right to export outside of Cummings Basin Area any ground water  
27 extracted from that basin or to export outside the area of  
28 Cummings Basin Watershed any surface water hereafter diverted from  
29 within Cummings Basin Watershed. Except to the extent of surface  
30 diversions of water within the Cummings Basin Watershed having  
31 \*Headings in this Judgment are for purposes of reference and the  
32 language of said headings do not constitute, other than for such  
purpose, a portion of this Judgment.



1 been made as of the water year preceding commencement of this  
 2 action, or as may be permitted pursuant to subsequent order of  
 3 Court under its continuing jurisdiction, no party to this action  
 4 has any right to divert surface waters within Cummings Basin  
 5 Watershed.

Name of Party	Base Water Right (in acre-feet)
8 Chester Ashford and Ruby Terry Ashford, 9 Mountain Valley Farms	454
10 Robert C. Saumbach	203
11 Audrey Jean Benefiel, Staben Land Company, 12 Frank Paul Staben, Jeanne P. Staben, William 13 Paul Staben, Jr., William Paul Staben, Sr. (each as to an undivided 1/5th interest)	256
14 California Correctional Institution at 15 Tehachapi, Department of Corrections of the 16 Youth and Adult Corrections Agency of the 17 State of California, Youth and Adult Corrections 18 Agency of the State of California, State of 19 California	308
16 Viola B. Carter and Owen L. Carter, joint tenants as 17 to an undivided 25% interest; Mabel G. Hocker, 18 Hazel A. Merritt, Ethel E. Schmidt, each an 19 undivided 25% interest	300
19 Edward J. Cummings and Mildred E. Cummings, 20 Cummings Ranch Corp.	268
21 Nellie Giuntini as Administratrix of the 22 Estate of Isola Marchetti	80
23 Eugene Nettler and Elsie Nettler	503
24 Robert C. Monroe and Mary Alice Monroe 25 (Successor in Interest to Irving P. Austin 26 and Gertrude E. Austin)	435
26 Robert C. Monroe and Mary Alice Monroe 27 (Successor in Interest to Gertrude Stowell 28 and Nellie Stowell)	47
28 Ralph W. Nylander and Eva Lucille Nylander 29 aka R. L. Nylander	145
30 Walter Jack Palance	71
31 Walter Jack Palance (Successor in Interest 32 to Charles E. Christopher and Winnie Christopher)	298

1	William Porter and Dorothy Porter	477
2	Jean Prel	609
3	Virginia Hunter Smith	617
4	H. W. Sprinkle aka Milo Sprinkle, W. F. Sprinkle, Jr.	111
5		
6	(DOMESTIC WELLS)	
7	Mary Banducci	3
8	John L. Germon	3
9	Robert C. Monroe and Mary Alice Monroe (Successor in Interest to Dorothy May Lunt)	3
10		
11	Tehachapi Unified School District	3
12		

13                   2. Parties Enjoined as to Surface Diversions and Exports

14                   Each party (other than the California Correctional  
15 Institute at Tehachapi, Department of Corrections of the Youth and  
16 Adult Corrections Agency of the State of California, Youth and  
17 Adult Corrections Agency of the State of California, and the State  
18 of California) and the officials, agents and employees from time  
19 to time of said parties listed in the above parentheses, are  
20 enjoined and restrained from hereafter: exporting outside of  
21 Cummings Basin Area any ground water extracted from that basin;  
22 from hereafter making any diversions of surface waters within  
23 Cummings Basin Watershed, except to the extent of diversions having  
24 been made by that party as of the water year preceding commencement  
25 of this action; and as to such parties last referred to, from here-  
26 after exporting outside of the area of Cummings Basin Watershed  
27 any surface waters diverted from within Cummings Basin Watershed.

28                   3. Court Retains Continuing Jurisdiction/Physical Solution

29                   The Court retains continuing jurisdiction for all pur-  
30 poses including but not limited to: the imposition of a physical  
31 solution in the Cummings Basin, including a restriction on ground  
32 water pumping to quantities which will not exceed the safe yield

1 from time to time of Cummings Basin, 4,099 acre-feet per year;  
 2 enjoining extractions of ground water from Cummings Basin except  
 3 to the extent of the parties' rights proportional to the safe  
 4 yield of Cummings Basin from time to time and except as may be  
 5 provided under any physical solution adopted pursuant to said  
 6 continuing jurisdiction; expand, amend and alter the powers,  
 7 duties and responsibilities of the Watermaster hereafter set  
 8 forth; and determining any and all other matters which might become  
 9 material under the Judgment.

10 4. Inter se Adjudication

11 The provisions of this Judgment constitute an inter se  
 12 adjudication with respect to the rights of the parties.

13 5. Rights of Plaintiff DISTRICT

14 Plaintiff DISTRICT is an interested party in all matters  
 15 subject to the continuing jurisdiction of this Court. Nothing in  
 16 this Judgment contained shall constitute a determination or  
 17 adjudication which will foreclose the Plaintiff DISTRICT from  
 18 exercising such rights, powers and prerogatives as it may now  
 19 have or may hereafter have by reason of provisions of law. Nothing  
 20 in this Judgment contained shall be deemed a determination whether  
 21 the Plaintiff or any other party will or will not have any rights  
 22 in any return flow from water subsequently imported, which matter  
 23 shall be within the continuing jurisdiction of the Court.

24 6. New Pumpers

25 Persons who may later be found to be, or later commence,  
 26 pumping within Cummings Basin may be added to this Judgment upon  
 27 such stipulation with the Watermaster as may be approved by the  
 28 Court upon prior thirty (30) days written notice of the date of  
 29 hearing to the parties.

30 7. Transfer of Rights - Domestic Wells

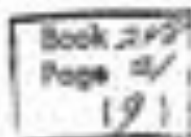
31 With regard to those parties listed in paragraph 1 under  
 32 the tabulation of water rights as having a domestic well and three

Approved as to form:

C.B. RENjr.

9.

J.A.B.



1 (3) acre-feet of Base Water Rights with respect thereto, said Base  
 2 Water Right shall be transferable only in connection with a  
 3 transfer of the property on which the right was developed. Twenty  
 4 (20) acre-feet of the Base Water Right of the Estate of Marchetti  
 5 (Nellie Giuntini as Administratrix of that estate) shall not be  
 6 pumped for use on other than the following property: the Northeast  
 7 quarter of Section 19 and the Northwest quarter of Section 20,  
 8 Township 32 South, Range 12 East, in Cummings Basin Area.

9 8. Watermaster - Powers, etc.

10 The Plaintiff, TERACHAPI-CUMMINGS COUNTY WATER DISTRICT,  
 11 is hereby appointed as Watermaster for the Court and is given the  
 12 following powers, duties and responsibilities:

- 13 (a) to establish written rules, subject to Court  
 14 approval on thirty (30) days notice to the  
 15 parties for reports by the parties of any  
 16 and all data useful to the monitoring of  
 17 ground water production by the parties, and  
 18 the keeping and furnishing of records to the  
 19 Watermaster by the parties pertaining thereto;
- 20 (b) to file written reports with the Court  
 21 annually, and serve upon the parties, no  
 22 later than four (4) months after the end of  
 23 each annual period after this judgment be-  
 24 comes final (subject to reserved jurisdic-  
 25 tion) reporting on the annual ground water  
 26 production of the parties as determined by  
 27 the Watermaster (excepting only domestic well  
 28 usage) and any alleged violations of the  
 29 injunctions contained in this judgment.

30 The parties are hereby ordered to comply with such  
 31 rules.

32 X X X X X

Approved as to form:

C.S.

NEWJ.F.

10.

J.R.B.

Book 247
Page 21
(10)

9. Judgment Binding on Successors

This Judgment and the provisions hereof are all applicable to and binding upon not only the parties hereto but as well upon their respective heirs, executors, administrators, successors, assigns, lessees, licensees and to the agents, employees and attorneys in fact of any such person having actual or constructive notice of said Judgment or of this action from the date of its filing. The injunctive provisions herein contained run equally against all such persons.

10. Costs

No party shall recover its costs herein as against any other party.

The Clerk shall enter this judgment forthwith.

DATED: Feb. 25, 1972

*Jay R. Ballentine*  
Judge of the Superior Court

Book 243  
Page 21  
1/1

All those portions of T.32 S., R.32 E., and T. 32 S., R.31 E., M.D.M.; and T.12 N., R.16 W., and T.11 N., R.16 W., S.B.W., Kern County, California, bounded as follows:

Beginning at the Southeast corner of Section 20, T.32 S., R.32 E., M.D.M.; thence westerly to the Southwest corner of the E1/2 of the Southeast 1/4 of said Section 20, thence northerly to the Northwest corner of said E1/2 of the Southeast 1/4 of Section 20; thence easterly to the E1/4 corner of said Section 20; thence northerly to the Northeast corner of said Section 20; thence westerly to the Southeast corner of the Southwest 1/4 of the Southeast 1/4 of Section 17, T.32 S., R.32 E., M.D.M.; thence northerly to the Northeast corner of said Southwest 1/4 of the Southeast 1/4 of Section 17; thence westerly to the Northwest corner of said Southwest 1/4 of the Southeast 1/4 of Section 17; thence northerly to the center 1/4 corner of said Section 17; thence westerly to the Southeast corner of the Southwest 1/4 of the Northwest 1/4 of said Section 17; thence northerly to the Northeast corner of said Southwest 1/4 of the Northwest 1/4 of Section 17; thence westerly to the Northwest corner of said Southwest 1/4 of the Northwest 1/4 of Section 17; thence westerly to the Southwest corner of the Northeast 1/4 of the Northeast 1/4 of Section 18, T.32 S., R.32 E., M.D.M.; thence northerly to the Northwest corner of said Northeast 1/4 of the Northeast 1/4 of Section 18; thence westerly to the South 1/4 corner of Section 7, T.32 S., R.32 E., M.D.M.; thence northerly

to the Southeast corner of the Northeast  $1/4$  of the Southwest  $1/4$  of said Section 7; thence westerly to the Southwest corner of said Northeast  $1/4$  of the Southwest  $1/4$  of Section 7; thence northerly to the Northwest corner of said Northeast  $1/4$  of the Southwest  $1/4$  of Section 7; thence westerly to the West  $1/4$  corner of said Section 7; thence southerly to the Southwest corner of said Section 7; thence southerly to the Southwest corner of the North  $1/2$  of the Northwest  $1/4$  of Section 18, T.32 S., R.32 E., M.D.M.; thence easterly to the Southeast corner of said North  $1/2$  of the Northwest  $1/4$  of Section 18; thence southerly to the center  $1/4$  corner of said Section 18; thence westerly to the West  $1/4$  corner of said Section 18; thence southerly to the Northeast corner of the Southeast  $1/4$  of the Southeast  $1/4$  of Section 13, T.32 S., R.31 E., M.D.M.; thence westerly to the Northwest corner of said Southeast  $1/4$  of the Southeast  $1/4$  of Section 13; thence southerly to the Southwest corner of said Southeast  $1/4$  of the Southeast  $1/4$  of Section 13; thence southerly to the Southwest corner of the Northeast  $1/4$  of the Northeast  $1/4$  of Section 24, T.32 S., R.31 E., M.D.M.; thence westerly to the Southwest corner of the Northwest  $1/4$  of the Northwest  $1/4$  of said Section 24; thence southerly to the West  $1/4$  corner of said Section 24; thence westerly to the Southeast corner of the Southwest  $1/4$  of the Northeast  $1/4$  of Section 23, T.32 S., R.31 E., M.D.M.; thence northerly to the Northeast corner of said Southwest  $1/4$  of the Northeast  $1/4$  of Section 23; thence westerly to the Northwest corner of said Southwest  $1/4$  of the Northeast  $1/4$  of Section 23; thence southerly to the center  $1/4$  corner of said Section 23; thence westerly to

the West 1/4 corner of said Section 23; thence southerly to the Northeast corner of the Southeast 1/4 of the Southeast 1/4 of Section 22, T.32 S., R.31 E., M.D.M.; thence westerly to the Northwest corner of said Southeast 1/4 of the Southeast 1/4 of Section 22; thence southerly to the Southwest corner of said Southeast 1/4 of the Southeast 1/4 of Section 22; thence southerly to the Southwest corner of the East 1/2 of the East 1/2 of Section 27, T.32 S., R.31 E., M.D.M.; thence southerly to the Southeast corner of the Northwest 1/4 of the Northeast 1/4 of Section 34, T.32 S., R.31 E., M.D.M.; thence westerly to the Southwest corner of said Northwest 1/4 of the Northeast 1/4 of Section 34; thence southerly to the South 1/4 corner of said Section 34; thence easterly to the Northeast corner of Section 25, T.12 N., R.17 W., S.B.M.; thence southerly to the West 1/4 corner of Section 31, T.12 N., R.16 W., S.B.M.; thence easterly parallel with the south line of said Section 31, a distance of 1320 feet; thence southerly parallel with the West line of said Section 31, a distance of 1640 feet; thence westerly parallel with the South line of said Section 31, a distance of 1320 feet to a point on the West line of said Section 31; thence southerly along the west line of said Section 31, a distance of 500 feet; thence easterly parallel with the South line of said Section 31, a distance of 500 feet; thence southerly parallel with the west line of said Section 31, a distance of 500 feet to a point on the south line of said Section 31; thence southerly parallel with the west line of Section 6, T.11 N., R.16 W., S.B.M., a distance of 1260 feet; thence easterly parallel with the south line of said Section 6, a distance of 885 feet to a point on the



east line of Lot VI of said Section 6, according to the Official Plat thereof approved by the Surveyor General April 29, 1881; thence southerly to the Southwest corner of Lot XV of said Section 6; thence easterly to the Southeast corner of said Lot XV; thence northerly to the Northeast corner of the South  $1/2$  of said Lot XV; thence easterly to the Northwest corner of the East  $1/2$  of the Southeast  $1/4$  of Lot XIV of said Section 6; thence northerly to the Northwest corner of the East  $1/2$  of the Southeast  $1/4$  of Lot IV of said Section 6; thence easterly to the Southeast corner of the  $N 1/2$  of Lot I of said Section 6; thence northerly to the Northeast corner of said Section 6; thence northerly to the Northwest corner of the South  $1/2$  of the Southwest  $1/4$  of Section 32, T.12 N., R.16 W., S.B.M.; thence easterly to the Northeast corner of said South  $1/2$  of the Southwest  $1/4$  of Section 32; thence northerly to the center  $1/4$  corner of said Section 32; thence easterly to the East  $1/4$  corner of said Section 32; thence easterly to the center  $1/4$  corner of Section 33, T.12 N., R.16 W., S.B.M.; thence southerly to the Northwest corner of the Southwest  $1/4$  of the Southeast  $1/4$  of said Section 33; thence easterly to the Northeast corner of said Southwest  $1/4$  of the Southeast  $1/4$  of Section 33; thence southerly to the Southeast corner of said Southwest  $1/4$  of the Southeast  $1/4$  of Section 33; thence easterly to the Southeast corner of said Section 33; thence southerly to the Southwest corner of the Northwest  $1/4$  of the Northwest  $1/4$  of Section 3, T.11 N., R.16 W., S.B.M.; thence easterly to the Southeast corner of said Northwest  $1/4$  of the Northwest  $1/4$  of Section 3; thence northerly to the Northeast

corner of said Northwest  $\frac{1}{4}$  of the Northwest  $\frac{1}{4}$  of Section 3; thence northerly to the Northwest corner of the Southeast  $\frac{1}{4}$  of the Southwest  $\frac{1}{4}$  of Section 34, T.12 N., R.16 W., S.B.M.; thence easterly to the Northeast corner of said Southeast  $\frac{1}{4}$  of the Southwest  $\frac{1}{4}$  of Section 34; thence northerly to the center  $\frac{1}{4}$  corner of said Section 34; thence easterly to the Southwest corner of the East  $\frac{1}{2}$  of the Northeast  $\frac{1}{4}$  of said Section 34; thence northerly to the Northwest corner of said East  $\frac{1}{2}$  of the Northeast  $\frac{1}{4}$  of Section 34; thence easterly to the Northeast corner of said Section 34; thence northerly to the Northeast corner of the Southeast  $\frac{1}{4}$  of the Southeast  $\frac{1}{4}$  of Section 32, T.32 S., R.32 E., M.D.M.; thence westerly to the Northwest corner of said Southeast  $\frac{1}{4}$  of the Southeast  $\frac{1}{4}$  of Section 32; thence northerly to the Northwest corner of the Northeast  $\frac{1}{4}$  of the Northeast  $\frac{1}{4}$  of said Section 32; thence easterly to the Northeast corner of said Section 32; thence northerly to the Southeast corner of Section 20, T.32 S., R.32 E., M.D.M., said Southeast corner being the point of beginning of this description.

All those portions of T. 32 S., R. 31 E., and T. 32 S., R. 32 E., M.D.M.; and T. 11 N., R. 16 W., T. 11 N., R. 17 W., T. 12 N., R. 16 W., and T. 12 N., R. 17 W., S.B.M., Kern County, California, bounded as follows:

Beginning at the center 1/4 corner of Section 16, T. 32 S., R. 32 E., M.D.M.; thence northerly to the N1/4 corner of said Section 16; thence westerly to the Northwest corner of said Section 16; thence westerly to the S1/4 corner of Section 8, T. 32 S., R. 32 E., M.D.M.; thence northerly to the center 1/4 corner of said Section 8; thence westerly to the W1/4 corner of said Section 8; thence westerly to the W1/4 corner of Section 7, T. 32 S., R. 32 E., M.D.M.; thence southerly to the Southwest corner of said Section 7; thence westerly to the N1/4 corner of Section 13, T. 32 S., R. 31 E., M.D.M.; thence southerly to the center 1/4 corner of said Section 13; thence westerly to the W1/4 corner of said Section 13; thence westerly to the W1/4 corner of Section 14, T. 32 S., R. 31 E., M.D.M.; thence southerly to the Southwest corner of said Section 14; thence westerly to the Northwest corner of Section 22, T. 32 S., R. 31 E., M.D.M.; thence westerly to the N1/4 corner of Section 21, T. 32 S., R. 31 E., M.D.M.; thence southerly to the S1/4 corner of said Section 21; thence easterly to the Southeast corner of said Section 21; thence southerly to the E1/4 corner of Section 28, T. 32 S., R. 31 E., M.D.M.; thence westerly to the center 1/4 corner of said Section 28; thence southerly to the S1/4 corner of said Section 28; thence southerly to the S1/4 corner of Section 33, T. 32 S., R. 31 E., M.D.M.; thence southerly to the Southwest

corner of Section 25, T. 12 N., R. 17 W., S.B.M.; thence easterly to the S1/4 corner of said Section 25; thence southerly to the center 1/4 corner of Section 36, T. 12 N., R. 17 W., S.B.M.; thence easterly to the E1/4 corner of said Section 36; thence southerly to the Southeast corner of said Section 36; thence westerly to the S1/4 corner of said Section 36; thence southerly to the center 1/4 corner of Section 1, T. 11 N., R. 17 W., S.B.M.; thence easterly to the E1/4 corner of said Section 1; thence southerly to the W1/4 corner of Section 7, T. 11 N., R. 16 W., S.B.M.; thence easterly to the E1/4 corner of said Section 7; thence easterly to the E1/4 corner of Section 8, T. 11 N., R. 16 W., S.B.M.; thence southerly to the Southeast corner of said Section 8; thence easterly to the W1/4 corner of Section 16, T. 11 N., R. 16 W., S.B.M.; thence southerly to the center 1/4 corner of said Section 16; thence easterly to the E1/4 corner of said Section 16; thence southerly to the Southeast corner of said Section 16; thence easterly to the S1/4 corner of Section 15, T. 11 N., R. 16 W., S.B.M.; thence northerly to the center 1/4 corner of said Section 15; thence easterly to the E1/4 corner of said Section 15; thence easterly to the E1/4 corner of Section 14, T. 11 N., R. 16 W., S.B.M.; thence easterly to the E1/4 corner of Section 13, T. 11 N., R. 16 W., S.B.M.; thence northerly to the Northeast corner of said Section 13; thence northerly to the E1/4 corner of Section 12, T. 11 N., R. 16 W., S.B.M.; thence westerly to the center 1/4 corner of said Section 12; thence northerly to the N1/4 corner of said Section 12; thence westerly to the Southeast corner of the W1/2 of the SW1/4 of Section 1, T. 11 N., R. 16 W., S.B.M.; thence northerly to the Southeast corner of the NW1/4 of the NW1/4 of said Section 1;

thence westerly to the Southwest corner of said NW1/4 of the NW1/4 of Section 1; thence northerly to the Northwest corner of said Section 1; thence westerly to the Southwest corner of the SE1/4 of the SE1/4 of Section 35, T. 12 N., R. 16 W., S.B.M.; thence northerly to the Northwest corner of said SE1/4 of the SE1/4 of Section 35; thence westerly to the Northeast corner of the SW1/4 of the SW1/4 of said Section 35; thence northerly to the Northeast corner of the NW1/4 of the NW1/4 of said Section 35; thence easterly to the S1/4 corner of Section 33, T. 32 S., R. 32 E., M.D.M.; thence northerly to the center 1/4 corner of said Section 33; thence westerly to the Southwest corner of the E1/2 of the NW1/4 of said Section 33; thence northerly to the Northwest corner of said E1/2 of the NW1/4 of Section 33; thence northerly to the Southeast corner of the NW1/4 of the NW1/4 of Section 28, T. 32 S., R. 32 E., M.D.M.; thence westerly to the Southwest corner of said NW1/4 of the NW1/4 of Section 28; thence northerly to the Northwest corner of said Section 28; thence northerly to the Northwest corner of Section 21, T. 32 S., R. 32 E., M.D.M.; thence easterly to the Southeast corner of the W1/2 of the SW1/4 of Section 16, T. 32 S., R. 32 E., M.D.M.; thence northerly to the Northeast corner of said W1/2 of the SW1/4 of Section 16; thence easterly to the center 1/4 corner of said Section 16, said center 1/4 corner being the point of beginning of this description.



1 (PROOF OF SERVICE BY MAIL - 1013a, 2015.5 C.C.P.)

2  
3 STATE OF CALIFORNIA

4 COUNTY OF LOS ANGELES

} ss.

5  
6 I am a citizen of the United States and a resident of the  
7 County aforesaid; I am over the age of eighteen years and not a  
8 party to the within action; my business address is 7624 South  
9 Painter Avenue, Whittier, California 90602. On December 29, 1971,  
10 I served the within proposed Judgment on the attorneys of record  
11 for the various parties herein and to the parties appearing pro  
12 per in said action, by placing a true copy thereof enclosed  
13 in a sealed envelope with postage thereon fully prepaid, in the  
14 United States mail, at Whittier, California, addressed as  
15 follows:

16 Richard Mednick, Esq.  
16641 Ventura Blvd.  
17 Encino, Ca 91316

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Bakersfield, Ca 93301

18 William Kuhn, Esq.  
19 P. O. Box 538  
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	Bakersfield, Ca 93301	Arcadia, Ca 91006
3	David Shane, Esq.	Hazel A. Merritt
4	6842 Van Nuys Blvd.	220 E. Duarte Road
	Van Nuys, Ca 91405	Arcadia, Ca 91006
5	Kenneth Byrum, Esq.	Viola B. Carter
6	1600 "W" Street	220 E. Duarte Road
	Bakersfield, Ca 93301	Arcadia, Ca 91006
7	Richard Hingate, Esq.	Ethel E. Schmidt
8	1901 Avenue of the Stars	220 E. Duarte Road
	Los Angeles, Ca 90067	Arcadia, Ca 91006
9	Anderson & Stronge	Jean Frel
10	1308 Chester Avenue	Star Route, Box 792
	Bakersfield, Ca 93301	Tehachapi, Ca 93561
11		Mary E. Sanducci
12		Star Route, Box 803
13		Tehachapi, Ca 93561

14 I certify under penalty of perjury that the foregoing is true  
 15 and correct.

16 EXECUTED ON December 29, 1971, at Whittier, California.

17  
 18   
 19 \_\_\_\_\_  
 20 Diana A. Robinson



JUL 22 1975 REC'D

REC'D 7.22.75

COURT OF APPEAL  
FIFTH APPELLATE DISTRICT

**FILED**

JUL 18 1975

EDITH M. SWANSON, Clerk

CERTIFIED FOR PUBLICATION

IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA  
FIFTH APPELLATE DISTRICT

TEHACHAPI-CUMMINGS WATER DISTRICT,

Plaintiff and Respondent,

v.

FRANK ARMSTRONG, et al,

Defendants and Respondents;

STATE OF CALIFORNIA, etc.,

Defendant and Appellant.

5 Civil No. 1935

(Sup. Ct. No. 17209)

OPINION

APPEAL from a judgment adjudicating the underground water rights in the Cummings Basin in Kern County, continuing the jurisdiction in the superior court, and appointing the respondent district as watermaster to monitor the ground water production in the basin. Jay R. Ballantyne, Judge. Reversed with directions.

STATEMENT OF THE CASE

This action was initiated by respondent Tehachapi-Cummings Water District, <sup>1/</sup> in October 1966, seeking an adjudication of the underground 1/ The district is a public entity formed under the County Water District Act. (Wat. Code, §§ 30000 et seq.) Although it claims no water rights in Cummings Basin it has statutory authority to pursue this action (Coachella Valley County Water District v. Stevens, 206 Cal.400, 406-410. The protection and conservation of underground water supplies for future as well as present use are primary functions of a water district. (Atchison etc. Ry. Co. v. Kings Co. Water Dist., 47 Cal.2d 140, 146-147.)

water rights in Cummings Basin and an injunction against increasing extractions or diversions of the water pending the lawsuit, a temporary injunction reducing the collective extractions of water to the safe yield, and a permanent injunction to restrict future extractions of water in accordance with the priorities and rights to be determined by the court. It was alleged that the ground water annually extracted by the defendant overlying owners of land in the basin amounted to substantially all of the water extracted from the basin and that the defendants owned substantially all of the rights to pump water from the basin.

The appellant State of California filed an answer on September 27, 1967, alleging that since 1930 it had pumped water from the basin in a reasonable and beneficial manner as needed for the domestic, industrial and irrigation uses of the Tehachapi prison situated at Cummings Valley; that by reason of such governmental use, appellant could not be sued as it had not consented to be sued nor had it waived its sovereign immunity. It further alleged that its water rights were paramount to the claimed rights of the other defendants to pump water from the basin.

In its pretrial statement filed on June 25, 1970, respondent district alleged that during each water year from 1949 to the commencement of the action, there had been an annual overdraft<sup>2/</sup> upon the basin with an increasing condition of accumulated overdraft, that

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2/ "Overdraft" results when more water is extracted from the basin than is naturally replenished.

the continuing overdraft resulted in a lower water level with progressive deepening of wells and increased costs of pumping. It was further alleged that all extractions of water from the basin from 1949 to the commencement of the suit were open, notorious, adverse, hostile, under claim of right, and uninterrupted as to all of the other parties to the suit. It was alleged that the court should adopt a physical solution and restrict pumping by the parties to their respective shares of the safe yield<sup>3/</sup> of the basin which was alleged to be 4,500 acre-feet per year. The pretrial statement alleged that the respondent district should be appointed watermaster to administer the provisions of the judgment and that the court should reserve continuing jurisdiction of the action.

On March 1, 1971, respondent amended its pretrial statement to allege that recent hydrological data indicated that the safe yield of 4,500 acre-feet per year was too high; notwithstanding this downward modification the data also indicated that water extractions for the preceding year were not in excess of safe yield so that there was no immediate need for pumping restrictions in the basin. However, it was alleged that the history of water production in the basin and the advent of subdivisions in the area necessitated that the export of water be enjoined, rights adjudicated and a watermaster appointed.<sup>4/</sup>

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<sup>3/</sup> Natural "safe yield" is the maximum quantity of ground water, not in excess of the long-term, average, natural replenishment (e.g., rainfall and runoff), which may be extracted annually without eventual depletion of the basin.

<sup>4/</sup> All parties, including appellant, stipulated to an injunction prohibiting the export of water from the basin and the appointment of respondent as watermaster to enforce the injunction.

Numerous defendants concurred in the respondent's pretrial statement. Parties who failed to file pretrial statements were deemed to have concurred in respondent's pretrial statement. Various other parties arrived at stipulations with respondent so that by the end of the trial appellant and respondent district were the only parties represented by counsel in court.

Trial was held June 14-22, 1971. A notice of intended decision was filed on August 23, 1971, and findings of fact, conclusions of law and the judgment were filed on March 6, 1972. Only appellant has appealed the judgment.

#### FACTS

Cummings Valley, site of the Cummings Basin, is located in Kern County west of Tehachapi Valley and the town of Tehachapi. The valley is about six miles long and two to four miles wide. Other than about 1,720 acres owned by appellant, the land is devoted to private agriculture. From 1951 to 1961, about 2,000 acres were irrigated, but this dropped to about 1,500 acres in the period 1961 to 1967.

The basin is composed predominantly of alluvial deposits about 450 feet thick at the deepest part. The alluvium feathers out in all directions toward the low-permeable rocks which surround the basin. The area within the alluvial boundary of the basin is about 8,500 acres. The main source of underground water is rainwater runoff from the surrounding mountains that flows onto the valley floor and percolates into the alluvium. At the time of trial, no water was imported into the valley.

The land on which appellant's prison facility is located was

acquired by appellant in 1930 for a women's prison. The prison was in operation for about 20 years, when it was closed in 1952 because of earthquake damage. It was reopened in 1955 as a branch of the California Institution for Men.

At the time of trial only about 50 of appellant's 1,720 acres was devoted to prison use. For many years prior to 1955, appellant had leased out approximately 700 acres for farming. After 1955, this acreage was used by appellant for a farming program for prisoners; however, except for about 40 acres used as an experimental seed plot, the program was abandoned later. Appellant's pumping of water steadily increased over the years so that by 1970 it was pumping approximately 565 acre-feet per year for use on its land.

The trial court made the following pertinent findings: During each water year from 1949-50 through 1964-65 there was an overdraft on the basin as a result of the beneficial extractions of water in excess of safe yield. The continued overdraft resulted in a deepening of wells, abandonment of wells, an increase in the cost of pumping water, and a contraction of the watered, alluvial areas of the basin, all of which had an adverse effect on the basin as a source of water for beneficial uses and resulted in substantial damage to those that were entitled to extract water.

The trial court also found that all extractions of water from the 1949-50 water-year to the commencement of the action had been open, adverse, uninterrupted, and under claim of right; the overdraft was at all times a matter of public knowledge to all parties.

The natural safe yield was found to be 4,090 acre-feet per year.

but because the present level of pumping was less than the safe yield, there was no need for an injunction restricting pumping. However, the court found that from the 1964-65 water-year to the time of the trial in 1971, the water levels in the basin remained fairly stable because of a decrease in pumping caused by the filing of the lawsuit and by a reduction in irrigated crops due to a decline in the agricultural economy of the area. The stabilization, however, had not remedied the overdraft which remained substantially as it existed at the end of the 1964-65 water-year. It found that a slight increase in irrigated crops and acreage would cause a resumption of the annual overdraft resulting in additional damage to the basin and to those entitled to extract water from it.

In the judgment, the trial court declared the water rights of the parties in terms of acre-feet per year. The appellant was found to have a right to extract 308 acre-feet per year. Because a slight increase in irrigated crops or acreage again would result in an annual overdraft, the court retained continuing jurisdiction and appointed respondent watermaster to monitor the ground-water production in the basin.

#### "JUSTICIABILITY" TO ADJUDICATE WATER RIGHTS

Appellant contends that because the basin was not in a condition of annual overdraft in the water-year preceding the filing of the action and the four years before trial the court had no power to declare and adjudicate the rights of the parties. Code of Civil Procedure section 1060 requires that there be an "actual controversy" relating to the legal rights and duties of the parties. Whether justiciability

exists in a jurisdictional sense in a declaratory relief action rests within the sound discretion of the trial court. (See California Water & Telephone Co. v. County of Los Angeles, 253 Cal.App.2d 16, 22; 2 Witkin, Cal. Procedure (2d ed.) Actions, § 38, pp. 909-910.)

The right of overlying owners to a judgment declaring their water rights and protecting them in the prospective beneficial use is clear even though substantial present damage is not shown. (Tulare Dist. v. Lindsay-Strathmore Dist., 3 Cal.2d 489, 525, 529-530; Hutchins, The California Law of Water Rights, pp. 498-500; Rogers and Nichols, Water for California, vol. 1, § 405, pp. 549-550.)

Appellant wrongly equates "annual overdraft" with "actual controversy." Although an annual overdraft may not have occurred in the several years before trial, there had been a continuing overdraft of the basin during the 15-year period 1950 through 1965. As a consequence, wells were deepened, some had to be abandoned, the cost of pumping water increased throughout the basin, and the peripheral, watered, alluvial areas underwent a contraction, all of which resulted in injury to those entitled to extract the water. Under these facts, the present and prospective injury to the overlying owners was of sufficient magnitude to justify the exercise of the court's jurisdiction.<sup>5/</sup>

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<sup>5/</sup> Because water rights are a species of real property the action may also be characterized as a quiet title action to adjudicate conflicting claims to water under Code of Civil Procedure section 738. (See Merritt v. City of Los Angeles, 162 Cal.47, 50-51; Stone v. Imperial Water Co., 173 Cal. 39, 43.)

### SOVEREIGN IMMUNITY

Appellant's contention that it is exempt from suit under the doctrine of sovereign immunity similarly is without merit. Former article XX, section 6 (now art. III, § 5) of the California Constitution provides that "[s]uits may be brought against the state in such manner and in such courts as shall be directed by law." This provision provides for legislative consent to suit. (Muskopf v. Corning Hospital Dist., 55 Cal.2d 211, 218.)

Government Code section 814 states that nothing in the Tort Claims Act affects the right to obtain relief other than money or damages against a public entity.

Commenting on section 814, Van Alstyne states:

"The principal thrust of the immunity doctrine in California has thus been to protect public entities against unwarranted judgments for damages. Non-monetary remedies have ordinarily remained open to the citizen. For example, he may enjoin a public entity from constructing a facility that will be a nuisance [citation] or will otherwise violate his rights [citation] . . . To the extent that substantive immunities are not infringed, declaratory relief is readily available for settling controversies between private persons and public entities . . . ." (Cont.Ed. Bar, California Government Tort Liability, § 1.6, pp. 8-9 (1964).)

General statutory provisions giving remedies to claimants but not expressly excluding governmental entities have been held to provide remedies against them. (Flournoy v. State of California, 57 Cal. 2d 497; Lord v. Garland, 27 Cal.2d 840, 852; Yuba River Power Co. v. Nevada Irr. Dist., 207 Cal. 521; Merritt v. City of Los Angeles, supra, 162 Cal. 47 [quiet title of water rights]; see also Cont.Ed. Bar, California Government Tort Liability, §§ 5.11 and 5.13.)



The declaratory relief statute (Code Civ. Proc., § 1060) comes within the rule that general statutory language is applicable to the state absent legislative intent to the contrary. (Lord v. Garland, supra, 27 Cal.2d 840, 852; Heinly v. Lolli, 2 Cal.App.3d 904, 909.)

Furthermore, the application of the theory of sovereign immunity to exempt appellant from suit would be contrary to the reasonable and beneficial use limitation of California Constitution article XIV, section 3. Although we reverse the judgment insofar as it declares that the overlying owners in the basin have acquired prescriptive rights to water against appellant, nonetheless appellant's rights, while correlative and equal to the other overlying owners, are subject to the constitutional limitation. (See City of Los Angeles v. City of San Fernando, 14 Cal.3d 199, 272-273.) Simply put, appellant is subject to suit to prevent a waste of water.

INAPPLICABILITY OF THE PRESCRIPTIVE  
RIGHTS DOCTRINE

The judgment must be reversed insofar as it declares that appellant is limited to pumping 308 acre-feet per year for use on its land within the basin. The trial court erred in applying the mutual prescription doctrine articulated in City of Pasadena v. City of Alhambra (33 Cal.2d 908, 928-933) to quantify the water rights of the parties on the basis of past use rather than current, reasonable and beneficial need.

All of the parties to the action are overlying owners and all of the water pumped by these owners insofar as pertinent to the judgment is for overlying purposes; there are no appropriators of water involved

in the action.<sup>7/</sup> Pasadena v. Alhambra, supra, and the other underground basin cases upon which the trial court relied in imposing a prescriptive rights solution involved controversies between overlying owners and appropriators of water for distant use outside the basin or for public service within the basin. These cases hold that an appropriative taking of water which is not surplus is wrongful and may ripen into a prescriptive right against overlying owners and prior appropriators. Without appropriation, however, there is no paramount right which can be prescribed against.

An overlying water right is analogous to that of a riparian owner's right in a stream; it is the right to take water from the ground underneath the land for use on the land. The right is based on the ownership of the land and is appurtenant thereto. (See Pasadena v. Alhambra, supra, 33 Cal.2d at p. 925.) As between overlying owners, the rights, like those of riparians, are correlative, i.e., they are mutual and reciprocal. This means that each has a common right to take all that he can beneficially use on his land if the quantity is sufficient; if the quantity is insufficient, each is limited to his proportionate fair share of the total amount available based upon his reasonable need. (Burr v. Maclay Rancho Water Co., 154 Cal. 428, 434-435; Katz v. Walkinshaw, 141 Cal. 116; Pasadena v. Alhambra, supra, 33 Cal.2d at p. 926; California Water Service Co. v. Edward Sidebotham

<sup>7/</sup> Appropriation is the use of water for nonoverlying purposes such as exportation to lands outside the basin or for municipal use within the basin. (Pasadena v. Alhambra, supra, 33 Cal.2d 908, 925.) Appellant's pumping of water is for an overlying purpose as the prison is a beneficial use of the land. By analogy to riparian rights, overlying rights may be exercised "for the purposes for which such lands are, or may be made adaptable." (See Cal. Const., art. XIV, § 3; United States v. Fallbrook Public Utility District, 165 F.Supp. 806, 824-825, where use of water for military reservation held to be a beneficial riparian use.

& Son, 224 Cal.App.2d 715, 725; Hutchins, The California Law of Water Rights, pp. 507-508.) The proportionate share of each owner is predicated not on his past use over a specified period of time, nor on the time he commenced pumping, but solely on his current reasonable and beneficial need for water. (Cal. Const., art XIV, § 3; Katz v. Walkinshaw, supra, 141 Cal. 116; Peabody v. City of Vallejo, 2 Cal.2d 351; Burr v. Maclay Rancho Water Co., 160 Cal. 268, 281-282; Hudson v. Dailey, 156 Cal. 617, 628-629; Hutchins, The California Law of Water Rights, pp. 437-438; 51 Cal.Jur.2d, Waters, § 400, p. 870.)

By analogy to riparian rights, where there is insufficient water for the current reasonable needs of all the overlying owners, many factors are to be considered in determining each owner's proportionate share: <sup>①</sup> the amount of water available, <sup>②</sup> the extent of ownership in the basin, <sup>③</sup> the nature of the projected use—<sup>④</sup> if for agriculture, the area sought to be irrigated, <sup>⑤</sup> the character of the soil, the practicability of irrigation, i.e., the expense thereof, <sup>⑥</sup> the comparative profit of the different crops which could be made of the water on the land—all these and <sup>⑦</sup> many other considerations must enter into the solution of the problem. (See Half Moon Bay Land Co. v. Cowell, 173 Cal. 543, 549-550; Rancho Santa Margarita v. Vail, 11 Cal.2d 501; Rogers and Nichols, Water for California, vol. 1, § 444, p. 582.) "[The] objection that this rule of correlative rights will throw upon the court a duty of impossible performance, that of apportioning an insufficient supply of water among a large number of users, is largely conjectural . . . The difficulty in its application in extreme cases is not a sufficient reason for rejecting it . . . ." (Katz v. Walkinshaw, supra, 141 Cal. 116, 136; see also Peabody v. City of Vallejo, supra, 2 Cal.2d

351, 375.)

We recognize that the responsibility for urging the imposition of a prescriptive rights solution in this case rests with respondent district. In its pretrial statement of June 25, 1970, it stated: "Plaintiff's theory of the case is predicated on . . . Pasadena v. Alhambra," and it then proposed findings of fact and a judgment quantifying the "base water right" of each of the defendants at a specified number of acre-feet per year, based on the highest continuous extraction of water by each defendant over a five consecutive-year period after the commencement of the overdraft. Thereafter, all defendants other than appellant either stipulated to the proposed findings or failed to appear at the trial. Because it is apparent that the stipulations and defaults were made under the misconception that all of the defendants' water rights eventually would be quantified on a mutually prescriptive basis or none would be, we believe the trial court on remand should reexamine the rights of all defendants in accordance with this opinion and determine whether any party who so desires should be relieved from his stipulation or default.

RETENTION OF JURISDICTION BY THE TRIAL COURT  
AND APPOINTMENT OF WATERMASTER

Although appellant's water rights may not be quantified to a specified acre-feet per year, it is clear that its right to pump water from the basin is subject to the reasonable and beneficial use limitation of the California Constitution. (City of Los Angeles v. City of San Fernando, supra, 14 Cal.3d at pp. 272-273.) For this reason, the trial court's reservation of jurisdiction over appellant and the other parties to settle future disputes concerning their pumping rights

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in the basin, and the appointment of a watermaster to monitor the amount of future pumping is proper. As stated in City of Los Angeles v. City of San Fernando, supra, at page 265:

" . . . the principle of continuing administration of competing rights to ground basin water through appointment of a watermaster and retention of jurisdiction should be distinguished from the rules by which the limited supply of water is apportioned among the parties. Thus, a determination that the competing rights are all other than prescriptive in nature would not necessarily preclude the exercise of such administration and jurisdiction to conserve and apportion the water in the overdrawn basin. (See Wat. Code, §§ 4025-4032 (watermaster service areas); Fleming v. Bennett (1941) 18 Cal. 2d 518 [116 P.2d 442].)"

The judgment is reversed. The action is remanded to the trial court with directions to declare that appellant's right to pump water from the Cummings Basin is correlative and equal to the water rights of the other overlying owners in the basin, and to make further inquiry and adjudication of the water rights of the other overlying owners in the basin as are consistent with the views expressed in this opinion.

Trancon  
J.

WE CONCUR:

Shingling  
Acting P.J.

Thompson  
J. \*

\* Retired judge of the superior court sitting under assignment by the Chairman of the Judicial Council.

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WHEN RECORDED RETURN TO: 9 4 4 11 52 11 9 9 41 52

MARTIN E. WHELAN, JR. INC.  
Third floor  
7624 So. Painter Ave  
Whittier, Ca 90602

*By [Signature]*

*[Signature]*

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

TEHACHAPI-CUMMINGS COUNTY WATER  
DISTRICT, a body corporate and  
politic,

Plaintiff,

vs.

IRVING F. AUSTIN, GERTRUDE AUSTIN,  
CHARLES J. AYERS, BAKERSFIELD PRODUCTION CREDIT ASSN., a corporation,  
BANK OF AMERICA NATIONAL TRUST AND SAVINGS ASSOCIATION, a corporation,  
ROY T. CLARK, NAJDA CLARK, CONSOLIDATED ESCROW COMPANY, a corporation,  
CONTINENTAL AUXILIARY COMPANY, a corporation, COOK & BONS, INC., a corporation,  
CORPORATION OF AMERICA, a corporation, EAST KERN ESCROW COMPANY,  
a corporation, J. J. ESTESZEK, ALAN FIELDS, HARDELL FIELDS, BENJAMIN  
GOLDSMAN, COURTLAND D. GROSS, HERITAGE INVESTMENT CORP., a corporation, ELMER  
F. JURY, MADDELECK A. JURY, KERN COUNTY TITLE COMPANY, a corporation, GEORGE R.  
LAWRENCE, VIRGINIA D. LAWRENCE, IDORSA LEIVA, JOSEPH LEIVA, HAROLD T. LITGE,  
HELEN LITGE, ROBERT L. MCCARTHY, DOROTHY M. MCCARTHY, MIRAN ROSENKOPF,  
JEAN M. A. PELLISSIER, ACHILLEE ROSEN, LEONARD ROSEN, BERNARD SASIA, WINIFRED  
SASIA, SCHULZE ENTERPRISES, a corporation, ROBERT SCHULZE, CYRUS E. STEWART,  
NACHI RUTH STEWART, TEHACHAPI GOLDEN ORCHARDS, a partnership, TEHACHAPI  
MOUNTAIN LAND AND ORCHARD CO., a corporation, ISRAEL TEUCHNER, TRANSAMERICA  
TITLE INSURANCE COMPANY, a corporation, BARBARA G. Von FLATEN, W. G. Von FLATEN,

Defendants.

Entered 9/3

NO. 97211

JUDGMENT

The above entitled action duly and regularly came on for

Book 4469  
Page 755  
111

1 trial on October 19, 1970, at 1:30 o'clock P.M., in Department 2  
 2 of the above entitled Court, before the Honorable Walter Colborn,  
 3 Jr., Judge, having been duly transferred thereto from Department  
 4 1 of said Court. Plaintiff appeared through its attorney, Martin  
 5 E. Whelan, Jr., Inc. and Martin E. Whelan, Jr. There was no  
 6 appearance by or on behalf of any defendant. All previously ap-  
 7 pearing defendants had theretofore concurred in Plaintiff's pre-  
 8 trial statement. The defaults of all non-appearing defendants  
 9 had theretofore been entered. Notice of trial was theretofore  
 10 properly and timely given. Evidence, both oral and documentary,  
 11 was received and the trial concluded and submitted on October 19,  
 12 1970.

13 In connection with the following Judgment, the following  
 14 terms, words, phrases and clauses are used by the Court with the  
 15 following meanings:

16 "Artificial Replenishment" is the replenishment of a  
 17 basin achieved through the spreading of imported water which  
 18 percolates into said basin.

19 "Base Water Right" is the highest continuous extraction  
 20 of water by a party from the Brito Basin for a beneficial use in  
 21 any period of five consecutive years after the commencement of  
 22 overdraft in Brito Basin as to which there has been no cessation  
 23 of use by that party during any subsequent period of five consec-  
 24 tive years, both prior to the commencement of this action. As  
 25 employed in the above definition, the words "extractions of water  
 26 by a party" and "cessation of use by that party" include such ex-  
 27 tractions and cessations by any predecessor or predecessors in  
 28 interest.

29 "Calendar Year" is the twelve month period commencing  
 30 January 1 of each year and ending December 31 of each year.

31 "Brito Basin" is that certain ground water basin under-  
 32 lying Brito Basin Arco.



1           "Brite Basin Area" consists of the territory within  
2 the boundaries set forth in Appendix "1" to this Judgment, made a  
3 part hereof by reference.

4           "Brite Basin Watershed" is that territory constituting  
5 the watershed of Brite Basin and is that territory within the  
6 boundaries set forth in Appendix "2" to this Judgment, made a  
7 part hereof by reference.

8           "Extraction", "Extractions", "Extracting", "Extracted",  
9 and other variations of the same noun and verb, mean pumping,  
10 taking or withdrawing ground water by any manner or means whatso-  
11 ever from Brite Basin.

12           "Imported Water" means water which may be brought into  
13 Brite Basin Area from a non-tributary source by the Plaintiff  
14 DISTRICT.

15           "Natural Replenishment" means and includes all processes  
16 other than "Artificial Replenishment" by which water may become a  
17 part of the ground water supply of Brite Basin, including return  
18 from applied waters.

19           "Natural Safe Yield" is the maximum quantity of ground  
20 water, not in excess of the long term average annual Natural  
21 Replenishment, which may be extracted annually from Brite Basin  
22 without eventual depletion thereof or without otherwise causing  
23 eventual permanent damage to Brite Basin as a source of ground  
24 water for beneficial use, said maximum quantity being determined  
25 without reference to such Artificial Replenishment of Brite Basin  
26 as might be accomplished from time to time.

27           "Overdraft" is that condition of a ground water basin  
28 resulting from extractions in any given annual period or periods  
29 in excess of the long term average annual Natural Replenishment,  
30 or in excess of that lesser quantity which may be extracted  
31 annually without otherwise causing eventual permanent damage to  
32 the basin.

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1           "Party" means a party to this action. Whenever the  
2 term "party" is used in connection with a quantitative water  
3 right, or any quantitative right, privilege or obligation, it  
4 shall be deemed to refer collectively to those parties to whom  
5 are attributed a Base Water Right in this Judgment.

6           "Person" or "persons" include individuals, partnerships,  
7 associations, governmental agencies and corporations, and any and  
8 all types of entities.

9           "Surface Diversion" is a diversion of waters flowing on  
10 the surface within Brite Basin Watershed (including Brite Basin  
11 Area) which diversion is made principally for use of the water or  
12 storage for future use, and not primarily for some other purpose,  
13 e.g., flood control, drainage. "Use" includes impounding of  
14 water for aesthetic or recreational purposes.

15           "Water" includes only non-saline water, which is that  
16 having less than 1,000 parts of chlorides to 1,000,000 parts of  
17 water.

18           "Water Year" is the twelve month period commencing  
19 October 1 of each year and ending September 30 of the following  
20 year.

21           In those instances where any of the above defined words,  
22 terms, phrases or clauses are utilized in the definition of any  
23 of the other above defined words, terms, phrases and clauses,  
24 such use is with the same meaning as is above set forth.

25           The Court having made its Findings of Fact and Conclusions  
26 of Law herein:

27           NOW THEREFORE, IT IS ORDERED, DECLARED, DECREED AND ADJUDGED  
28 AS FOLLOWS:

29           1. Declaration and Determination of Water Rights  
30           of Parties\*

31           \*Headings in this Judgment are for purposes of reference and the  
32 numbering of said headings do not constitute, other than for such  
33 purpose, a portion of this Judgment.

Book 3-11  
Page 167  
1991

1 Each party whose name is hereinafter set forth in the  
 2 tabulation at the end of paragraph 1 of this Judgment and after  
 3 whose name there appears under the column "Base Water Right" a  
 4 figure, is the owner of and has the right annually to extract  
 5 ground water from Brito Basin for beneficial use in Brito Basin  
 6 Area in the quantity in acre-feet so set forth after that party's  
 7 name under said column "Base Water Right". All of the rights  
 8 listed thereon are of the same legal force and effect and are  
 9 without priority with reference to each other. They are sub-  
 10 ject in any event to (i) subsequent curtailment in the exercise  
 11 of the continuing jurisdiction of the court hereinafter provided,  
 12 and (ii) all of the other provisions of this Judgment herein-  
 13 after provided. No party to this action is the owner of or has  
 14 any right to extract ground water from Brito Basin, except as  
 15 set forth in the tabulation following this paragraph 1 of this  
 16 Judgment, except insofar as any such party may be the tenant of  
 17 any other party, have an interest under a Deed of Trust, or  
 18 establish rights as a transferee. No party to this action  
 19 listed on said tabulation has any right to export outside of  
 20 Brito Basin Area any ground water extracted from Brito Basin.  
 21 No party has any right to export any water diverted from the  
 22 surface of the Brito Basin Watershed outside of the area of the  
 23 Brito Basin Watershed. No party has any right to export outside  
 24 of Brito Basin Area any water diverted from the surface of that  
 25 area. Except to the extent of surface diversions of water within  
 26 the Brito Basin Watershed and Brito Basin Area having been made  
 27 as of the water year preceding commencement of this action, or  
 28 as may be permitted pursuant to subsequent order of Court under  
 29 its continuing jurisdiction, no party to this action has any  
 30 right to divert surface waters within Brito Basin Watershed or  
 31 Brito Basin Area.  
 32 E E E E E

Book 4469  
 Page 759  
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1	<u>Name of Party</u>	<u>Base Water Right (in acre-feet)</u>
2		
3	J. J. Erteszek, a.k.a. Jan J. Erteszek*	35
4		
5	Jean M. A. Pellissier*	3
6	Schultz Enterprises, Inc., Robert Schultz	29
7	Courtland Devereaux Cross	3
8		
9	Tobachapi Golden Orchards, a general partnership (Successors in interest to Bernard Sasia and Winifred B. Sasia)	105
10		
11	Tobachapi Mountain Land and Orchard Co., a California corporation (Successors in interest to Cook & Sons, Inc.)	115
12	(*See listing also under "PARTY-DOMESTIC WELL")	
13		
14	J. J. Erteszek, a.k.a. Jan J. Erteszek	3
15	Elmer F. Jury and Madeline A. Jury	3
16	Joseph J. Leiva and Idonna Leiva	3
17		
18	Robert C. Monroe and Mary Alice Monroe (successors in interest to Harold T. Lutge and Helen Lutge)	3
19	Jean M. A. Pellissier	3
20	Bernard Sasia and Winifred B. Sasia	3
21	W. G. Von Flaten and Barbara G. Von Flaten	3

2. Parties Enjoined as to Surface Diversions and  
Exports

Each party listed in the foregoing tabulation under paragraph 1 of this Judgment is enjoined and restrained from hereafter exporting outside of Brite Basin Area any ground water extracted from Brite Basin. Each party to this action is enjoined and restrained from hereafter making any diversions of surface water within Brite Basin Watershed or within Brite Basin Area, except to the extent of diversions having been made by that party or a predecessor in interest during the water year immediately preceding commencement of this action. Each party

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1 who may have a diversion right under the exception of the fore-  
 2 going sentence is hereafter enjoined and restrained from export-  
 3 ing outside of Brito Basin Watershed any surface water diverted  
 4 therein, and is further enjoined and restrained from exporting  
 5 outside of Brito Basin Area any surface water diverted therein.

6 3. Court Retains Continuing Jurisdiction/Physical  
 7 Solution

8 The Court retains continuing jurisdiction for all pur-  
 9 poses including but not limited to: the imposition of a physical  
 10 solution in the Brito Basin, including a restriction on ground  
 11 water pumping to quantities which will not exceed the Natural  
 12 Safe Yield of Brito Basin, now 500 acre-feet; enjoining  
 13 extractions of ground water from Brito Basin except to the ex-  
 14 tent of the parties' rights proportional to the Natural Safe  
 15 Yield of Brito Basin from time to time and except as may be  
 16 provided under any physical solution adopted pursuant to said  
 17 continuing jurisdiction; and determining any and all other  
 18 matters which might become material under the Judgment.

19 4. Inter se Adjudication

20 The provisions of this Judgment constitute an inter se  
 21 adjudication with respect to the rights of the parties.

22 5. Rights of Plaintiff DISTRICT

23 Plaintiff DISTRICT is an interested party in all  
 24 matters subject to the continuing jurisdiction of this Court.  
 25 Nothing in this Judgment contained shall constitute a deter-  
 26 mination or adjudication which will foreclose Plaintiff DISTRICT  
 27 from exercising such rights, powers and prerogatives as it may  
 28 now have or may hereafter have by reason of provisions of law.  
 29 Nothing contained in this Judgment shall be deemed a determina-  
 30 tion whether the Plaintiff or any other party will or will not  
 31 have any rights in any return flow from water subsequently im-  
 32 ported, which water shall be within the continuing jurisdiction

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1 of the Court.

2 6. New Pumps

3 Persons who may later be found to be, or later commence,  
4 pumping within Brito Basin may be added to this Judgment upon  
5 such stipulation as may be approved by the Court upon prior ten  
6 (10) days written notice of the date of hearing to the parties.

7 7. Transfer of Rights - Domestic Wells

8 With regard to those parties listed in paragraph 1  
9 under the tabulation of water rights as having a domestic well  
10 and three (3) acre-feet of Base Water Rights with respect there-  
11 to, said base water right shall be transferable only in connec-  
12 tion with a transfer of the property on which the right was  
13 developed.

14 8. Judgment Binding on Successors

15 This Judgment and the provisions thereof are all ap-  
16 plicable to and binding upon not only the parties hereto but as  
17 well upon their respective heirs, executors, administrators,  
18 successors, assigns, lessees, licensees and to the agents, em-  
19 ployees and attorneys in fact of any such person. The injunc-  
20 tive provisions herein contained run equally against all such  
21 persons.

22 9. Costs

23 No party shall recover its costs herein as against any  
24 other party.

25 The clerk shall enter this judgment forthwith.

26 DATED: December 2, 1970

27  
28 Walter R. Roberts  
29 Judge of the Superior Court  
30  
31  
32



## "WHITE BASIN AREA"

All those portions of T. 32 S., R. 32 E., M.D.M., and T. 32 N., R. 36 W.; T. 32 N., R. 36 W., and T. 31 N., R. 36 W., S.E.M., Kern County, California, bounded as follows:

Beginning at the NE corner of Section 27, T. 32 S., R. 32 E., M.D.M.;

thence Westerly to the SE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 27, T. 32 S., R. 32 E., M.D.M.;

thence Northerly to the NE corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 27;

thence Westerly to the NW corner of said SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 27;

thence Northerly to the NE corner of said Section 27;

thence Westerly to the SE corner of the SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 21, T. 32 S., R. 32 E., M.D.M.;

thence Northerly to the NE corner of said SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 21;

thence Westerly to the NW corner of said SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 21;

thence Southerly to the SE corner of said Section 21;

thence Westerly to the NW corner of the NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 20, T. 32 S., R. 32 E., M.D.M.;

thence Southerly to the SW corner of said NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 20;

thence Easterly to the SE corner of said NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 20;

thence Southerly to the SE corner of said Section 20;

thence Southerly to the SW corner of the NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 20, T. 32 S., R. 32 E., M.D.M.;

thence Easterly to the SE corner of said NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 20;

thence Southerly to the SE corner of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said Section 26;

thence Southerly to the SE corner of the W $\frac{1}{2}$  of the NW $\frac{1}{4}$  of Section 26, T. 12 S., R. 32 E., M.D.M.;

thence Easterly to the center  $\frac{1}{4}$  corner of said Section 33;

thence Southerly to the NW corner of the S $\frac{1}{2}$  of the SE $\frac{1}{4}$  of said Section 33;

thence Easterly to the NE corner of said S $\frac{1}{2}$  of the SE $\frac{1}{4}$  of Section 33;

thence Southerly to the SE corner of said Section 33;

thence Easterly to the NW corner of Section 36, T. 12 N., R. 16 W., S.B.M.;

thence Southerly to the SW corner of the N $\frac{1}{2}$  of the NW $\frac{1}{4}$  of said Section 36;

thence Easterly to the SE corner of said N $\frac{1}{2}$  of the NW $\frac{1}{4}$  of Section 36;

thence Southerly to the center  $\frac{1}{4}$  corner of said Section 36;

thence Easterly to the NW corner of the NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said Section 36;

thence Southerly to the SW corner of said NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 36;

thence Easterly to the SE corner of said NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 36;

thence Southerly to the SE corner of said Section 36;

thence Southerly to the W $\frac{1}{2}$  corner of Section 6, T. 11 N., R. 18 W., S.B.M.;

thence Easterly to the NW corner of the NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of said Section 6;

thence Southerly to the SW corner of said NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 6;

thence Easterly to the SE corner of said NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 6;

thence Easterly to the NE corner of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 5, T. 11 N., R. 15 W., S.D.M.;

thence Northerly to the E $\frac{1}{2}$  corner of said Section 5;

thence Westerly to the SW corner of the SE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of said Section 5;

thence Northerly to the NW corner of said SE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 5;

thence Westerly to the SE corner of the NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of said Section 5;

thence Northerly to the NE corner of said NW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 5;

thence Westerly to the NW corner of said Section 5;

thence Westerly to the S $\frac{1}{2}$  corner of Section 31, T. 12 N., R. 15 W., S.D.M.;

thence Northerly to the center  $\frac{1}{2}$  corner of said Section 31;

thence Westerly to the SW corner of the E $\frac{1}{2}$  of the NW $\frac{1}{4}$  of said Section 31;

thence Northerly to the NW corner of said E $\frac{1}{2}$  of the NW $\frac{1}{4}$  of Section 31;

thence Westerly to the NW corner of said Section 31;

thence Northerly to the SE corner of Section 27, T. 22 S., R. 27 E., M.D.M.;

thence Northerly to the E $\frac{1}{2}$  corner of said Section 27;

thence Easterly to the center  $\frac{1}{2}$  corner of said Section 27;

thence Northerly to the N $\frac{1}{2}$  corner of said Section 27, said N $\frac{1}{2}$  corner being the point of beginning of this description.



" ROUTE DASH WATERSHED "

All those portions of T. 32 S., R. 32 E., M.D.M.; and T. 12 N., R. 16 W.; T. 12 N., R. 15 W.; T. 11 N., R. 16 W., and T. 11 N., R. 15 W., S.B.M., Kern County, California, bounded as follows:

Beginning at the center  $\frac{1}{2}$  corner of Section 27, T. 32 S., R. 32 E., M.D.M.;  
 thence Northerly to the NE  $\frac{1}{2}$  corner of said Section 27;  
 thence Northerly to the center  $\frac{1}{2}$  corner of Section 22, T. 32 S., R. 32 E., M.D.M.;  
 thence Westerly to the W  $\frac{1}{2}$  corner of said Section 22;  
 thence Northerly to the NW corner of said Section 22;  
 thence Northerly to the E  $\frac{1}{2}$  corner of Section 16, T. 32 S., R. 32 E., M.D.M.;  
 thence Westerly to the W  $\frac{1}{2}$  corner of said Section 16;  
 thence Southerly to the SE corner of said Section 16;  
 thence Southerly to the SW corner of Section 21, T. 32 S., R. 32 E., M.D.M.;  
 thence Southerly to the SW corner of Section 20, T. 32 S., R. 32 E., M.D.M.;  
 thence Southerly to the SW corner of Section 33, T. 32 S., R. 32 E., M.D.M.;  
 thence Westerly to the NW corner of Section 35, T. 12 N., R. 16 W., S.B.M.;  
 thence Southerly to the W  $\frac{1}{2}$  corner of said Section 35;  
 thence Easterly to the center  $\frac{1}{2}$  corner of said Section 35;  
 thence Southerly to the S  $\frac{1}{2}$  corner of said Section 35;  
 thence Easterly to the SE corner of said Section 35;  
 thence Southerly to the SW corner of Section 1, T. 11 N., R. 16 W., S.B.M.;

thence Easterly to the  $S\frac{1}{2}$  corner of said Section 1;  
 thence Southerly to the center  $\frac{1}{2}$  corner of Section 12,  
 T. 11 N., R. 14 W., S.D.M.;  
 thence Easterly to the  $E\frac{1}{2}$  corner of said Section 12;  
 thence Southerly to the  $SE$  corner of said Section 12;  
 thence Southerly to the  $W\frac{1}{2}$  corner of Section 18, T. 11 N.,  
 R. 15 W., S.D.M.;  
 thence Easterly to the  $E\frac{1}{2}$  corner of said Section 18;  
 thence Easterly to the center  $\frac{1}{2}$  corner of Section 17,  
 T. 11 N., R. 15 W., S.D.M.;  
 thence Southerly to the  $S\frac{1}{2}$  corner of said Section 17;  
 thence Easterly to the  $SE$  corner of said Section 17;  
 thence Northerly to the  $NE$  corner of said Section 17;  
 thence Northerly to the  $E\frac{1}{2}$  corner of Section 8, T. 11 N.,  
 R. 15 W., S.D.M.;  
 thence Westerly to the center  $\frac{1}{2}$  corner of said Section 8;  
 thence Northerly to the  $N\frac{1}{2}$  corner of said Section 8;  
 thence Easterly to the  $NE$  corner of said Section 8;  
 thence Northerly to the  $NE$  corner of Section 9, T. 11 N.,  
 R. 15 W., S.D.M.;  
 thence Westerly to the  $NW$  corner of said Section 9;  
 thence Northerly to the  $E\frac{1}{2}$  corner of Section 31, T. 12 N.,  
 R. 15 W., S.D.M.;  
 thence Westerly to the center  $\frac{1}{2}$  corner of said Section 31;  
 thence Northerly to the  $N\frac{1}{2}$  corner of said Section 31;  
 thence Northerly to the center  $\frac{1}{2}$  corner of Section 35, T. 3  
 S. 32 E., M.D.M.;  
 thence Westerly to the  $W\frac{1}{2}$  corner of said Section 35;  
 thence Northerly to the  $NW$  corner of said Section 35;  
 thence Northerly to the  $E\frac{1}{2}$  corner of Section 27, T. 32 S.,  
 R. 32 E., M.D.M.;  
 thence Westerly to the center  $\frac{1}{2}$  corner of said Section 27  
 center  $\frac{1}{2}$  corner being the point of beginning of this desc

(PROOF OF SERVICE BY MAIL - 1913a, 2013.5 C.C.P.)

STATE OF CALIFORNIA )  
County of Los Angeles )

I am a citizen of the United States and a resident of the county aforesaid, I am over the age of eighteen years and not a party to the within action; my business address is 7624 S. Painter Avenue, Whittier, California 90602. On November 19, 1970, I served the within Judgment (Proposed)

on the defendants and their attorneys of record in said action by placing a true copy thereof enclosed in a sealed envelope with postage thereon fully prepaid, in the United States mail at Whittier, California addressed as follows:

- CHARLES E. COOK, JR. ESQ. for COOK & Sons, Inc.  
Barducci Road Alan Fields  
Tehachapi, Ca 93561 Marshall Fields  
Elmer F. Jury  
Madeleine A. Jury  
Adrienne Moran  
Leonard Rosen  
Tehachapi Mountain Land  
and Orchard Co.  
Barbara C. Von Platen  
W. G. Von Platen
- Kenneth Bates, Esq. for Cyrus E. Stewart  
DEADRICH, BATES & LUND Naomi Ruth Stewart  
1122 Truxtun Ave.  
Bakersfield, Ca 93301
- Donald G. Kendall, Esq. for Bernard Sasia  
1814 - 30th Street Winifred Sasia  
Bakersfield, Ca 93301
- Arthur Livingston, Esq. for Schultz Enterprises, a corp.  
315 So. Beverly Drive Robert Schultz  
Beverly Hills, Ca 90212
- Richard Medwick, Esq. for Irving P. Austin  
16661 Ventura Blvd. Gertrude Austin  
Encino, Ca 91316
- Courlandt D. Cross Is Pro Per  
1210 Arrowmink Road  
Villanova, Penn. 19085

I certify under penalty of perjury that the foregoing is true and correct.  
Executed on November 19, 1970 at Whittier, California

THE SIGNATURE TO WHICH THIS CERTIFICATE IS ATTACHED IS A TRUE, FULL AND CORRECT COPY OF THE ORIGINAL ON FILE AND OF RECORD IN MY OFFICE.  
DSD 11 1970

*Ann M. Perrin*

ATTEST  
VERA E. GIBSON County Clerk and Clerk of the Superior Court of the State of California, in and for the County of Kern,

ANN M. PERRIN

BY \_\_\_\_\_ DEPUTY

# GROUNDWATER MANAGEMENT PLAN

October 1998





# BEAR VALLEY COMMUNITY SERVICES DISTRICT

October 10, 1998

To: BOARD OF DIRECTORS

From: JOHN YEAKLEY, GENERAL MANAGER

A handwritten signature in dark ink, appearing to read "J. Yeakley", is written over the printed name.

Subject: BEAR VALLEY COMMUNITY SERVICES DISTRICT GROUND WATER  
MANAGEMENT PLAN

---

The subject plan is forwarded as directed by Bear Valley Community Services District Resolution 98-923 of March 14, 1998. It is my opinion that this document fully addresses the requirements of California Water Code, Sections 10750, et seq (AB 3030).

As the Board is aware, development and maintenance of a reliable, high quality ground water supply is vitally important to the Bear Valley community. It is hoped that implementation of this plan will provide the District with the ability to establish a self-governing policy relating to ground water protection, extraction, and use. Through the proactivity of the Board and the actions taken by implementation of this plan, we now have the framework in place to implement a sound groundwater management strategy.

## **BEAR VALLEY COMMUNITY SERVICES DISTRICT**

---

### ***Board of Directors***

William R. Miller, President

George Aungst, Vice-President

Michael McCloskey

Peter Prince

Ron Samuels

### ***CSD Staff***

John C. Yeakley, General Manager

John Martin, Assistant General Manager

Kim Burdick, Water Supervisor

### ***Consultant, Fugro West, Inc.***

Paul A. Sorensen, Project Manager

**BEAR VALLEY COMMUNITY SERVICES DISTRICT**

**GROUNDWATER MANAGEMENT PLAN**

Prepared for:

**Bear Valley Community Services District**

Prepared by:

**Fugro West, Inc.  
San Luis Obispo, California**

**October 1998**



## GROUNDWATER MANAGEMENT PLAN

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### TABLE OF CONTENTS

1.	INTRODUCTION.....	1
1.1	General.....	1
1.2	District Management and Administration.....	1
1.3	Purpose and Goals.....	2
1.4	Institutional Requirements.....	3
1.5	Preparation and Organization of This Plan.....	3
2.	WATER SUPPLY AND DEMAND REVIEW.....	5
2.1	Sources of Supply.....	5
2.2	Groundwater.....	5
2.2.1	Bear Valley Alluvial Wells.....	5
2.2.2	Bedrock Wells.....	6
2.2.3	Cummings Valley Wells.....	6
2.3	Imported Water.....	6
2.4	Existing Demand.....	6
2.5	Future Demand.....	7
2.6	Monitoring Efforts.....	7
2.7	Water Conservation.....	8
3.	GEOLOGIC AND HYDROGEOLOGIC SETTING.....	9
3.1	General.....	9
3.2	Description of Area.....	9
3.3	Geologic and Hydrogeologic Framework.....	9
3.3.1	Bedrock.....	9
3.3.2	Bear Valley Alluvium.....	11
3.3.3	Cummings Valley Alluvium.....	12
4.	WATER QUALITY.....	15
4.1	Groundwater Quality.....	15
4.2	Water Quality Requirements/Objectives.....	15
5.	GROUNDWATER CONDITIONS.....	17
5.1	Groundwater Levels, Storage, and Yield.....	17

6.	ACTION ITEMS .....	19
6.1	Groundwater Management Program .....	19
6.2	Periodic Review of Hydrogeologic Data .....	19
6.3	Water Quality Monitoring.....	19
6.4	Conjunctive Use Program .....	20
6.5	Water Conservation Program.....	21
6.6	Drought Management and Drought Contingency Plans .....	21
6.7	Well Field Maintenance.....	22
6.8	Groundwater Monitoring .....	22
6.9	Well Head and Aquifer Protection.....	22
6.10	Well Construction and Abandonment Plan .....	23
7.	REFERENCES.....	24

### TABLES

**Table 1 - Projected Water Delivery Requirements**

**Table 2 - Annual Water Quality Report**

### FIGURES

**Figure 1 - District Boundary Map**

**Figure 2 - Annual Groundwater Production**

**Figure 3 - Monthly Groundwater Production**

**Figure 4 - Groundwater Production Summary**

**Figure 5 - Annual Total Water System Production**

**Figure 6 - Total Water Consumption**

**Figure 7 - Metered Consumption vs Total Groundwater Production**

**Figure 8 - Projected Total Water Delivery Demand**

**Figure 9 - Projected Peak Demands**

### APPENDICES

**Appendix A** – Resolution No. 98-923. Resolution of the Board of Directors of the Bear Valley Community Services District of Intention to Draft A Groundwater Management Plan

**Appendix B** – Ordinance No. 95-106. An Ordinance Of The Bear Valley Community Services District Board Of Directors Regarding The Implementation Of Emergency Water Conservation Measures In The Event Of A Water Supply Shortage

# GROUNDWATER MANAGEMENT PLAN

## I. INTRODUCTION

### 1.1 GENERAL

The preparation of a Groundwater Management Plan (the Plan) has been authorized by the Board of Directors of the Bear Valley Community Services District (BVCSD; District) by Resolution (Appendix A), in compliance with the provisions of Assembly Bill 3030, the Groundwater Management Act, California Water Code Sections 10750, *et seq.*, (the Act). The objectives of the Plan are to:

- Protect the quality of the District's groundwater basin
- Promote and improve existing monitoring activities
- Enable the District to identify and implement the necessary means to preserve and enhance our groundwater resource.

### 1.2 DISTRICT MANAGEMENT AND ADMINISTRATION

The District was formed in May 1970 under the California Community Services District Act, California Government Code, §61000, *et seq.*, and includes all of the subdivisions plus certain other adjacent parcels of land within the Bear Valley Springs development. The District has a service area of approximately 26,000 acres in Kern County (Figure 1), with a current estimated population of about 5,600.

With a staff of 43, the District owns and operates the water system that supplies water to the development, and the sewage treatment plant that provides collection, treatment, and disposal of sewage to most of the community. It owns and maintains the roads, streets, and related drainage facilities in Bear Valley Springs and has established and maintains a police department. The District's services are funded by property taxes, special assessments and standby charges collected by Kern County on the regular property tax bill. Some funds are collected through user fees such as water and sewer charges and capacity fees for new water connections.

The governing body of the District is a five-member board of directors, which exercises all the powers of the District. Directors are elected by ballot by the registered voters of BVCSD at District elections. The Board employs a general manager who manages the District facilities and supervises day-to-day activities. The General Manager has authority over all District employees and is responsible for implementing Board decisions.

The District is the sole water purveyor for the community of Bear Valley Springs. The District currently serves approximately 2,000 active connections, with an average annual water production between 1989 and 1997 of approximately 925 acre-feet per year (AFY). The primary source of water supply to the District during that period was from 27 active water supply wells. Beginning in 1991, supplemental State Water Project (SWP) water imported through the Tehachapi-Cummings County Water District was used for non-potable, irrigation water. Of the average 925 AFY production, the District's 7 alluvial wells contribute an average of 205 AFY, the 20 bedrock wells contribute an average of 610 AFY, and the remainder of the annual supply is from the imported water supply. The summer of 1998 will witness implementation of the Cummings Valley importation project, the District's new water supply source. That project consists of an exchange of the District's State Water Project water to the Tehachapi-Cummings County Water District (TCCWD), in exchange for the rights to pump water out of the Cummings Groundwater Basin. The TCCWD, in turn, uses the District's SWP water to recharge the Cummings Basin. Upon implementation of the Cummings Valley importation project, SWP water will no longer be imported or used in-valley.

As discussed in the District's recently completed Water Supply Management Planning Analysis (Fugro, 1996), the community is continuing to expand. The projected water demand for the District is expected to eventually nearly double, to approximately 1,650 AFY. In order to keep up with this increasing demand on the system resources, the District has implemented a series of actions designed to increase water supplies. Of major significance is the Cummings Valley importation project, which will provide a source of potable groundwater from neighboring Cummings Valley. Based on the results of pumping tests conducted on the District's new Cummings Valley wells in March, 1996, an estimated 200 to 250 acre feet of water can be produced during the five month summer pumping season without causing excessive drawdown in the wells and basin. If both wells are pumped simultaneously during emergency pumping periods, it will be possible to produce an estimated 100 to 140 acre feet of water in one month. In whatever manner the wells are operated, the Cummings Valley wells and importation project is a significant water supply project for the District.

### **1.3 PURPOSE AND GOALS**

The Bear Valley Community Services District is dependent on groundwater for its water supply source and for the life and vitality of its community. Thus, the Board has long recognized development of a reliable, high quality groundwater supply as vitally important to the community it serves. Preparation and implementation of the groundwater management plan will provide the District's Board of Directors with the ability to establish a self-governing policy relating to groundwater protection, extraction, and use, rather than expose itself to the possibility of outside management by an external agency or the State of California.

The Plan recognizes that a complete understanding of the water supply conditions that influence the District is necessary, and that the District's history of proactive management of the

water supplies must be continued. To achieve this goal requires identification of future problems, and effective management of both local and imported water supplies. The long-term continuation of this balance will be the principal benefit to be derived from the Plan. Retaining not only the rights but also the ability to use all existing surface, ground, and imported water supplies within the District is critical to maintaining a water supply.

The principal action item of the Plan will be identification of potential future problems, and the compilation and evaluation of additional data related to the quantity and quality of groundwater. Action items will be developed to enhance the valuable groundwater resource by promoting those actions necessary to protect the groundwater resource from threats, whether the threats come from groundwater contamination, encroachment of water rights issues, or long-term groundwater level declines. Most of the action items identified in the Plan have been implemented by the District, or will begin with adoption of the Plan. A few of the action items will require further study before implementation.

Preparation of the Plan is funded by Bear Valley Community Services District. It is not likely that an additional funding source will be required to fully implement any future Plan activities. The Groundwater Management Act allows for the levying of groundwater assessments or fees under certain circumstances and according to specific procedures, however the District is the sole groundwater user in the Bear Valley Springs area, and is a party to the groundwater basin adjudication in the Cummings Valley. Thus, there are limited threats to the District's groundwater position, and limited to nil opportunities for the District to develop new stakeholder opportunities. Before instituting a new fee structure related to action outlined in this Plan, the District must hold an election on whether or not to proceed with the enactment of the assessments. A majority of the votes cast at the election will be required to implement an additional funding assessment.

#### **1.4 INSTITUTIONAL REQUIREMENTS**

Historically, the use of groundwater in the State of California has not been regulated except in a few basins where the courts have adjudicated the rights or special management districts have been authorized by the State Legislature. The District is in a unique and fortunate situation, whereby it is the sole pumper and user of the groundwater aquifers from which most of its supply originates. Its secondary supply source, which is a conjunctive use of State Water Project water in association with the adjudicated Cummings Basin groundwater supply, is a secure source of water that is managed by the District in association with the Cummings Valley (TCCWD) Watermaster.

#### **1.5 PREPARATION AND ORGANIZATION OF THIS PLAN**

This "Groundwater Management Plan" was prepared for the District by Fugro West, Inc., Paul A. Sorensen, Project Manager, and coordinated by John C. Yeakley, BVCSD General Manager. John Martin, Assistant General Manager, and the members of the Infrastructure

Committee, consisting of Directors Ron Samuels and William R. Miller provided technical review of the draft document.

The "Groundwater Management Plan" is organized into six chapters, including:

**Chapter 1. INTRODUCTION:** Contains background and historical information about the District, the purpose and goals of preparing this "Groundwater Management Plan," the institutional framework under which the District is generating the Plan, and some of the organizational details of the Plan.

**Chapter 2. WATER SUPPLY AND DEMAND REVIEW:** Contains a summary of the current and projected water supply and demand situation in the area. This chapter defines and explains the physical and legal structure of the District's water supply and outlines expected future demands.

**Chapter 3. GEOLOGIC AND HYDROGEOLOGIC SETTING:** Contains a review of the geologic and hydrogeologic conditions that provides the physical framework for the District's water supply. Because one of the first steps in developing a groundwater plan is to identify and review existing hydrogeologic data, this technical summary is an important review in formulating the foundation of the Plan and future action items.

**Chapter 4. WATER QUALITY:** Describes the groundwater and surface water quality conditions of the District's water supply, the institutional requirements and objectives of the District, and the current threats to the quality of the District's groundwater supply.

**Chapter 5. GROUNDWATER CONDITIONS:** Describes the current conditions of groundwater levels and groundwater movement in the aquifer from which the District obtains its supply.

**Chapter 6. ACTION ITEMS:** Contains a summary of future action tasks and studies to be undertaken to meet the previously defined water supply objectives.

## **2. WATER SUPPLY AND DEMAND REVIEW**

### **2.1 SOURCES OF SUPPLY**

The Bear Valley Community Services District is the sole water purveyor for the customers of the Bear Valley Springs community. The District currently serves about 2,000 active water service connections. An increased rate of growth in the past several years, coupled with the serious drought that plagued California between 1986 and 1992, resulted in a condition where the District's ability to produce water was barely able to keep up with demands for service. A series of actions was implemented, designed to increase water supplies as well as to provide an evaluation of options available to the District to develop an adequate supply to satisfy the needs of the community through buildout.

The District's entire potable water supply has historically been produced by local groundwater supplies, developed by a combination of alluvial wells drilled in the Bear Valley groundwater basin, and bedrock wells drilled into the granitic bedrock that forms the hills surrounding the community. Before implementation of the Cummings Valley importation project, the District's water supply capability was at a critical juncture in meeting heavy demands during the late summer seasonal demands. At the time of this writing, the Cummings Valley importation project has been in operation for a single summer season, and appears to exceed all expectations. The new project is expected to be capable of providing a surplus supply of water to the District for the next 15 to 20 years, depending on future growth rates. The importation project facilities have been designed for ease of future expansion, including a well site for a third supply well, oversized pipelines and other appurtenances, and additional pumping capacity at the pump station.

Groundwater production has steadily increased over the past 15 years, reaching a peak in 1997 when 911 acre feet of water were pumped. From 1990 through 1995, production declined to a relatively stable level of about 800 acre feet per year (AFY). However, 1996-97 saw an increase in production demands, reaching the historic high of 911 AFY in 1997 (Figure 2).

Of more significance than the overall annual production capability are the peak demands placed on the system during late summer (Figure 3). It is important to understand the difference between the total annual system demand or even total monthly demands, and the daily peak demands that are critical to the District's ability to adequately service its customers. Thus, the key to calculating District capabilities is in daily peak demands.

### **2.2 GROUNDWATER**

#### **2.2.1 Bear Valley Alluvial Wells**

A breakdown of the component contribution of the alluvial wells and the bedrock wells is shown on Figure 4. For the past 12 years, the supply contribution of the alluvial aquifer has consistently hovered in the range of 200 AFY.

Water levels in the alluvial wells have fluctuated rapidly in response to seasonal changes, and in response to long-term rainfall patterns. Standing water levels in the alluvial wells have typically risen rapidly following the onset of the winter rainy season and likewise started a steady rate of decline during the summer as the aquifer is heavily stressed. These fluctuations are typical of small, shallow, relatively constrained, unconfined groundwater basins that one finds in intermontane environments and along narrow coastal valleys. The fluctuations indicate that recharge is rapid and although water levels decline during drought periods, they tend to recover quickly after the low rainfall period has concluded. Hence, the basin is clearly not in overdraft; in fact, it likely is not possible for the basin to enter a sustained period of overdraft conditions.

### **2.2.2 Bedrock Wells**

The difference between the  $\pm 200$  AFY alluvial basin contribution and the annual demand has historically been made up with the bedrock aquifer component that has varied over the past 10 years from a low of 383 AF in 1986 to a high of 702 AF in 1997 (Figure 4).

### **2.2.3 Cummings Valley Wells**

The projected contribution of the Cummings Valley wells is estimated to be capable of augmenting existing supplies by approximately 700 gpm. Each of the two wells is likely capable of individually pumping continuously at 500 to 550 gpm; however, there will be significant mutual well interference when both wells are pumped at the same time. The wells will be pumped directly into a storage tank before introduction to the system, so entrained air that may be caused by pumping both wells simultaneously at pumping levels below the perforations will be mitigated. However, to minimize this condition, the wells will only be pumped at their design rate for 16 hours per day to decrease the potential for entrained air. Thus, the total future effective contribution of the two Cummings Valley wells is conservatively projected to be 700 gpm.

## **2.3 IMPORTED WATER**

Beginning in 1991, supplemental State Water Project water imported through the Tehachapi-Cummings County Water District was piped into BVCSD for use as a non-potable, irrigation water source for lake fill and golf course irrigation. Figure 5 shows the volume of imported water used since 1991. With implementation of the Cummings Valley importation project, State Water will no longer be imported or used in-valley. It will, however, be purchased as exchange water for groundwater pumping rights to Cummings Valley groundwater, as described earlier.

## **2.4 EXISTING DEMAND**

Historic total average annual water production over the past 9 years has ranged from about 767 AFY to as high as 911 AFY (Figures 6 and 7). Of that amount, approximately 85% of the demand serves metered residential customers, 5% to metered non-residential use (commercial



usage and lake fill/irrigation demands), and approximately 10% to "unaccounted for" water (water lost in the system through leaks, faulty meters, construction water, etc.).

## **2.5 FUTURE DEMAND**

Future domestic water requirements are shown on Table 1. It is likely that growth will not continue at the rates seen in the late 1980's, but will slow as more and more of the "easy" lots are developed. Thus, growth rates are shown as declining numbers as community buildout nears.

Using the average annual growth rates shown in Table 1, and average water duty factors for each category, the projected annual water delivery requirement is expected to reach approximately 1,650 AFY. This number is based on buildout projections of 3,750 active residential meters and a population of 10,000 to 10,500 (Table 1 and Figure 8).

Demands on the system are significantly greater on peak days during the summer pumping season. The ability of the District to produce the annual total volume demand is relatively unimportant when compared to the need to meet peak demands for several hours at a time. Thus, when analyzing the relationship between supply and future demands, it must be described in terms of peak gallons per minute demands.

The current maximum day demand is estimated at approximately 1,250 gpm. With the current estimated maximum day contribution of the existing Bear Valley wells at approximately 1,300 gpm, the Cummings Valley wells effective contribution of approximately 700 gpm, a maximum peak day demand (Peaking Factor) of 2.09 (calculation based on historic values), and a 10% safety factor, the District has a groundwater supply capable of meeting future demands out to approximately year 2016 (Figure 9).

## **2.6 MONITORING EFFORTS**

The District monitors water levels, total production, and hours of operation of each well on a monthly basis.

Chemical water quality samples are taken as required under Federal and State Drinking Water Standards. General mineral, general physical, and inorganic chemical analyses are conducted every three years, and the latest test results comply with State standards. Volatile organic and synthetic organic chemical analyses are also conducted once every three years, and current test results are non-detectable for these organic chemicals. Radiological testing is done at each well once every four years, for four consecutive quarters and has been in compliance. Average test results for each of these constituents are listed on Table 2.

Bacteriological water quality samples are collected twice weekly on a rotating basis for every pressure zone in the system. Raw water well samples are also collected on a monthly basis from each of the chlorinated wells for bacteriological analysis. The District complies with all water quality standards.

## 2.7 WATER CONSERVATION

In 1995, the Board of Directors approved a resolution creating a water conservation plan and setting water production targets. The purpose of the program is to reduce per-capita potable water production compared with the base year of 1994. Targets and actual figures for the three full years following approval of the resolution were:

Year	Production (AF)		Production (HCF)		Population		Per-Capita Production (HCF)	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
1995	811.09	779.64	353,309	339,611	5,337	5,304	66.2	64.0
1996	821.8	877.62	357,975	382,291	5,550	5,531	64.5	69.1
1997	840.09	903.0	365,945	393,347	5,772	5,581	63.4	70.5

Although population increased at a slower pace than was projected, water production has increased significantly. The conservation target was met in 1995, but not in 1996 or 1997.

Per-capita water production has increased despite the fact that unaccounted-for water (system losses and meter inaccuracies) has been controlled. In 1995, unaccounted-for water was 13.9% of the production total. This dropped to 10.8% in 1996 and to 10.1% in 1997.

Residential consumption appears to be driving the production increase. In 1995 (a wet year), residential accounts consumed 622 acre feet; in 1996 they consumed 735 AF and in 1997 they consumed 763 AF.

Several factors contribute to the higher residential consumption:

- Hotter-than normal summers
- Lower-than-normal precipitation in the Spring
- Installation or expansion of landscaping at existing and newly-built houses
- Insensitivity to conservation water rates

The average active residential customer in the District used 0.43 AF in 1997, higher than the historical average of 0.39 AF, but substantially lower than other nearby communities. The city of Tehachapi used 0.70 AF in the same period and Bakersfield residents used 0.84 AF. Because Bear Valley residents already consume so little water comparatively, significant water savings will be difficult to achieve through water conservation regardless of the measures employed.

### **3. GEOLOGIC AND HYDROGEOLOGIC SETTING**

#### **3.1 GENERAL**

One of the important components of a groundwater management plan is a review of the existing data available to determine conditions in the groundwater basin(s). Compilation of this technical information not only forms the foundation upon which a groundwater management plan can be built, but is necessary for implementation of the plan.

This chapter is a compilation of information taken from several sources, including Brown (1969), Dering (1970), BCI (1988), and Fugro (1996, 1997).

#### **3.2 DESCRIPTION OF AREA**

The Bear Valley Springs community is situated in an elevated valley, in the western portion of the Tehachapi Mountains. The physiographic features of Bear Valley and surrounding mountains are shown on Figure 1. The valley, coupled with the surrounding drainage areas, comprise an area of about 18 square miles. The main portion of the valley is actually three interconnected alluvial basins, designated the Upper, Middle, and Lower Valleys (from east to west, respectively). Surface elevations range from 4,100 feet in the Lower Valley to about 6,200 feet southeast of Bear Mountain, which at 6,913 feet is the highest peak in the area. The grassy hillsides are generally covered with oak and pine trees on all but the steepest slopes. Bear Valley is nearly fully enclosed by a ring of mountains of igneous origin, comprised generally of granitic rocks. The region is seismically active and several prominent faults traverse the area.

Average annual precipitation within Bear Valley is approximately 18.3 inches on the valley floor, and about 26.6 inches in the higher mountains. Annual precipitation in the valley has varied from a low of 10.1 inches in 1910-11 and 1917-18, to a high of 42.0 inches in 1982-83. Snowfall is a common occurrence during winter months. Temperature measurements at Tehachapi indicate a mean monthly range from a low of 39.5°F during January to a high of 72.4°F during July.

#### **3.3 GEOLOGIC AND HYDROGEOLOGIC FRAMEWORK**

The Bear Valley watershed covers approximately 18 square miles. Valley elevations range from 4,100 feet to 6,913 feet (Brown, 1969). The geology of the watershed is primarily composed of extensively fractured and faulted granitic rocks. Three small, alluvial valleys lie in the bottom of the watershed and have been referred to generally as the Upper, Middle, and Lower valleys. The alluvium in the three valleys is composed of coalescing alluvial fans and fine grained stream deposits, consisting of mixed sands, silts and clays.

##### **3.3.1 Bedrock**

The Cretaceous Bear Valley Springs (BVS) pluton dominates the Bear Valley region. Although the plutonic rocks are generally referred to as granitic rocks, they are technically a

weakly to strongly foliated tonalite, and have been radiometrically dated at about 99 million years (BCI, 1988, Sames et al., 1983).

The only rocks to outcrop in the District service area are the BVS pluton and Quaternary alluvium. The alluvium ranges in thickness from about 40 to 200 feet in the three small sub-basins that form Bear Valley, and consists of mostly silty, fine- to medium-grained sands with discontinuous clay-rich horizons (Brown, 1969).

The topography and relief of the Tehachapi Mountains reflects widespread and relatively recent tectonic activity. The two major structural features of the region are the Garlock and San Andreas faults, which form the southeastern and southwestern boundaries of the Tehachapi Mountains, respectively. The northeast-trending, high-angle Garlock Fault has experienced mostly left-lateral movement in the past 10 million years (BCI, 1988; Burbank and Whistler, 1987). The San Andreas fault is a mostly northwest-trending, high-angle feature with right-lateral movement that is the major structural and tectonic feature of California's geology.

The White Wolf fault, located about 5 miles northwest of Bear Valley, is a significant tectonic structure near the area of interest. This fault trends northeast and marks the abrupt border between the Tehachapi Mountains and the adjacent San Joaquin Valley. A major earthquake during 1952 has been attributed to movement of the White Wolf fault, which resulted in the simultaneous development of prominent scarps. Geologists have estimated that between 3 and 10 feet of left-lateral reverse movement occurred during this event (BCI, 1988; Dibblee and Warne, 1970; Stein and Thatcher, 1981).

Within Bear Valley, several different studies have identified a number of northwest-trending faults that apparently cross the valley floor. Brown (1969) identified four mostly northwest-trending faults across Bear Valley, and suggested all movement on the faults as purely dip-slip. Building on the work of Brown (1969), Dering (1970) prepared a detailed geologic map of the valley and identified almost a dozen northwest structures as well as several more minor northeast-trending faults. Dibblee and Warne (1970) located two northwest faults in the valley coinciding with those spotted by Brown (1969) and Dering (1970), and also identified the Bear Mountain fault extending along the northeastern slope of Bear Mountain, 2 to 3 miles north of Bear Valley.

The bedrock aquifer surrounding Bear Valley is a critical component of the District's water supply, providing as much as 70% to 75% of the historic water supply. As described in Section 2, the District produces an average of about 600 acre-feet of groundwater per year from 20 active wells in the fractured plutonic bedrock. The wells range in depth from 152 feet deep to 977 feet deep, and range in production capability from less than 20 gallons per minute (gpm) to more than 300 gpm. All of the bedrock wells produce groundwater of good quality, with the exception of three of the wells that produce water with slightly elevated iron and manganese concentrations. Six of the bedrock wells were once discounted on the basis of elevated uranium

concentrations, but three of those wells have now been inactivated and are in the process of being properly abandoned. The other three wells have met the minimum standard of 40 parts per billion uranium for two years; thus, all District wells now meet minimum State and Federal standards for radiochemical testing.

### **3.3.2 Bear Valley Alluvium**

The Upper Valley is a separate and hydrogeologically distinct basin covering approximately 530 acres that lies upgradient and northeast of the Middle Valley. Wells in the Upper Valley have encountered alluvium to depths of 60 to 70 feet. The Middle Valley is the largest of the three valleys, covering approximately 2,000 acres. Alluvium in the Middle Valley has been encountered to depths of approximately 200 feet. The Lower Valley is a shallow valley of approximately 1,400 acres that lies west of the main, Middle Valley. Alluvium in the Lower Valley is generally a maximum of 50 to 80 feet thick.

Groundwater occurs in all three valleys, and in the fracture zones in the bedrock. The primary source of groundwater is infiltration of rainfall, although an unknown volume of groundwater discharges from the surrounding bedrock into the basins via fracture flow. Groundwater levels in the basins, particularly the Middle Valley where levels are depressed through pumping, respond rapidly upon receiving any significant volume of rainfall. During years of average rain, a shallow lake forms in the southwest part of Middle Valley, when the valley can accept no additional infiltration.

The alluvial deposits in the Upper Valley are relatively limited in extent and in thickness. Based on borings, the alluvial sediments consist of clayey silt and silty fine sand. Groundwater in the valley appears to be under semi-confined conditions. As discussed above, alluvium thickness varies from nil along the basin fringe, to as much as 60 to 70 feet in the deepest part of the basin. Discharge from the basin occurs during periods of high groundwater through the narrow stream channel in the northwest part of the basin, and perhaps as underflow through bedrock fractures below the basin, downgradient to the Middle Valley. There are no active, production water wells in the alluvium of the Upper Valley.

The alluvial sediments in the Middle Valley are slightly coarser than the Upper Valley, consisting of fine sandy silts and silty sand in the upper zone, to a silty fine to coarse sand in the more permeable lower aquifer zone below 100 feet. The deepest portion of the valley has approximately 200 feet of alluvium. At the outlet, where the Middle and Lower valleys join, the depth to bedrock is apparently about 45 to 50 feet at the maximum. Discharge from the Middle Valley is through evapotranspiration, pumpage, stream flow into the Lower Valley (both surface and subsurface), and probably through vertical leakage into the underlying fractures of the granitic bedrock. The Middle Valley constitutes the primary alluvial groundwater supply source for the District. Seven wells penetrate and extract groundwater from the alluvium in the valley, pumping an average of approximately 200 acre-feet per year. The wells range in depth from 182 feet deep

to 200 feet deep, and range in production capability from 25 gpm to 50 gpm. All of the alluvial wells produce groundwater of good quality, meeting all minimum State and Federal standards.

Sediments in the Lower Valley are typically silty fine to medium sands. The thickness of the alluvial sediments probably averages about 50 to 60 feet, with a maximum thickness of approximately 80 feet. Discharge from the Lower Valley is by stream flow out the outlet stream during periods of high water, and through bedrock underflow. No domestic supply wells are located in the Lower Valley, although one well has been used in the past for lake fill/irrigation purposes.

### 3.3.3 Cummings Valley Alluvium

The Cummings Valley, located adjacent to and southeast of Bear Valley, is the site of the District's new Cummings Valley well field. The basin was adjudicated as a result of *Tehachapi-Cummings County Water District vs. Armstrong, et al*, ruled by the Superior Court of the State of California for the County of Kern, 1972.

The District purchased land in Cummings Valley, overlying the Cummings Groundwater Basin, thereby exercising the overlying landowner's adjudicated rights to the basin. In association with and approval by Tehachapi-Cummings County Water District, acting as Watermaster of the basin, the District will continue to purchase State Water Project water through its contract with TCCWD. The purchased SWP water will then be used as a source of active instream recharge at the head of Chanac Creek, in exchange for the District's right to pump water from wells located on its Cummings Valley property for use in Bear Valley. As of the time of this writing, the District is nearing completion of the new Cummings Valley water supply project, consisting of the requisite wells, pumps, pipelines, storage tanks, and booster pumps to pump Cummings Valley groundwater across the ridge into Bear Valley.

The District's property and Cummings Valley well field is located on the northern fringe of the Cummings Groundwater Basin. The Cummings Basin occupies a northeast trending elongate valley approximately 6 miles long and 2 1/2 miles wide. The valley is fed mainly by Cummings Creek, as well as Chanac Creek that heads out of Brite Valley. The floor of the valley has a downward southwest gradient to Chanac Creek, which drains the valley.

The Cummings Valley, as part of the larger Tehachapi Mountain Range system, is a relatively young geologic feature that has evolved during the Recent time. The rocks that form the bedrock in the area were formed in the Jurassic and Cretaceous time periods, when repeated intrusions of igneous rock culminated in the metamorphosis of older sediments, and emplacement of the granitic rock basement.

During the Tertiary period, the Tehachapi area was the site of a series of uplifts, erosional intervals, and folding and faulting. In the late Pleistocene time, the final stage of mountain building resulted in formation of the Sierra Nevada and the mountains surrounding the Tehachapi system.

Normal faulting of a complex series of northwest trending faults dislocated many of the blocks that now form the Tehachapi system, including the Cummings Valley. Since then, the valleys have slowly filled with stream sediments.

The sediments that comprise the Cummings Valley were deposited in a complex series of alluvial fans by stream flow deposition from the surrounding mountain blocks. The District property lies near the head of the small alluvial fan complex that drains the valley that forms the entrance to Bear Valley Springs, which is one of several tributaries to the larger valley. The Cummings Basin covers approximately 8,500 acres, with a watershed area of approximately 16,000 acres.

The Cummings Basin contains Recent alluvial fill and alluvial fan sediments. Although there are numerous water bearing sedimentary deposits identified in the Tehachapi system, the only ones of consequence in Cummings Valley consist of Recent-age Alluvial Fan Deposits and Recent Stream Deposits/Floodplain Silts. Lithologically, these two formations are very similar in appearance and character, and are therefore often not distinguishable in well logs or drill cuttings, except when the alluvial fan deposits are coarse enough to contain cobbles and other remnants of high energy deposition. In the vicinity of the District property, the sediments generally reflect relatively uniform, low energy deposition of silts and fine-grained sands. On a regional scale, the basin sediments tend to become finer-grained towards the southern end of the valley.

Where saturated, the Recent-age sediments in the valley tend to be reasonably permeable, particularly in the northern part of the valley where the sediments are coarser. On the basis of well log records from TCCWD and the Michael-McCann (1962) report, the deepest part of the basin appears to be located in the vicinity of the District property, where the sediment thickness reaches about 450 feet. By comparison, the saturated sediment thickness in the southern part of the valley is estimated to be about 50 feet.

Underlying the Recent-age unconsolidated sediments throughout the valley, and forming the basin bedrock, are consolidated dioritic and granitic rocks. Although numerous wells penetrate the bedrock and withdraw water from the secondary fracture system that dominates the bedrock aquifer, the yield of the bedrock wells is generally much less than that of the alluvial wells.

The principal recharge to the Cummings Basin is by infiltration of stream flow, rainfall, and return agricultural irrigation water. To a lesser degree, basin recharge also occurs through subsurface flow from unconsolidated sediments that form the basin margins. Mann (1971) estimated that the Cummings Basin receives an annual natural recharge of approximately 3,560 acre-feet.

The Cummings Basin experienced significant groundwater withdrawal in the 1940's and 1950's, and as a result, the water levels began to decline precipitously. As a reaction to the overdraft condition, the Tehachapi-Cummings County Water District was formed, and

adjudication proceedings were initiated in the mid-1960's. The steady decline of water levels started rebounding as TCCWD contracted for importation of State Water Project water, and the water levels have apparently stayed relatively stable since then. Presently, the depth to water in the aquifer in the vicinity of the District property is about 175 to 200 feet below ground surface.



## 4. WATER QUALITY

### 4.1 GROUNDWATER QUALITY

Overall, groundwater quality produced from the District's wells is excellent. A summary of the well water quality is presented in Table 2. The table shows that the District's groundwater supply is generally of good mineral quality (containing relatively low mineral concentrations). In the past four years, only one well produced water with iron concentrations that exceeded the State Primary Drinking Water Standards (or Maximum Contaminant Levels, MCLs), and one well exceeded the State MCL in manganese. In 1994, three wells that produce water from the granitic bedrock aquifer had uranium concentrations at levels that exceeded the State's standards at the time, and were taken off line.

The District is fortunate to have a water supply of excellent quality, that consistently meets or exceeds minimum State and Federal standards for both Primary and Secondary standards. Water supplies containing contaminants exceeding the Primary MCLs present risks to human health when continually used for drinking or culinary purposes. Water supplies containing substances exceeding the Secondary MCLs may be objectionable to an appreciable number of people, but are not generally hazardous to health.

Over the past several years, average nitrate concentrations as reported to the State Department of Health Services have been slowly increasing, reaching a high in 1998 of 13.8 mg/L (Table 2). Although this value is still significantly below the State Standard MCL of 45.0 mg/L, the steady upwards trend of values will be studied. Significantly, the wells with the highest nitrate concentrations have not increased over the past several years; the reason the average is creeping upwards is that the wells with the lower concentrations of nitrates are showing a slight upward trend.

Analysis of the Cummings Valley wells indicate that the water from those wells is also of very good quality, with Total Dissolved Solids content of about 325 mg/L. With the wells located on the valley floor in an area of heavy historical agricultural use, the presence of nitrates is of concern. When the wells were drilled, the results of the nitrate tests indicated a level of 33.2 mg/L.

### 4.2 WATER QUALITY REQUIREMENTS/OBJECTIVES

A primary objective of the Plan is to maintain the water quality within the District. This is of extreme importance because the municipal users need a dependable, high quality water supply. A reduction in the quality of the groundwater is equivalent to a loss of water supply, since the quality problems will require additional costs for the construction of treatment facilities. In addition, with the continual raising of drinking water standards, maintaining the quality of the groundwater supply becomes even more important.

One of the action items listed in the Plan is a recommendation to increase monitoring and evaluation of groundwater quality in the District's service area. This monitoring information will be collected and utilized to proactively evaluate the best management practices to minimize any deleterious effects of increased levels of any analytes.

The quality of groundwater within the District must be maintained, and one of the keys to maintaining good quality groundwater in the alluvial basin of Bear Valley is to assure that the surface water impoundments are not degraded. Since natural minerals occur in low concentrations, the major thrust of the water quality monitoring and recommended practices will be to prevent chemical contamination. The Plan provides a mechanism that will help achieve these long-term goals. The initial action of increasing the evaluation of and amount of monitoring will provide the additional data needed to proceed with future programs to maintain water quality.

## 5. GROUNDWATER CONDITIONS

### 5.1 GROUNDWATER LEVELS, STORAGE, AND YIELD

The District has monitored and recorded groundwater levels in its production water wells on a regular basis for several years. Compilation of this data, coupled with extensive reviews of the data, has provided the District with an understanding of the groundwater flow patterns of the alluvial aquifers, the trends in water levels in all its wells, and the yields of the aquifers from which it pumps.

Some of the conclusions that can be drawn from even a cursory inspection of the hydrogeologic data are a result of the differences between the alluvial and bedrock aquifers. The water level fluctuations in wells that extract water from the alluvium show that the aquifer is quickly recharged with even a minor amount of winter rainfall. This is common in all shallow alluvial aquifers, and creates a situation where long-term overdrafting of the aquifer is nearly impossible. The downside, of course, is that extended seasonal pumping from numerous wells in the same shallow aquifer results in a rapid decline of water levels, with a concomitant decline in production rates, until a significant source of recharge is available. Thus, the wells tend to lose production capability and/or cannot pump for as long a time towards the end of the summer pumping season.

The alluvial basins of Bear Valley contain appreciable quantities of groundwater in a confined to semi-confined condition. Because of the nature of the semi-confined aquifers, coupled with the comparatively low hydraulic conductivity of the aquifer materials, a relatively small percentage of this water is easily withdrawn by wells. The Middle Valley is the only one of the three alluvial basins that has proven to be an economically viable groundwater basin supply. The Upper and Lower valleys have been the sites of several test holes and wells, but neither basin is being utilized currently as a supply source.

Annual recharge to the Middle Valley has been estimated to be in the range of 500 to 550 acre feet per year. However, well production capability has historically been limited to about 200 AFY. Recent studies by Fugro (1997) looked at the Middle Valley in detail, and concluded that the operational yield of the Middle Valley, assuming current operational strategy, is in the range of 250 to 300 acre feet per year. In other words, there does not appear to be a significant surplus of additional groundwater available for the District to tap.

Although production out of the Middle Valley appears to be limited to the range of 250 to 300 AFY, it is likely that the basin cannot be overdrafted on a long-term basis, because of the ability of the basin to respond rapidly to slight increases in recharge. Given a reasonable rainfall, the District can expect the basin to recharge sufficiently to continue to produce the  $\pm 200$  to 250 AFY.

It is likely that the District's alluvial production capability could be increased to  $\pm 250$  to 300 acre feet per year through optimization of well spacing and well operations. Optimization

modeling of the District's wells would identify optimal well spacing and production. However, it is questionable whether the costs of a new well project would justify the rather limited additional supply gained from the work. Further cost and benefit studies would be required to fully answer that issue.

The bedrock aquifers have greater storage capabilities than the alluvial basins because of the extensive and widespread fracture sets prevalent throughout the pluton. However, when the fractures are "dewatered," recharge may be slow. The result is that bedrock wells can be pumped at high discharge rates for longer time periods while the aquifer is slowly being dewatered or "mined," which results in a long-term decline in standing water levels and general overdrafting of the bedrock aquifer.

During the drought of the late 1980's and early 1990's, the water level trends of the bedrock wells suggested aquifer mining, resulting in a steady decline of both standing and pumping water levels. However, the return to normal to heavy rainfall years of the mid 1990's has resulted in a reversal of the trend and a general rise in water levels throughout the District's well field. What became apparent during the drought years was that the District did not have an adequate emergency supply. However, with implementation of the new Cummings Valley importation project, the District is now in a position of having a reliable, high-quality, long-term groundwater supply that can withstand drought periods equal to that experienced in the 1980's-90's.

The collection of water level and production data described in earlier sections of the Plan will be continued. The information that can be prepared will include maps of spring and fall water elevations, depths to groundwater, and changes in groundwater levels over time. In addition, the groundwater reports can include estimates of changes in groundwater storage, water delivered, and water use. This will allow an evaluation of the management activities to be made.

The water quality monitoring that is being proposed as one of the action items will be used to augment the information obtained through the historical water level readings. Criteria will be established to develop water quality "red flags," which with the compilation of the quality tests and the groundwater level measurements, the District will improve its ability to effectively manage its groundwater supply.

## **6. ACTION ITEMS**

### **6.1 GROUNDWATER MANAGEMENT PROGRAM**

Several action items have been identified for the Plan. Some of the items have already been implemented or are in the process of implementation; others will be implemented appropriately, as amended from time to time. Above all else, it is the objective of the District and this Plan to provide its customers with a long-term, reliable, high-quality water supply. All action items identified in this Plan are aimed, directly or indirectly, towards this overriding goal.

Not all of the action items identified here will be implemented immediately. Some items will be phased in as needed or as appropriate. The District believes it is important to identify all potential action items in the event any one of them becomes necessary. Many of the action items are in place and part of District policy. Others will be implemented immediately, while investigations into still other items may begin upon approval of the Plan or some time thereafter. Additional, new action items may be defined and will require further definition and implementation because of these investigations. Other items will require additional staff study, Board approval, and public hearings. It is felt that through the management activities listed in the Plan, and through the maintenance of this Plan as a living document, the District can preserve the groundwater resource to which it has been entrusted.

### **6.2 PERIODIC REVIEW OF HYDROGEOLOGIC DATA**

Comprehensive assessments of the Bear Valley and Cummings Valley alluvial aquifers have been conducted. The yields of both basins, the hydrogeologic flow patterns, and production constraints are well known. It is important, however, to periodically review the data collected by the monitoring program to observe the various critical parameters controlling the District's ability to reliably serve its customers. Periodic reviews and reporting of the data will enhance the District's geologic understanding of the basins, and allow the District to more effectively protect its resource while planning for the eventual supplemental water needs identified for 15 to 20 years hence.

The District recognizes that the effectiveness of this task is dependent on the validity and accuracy of the monitoring data. The health of both the alluvial and bedrock aquifers, particularly the bedrock aquifer, can be effectively evaluated only with proper water level monitoring. The monitoring should include readings at the same intervals every week, month, or year, and when the well pump has been off for a sufficient time to allow full recovery.

### **6.3 WATER QUALITY MONITORING**

The District's water supply is of excellent quality that consistently meets or exceeds minimum State and Federal standards for both Primary and Secondary standards. One of the primary objectives of this Plan is to maintain this high standard of water quality.

Over the past several years, average nitrate concentrations as reported to the State Department of Health Services have been slowly rising. Nitrate concentrations have risen approximately 1 mg/L per year over the past seven years, to reach a high in 1998 of 13.8 mg/L (the reported value represents an average of the wells included in the year of reporting). Although this value is still significantly below the State Standard MCL of 45.0 mg/L, the steady upwards trend will be evaluated through detailed inspection of nitrate concentrations of all the District wells, and possibly through increased sampling and monitoring. On preliminary inspection, it appears that the wells with the highest nitrate concentrations have not increased over the past several years. Rather, the reason the average is creeping upwards is that the wells with the lower concentrations of nitrates are showing a slight upward trend. These trends will be investigated and, depending on the results of the investigation, aquifer protection measures may be implemented to further protect the resource.

One of the growing concerns nationwide with groundwater production and the use of groundwater as a drinking water supply is the problem and threat of pathogens. To date, the Tehachapi area and California in general has been free of serious outbreaks of *Giardia*, *Cryptosporidium*, bacteria, and viruses being found in water from wells. However, the threat is real and very serious, and regulatory action to combat it will likely lead to disinfection requirements for groundwater. Current estimates from the EPA are that the Groundwater Disinfection Rule (GWDR) developed sometime in 1999, most likely to become effective sometime in 2002. Promulgation of this new rule will have a profound effect on many purveyors, with an unknown financial impact. The District intends to stay abreast of the status of the GWDR, and will proactively pursue proper disinfection methodologies as appropriate.

#### **6.4 CONJUNCTIVE USE PROGRAM**

The District has developed and implemented both active and passive conjunctive use programs, which is the integration of surface and groundwater supplies to meet current and future demand. In Bear Valley, the District stores Sycamore Creek water in Cub Lake and 4-Island Lake for golf course irrigation. During years of low stream flow, groundwater has been pumped into the lakes to supplement the surface water supply. In Cummings Valley, the District is nearing completion of the Cummings Valley importation project, which has as one of its components an active stream recharge project.

To continue this proactive approach, an objective review of both past and future programs will be conducted, including a review of the effectiveness of past surface water recharge efforts, the potential for increasing the Bear Valley conjunctive use program to store more storm runoff water, and, as appropriate, the potential for future augmentation of the Cummings Valley project. The siting and construction of new or additional recharge facilities, particularly in Bear Valley, will be assessed and developed in the most economical, effective manner possible.

## 6.5 WATER CONSERVATION PROGRAM

The District has always strongly supported programs that stress water conservation, and will continue to educate local water users and encourage water conservation efforts throughout the District. In conjunction with its mandate to provide a reliable water supply to its customers, one of the District's main goals is water conservation. The District endeavors to insure that:

- Water is reused to the maximum extent possible
- Water is priced in such a way as to encourage conservation through tiered monthly water rates
- Programs are in place to encourage water customers to voluntarily participate in personal conservation programs
- Programs are in place to educate water customers in conservation measures

The District is a signatory to the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding (MOU) and is obligated to and committed to comply with the Best Management Practices (BMP) contained in the MOU, listed below.

BMP Measure	Action Date
Water surveys for residential customers	7/1/98
Residential plumbing retrofit	7/1/98
System water audit	Current
Metering with commodity rates	Current
Large landscape conservation	7/1/99
High-efficiency washing machine rebate	7/1/99
Public information	Current
School education	7/1/98
CII conservation	7/1/99
Conservation pricing	Current
Conservation coordinator	7/1/98
Water waste prohibition	Current
Residential ULFT rebate	7/1/98

The District has taken a proactive approach towards water conservation and towards implementation of the MOU's BMPs. Full implementation of the District's water conservation programs and policies will continue to be of critical importance to the Board.

## 6.6 DROUGHT MANAGEMENT AND DROUGHT CONTINGENCY PLANS

The District Board of Directors enacted District Ordinance 95-106 on January 14, 1995 (Appendix B). The Ordinance sets forth emergency conservation measures to be implemented in case of either a prolonged water shortage (drought) or a catastrophic event resulting in the temporary inability to deliver water.

The Ordinance defines three drought conditions: moderate, severe, and critical. The criteria for setting each condition is spelled out as well as the measures to be taken by both the District and the District's water customers. Specific actions that the District can take to enforce compliance, as well as the legal actions the District can take for non-compliance are all defined.

## **6.7 WELL FIELD MAINTENANCE**

The District recently completed an extensive evaluation of the physical health of its entire well field. Several steps were taken to maximize production from some wells, rehabilitation efforts on certain wells were conducted, some inefficient or ineffective wells were taken off-line, and a new program to replace certain wells has been initiated. This proactive approach to maintaining the well field will protect the District from unscheduled and expensive repairs or outages. As part of the monitoring efforts and periodic reviews, data will be evaluated and the health of the wells will continue to be evaluated.

## **6.8 GROUNDWATER MONITORING**

The District currently has in place a comprehensive monitoring program that regularly measures water levels in all District wells. The District shall continue to monitor water levels and sampling for water quality testing on a routine basis. To increase the effectiveness of the monitoring program and improve the water level data base, it is the District's intent to standardize the monitoring interval between measurements, and insure that all water level measurements are taken during times of full recovery or maximum drawdown. As described in earlier action items, the District will periodically review the data gathered in the monitoring phase, and prepare reports quantifying water demands and evaluating surface and groundwater supplies. These summaries will assist the District in evaluating the effectiveness of the various elements of the program.

The need for expansion of the existing monitoring plan and monitoring network will be evaluated. If appropriate, new monitoring wells can be obtained and/or drilled to monitor for groundwater gradient effects and potential well field contamination issues.

## **6.9 WELL HEAD AND AQUIFER PROTECTION**

The federal Well Head Protection Program (WHPP) was established by Section 1428 of the Safe Drinking Water Act (SDWA) of 1986, which required states to develop a plan to protect the public drinking water supply. The 1996 amendment to the SDWA furthered the concept by enacting the Source Water Assessment Program (SWAP), again requiring each state to implement a SWAP or WHPP. These programs are designed to protect groundwater sources of public drinking water supplies from contamination, thereby eliminating the need for costly treatment to meet drinking water standards. The key elements of a WHPP include a source area delineation, contaminant inventory, and vulnerability assessment.

A Well Head Protection Area (WHPA) is defined as "The surface and subsurface area surrounding a water well or well field supplying a public water system, through which



contaminants are reasonably likely to move toward and reach such water well or well field." The WHPA may also be the recharge area that provides the water to a well or well field. Thus, well head protection is a preventative measure to protect groundwater supplies. The elements of a WHPP are sufficiently similar to a SWAP such that BVCSD's efforts to protect its groundwater supplies through a WHPP-type program would be adequate to satisfy the SWAP requirements.

The District is in a unique situation in that it completely overlies the groundwater basin from which its water is produced. It is the only entity, public or private, that can drill and produce water from a water well in the community, and the land use decisions have already been established to form a *de facto* protection zone around the production wells. Furthermore, the entire watershed recharge zone for all the District's wells (excepting the Cummings Valley wells) lies within the District service area and is therefore protected.

To date, the State of California has not formally adopted a required WHPP program, and is not expected to enforce the guidelines for several years. So far, the State Department of Health Services (DHS) is taking the lead role in advising local agencies and purveyors on the published guidelines. As the DHS, Cal-EPA, SWRCB promulgate specific requirements, the District will respond promptly and responsibly. The District's jurisdictional position in Bear Valley will allow for effective implementation of any necessary future programs.

#### **6.10 WELL CONSTRUCTION AND ABANDONMENT PLAN**

All wells should be properly destroyed or decommissioned if they are not to be used in the future. Wells that are not properly decommissioned can pollute groundwater to the point where it is unusable or requires expensive treatment. Groundwater contamination is not the only threat to public health due to abandoned wells, but these wells could conceivably also pose a serious physical hazard to humans and animals.

The District has always constructed its wells in a manner to meet or exceed minimum standards established by the State of California and Kern County. Wells that are no longer in service that are also not necessary to the District's monitoring efforts will be destroyed according to minimum standards for the destruction of wells as specified in Department of Water Resources Bulletins 74-81 and 74-90.

Within Bear Valley, the District has control over the location, construction standards, and destruction procedures of all wells constructed within the District's service area.

As one of many landowners in Cummings Valley, the District does not have the broad jurisdictional control it enjoys in Bear Valley. Therefore, BVCSD will work with the Tehachapi-Cummings County Water District Watermaster and other Cummings Valley landowners to insure that the highest water well construction and abandonment standards are maintained.

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**Tables**

**BASED ON NUMBERS OF REGISTERED VOTERS**

Year	Number of Registered Voters	Average Annual Growth (%/yr)	Delivered Water			Unaccounted for Water A/Fyr	Total Water Delivery Requirement A/Fyr
			Residential A/Fyr	Commercial A/Fyr	Irrigation/Lake Fill A/Fyr		
1998	2,430	4.0%	856	50	150	103	963
2000	2,770	3.5%	748	57	150	115	1070
2005	3,120	2.5%	842	64	150	127	1180
2010	3,510	2.5%	948	72	150	140	1325
2015	3,880	2.0%	1043	78	150	153	1430
2020	4,050	1.0%	1094	83	150	159	1480
2025	4,280	1.0%	1150	88	150	167	1580
2030	4,470	1.0%	1207	92	150	174	1630

**BASED ON POPULATION**

Year	Number of Residents	Average Annual Growth (%/yr)	Delivered Water			Unaccounted for Water A/Fyr	Total Water Delivery Requirement A/Fyr
			Residential A/Fyr	Commercial A/Fyr	Irrigation/Lake Fill A/Fyr		
1998	5,540	4.5%	885	50	150	104	975
2000	6,420	4.0%	770	56	150	117	1100
2005	7,550	3.5%	906	68	150	135	1280
2010	8,310	2.0%	987	75	150	147	1370
2015	8,930	1.5%	1072	81	150	159	1480
2020	9,380	1.0%	1126	85	150	163	1530
2025	9,840	1.0%	1181	89	150	170	1590
2030	10,340	1.0%	1241	93	150	178	1670

**BASED ON ACTIVE RESIDENTIAL METERS**

Year	Number of Residential Services	Average Annual Growth (%/yr)	Delivered Water			Unaccounted for Water A/Fyr	Total Water Delivery Requirement A/Fyr
			Residential A/Fyr	Commercial A/Fyr	Irrigation/Lake Fill A/Fyr		
1998	1,980	3.2%	637	50	150	100	940
2000	2,340	3.2%	717	56	150	111	1040
2005	2,530	2.8%	810	64	150	123	1150
2010	2,800	2.1%	898	70	150	134	1280
2015	3,070	1.9%	982	77	150	148	1380
2020	3,300	1.5%	1056	80	150	155	1480
2025	3,530	1.4%	1130	89	150	164	1540
2030	3,750	1.3%	1200	94	150	173	1620

**PROJECTED WATER DELIVERY REQUIREMENTS**

CHEMICAL GROUP	CONSTITUENT	UNIT	FEDERAL MCL	STATE MCL	AVERAGE for all WELLS	RANGE for all WELLS
MINERALS (CATIONS)	Total Hardness (as CaCO <sub>3</sub> )	mg/L	NS	NS	157.7	14.0-200.0
	Calcium	mg/L	NS	NS	42.3	4.2-58.0
	Magnesium	mg/L	NS	NS	12.2	7-17.0
	Sodium	mg/L	NS	NS	34.4	25.0-60.0
MINERALS (ANIONS)	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	NS	NS	162.7	89.0-220.0
	Hydroxide	mg/L	NS	NS	<0.8	<0.8
	Carbonate (CO <sub>3</sub> )	mg/L	NS	NS	3.0	<2.6-21.0
	Bicarbonate (HCO <sub>3</sub> )	mg/L	NS	NS	194.1	66.0-270.0
	Sulfate	mg/L	NS	600.0	22.1	13.0-25.0
	Chloride	mg/L	NS	600.0	22.0	11.0-34.0
	Nitrate (NO <sub>3</sub> )	mg/L	45.0	45.0	13.8	1.5-34.0
	Fluoride (Temp. depend.)	mg/L	4.0	1.4	0.2	.06-34
PHYSICAL	pH (Lab)	Std units	NS	NS	8.0	7.73-9.19
	Specific Conductance	umho/cm	NS	900.0	455.6	301-555
	Total Filterable Residue	mg/L	NS	1500.0	269.0	182.0-326.0
	Apparent Color (Unfiltered)	UNITS	NS	15.0	4.3	2.0-16.0
	Odor Threshold @ 60 C	TON	NS	3.0	NONE	NONE
	Lab Turbidity	NTU	NS	3.0	1.0	.1-5.3
	MBAS	mg/L	NS	0.5	<0.5	<0.5
INORGANICS	Aluminum	ug/L	NS	1000.0	<50.0	<50.0
	Antimony	ug/L	NS	6.0	<1.0	<1.0
	Arsenic	ug/L	50.0	50.0	3.6	<2.0-9.3
	Barium	ug/L	2000.0	1000.0	<100.0	<100.0
	Beryllium	ug/L	NS	4.0	<1.0	<1.0
	Cadmium	ug/L	NS	10.0	<1.0	<1.0
	Chromium (Total)	ug/L	100.0	50.0	<10.0	<10.0
	Copper	ug/L	1300.0	1000.0	15.3	<10.0-46.0
	Iron	ug/L	NS	300.0	71.2	<50.01-110.0
	Lead	ug/L	50.0	50.0	<5.0	<5.0
	Manganese	ug/L	NS	50.0	24.7	<10.0-56.0
	Mercury	ug/L	2.0	2.0	<0.2	<0.2
	Nickel	ug/L	NS	100	<5.0	<5.0
	Selenium	ug/L	50.0	10.0	4.0	<2.0-12.0
	Silver	ug/L	50.0	50.0	<10.0	<10.0
	Thallium	ug/L	NS	2.0	<1.0	<1.0
	Zinc	ug/L	NS	5000.0	59.1	<50.0-72.0
Nitrate as N (Nitrogen)	ug/L	NS	1000.0	77.1	<20.0-410.0	
BIOLOGICAL	Coliform Bacteria Presence/Absence No. Of Violations		No. of tests 154 0	Pos. Tests 1	% pos. 1	Period Jan-Dec

mg/L = Milligrams per liter=parts per million. Ug/L = Micrograms per liter = Parts per billion.

NS = No Standard. < = Less than.

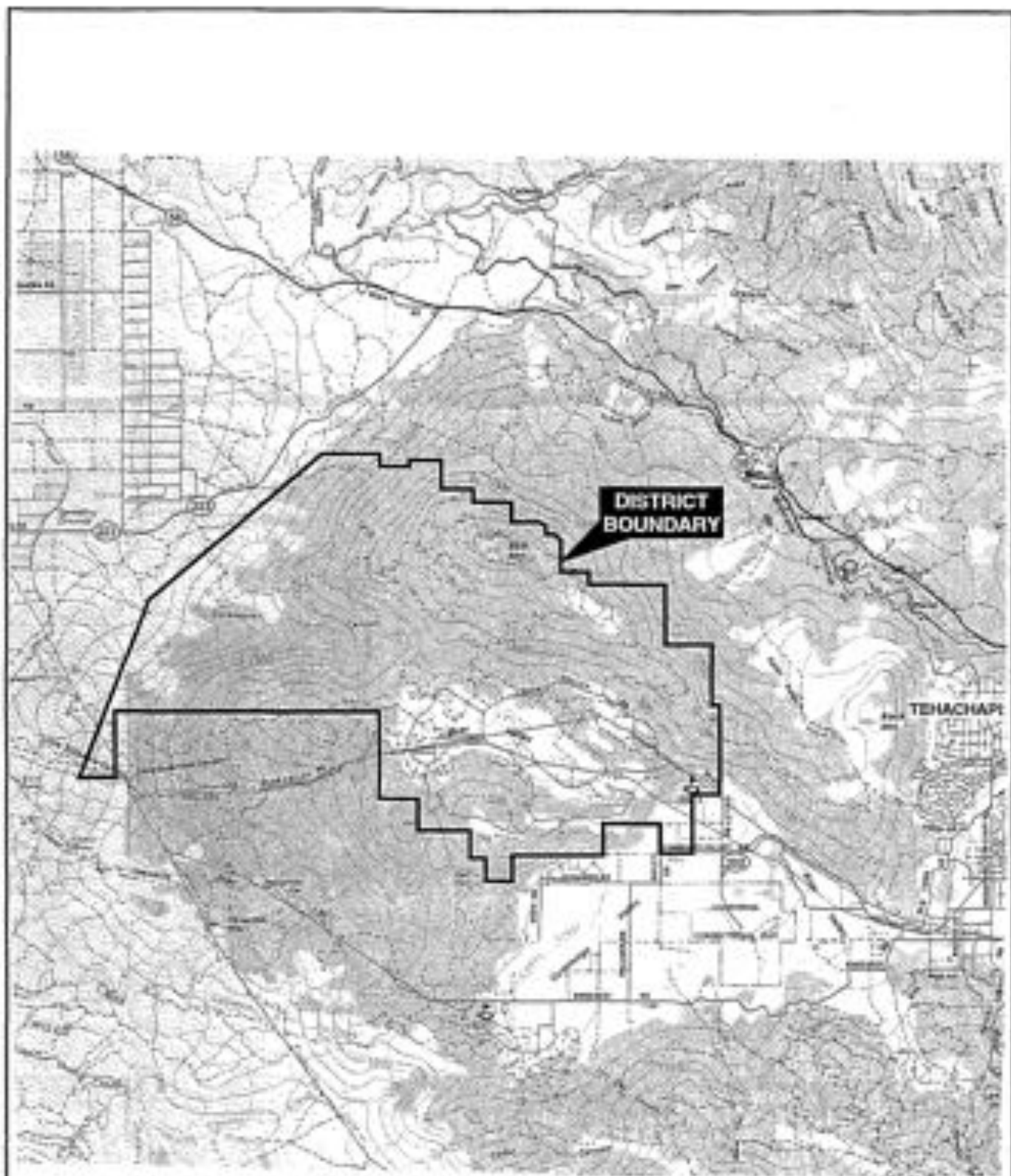
Bear Valley CSD currently has 25 potable water wells. Each well is tested every three years for various constituents.

In 1997 wells #6,8,9,11,24,25, and 33 were tested.

These 7 wells were also tested for over 80 organic chemicals. All analysis results were less than the detection limit.

## ANNUAL WATER QUALITY REPORT -- 1998

**Figures**



DISTRICT BOUNDARY MAP

Figure 1



BEAR VALLEY COMMUNITY SERVICES DISTRICT  
GROUNDWATER MANAGEMENT PLAN

REVISED 04/13

**fugro**

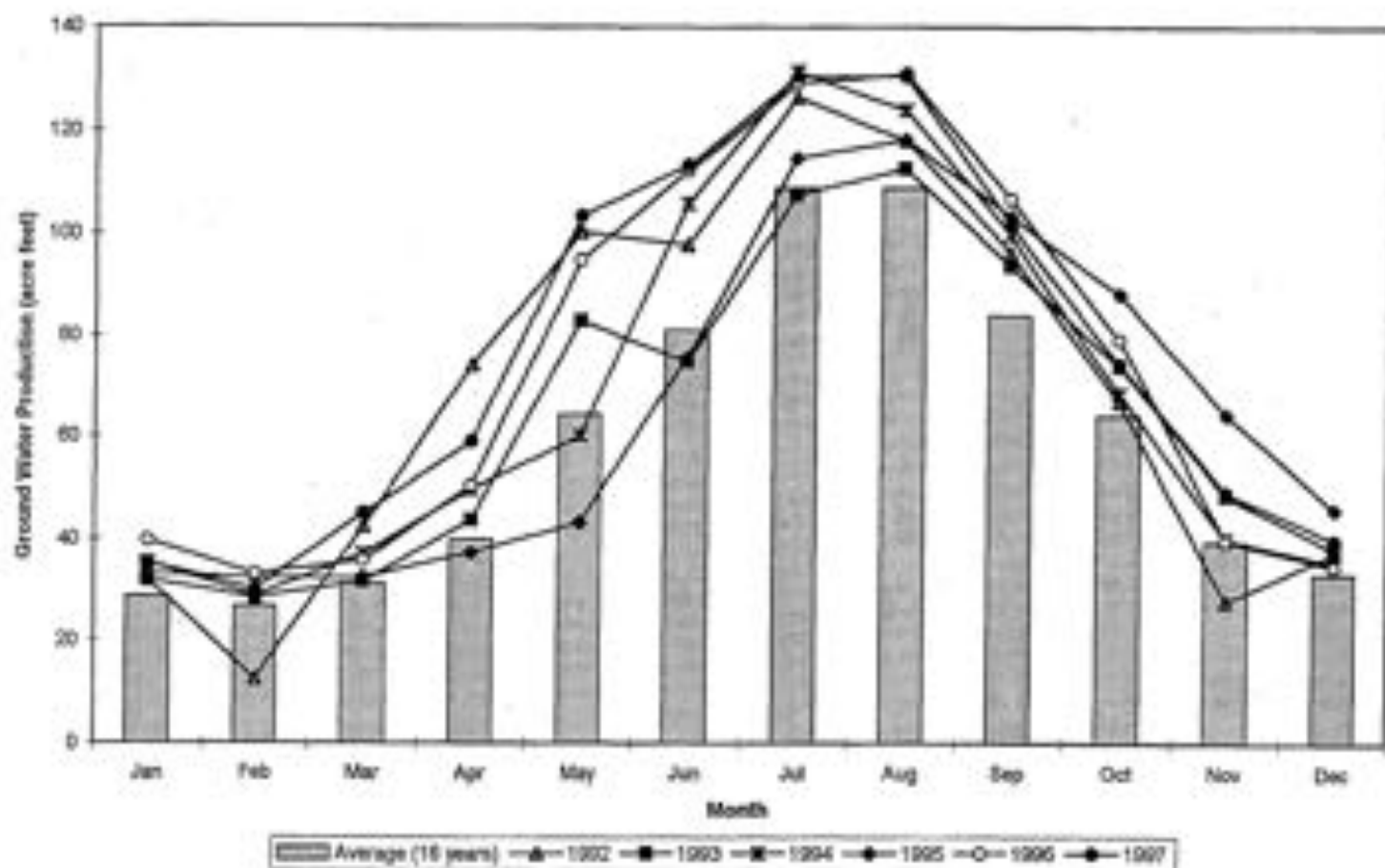




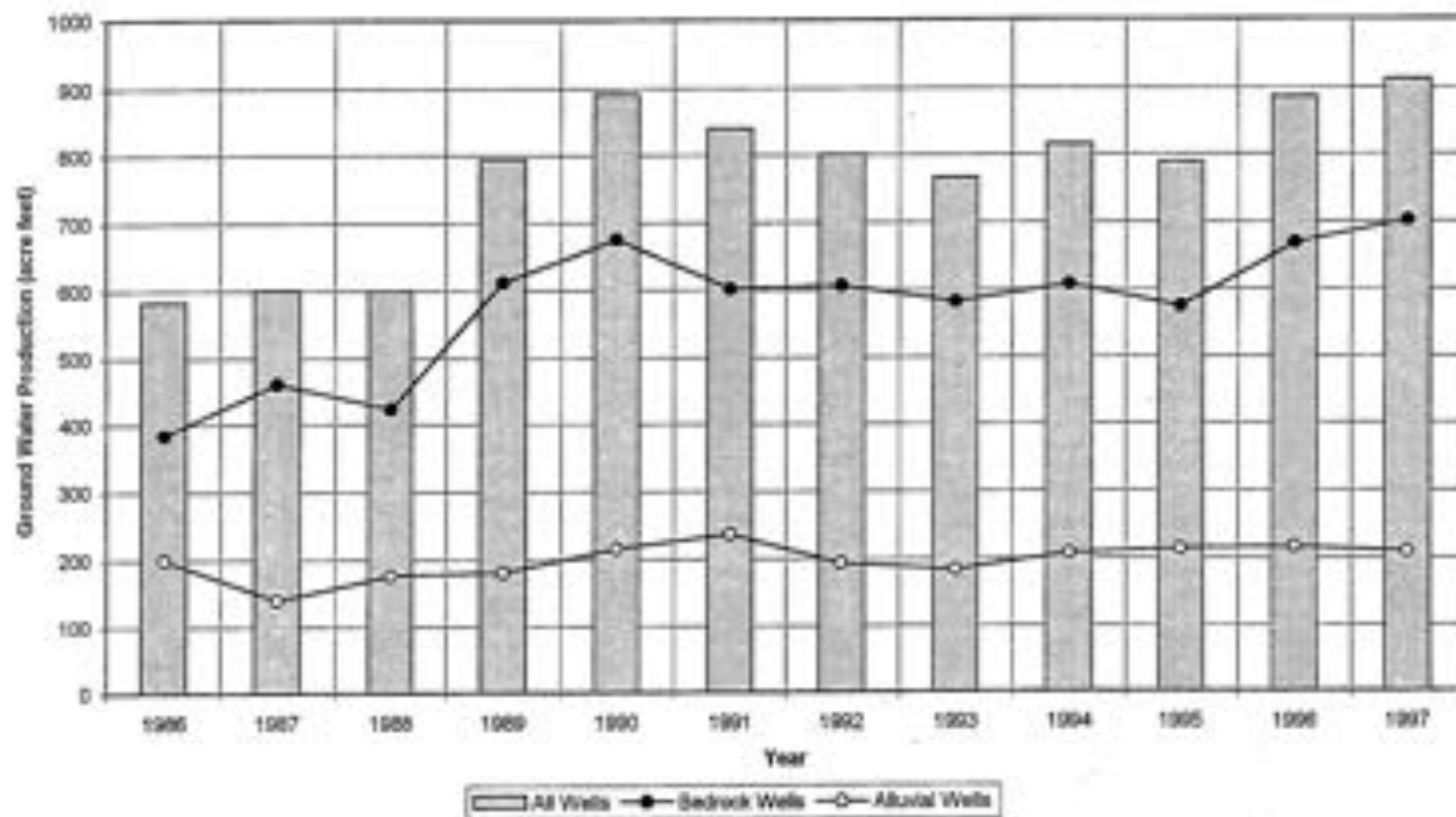
**ANNUAL GROUNDWATER PRODUCTION**

BEAR VALLEY COMMUNITY SERVICES DISTRICT  
GROUNDWATER MANAGEMENT PLAN

Figure 2



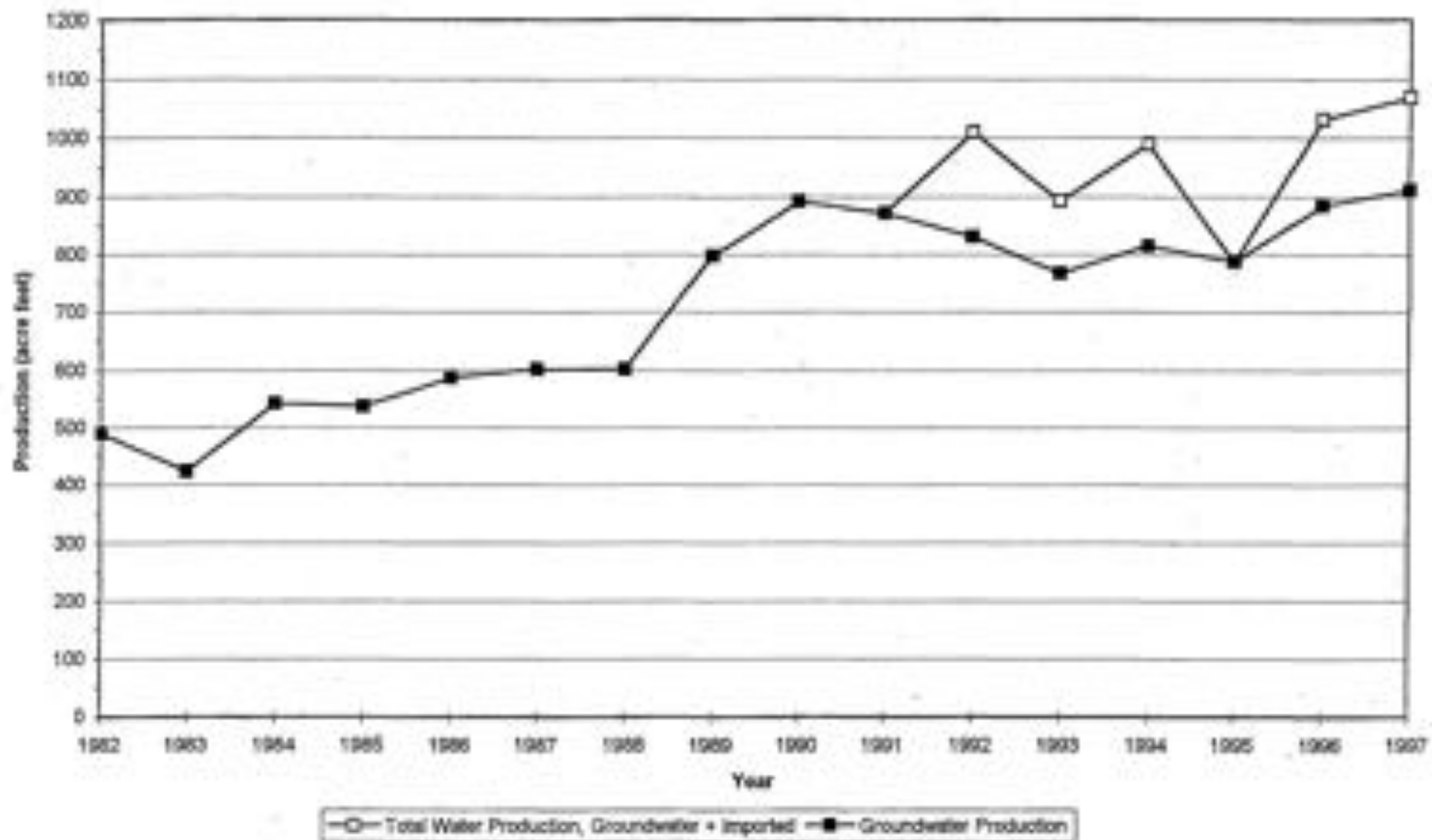
MONTHLY GROUNDWATER PRODUCTION



**GROUNDWATER PRODUCTION SUMMARY**

BEAR VALLEY COMMUNITY SERVICES DISTRICT  
GROUNDWATER MANAGEMENT PLAN

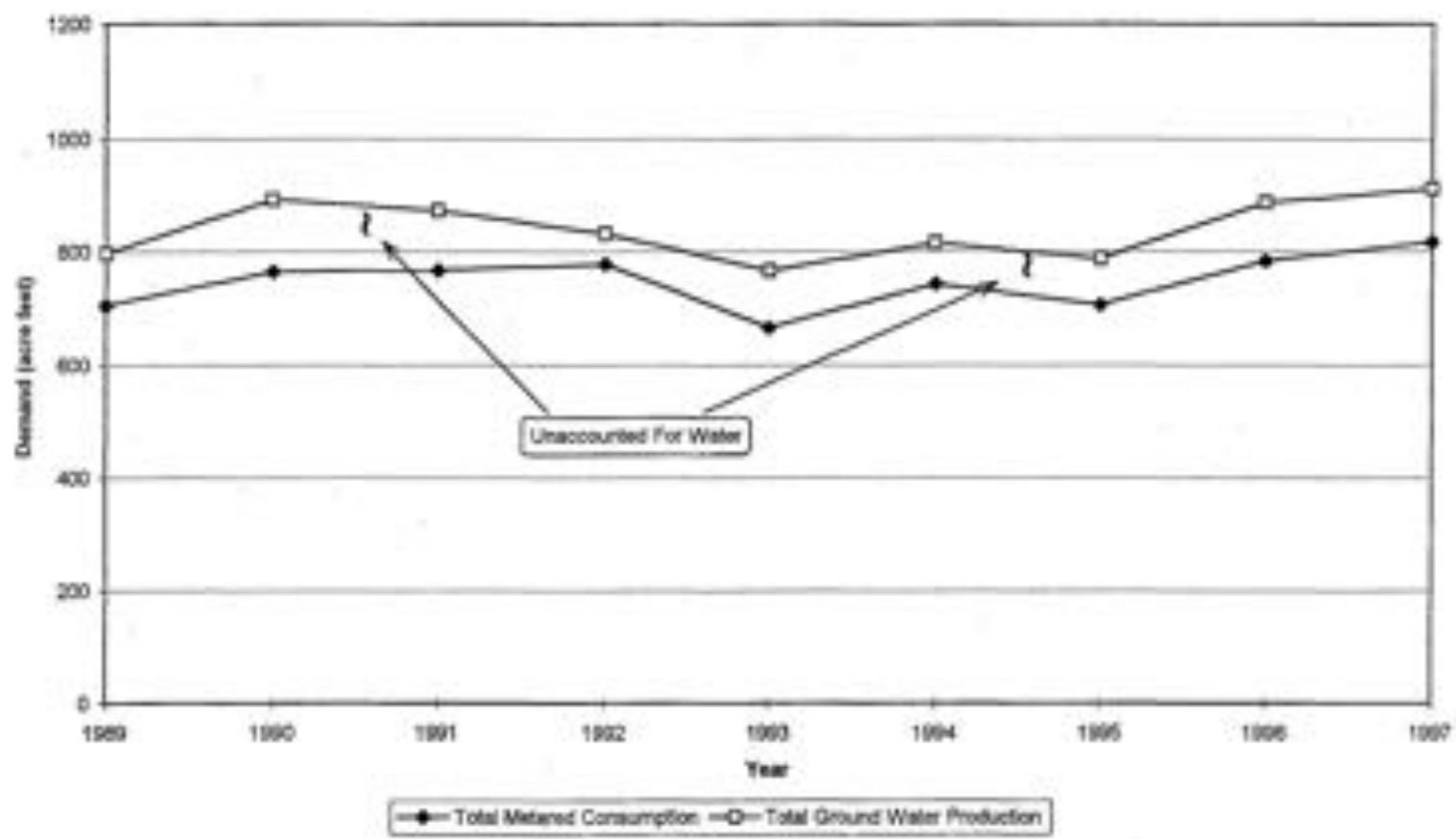
Figure 4



ANNUAL TOTAL WATER SYSTEM PRODUCTION

BEAR VALLEY COMMUNITY SERVICES DISTRICT  
GROUNDWATER MANAGEMENT PLAN

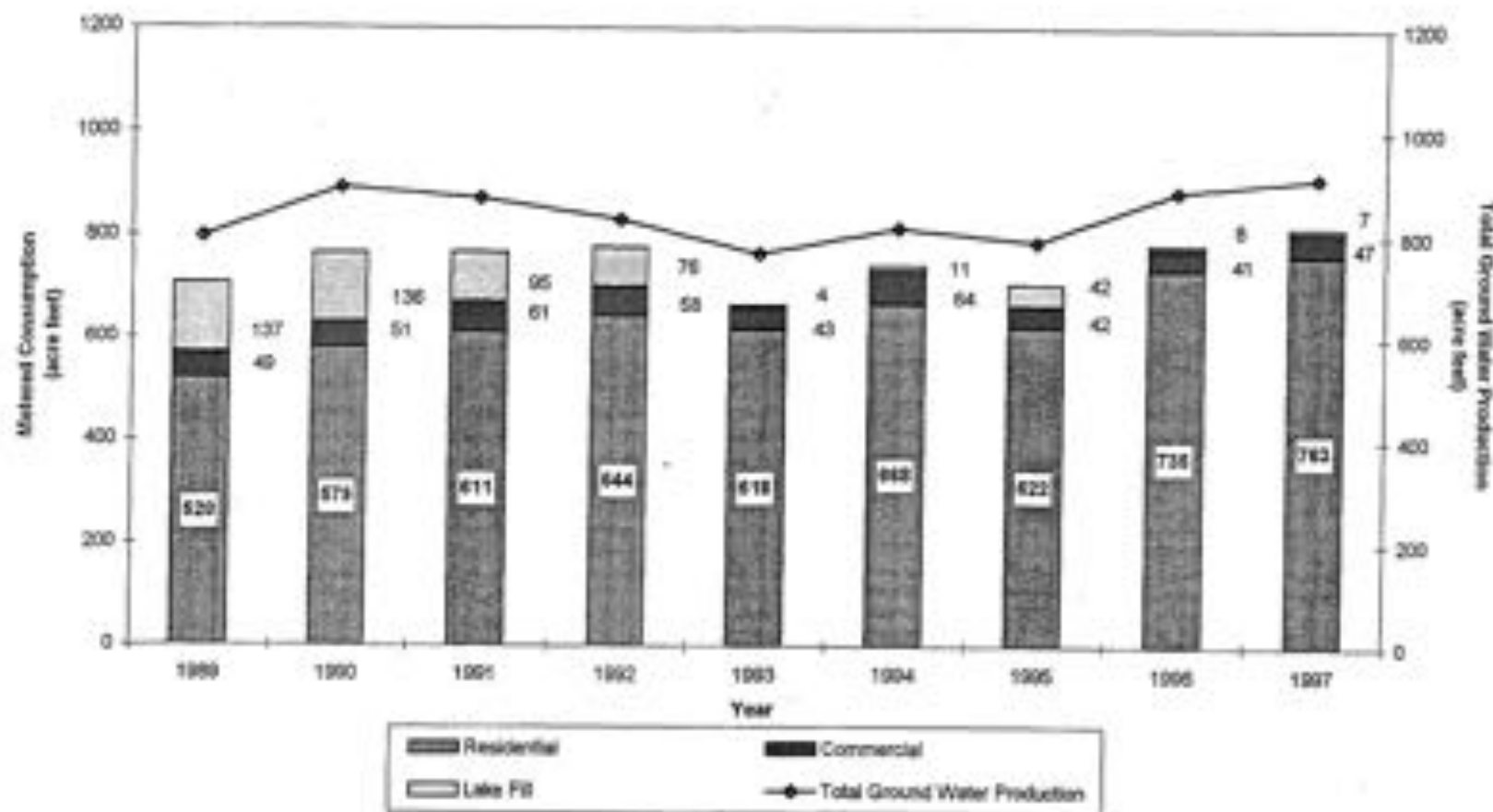
Figure 5



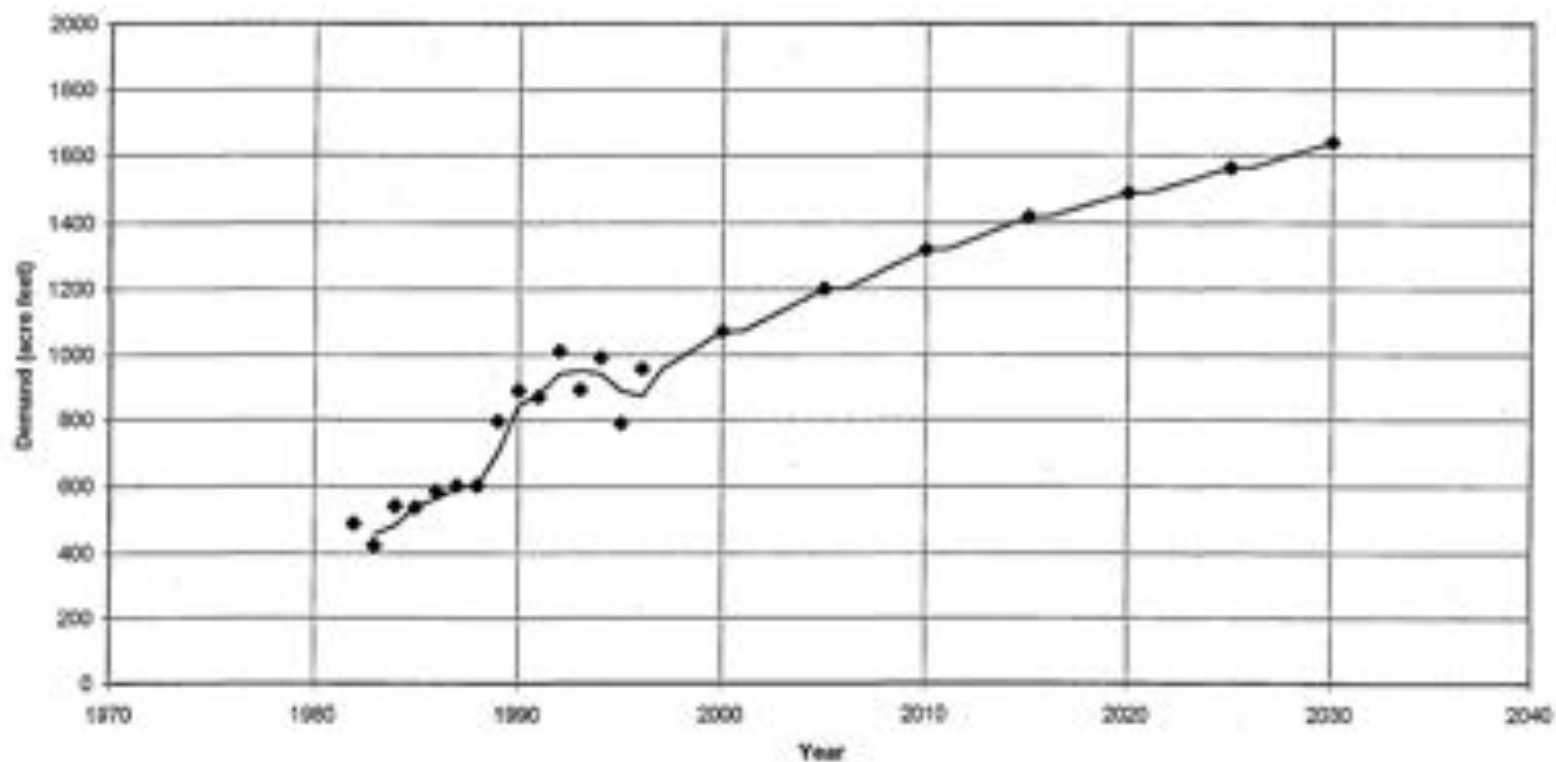
**TOTAL WATER CONSUMPTION**

BEAR VALLEY COMMUNITY SERVICES DISTRICT  
GROUNDWATER MANAGEMENT PLAN

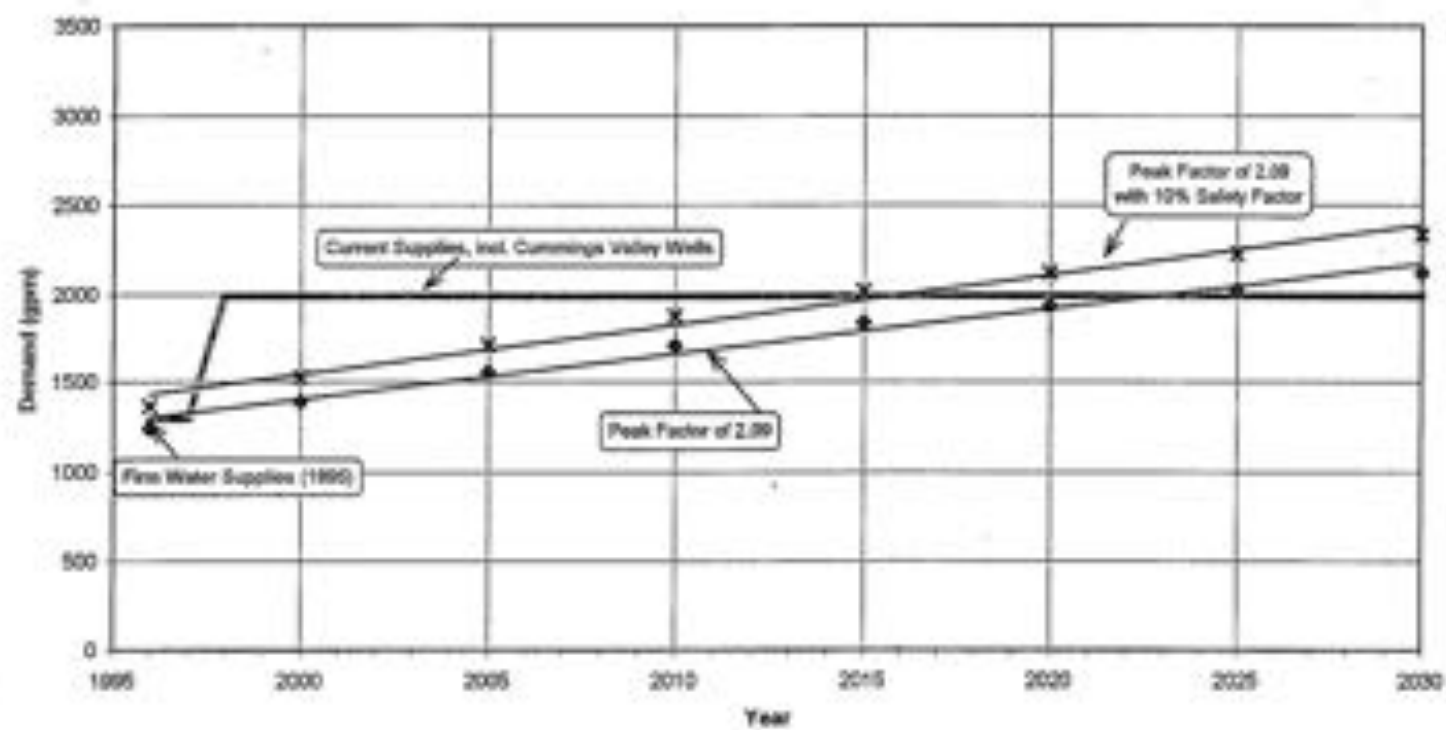
Figure 6



METERED CONSUMPTION vs TOTAL GROUNDWATER PRODUCTION



PROJECTED TOTAL WATER DELIVERY DEMAND



PROJECTED FUTURE PEAK DEMANDS

BEAR VALLEY COMMUNITY SERVICES DISTRICT  
GROUNDWATER MANAGEMENT PLAN

Figure 9





**Appendix A**

RESOLUTION NO. 98-923

RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
BEAR VALLEY COMMUNITY SERVICES DISTRICT  
OF INTENTION TO DRAFT  
A GROUNDWATER MANAGEMENT PLAN

WHEREAS, in 1992 the California Legislature adopt AB 3030, effective January 1, 1993, and embodied in the California Water Code, Sections 10750, et seq., which permits local agencies to work cooperatively to manage groundwater resources within their jurisdictions; and

WHEREAS, Sections 10753 of the Water Code authorizes any local agency, whose service area includes a groundwater basin, or a portion of a groundwater basin, not subject to groundwater management pursuant to other provisions of law or court order, to adopt and implement a groundwater management plan; and

WHEREAS, pursuant to the requirements of the Groundwater Management Act a noticed hearing was held to allow for public participation and comment on the District's intention to draft a groundwater management plan;

WHEREAS, the Board of Directors has determined that it is in the best interest of the District and its customers to draft a groundwater management plan;

NOW, THEREFORE, BE IT RESOLVED as follows:

1. That the District's staff draft a groundwater management program, including plans and regulations to implement and enforce said plan, all as authorized by the Groundwater Management Act (California Water Code, Sections 10750, et seq.).
2. After the proposed groundwater program is drafted, the District's staff is directed to present said plan to the Board of Directors and the public at a second noticed hearing for the purpose of consideration of the adoption of said plan.

\*\*\*\*\*

I HEREBY CERTIFY that the foregoing Resolution was passed and adopted by the Board of Directors of the Bear Valley Community Services District at a regular meeting thereof held on the 14th day of March, 1998 by the following vote:

AYES: MCCLOSKEY, SAMUELS, MILLER

NOES: NONE

ABSENT: AUNGST, PRINCE

ABSTAIN: NONE



WILLIAM R. MILLER, President  
Board of Directors of the Bear  
Valley Community Services District

ATTEST:



Roblee Thiesse, Secretary

**Appendix B**

ORDINANCE NO. 95-106

AN ORDINANCE OF THE BEAR VALLEY COMMUNITY SERVICES  
DISTRICT BOARD OF DIRECTORS REGARDING THE  
IMPLEMENTATION OF EMERGENCY WATER CONSERVATION  
MEASURES IN THE EVENT OF A WATER SUPPLY SHORTAGE

BE IT ORDAINED by the Board of Directors of the Bear Valley Community Services District as follows:

Section 1. Declaration of Policy.

California Water Code Sections 375 et seq. permit a Community Services District that supplies water for the benefit of persons within its service area to adopt and enforce a water conservation program to reduce the quantity of water used in order to conserve the District's water supplies. The Board of Directors ("Board") of the Bear Valley Community Services District ("District") hereby establishes a comprehensive water conservation program pursuant to California Water Code Sections 375 et seq., based on the need to conserve water supplies and to avoid or minimize the effects of any future shortage.

Section 2. Findings

- (a) The Board finds that water shortages have occurred in the past and could occur in the future due to increased demand or limited supplies of potable water caused by drought or curtailment of supply.
- (b) The Board also finds that for many years Southern California has been experiencing a gradual reduction in per capita water supply resulting from population growth and lack of supply replacement and that the demographic changes in population of the District have caused an increase in demand that cannot be met in time of supply shortages.

Section 3. Scope of the Conservation Program

The provisions of this ordinance respond to long-term and short-term water shortages by authorizing the Board to select the most appropriate level of conservation measures based on then current conditions. The Board shall conduct duly noticed public meetings to inform the District's water customers of any change in the level of water conservation needed to meet the limited supply of water resources and the measures needed to meet those limitations.

Section 4. Water Use In Landscaping

- (a) The California Legislature has found and declared that:

(1) Landscapes are essential to the quality of life in California by providing areas for active and passive recreation and as an enhancement to the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development; and

(2) Landscape design, installation, and maintenance can and should be water efficient.

(b) The District finds and declares that:

(1) The current rate of home construction on unoccupied lots will in the future substantially increase the present demands for potable water.

(2) The amount of potable water used for landscaping during the months of summer is about three times the amount used for domestic household purposes, resulting in potential water shortages.

(c) It is the intent of the District, realizing that water shortages can develop at any time, to promote the most efficient use of water in landscaping throughout the year while respecting the economic, environmental, aesthetic, and lifestyle choices of property owners.

(d) In order to avoid unnecessary expenses that could be incurred by property owners during periods of water shortages, the District shall provide information to all property owners and renters regarding the design, installation, and maintenance of water efficient landscapes and the use of drought resistant plants and efficient irrigation systems.

#### Section 5. Authorization

Based on meter information provided by the District's Water Supervisor of the water supplies available, the General Manager is authorized and directed to implement the provisions of this ordinance. Additionally, the General Manager is authorized to make minor and limited exceptions to prevent undue hardship or unreasonable restrictions, provided that water shall not be wasted or used unreasonably and the purpose of this ordinance can be accomplished. Any exceptions shall be reported to the Board at its next meeting.

#### Section 6. Duration of Conservation Levels

As soon as a water shortage condition is determined to exist, the water conservation measures provided for by this ordinance for that condition shall apply to all District water service until a different condition is declared.

#### Section 7. Use of Non-potable Water

Nothing in this ordinance shall prohibit or limit the use of non-potable water on the golf course or for other irrigation purposes, provided the State Department of Health Services has determined that the use would not be detrimental to public health.

## Section 8. Definition of Severity of Water Shortage Conditions

(a) **Stage One Condition: Moderate water shortage.** This condition exists when the District determines that it may not be able to meet 90 percent or more of the projected water demands of its customers, either now or within six months, and that water use should be reduced by not less than 10 percent. During a Stage One Condition customers are asked to use water wisely and to practice water conservation measures so that water is not wasted. All water withdrawn from District facilities shall be put to reasonable beneficial use. Water conservation measures include, but are not limited to:

- (1) Preventing excessive water from flowing off the property served onto adjacent properties or sidewalks, gutters, surface drains, storm drains, or overland.
- (2) Use of drip irrigation systems or other methods designed to prevent excessive surface irrigation of landscaped areas, resulting in conditions such as puddling or run-off.
- (3) Immediate repair of all observable leaks of water on the customer's premises.
- (4) Use of a broom or a blower instead of a hose to clean driveways and paved surfaces. Use of water in washing down of driveways and other paved surfaces only when necessary to alleviate immediate fire or sanitation hazards.
- (5) Being careful not to leave a hose running while washing a vehicle.
- (6) Use of low flow shower heads and shortening the time spent in the shower.
- (7) Use of volume reduction devices in toilets and being careful not to use the toilet as an ashtray or wastebasket.
- (8) Reduction in water consumption for bathing, hand dishwashing and irrigation by reduction of flow time for these activities.
- (9) Running only full loads in the washing machine and dishwasher.
- (10) Capturing cold tap water while waiting for hot water to come down the pipes, to be used later on house plants or garden.
- (11) Serving water to customers at the Oak Tree Country Club and Mulligan Room only upon specific request.

(b) **Stage Two Condition: Severe water shortage.** This condition applies during periods when the District determines that it may not be able to meet 80 percent or more of the projected water demands of its customers, either now or within six months, and that water use should be reduced by not less than 20 percent. During a Stage Two Condition, the following water conservation measures shall apply, including all provisions of a Stage One Condition:

- (1) (A) Lawn watering and landscape irrigation is permitted only Monday through Saturday between the hours of 5:00 p.m. and 8:00 a.m., local time. However, this watering is permitted at any time if a hand-held hose is used, equipped with a nozzle that automatically shuts off when released, or when a hand-held container or a drip irrigation system is used.
- (B) Lawn watering and landscape irrigation is prohibited on Sundays.

(2) Construction water for grading and compacting may be used at any time providing the water is from a source other than the District's potable water system.

(3) Potable metered water may be used for other construction between 7:00 a.m. and 5:00 p.m., local time.

(4) Washing of vehicles or other equipment is permitted only if done using a hand-held bucket or a hand-held hose equipped with a nozzle that automatically shuts off when released.

(c) Stage Three Condition: Critical water shortage. A Stage Three Condition applies during periods when the District determines that it will not be able to meet 70 percent or more of the projected water demands of its customers now or within six months, and that a reduction of not less than 30 percent in potable water use is required to meet minimal needs of all its customers.

During a Stage Three Condition, all the provisions of Stages One and Two Conditions shall apply, and in addition, the following restriction shall apply: All high volume users (defined as over 4000 cubic feet per month) shall submit to the District water use curtailment plans for at least 30 percent overall reduction in water use. The plans shall be furnished on a District form within ten days of notice by the District of the declaration of a Stage Three Condition.

#### Section 9. Water Rates and Surcharges

Special Water Conservation Rates shall apply during Stage Conditions One, Two and Three, and in addition, surcharges shall apply during Stage Conditions Two and Three, as set out in Section 12.

#### Section 10. Implementation of Stages One, Two or Three Conditions

The General Manager or his designee shall monitor the District's projected supply and demand for water on a daily basis and determine the extent of the conservation required through the implementation or termination of Stages One, Two and Three Conditions in order for the District to prudently plan for and supply water to its customers. Thereafter, the General Manager may order that Stage One, Two or Three Conditions be implemented or terminated in accordance with the applicable provision of this ordinance. The declaration of a Stage Condition shall be made by public announcements, posting of notices in three locations accessible to the public and publication of the notice in the Tehachapi News. The Stage designated shall become effective immediately upon announcement. The declaration of any



Stage Condition shall be reported to the Board at its next meeting. The Board shall then ratify the declaration, rescind the declaration or direct the declaration of a different Stage.

#### Section 11. Remedies

(a) The General Manager is authorized to require filing of water use curtailment plans from high volume users in order to protect the minimum supplies necessary to provide for public health, sanitation, and fire protection. Failure to provide curtailment plans in a timely manner or plans that do not meet the required cutbacks shall authorize the District to install flow restrictors at the meter or termination of service.

(b) Remedies for violations of this ordinance are not exclusive and may be imposed cumulatively in the discretion of the District. For example, a violator may pay a surcharge, be subject to a flow restrictor, have water service be discontinued, and be prosecuted criminally.

(c) Surcharges and the cost of disconnecting or limiting service shall be the responsibility of the property owner and the person in whose name service is maintained. Surcharges shall be considered normal charges for water used, and collected through the District's routine water billing process.

(d) Any violation of this ordinance is a misdemeanor under Section 377 of the California Water Code and upon conviction a person shall be punished by imprisonment in the county jail for up to 30 days, or by a fine of up to \$1000, or by both.

(e) The General Manager shall determine if and when violations occur and mail a Notice of Violation, together with a copy of this ordinance, to the property owner or to the person in whose name the service is maintained. In making this determination the General Manager may grant an exemption in emergency situations for health and safety reasons.

#### Section 12. Appeals of Violations

Any customer disagreeing with the Notice of Violation may appeal the Notice by written notice received by the District within ten days of the mailing of the Notice of Violation. Any Notice not appealed within ten days is final. Upon timely filing of an appeal, the District shall mail a notice to the property owner and the person in whose name service is maintained at least ten days prior to the regular or special meeting at which the appeal will be heard. The Board may, in its discretion, affirm, reverse, or modify the Notice of Violation.

#### Section 13. Water Rate and Surcharge Schedules

##### (a) Basic Normal Water Rate Schedule:

The Basic Normal Water Rate Schedule for the District is established by resolution of the District and reviewed annually.

##### (b) Stage One Condition Schedule (Moderate Water Shortage):

During a Stage One Condition the Basic Normal Water Rate Schedule shall be increased by ten percent for all residential customers except for those whose monthly use does not exceed 1,000 cubic feet.

(c) Stage Two Condition Schedule (Severe Water Shortage):

(1) During a Severe Water Shortage the Basic Normal Water Rate Schedule for residential customers shall be increased by 20 percent except for those whose monthly usage does not exceed 1,000 cubic feet.

(2) If a violation of this ordinance occurs during a severe water shortage a surcharge of \$100 shall be added to the charge under subdivision (1) if the monthly water usage exceeds 4000 cubic feet.

(d) Stage Three Condition Schedule (Critical Water Shortage):

(1) During a Critical Water Shortage the Basic Normal Water Rate Schedule for residential customers shall be increased by 30 percent except for those whose monthly usage does not exceed 1,000 cubic feet.

(2) If a violation of this ordinance occurs during a Critical Water Shortage a monthly surcharge of \$100 shall be added to the charge under subdivision (1) for those customers whose water usage exceeds 4000 cubic feet for that month.

(3) When a monthly surcharge is added under subdivision (2), additional surcharges shall be added for that month as follows:

- (A) An initial \$100 if the customer fails to submit the water use curtailment plan required by Section 7(c), or having filed the plan, has failed to meet at least a 30 percent reduction in water use for that month.
- (B) An additional \$100 if the customer fails to file a plan and also fails to meet at least a 30 percent reduction in water use for that month.

Section 14. Exception

Notwithstanding any other provision of this ordinance, failure to practice the Stage One Condition water conservation measures specified in Section 7, subdivision (a), shall not be considered a violation of this ordinance. However, the 10 percent water rate increase provided in Section 12(b) shall apply.

Section 15. Effective Date and Publication

This ordinance shall become effective immediately upon adoption and the Secretary of the Board is directed to arrange for its posting in three locations in the District available to the public.

Section 16. Invalidity of Provisions

If any provision of this ordinance, or its application to any person or circumstance, is held invalid, the remainder of the ordinance, or its application to other persons or circumstances, shall not be affected.

The foregoing ordinance was duly and regularly adopted at a regular meeting of the Board of Directors held on the 14th day of January, 1995 by the following vote:

AYES: RUBIN, MILLER, MCCLOSKEY

NOES: VIOLETT

ABSTAIN: NONE

ABSENT: SAMUELS



MICHAEL J. MCCLOSKEY, PRESIDENT

ATTEST:



Roblee Thiesse, Secretary



## Appendix F

# Water Shortage Contingency Plans, Resolutions, and Ordinances

RESOLUTION NO. 20-11

A RESOLUTION OF THE BOARD OF DIRECTORS OF  
TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT  
AMENDING THE RULES AND REGULATIONS FOR THE  
SALE, USE AND DISTRIBUTION OF WATER

I. Recitals.

(i) California Water Code Section 31024 provides that a county water district may establish rules and regulations for the sale, distribution, and use of water and may provide that water shall not be furnished to persons against whom there are delinquent water rates.

(ii) By Resolution No. 15-76, the District first adopted rules and regulations for the sale, use and distribution of water ("Rules and Regulations") which have been amended from time to time thereafter.

(iii) The Rules and Regulations need to be amended to adopt a new form of Term M&I Agreement for recharge water customers.

II. Resolution.

NOW, THEREFORE, be it found, determined and resolved by the Board of Directors of Tehachapi-Cummings County Water District as follows:

1. Each of the above recitals is true and correct and the Board so finds and determines.

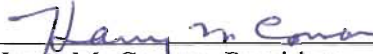
2. Section 1 of Part C of the Rules and Regulations is hereby amended to read as follows:

“Section 1. Contents. Except in circumstances requiring other forms of agreement, as determined by the Board in its discretion, Term M&I Agreements for surface delivery of SWP water shall be substantially in form and content as set forth in Appendix 1 hereto and Term M&I Agreements for subsurface delivery of recharged SWP water shall be substantially in form and content as set forth in Appendix 2 hereto.”

3. Appendix 2, as referred to in Section 1 of Part C as amended above, is attached hereto.

4. Section 3 of Part C of the Rules and Regulations is hereby deleted.

ADOPTED and APPROVED this 21<sup>st</sup> day of December, 2011.

  
Harry M. Cowan, President

ATTEST:

  
Lori Bunn, Secretary

SECRETARY'S CERTIFICATE

I, LORI BUNN, Secretary to the Board of Directors of the Tehachapi-Cummings County Water District, do hereby certify that the foregoing Resolution was introduced at a Regular Meeting of the Board of Directors of said District, held on the 21st day of December, 2011 and was adopted at that meeting by the following vote:

  
Lori Bunn, Secretary

AYES: Cowan, Hadley, Hall, Prel and Schultz

NOES: None

ABSTAIN: None

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT

RULES AND REGULATIONS  
FOR THE SALE, USE AND DISTRIBUTION OF WATER

PART A. DEFINITIONS. The following terms, as used in all parts of these Rules and Regulations shall have the following meanings, unless the context requires another meaning.

Section 1. "District" – Tehachapi-Cummings County Water District.

Section 2. "Agricultural water" - water used primarily in the commercial production of agricultural crops or livestock, including domestic use incidental thereto, on tracts of land operated in units of more than two (2) acres.

Section 3. "M&I water" - water used for any use so that the same is not agricultural water within Section 2 hereof.

Section 4. "General Manager" - the General Manager of District, or in the event of his absence the employee designated by the Board of Directors of District to assume the General Manager's duties.

Section 5. "Person" - any natural person or artificial person, including but not limited to, a partnership, corporation, association, public entity or any other type of entity.

Section 6. "Term M&I Agreement" - a written agreement entered into between District and a water user or prospective water user wherein that person agrees to purchase water from District for a term and with provisions as provided for in Part C, Section 1 of these Rules and Regulations.

Section 7. "These Rules and Regulations" or "Hereof" or Other Words Referring to these Rules and Regulations or Some Part or Section Hereof – these Rules and Regulations as amended from time to time and any successor Rules and Regulations as amended from time to time.

Section 8. "Water User" - any person whose application for water service has been approved by the General Manager and which applicant has complied with all provisions of these Rules and Regulations precedent to entitling him to commencement of water service.

Section 9. "Prospective Water User" - a person desiring water service from District, but who is not yet a water user within the preceding definition.

Section 10. "Board" – The Board of Directors of the District.



## PART B. RATES.

### Section 1. Setting Rates.

The Board from time to time shall by resolution set rates for water sold by the District. Rates shall be set for the following categories:

- (a) M&I water delivered pursuant to a Term M&I Agreement;
- (b) M&I water delivered other than pursuant to a Term M&I Agreement;
- (c) Agricultural water.

The Board shall establish appropriate recharge surcharges for any of the above categories where the water user pumps recharged water in lieu of taking delivery on the surface. Such recharge surcharges shall be set to recover the unreimbursed capital costs of acquiring and constructing recharge facilities and the costs of maintaining and operating such facilities. The recharge surcharge shall also include the cost of imported water lost on account of evaporation, phreatophyte consumption or any other losses incurred in the transportation and spreading of recharge water.

### Section 2. General Policies Governing Rate Setting.

In setting rates, the Board shall consider the following general policies adopted on account of facts and circumstances unique to the District:

(i) The District purchases State Water Project (“SWP”) water from the Kern County Water Agency (“KCWA”) pursuant to the two written contracts, both dated December 16, 1966 (the KCWA Contracts”), one for up to 15000 AF of M&I water, the other for up to 5000 AF of Agricultural water. The KCWA Contracts obligate the District to pay a specified percentage of (a) KCWA’s “fixed obligations” (i.e., “the capital cost and minimum operation, maintenance, power and replacement components of the Delta Water Charge and Transportation Charge”) to the State Department of Water Resources (“DWR”) under the “Master Contract” between DWR and KCWA, and (b) KCWA’s “variable obligations” (i.e., “the variable operation, maintenance, power and replacement components of the Transportation Charge”) applicable to delivering the District’s Table 1 entitlement to the District’s turnout in Reach 16 of the California Aqueduct. The District’s “fixed obligations” to KCWA must be paid irrespective of the quantity of SWP water actually delivered. In other words, the District must pay its share of “fixed obligations” even if DWR is unable to deliver any SWP water.

(ii) From its turnout in the California Aqueduct, the District lifts SWP water some 3425 feet by means of four pump stations and 31 miles of transmission lines into its storage reservoir in Brite Valley. The District’s main transmission line continues eastward through Tehachapi Valley and ends in Oak Creek Canyon at California Portland Cement Company’s plant. The District also owns and operates various distribution lines, recharge facilities in the Tehachapi and Cummings Basin, and water wells as part of its Imported Water System.

(iii) Pursuant to the holding of Fourth District Court of Appeal in *Goodman v. County of Riverside* (1983) 140 Cal.App.3d 900, the District’s obligations to the KCWA under the KCWA Contracts are prior voter approved indebtedness and, consequently, the District may levy ad valorem real property taxes to meet the District’s obligations, in whole or in part, to the KCWA under the KCWA Contracts.

(iv) The full cost of SWP water purchased by the District from the KCWA pursuant to the KCWA Contracts and pumped and delivered through the Imported Water System far exceeds the ability of either M&I or Agricultural customers to pay. It is the policy of the District to set water rates such that M&I and Agricultural users in the aggregate pay the full cost of operating and maintaining the District’s Imported Water System, including reasonable reserves for repairs and replacement, less a major portion of the District’s share of the 1% general ad valorem tax levy. It is additionally the policy of the District, on account of the benefit to property owners District-wide bestowed by the SWP water supply made available pursuant to the KCWA Contracts, to levy ad

valorem taxes each year to meet the District's annual obligations under the KCWA Contracts.

(v) In setting rates for M&I water, it is the policy of the District that the rate for M&I water delivered other than pursuant to a Term M&I Agreement (the "normal M&I rate") shall be set to recover the full cost to the District of purchasing and delivering such water on a non-scheduled occasional demand basis, including all costs under the KCWA Contracts. The rate for M&I water sold pursuant to a Term M&I contract or other contractual basis shall be set at a lower rate than the normal M&I rate on account of the long term contractual commitment of the water user to the District to purchase a portion of the District's Table I entitlement. Further, the ultimate retail purchaser of water sold to wholesale purveyors under Term M&I Agreements pay real property taxes, which support District operations, while non-contract purveyors of M&I water typically are not taxpayers within the District. Further, a lower rate is justified since Term M&I contract customers must schedule their anticipated deliveries six years in advance which assists the District in meeting its obligations to the KCWA under the KCWA Contracts to likewise schedule its deliveries six years in advance.

(vi) As set forth in Part K hereof, the District owns all return flows from SWP water purchased from the KCWA under the KCWA Contracts and imported into the District through the District's Imported Water System. In setting rates for agricultural water, it is the policy of the Board to take into account the fact that the percentage of return flows back into the ground from agricultural water is substantially higher than that from M&I uses. It is the policy of the District to avoid, to the extent possible, setting rates higher than the ability of its customers to pay for water since it is in the District's best interests to maximize water sales revenues.

#### PART C. TERM M&I AGREEMENTS.

Section 1. Contents. Except in circumstances requiring other forms of agreement, as determined by the Board in its discretion, Term M&I Agreements for surface delivery of SWP water shall be substantially in form and content set forth in Appendix 1 hereto and Term M&I Agreements for subsurface delivery of recharged SWP water shall be substantially in form and content as set forth in Appendix 2 hereto.

Section 2. Policy Concerning New Term M&I Customers. Not all of the SWP facilities authorized and necessary for the DWR to deliver all of the KCWA's Table A entitlement under the Master Contract (and necessary for the KCWA to deliver all of the District's Table I entitlement under the KCWA Contracts) have been constructed. Recent court decisions adverse to the DWR water supply cast further uncertainty as to the amount and dependability of the District's SWP water supply. It has been and remains the District's policy to routinely extend Term M&I Agreements upon conclusion of their stated terms since the District's wholesale customers and their retail customers have built water distribution systems, homes, businesses and other public and private improvements in reliance on the long term availability of SWP water from the District. Before entering into new Term M&I Agreements or other contracts with new customers, it is the District's policy to carefully consider whether any SWP water under the KCWA Contracts, surplus to the anticipated long term needs of the District's existing Term M&I and other contract customers, exists and will continue to exist during the entire duration of the new customer's anticipated demand. In allocating its available water supply, the District will first meet the reasonable present and future needs of its existing M&I Term customers, other existing contract customers and existing agricultural customers. If and when such needs cannot be met, it is District's policy that new customers, as a condition of service, shall provide the District with such additional water supply as needed to meet such customer's long term water requirements.

PART D. WATER SERVICE; APPLICATIONS; CONNECTION AND RECONNECTION CHARGES; DEPOSITS. Water service will be furnished in accordance with the policy and rules herein adopted and the connection and reconnection charges herein established, subject to all other provisions of these Rules and Regulations.

Section 1. District Service Policy: Domestic Use. It is the current policy of District to act as a wholesaler of water and not as a retailer, i.e., to transmit such water and not to distribute the same. It shall be consistent with this policy to provide agricultural water service to users who connect at their own expense to District's transmission facilities from time to time. Except for sales to "Exchangees" pursuant to the Amendment to Judgment in the Tehachapi Basin case<sup>1</sup>, the District will provide M&I water service only to: (a) entities or persons constituting recognized public purveyors, including public agencies, public utilities under the jurisdiction of the Public Utilities Commission, and mutual water companies; (b) entities or persons for industrial and other non-domestic uses; and (c) for agricultural direct use but for ultimate M&I use under an approved exchange agreement. Included in (a) above shall be improvement districts, whether of this District or other public entities, established to furnish water service to the public. Transmission facilities additional to those now provided for may be provided by District from time to time in the discretion of the Board, and it shall be in the discretion of the Board to determine whether and to what extent any particular proposed facility is a transmission facility.

Section 2. Point of Service. Except as additional turnouts are authorized by the Board, all services shall be from existing turnouts, and from the turnout as determined by the General Manager after consultation with the prospective water user.

Section 3. Preliminary Information; Past Due Amounts. Prior to filing with District an application for service, the prospective water user shall furnish in writing to District, on a form which the General Manager shall prepare, information from which the General Manager may determine the size of service required and the turnout at which service would be provided, any special facilities required to provide service, and whether the prospective water user or owner of the property on which the water will be used owes any past due charges of any kind to District, or whether there is a lien on said property for any such charges. If there exists any such past due charges or lien, no application for service shall be accepted for filing unless such amounts, together with all interest, are first paid.

Section 4. Application. Each prospective water user ("applicant") must make an application for the service desired. Except where a water purveyor is the applicant, each application for service shall be jointly signed by all the persons constituting the owner of the property on which the water is to be used ("owner" collectively hereafter in these Rules and Regulations) and in the event the prospective water user is not the owner, by such owner and prospective water user, and they shall all be jointly and severally liable for all water charges and other charges. Application shall be made at District's office (presently located at 22901 Banducci Road, Tehachapi, California, 93561). Where the prospective water user is not the owner, District's General Manager is given discretion to waive such requirement that the owner sign, provided that the prospective water user shall provide a deposit equivalent to two (2) months' charges as estimated by District's General Manager (which required deposit may be revised from time to time based on experience). If the prospective water user desires to have a refund of the deposit, he may do so by having a duplicate original of the application executed by the owner and by himself, and filing the same with District. Each such application shall contain the following information, in addition to such other information as may be provided for on said form by the General Manager: (1) Name and address of applicant; (2) Date of application; (3) Location of the premises upon which the water will be used; (4) Date service is requested to be commenced; (5) The purpose for which the water is to be used; (6) Prospective water user's mailing address, if different from the first address listed; (7) a copy of the vesting deed shall be attached; (8) The turnout from which service is requested, which shall be as determined by the General Manager; (9) The size service requested, which shall be as determined by the General Manager; and (10) as to M&I service, whether a Term M&I Agreement is desired. The application shall be accompanied by all required charges required prior to the furnishing of service. Above the

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<sup>1</sup> *Tehachapi-Cummings County Water District v. City of Tehachapi, etc, et al.*, Kern County Superior Court Case No. 92710.

applicant's signature shall be contained the following in type or print of a size or style to fairly distinguish it from the remainder of the application:

"The undersigned applicant understands that upon approval of this application, District will take steps toward installation of the necessary facilities for service. However, applicant understands that District is not liable for any direct or consequential damages of any kind to applicant by reason of delay in the commencement of service. Applicant also understands that as a part of this service contract, it is subject to the Rules and Regulations for the Sale, Use and Distribution of Water as adopted by Resolution No. 13-09 of the Tehachapi-Cummings County Water District (the "Rules and Regulations"), as the same may have been heretofore amended, or as the same may be hereafter amended, and to any successor Rules and Regulations as may be thereafter adopted, and that all rates, charges and other rules and regulations are subject to amendment at any time without prior notice to applicant. Applicant acknowledges receipt of a copy of the Rules and Regulations. If this application results in a Term M&I Agreement, the provisions of said Term M&I Agreement will modify the provisions of this paragraph."

Section 5. Where New Turnout Required. If the applicant desires service from a point requiring construction of a new turnout, an application for service shall state the location thereof. The application shall not be approved until the Board has approved the location of the new turnout, and the estimated cost thereof, which amount shall be an additional connection charge which must be deposited prior to approval of the application.

Section 6. Approval of Application. When all conditions precedent to entitlement to service have been met, the General Manager shall endorse approval on the application form and return one executed counterpart to the prospective water user. Where a Term M&I Agreement is to be executed, service shall not commence until such agreement is executed in two (2) counterparts by District and the prospective water user.

Section 7. Separate Applications for Each Connection. A separate application shall be required for each separate service connection, but a delinquency by a water user as to any service connection shall constitute a delinquency as to all of the water user's connections. A reconnection for the same water user where service has been discontinued under Sections 2 through 4 of Part E shall not require a new application if reconnection is made within three (3) months of disconnection, and any owner who has signed the initial application shall remain responsible for charges.

Section 8. Connection and Reconnection Charges. The Board by resolution shall set connection and reconnection charges to recoup the full cost of each initiation of water service or reestablishment thereof.

Section 9. Connection or Reconnection, Pursuant to Exchange Pool Requirements Under Adjudications. To the extent that any water user is required by the Court in any of the ground water adjudications (Kern County Superior Court Case Nos. 92709, 92710 and 92711) to purchase water from District in connection with the physical solution imposed by the Court under any exchange pool or similar arrangement, connection charges otherwise payable prior to connection or reconnection shall be paid by District, except such reconnection charges as arise by reason of disconnection under Sections 2 through 4 of Part E.

Section 10. Lateral Distribution Lines Privately Financed. Lateral distribution lines, the cost of construction of which is paid for or substantially all paid for by a person or persons for service to specific property or properties, when and as dedication thereof is accepted by this District, shall be accepted on the following condition:

"Water deliveries from said lateral distribution line for the benefit of properties other than the described property (the "described property" hereafter) shall not be permitted to the extent that use of the said line's capacity therefore would prevent the District from meeting reasonable beneficial demands for the described property. Nothing herein contained shall relieve grantors or their successors or the described property from the effect of any ordinance, rule or regulation of District, now or hereafter established, relating to scheduling of deliveries, interpretability of service for one or more types of use or sub-categories of a use or uses, handling of shortages of water or shortages of water available for certain types of uses or sub-categories of uses, priority of one or more uses or sub-categories of uses or purposes, or any other ordinance, rule or regulation, whether or not of the same or a different type than any of the foregoing, provided the ordinance, rule or regulation is not solely occasioned by or applicable only to said lateral distribution line solely by reason of shortage of capacity occasioned by deliveries or desired deliveries of water there from to properties other than the described properties".

The foregoing provisions shall not apply to lateral distribution lines financed through assessment districts or improvement districts, or if the offered dedication expressly provides that it is not subject to the foregoing and is accepted on that basis by the District. Nothing herein affects or purports to affect the powers of the District as Tehachapi Basin Watermaster under the judgment as amended from time to time in "Tehachapi-Cummings County Water District, a body corporate and politic, vs. City of Tehachapi, a municipal corporation, et al.", Kern County Superior Court No. 97210.

PART E. DISCONNECTION OF SERVICE. Disconnection of service may be made in the following instances, but shall not excuse the water user or owner from payment of all charges otherwise payable.

Section 1. Disconnection at User's Request. Any water user who desires service disconnected shall give at least one full business day advance written notice to District (a business day being other than a District holiday or any Saturday or Sunday). A water user in addition to being responsible for water delivered to him shall be responsible for charges for any use of water from his connection by any unauthorized person until the end of such one full business day following said written notice. Notwithstanding, when District has knowledge that the water user has vacated the premises in question or has otherwise permanently discontinued use of water, District may make a disconnection.

Section 2. Disconnection for Non-Payment. District may disconnect any water user's connection when any bill for water service rendered or other charge has become delinquent. District shall not be required to apply any deposits on hand to avoid such disconnection. A delinquency as to any service connection shall be a delinquency as to all service connections of that water user under this section.

Section 3. Emergency Disconnection for Detrimental or Damaging Conditions. If a condition unsafe or hazardous to District facilities or water supplies is found to exist on the water user's premises, or if the use of water thereon is found to be detrimental or damaging to District facilities or water supply for any reason, including but not limited to, chemicals, fertilizers or other substances applied with or added to such water, or water user's equipment, application, consumption, use and disposition of such water, the service may be disconnected without prior notice. District will notify the water user of the reasons for the disconnection and the corrective action to be taken by the water user before service may be restored.

Section 4. Disconnection for Failure to Comply with Rules and Regulations. The District may disconnect any water user's connection for any other failure to comply with these Rules and Regulations.

Section 5. Notice and Hearing. Prior to any disconnection of any water user's connection, except an emergency disconnection under Section 3 of this part, the General Manager shall notify the water user in writing of the basis for the District's proposed action; the date the District proposes to disconnect the connection; that the water user, upon timely

request, may have a hearing before the Board to present any objections to the proposed District action; and the last date upon which the request must be received by the District. If the water user does not timely request a hearing before the Board, the District shall proceed to disconnect the connection. If the water user timely requests a hearing before the Board, the Board shall schedule the hearing at the next regular Board meeting, consider the objections of the water user, and make such decision as appears proper under all of the circumstances.

PART F. STATEMENTS. Statements for water charges shall be rendered as follows:

Section 1. Regular Statements. Statements for water delivered shall be mailed monthly on or before the tenth (10th) day of the month with respect to water delivered the preceding month. However, late mailing shall not extend the dates hereafter set forth. All such statements are due and payable immediately, and become delinquent if not paid by the twenty-eighth (28th) day of the month, or if the same not be a District business day, by the next succeeding business day; provided, that as to a public entity water user, a statement shall not become delinquent if paid within twenty-one (21) days after the first regular or adjourned regular meeting of its governing body held after receipt of the billing. If service is discontinued prior to a statement being mailed, it may likewise include charges for water furnished through date of discontinuance.

Section 2. Closing Statements. Closing statements, other than as provided above, shall be mailed promptly upon discontinuance of service and shall be due and payable within fifteen (15) days after the date on which mailed, or the next succeeding District business day if such fifteenth (15th) day be not a business day. If not paid within that time, they are delinquent.

Section 3. Water User's Obligation to Request Statement. If any water user has not received a statement or bill which should have been received by him under the foregoing rules, it shall be his obligation to timely obtain a duplicate statement from District, and risk of loss in the mails shall not be the responsibility of District.

Section 4. Meter Readings. Bills for water service will state the date on which read, the date of the last prior reading, the respective meter readings on those two (2) dates, the amount of the bill and the last- day for payment before the same becomes delinquent, in addition to any other matters determined by the General Manager. Billings will be based on meter readings. However, if there has been a substantial malfunction or failure of a meter, it shall be the responsibility of the General Manager to cause an investigation and to determine the estimated actual quantity used. Any supplementary statements rendered on account thereof shall be payable within a like period and with like consequences, as a closing bill, as provided in Section 2 of this part. If a previously over-billing has been involved such amounts shall be credited or refunded, if request for refund is made.

Part G. Delinquent Charges; Deposits; Liens; Actions to Collect. In addition to and not in substitution of District's other rights and remedies, the following provisions shall apply.

Section 1. Late Payment Charges. If any statement for water delivered shall become delinquent (See Part F) there shall be added to the other applicable charges interest at the maximum rate authorized by law, commencing with the date on which the same became delinquent, and an administration charge, which the Board hereby determines to be reasonable in relation to District's anticipated costs, of Two Hundred Fifty Dollars (\$250.00) or ten percent (10%) of the billed amount involved, whichever is the lesser, in addition to any reconnection charges under Section 8, Part D.

Section 2. Deposits for Service. Any water user against whom late payment charges have accrued shall be required to make a deposit with District in an amount equal to estimated charges for water for the highest two (2) months of anticipated use in any calendar year, such amount to be determined in the discretion of District's General Manager. Such deposit shall be maintained until the water user has timely paid all bills without delinquency, for a period of twelve (12) consecutive calendar months. Failure to pay any required deposit within ten (10) days of written notice thereof, where service has not theretofore been discontinued, shall be further ground for discontinuance of service by District with reconnection charges as provided in Section 8, Part D.

District may, but is not required to, apply any deposit to outstanding amounts due and owing. When a deposit has been made, but is no longer required, the same will be refunded to the water user after deduction of any charges or indebtedness to District which are due and owing, or applied against succeeding water bills. Absent written direction as to the first alternative, District may apply the same to succeeding water bills.

Section 3. Unpaid Charges a Lien on Property. To the extent permitted by law, any unpaid charges, including connection charges and other charges, shall constitute a lien on the property of the water user as specifically provided by the County Water District Act (Water Code Section 31701.7). The District may record with the County Recorder a notice or "certificate" of any such lien and thereafter file suit to foreclose such lien in the manner provided by law.

Section 4. Actions to Collect. In the event any action is brought to collect any of unpaid charges, including connection and other charges, whether separately or apart from any foreclosure of lien, the District shall be entitled to recover, in addition to any such charges, its reasonable attorneys fees and court costs.

#### PART H. NON-LIABILITY OF DISTRICT; INDEMNIFICATION AND HOLD HARMLESS OF DISTRICT BY WATER USERS.

Section 1. Untreated Water - No Warranty. All water sold by the District will be untreated water. It shall be the responsibility of the water user utilizing, serving or otherwise disposing of the same for human or animal consumption to cause such treatment thereof as may be required by any applicable law, rule or regulation for any such use and as may in addition thereto be necessary or desirable for any such use. District expressly disclaims any warranty or representation of suitability for any of the above uses, and the water user shall assume full responsibility therefore. The water user shall provide any person to whom the water is otherwise sold or disposed of a copy of this section, unless such user shall have treated said water in accordance with all applicable laws, rules and regulations. No water user or other person shall serve water obtained directly or indirectly from the District in a domestic water system without first complying with all applicable laws, rules and regulations. There is further no warranty or representation concerning any use of delivered water as to content of dissolved or undissolved solids in the water, salts, or absence of impurities or foreign objects in any water delivered, nor as to the long or short-term effect on soils, pipes or fittings of utilization of water delivered.

Section 2. District Not Liable; Indemnifications. Notwithstanding the term "sale" or like terms in these Rules and Regulations, which may be used for convenience, any service of water to any water user is a water service agreement. Any such water user shall be required to and shall be deemed to have consented to accept water service at the location served subject to such conditions of pressure and service as may be provided from time to time, and such condition may be changed by the District's General Manager, consistent with these Rules and Regulations. The District, its Directors, agents, employees and independent contractors shall not be liable to any water user or any person to whom a water user provides water, directly or indirectly, for any claimed damage or expense occasioned from any of the following, whether or not occasioned by the concurrent or contributory negligence, actual or alleged, of District or its Directors, agents, employees or independent contractors: quality or content of water, whether relating to a matter specified in the preceding section or otherwise; delayed commencement or recommencement of service; interruptions of service; low pressure; high pressure fluctuations of pressure; shortage or insufficiency of supply; the control, carriage, handling, use, disposal or distribution of water delivered to a water user once it reaches a point beyond the facilities owned and operated by District. Notwithstanding any provisions in these Rules and Regulations, any water service agreement is solely between District and the applying water user (subject to liability of any co-signing owner), notwithstanding that that water user may in turn supply such water to others, and no provision in this agreement shall be deemed to make any other person a beneficiary, third party or otherwise, of any provision of said water service agreement, or to establish any contractual relationship between such other party and District. It is the responsibility of the water user to provide terms and conditions as a part of any furnishing of water to others. Each water user shall indemnify and hold the District, its Directors, agents, employees and independent contractors harmless from any claims by any such other persons, whether from matters set forth in this section, or based on any other ground, and whether or not occasioned by the concurrent or contributory negligence, actual or alleged, of District or its Directors, agents,

employees or independent contractors.

PART I. SERVICE CONNECTION FACILITIES INSTALLED BY DISTRICT; FACILITIES TO BE INSTALLED BY WATER USER; PROTECTION OF DISTRICT FACILITIES. The following facilities will be installed and maintained by District and water user respectively, subject to all other provisions of these Rules and Regulations.

Section 1. Installation by District. Upon approval of an application for service, payment of all required connection charges and execution by District and water user of any other required agreement, the facilities to be installed by District will consist of any new turnout approved under Part D, Section 5 hereof, a mainline valve, propeller meter, manhole, all required pipe, fittings and couplings, and any and all pipeline to the boundary of District's permanent easement. The facilities may include, as determined by the General Manager, a manifold, secondary valve and a check valve. All such facilities to the boundary of said easement shall be the property of and be maintained by District.

Section 2. District's Assistance in Necessary Rights-of-Way and Easements. Notwithstanding any other provision of these Rules and Regulations, District, under appropriate agreement approved by its Board, may acquire, either consensually or through condemnation proceedings, easements and rights-of-way for lateral or other lines to prospective water users who cannot otherwise obtain such easements and rights-of-way. Such water users will be required to bear all costs and expenses of easement acquisition and installation of facilities therein, which the District will own.

Section 3. Water User's Responsibility for Distribution System. The water user shall provide his own installation and maintenance of facilities from the terminus of District facilities.

PART J. CERTAIN USES OF WATER AND OTHER ACTS PROHIBITED; RATES FOR PROHIBITED WATER USES. The following uses and acts are prohibited, and, for prohibited uses and acts, water rates shall be payable in accordance with the following.

Section 1. No Water to be Conveyed to Third Person Except by a Water Purveyor. No water user, except a water purveyor (being one regularly engaged in the business of distributing M&I water) shall, without the prior written consent of District, sell or convey any water obtained from District to any other person or permit any other person to obtain the same from water user's distribution facilities.

Section 2. Uses for Which Rates Have Not Been Established. No water user shall use or permit to be used any water obtained from District for any use or category for which rates have not been established or which requires the consent of District where that consent has not been first obtained in writing. Each water user shall be absolutely responsible for the acts of its distributees in this regard.

Section 3. Unauthorized Connection or Reconnection. Only District personnel are authorized to connect or reconnect service. No other person shall do so.

Section 4. Charges and Rates for Violation. Any water user who violates any of the foregoing sections of this part, and any other person who violates Section 3 of this Part, or who bypasses a District meter, shall be deemed to have agreed to pay double the normal M&I rate, and in the case of a Section 3 violation, all charges which would otherwise be imposed for an authorized connection or reconnection. Nothing herein shall preclude District from disconnecting. In the event of a by-pass of a District meter, it shall be presumed that such by-pass occurred immediately after the last meter reading, and that water has been taken twenty-four (24) hours a day each day thereafter at the full rate of flow which the connection is capable of transmitting, and it shall be the burden of that person to demonstrate to the contrary. The General Manager in such event shall determine the amounts due and, payable from time to time and render a billing which is immediately due and payable.

Section 5. Only District Personnel to Operate or Control District Facilities. No person other



than authorized District personnel shall operate, control or otherwise disturb any District water system equipment or facilities.

**PART K. DISTRICT'S RIGHT IN WASTE, SEEPAGE AND RETURN FLOW.** District has and claims all right, title and interest in and to all return flow into any ground water basin within District's boundaries resulting from water imported by District, along with the right to later recapture or otherwise utilize the same, provided, however, the District does not claim title to return flow from imported water purchased by a public entity from the District which is intentionally spread for storage in a groundwater basin by such public entity pursuant to rules and regulations promulgated therefore by the District acting as Watermaster of any such basin. The District's claim extends to all return flow from water imported by the District, whether from spreading operations by the District, from waste or seepage before any delivery of water by the District, from waste or seepage thereafter, and from percolation after or as a result of use or reuse of imported waters by any water user or other person, except imported water purchased from the District by a public entity which is intentionally spread for storage in a groundwater basin by such public entity pursuant to rules and regulations promulgated by the District acting as Watermaster of any such basin. District hereby expresses its intention to later recapture or otherwise utilize such return flow. Nothing herein shall prevent any person from engaging in drainage or other activities to protect his land or the use thereof from return flow which otherwise would injure or would threaten injury to the enjoyment or utilization of such land.

**PART L. SHORTAGES.** District retains the right and power to later provide, consistent with any then applicable provisions of law, for priorities, restrictions, prohibitions and exclusions in the event of shortage or other emergency, including cessation or interruption of sale of water to particular users.

**PART M. MANAGEMENT OF DISTRICT WATER SYSTEM; ACCESS.** The following provisions apply to management of District's system and access to lands of water users.

Section 1. Management - General Manager and Employees. Subject to the Board's overall control, District's water system is under the exclusive management and control of the General Manager who is a person appointed by District's Board to manage the affairs of District pursuant to its direction. No other person except said General Manager or a person operating under his authority shall operate any of the facilities of District's system. The General Manager shall supervise the activities of all District employees in connection with operation and maintenance of District's water system and all other activities of District. Any controversy between a water user and District shall be handled by the General Manager, or in his absence the employee designated by the Board to act.

Section 2. Right of Access. District employees authorized by the General Manager shall have reasonable access to lands and irrigation facilities within District for the purpose of conducting District business which may include the following: (a) Inspection of the lands upon which water delivered by District is being applied for the purpose of determining water users' compliance with these Rules and Regulations or performing any function under these Rules and Regulations; (b) Inspection, maintenance, repair or modification of facilities of District's water system.

Section 3. Scheduling of Agricultural Water. When deemed necessary or desirable by the General Manager, he may schedule the delivery of agricultural water in such manner as he deems advisable.

**PART N. DECISIONS OF GENERAL MANAGER; APPEAL TO BOARD.** In order to assure fairness to water users, the following provisions are established relative to decisions of the General Manager and appeals there from.

Section 1. General Manager Decisions. Any person desiring to appeal a decision of the General Manager affecting that person as a water user or prospective water user shall first request that the decision be placed in writing and provided that person. It shall be the duty of the General Manager to promptly do so, who may also reduce any

decision to writing without such a request.

Section 2. Appeals. If any such written decision involves the payment of any charge or amount of money, any appeal there from as hereinafter provided for shall not excuse the payment when otherwise due and payable had there been no appeal. Provided that all such payments have been made to the District, the water user or prospective water user may file an appeal in writing to the Board within twenty (20) days after the written decision is deposited in the mails or personally delivered to the person affected, specifying the decision appealed from and the grounds of the appeal. The Board shall thereafter hear the evidence on the matter and make its determination in writing. Failure to timely pay any amount involved which becomes due and payable after the filing of the appeal but before hearing shall be deemed an abandonment of the appeal unless the Board should otherwise rule. Any such hearing shall be conducted as close as possible in accordance with normal rules of evidence, but the acceptance of inadmissible evidence shall not be grounds for voiding the decision of the Board. If any refund is then indicated it shall be promptly made, or if the water user or prospective water user so consents shall be credited against subsequent charges. If no appeal is filed within twenty (20) days after the written decision is mailed to the person or personally delivered to him, or any payment called for by said decision is not made concurrently with or before the filing of any such appeal, the decision of the General Manager becomes final and conclusive, unless for good cause shown the Board grants relief from any default in timely filing an appeal or making any payment otherwise due and payable under said decision.

#### PART O. SEVERABILITY; INTERPRETATION.

Section 1. Severability. If any provision of these Rules and Regulations is determined to be invalid, it is the intention that the remainder of these Rules and Regulations shall not be affected thereby.

Section 2. Interpretation. In the event of any ambiguity in these Rules and Regulations or its application, the Board's interpretation shall be final and conclusive.

#### PART P. SPECIAL RULES AND REGULATIONS GOVERNING THE USE OF RECYCLED WATER.

Section 1.1. Introduction. The District by contract with the California Department of Corrections & Rehabilitation (CDCR) will receive disinfected tertiary recycled water ("recycled water") from CDCR's California Correctional Institution in Cummings Valley ("CCI"). The District intends to sell water for irrigation uses enumerated in and in accordance with subpart (a) of section 60304 of Title 14 of the California Code of Regulations. For any other recycled water uses in the future including, but not limited to, industrial processes and commercial, landscape or recreational impoundments, wildlife habitat, and groundwater recharge, the District shall submit additional plans and documents to the State of California, Department of Health Services and the Central Valley Regional Water Quality Control Board for review and approval. These future recycled water applications will be evaluated on a case-by-case basis and shall be evaluated in accordance with the California Environmental Quality Act.

Section 1.2. Purpose. The purpose of these special recycled water rules and regulations is to promote the conservation and reuse of water resources and to ensure maximum public benefit from the use of District's recycled water supply by regulating its use in accordance with applicable federal, state and local regulations. These rules and regulations are also intended to be those required as a condition of issuing a master recycled water project permit pursuant to section 13523.1(b)(3) of the Water Code.

Section 1.3. Policy. Recycled water supplies shall be used to the maximum extent possible for any approved beneficial use. This shall be accomplished through the beneficial use of recycled water in compliance with applicable federal, state and local regulations.

Section 1.4. Intent. The District shall provide recycled water wherever the District determines its use is economically and technically feasible and consistent with these rules and regulations and its

contractual obligations to CDCR.

Pursuant to Water Code section 13523.1(b)(3), the establishment and enforcement of these rules and regulations shall govern the design, construction and use of recycled water distribution and disposal systems within the District.

It is further, the intent of these rules and regulations to be consistent with the following criteria:

- California Code of Regulations, Title 22, Division 4, Chapter 3, *Wastewater Reclamation Criteria*;
- California Code of Regulations, Title 17, Division 1, Chapter 5, Group 4, Articles 1 & 2;
- The State Department of Health Services (State DHS), *Preparation of an Engineering Report for the Production, Distribution and Use of Recycled Water*;
- Any measures that are deemed necessary for protection of public health, such as the American Water Works Association (AWWA) California/Nevada Section, *Guidelines for the Distribution of Non-Potable Water and Guidelines for Retrofitting to Recycled Water* or alternate measures that are acceptable to the State DHS.
- The General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water as Adopted by the State Water Resources Control Board.

Section 1.5. Scope. These special rules and regulations establish the requirements for recycled water use and the provision of recycled water service by the District to its customers. If there is any conflict between the provisions of these rules and regulations and the provisions of any of the documents incorporated by reference, the most stringent requirement will govern.

Section 1.6. Incorporation of Supporting Documentation. The following documents and programs, as may be amended hereafter, are incorporated herein and by this reference made a part hereof as though fully set forth:

- A. California Code of Regulations, Department of Health Services, Title 22, Division 4;
- B. Department of Health Services, “Manual of Cross-Connection Control/Procedures and Practices”
- C. California Code of Regulations, “Regulations Relating to Cross-Connections” (Title 17, Chapter 5, Subchapter 1);
- D. California State Water Resources Control Board, “General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water”
- E. California-Nevada Section American Water Works Association “Guidelines for Distribution of Non-potable Water”

- F. California-Nevada Section American Water Works Association “Guidelines for the On-Site Retrofit of Facilities Using Disinfected Tertiary Recycled Water.”
- G. T-CCWD “Recycled Water Use Guidelines And Best Management Practices” (Sections 7.1-7.7).
- H. T-CCWD “Recycled Water Inspection And Monitoring Program” (Sections 8.1-8.6).
- I. All other Federal, State or local statutes, regulations, ordinances governing the distribution and use of recycled water.

Section 2.1. Definitions.

- A. **“Applicant”**. Party requesting a Recycled Water Service Connection and/or recycled water service from District.
- B. **“As-Built Drawings”**. Engineered drawings that depict the completed facilities as constructed or modified.
- C. **“Backflow”**. A condition that results in the flow of water into District pipelines from a source other than an approved water supply.
- D. **“Board”**. The Board of Directors of Tehachapi-Cummings County Water District.
- E. **“Cross Connection”**. Any unapproved and/or unprotected connection between a standard District water system and a non-potable system.
- F. **“Customer/User”**. Recipient of recycled water service from the District.
- G. **“District”**. Tehachapi-Cummings County Water District and/or the Staff thereof.
- H. **“Service Connection”**. The District’s valve and meter through which a customer takes delivery from the District of recycled water.
- I. **“Recycled Water”**. Disinfected tertiary treated recycled water as defined in section 60301.230 of Title 14 of the California Code of Regulations.
- J. **“District’s Standard Rules and Regulations.”** The Rules and Regulations for the sale, use and distribution of water, of which these special regulations for recycled water are a part (Part P), as adopted by Resolution No. 13-09, and as may be amended in the future.
- K. **“Non-Potable Water”**. Water that is not acceptable for human consumption in conformance with federal, state and local drinking water standards.
- L. **“Off-Site Recycled Water Facilities”**. Facilities under the control of the District from the source of supply (CDCR) to the point of connection to the

customer's on-site facilities normally up to and including the Service Connection.

- M. **“On-Site Recycled Water System”**. The customer operated portion of the recycled water system facilities, extending from the Service Connection to the customer's parcel to be provided with recycled water service and including recycled water system facilities on the parcel to be irrigated with recycled water.
- N. **“Potable Water”**. Water which conforms to the latest federal, state and local drinking water standards.
- O. **“Recreational Impoundment”**. A body of water used for recreational activities including, but not limited to, fishing, boating, and/or swimming.
- P. **“Recycled Water Agreement”**. An executed contract between the District and the customer, as a condition for obtaining recycled water service.
- Q. **“Regulatory Agency”**. Individually, or in concert, the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, the Central Valley Regional Water Quality Control Board, State Water Resources Control Board, State Department of Health, California Department of Fish and Game, the Kern County Department of Environmental Health Services, and the District.
- R. **“Standard District Water”**. Water, other than recycled water, supplied by the District.
- S. **“Unauthorized Discharge”**. Any release of recycled water that violates the provisions of these rules and regulations or any applicable federal, state, District, or local statutes, regulations, ordinances, contracts or other requirements.
- T. **“Use Area”**. The specific area designated to be served recycled water through on-site recycled water facilities.

Section 3.1. Off-Site Recycled Water Facilities and Service Connections.

- A. Off-site recycled water facilities and Service Connections shall be planned, furnished and installed by the District at customers' expense in accordance with applicable federal, state and local statutes, ordinances and regulations.
- B. The District reserves the right to determine the location, size, capacity, manufacturer and model(s) of off-site recycled water facilities and Service Connections.
- C. Requests for modification or relocation of an existing Service Connection shall be made to the District in writing and paid for in advance before the District will begin the involved work.
- D. The District reserves the right to limit the use area to be supplied by one Service Connection to one customer. A Service Connection shall not be used to supply adjoining property of a different customer unless approved by the District, in writing in advance of any new use.

- E. Every Service Connection shall be equipped with a valve on the inlet side of the meter to control the water supply through the meter assembly.
- F. District ownership and maintenance responsibilities terminate at the valve on the user's side of the meter assembly.
- G. The standard District water supply system or any public water supply shall not be used as a backup or supplemental source of water for a recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of sections 7602(a) and 7603(a) of Title 17 and the approval of the District or the operator of the public water system has been obtained. If a "Swivel-ell" type connection is used it must be used in accordance with the provisions of the Department of Health Services Policy Memo 2003-003. Approved backflow prevention devices shall be provided, installed, tested, and maintained by the recycled water user in accordance with the applicable provisions of Title 17, Division 1, Chapter 5, Group 4, Article 2.

Section 3.2. On-Site Recycled Water Facilities.

- A. Each customer shall be responsible for furnishing, installing, operating and maintaining all facilities necessary to convey water from the meter assembly at the Service Connection to the use area in a manner that does not harm or damage any person or property, including any employees or property of the District.
- B. On-site recycled water facilities shall be constructed in accordance with applicable federal, state and local statutes, ordinances and regulations.
- C. The District shall inspect the construction of all recycled water facilities to ensure compliance with applicable regulations.
- D. The District shall approve irrigation system schedules of its customers who shall be obligated to coordinate the scheduling of their irrigation demand among themselves so that all of the District's customers receive their share of recycled water supplied by CDCR to the District in an efficient manner. The District shall have the right to impose schedules upon its recycled water customers if the customers fail to agree.
- E. On-site recycled water facilities shall be tested under active conditions in the presence of the District inspector and most likely a representative from the State DOHS, Kern County Department of Environmental Health Services, Central Valley Regional Water Quality Control Board or other regulatory agency to ensure compliance with local, state and federal conditions.

Section 3.3. Conversion of Existing Facilities.

- A. Conversion of Existing Facilities to Recycled Water Use. Prior to the conversion of an existing irrigation system to recycled water use, the District at the customer's expense shall, at a minimum, review the record drawings, prepare required reports, and determine the measures necessary to bring the system into

full compliance. No existing irrigation facilities shall be converted to, or incorporated into, a recycled water system without proper testing and approval by District and/or other regulatory agencies.

Section 3.4. Marking Water Facilities.

- A. The exposed portions of the customer's recycled water piping and appurtenances shall be clearly identified in accordance with local and health department requirements. The method of identification shall be clearly detailed on all plans, specifications, and engineering reports.
- B. Water meters used for recycled water service shall not be used for any other water service.

Section 3.5. Cross-Connection Prevention.

- A. Backflow Assembly. Backflow assemblies are required at every recycled water service connection and at every back up connection between a customer recycled water system and the standard District water system or with any public system. The customer, at his/her sole expense, shall install, test, and maintain an approved backflow assembly in accordance with Title 17 of the California Code of Regulations as a prerequisite to receiving recycled water service.

Any backflow prevention device installed to protect the standard District water system or other public water system shall be tested, inspected, and maintained in accordance with section 7605 of Title 17, California Code of Regulations.

- B. System Testing. As required by the State Department of Health Services or the regulatory agency, the District will periodically conduct a cross-connection control test of the integrity of the on-site recycled water system at those facilities having both standard District water service or other public water service and recycled water service. Methods of system testing include, but may not be limited to: 1) isolating each system in turn and recording the internal pressure of the isolated system; or 2) introducing tracer dyes into the system to determine existence of backflow into the standard District or other public water system. The recycled water system shall be tested as described above for possible cross connections at least once every four (4) years.
- C. The District shall provide adequate notice prior to conducting a cross-connection control test to the State Department of Health Services and any other regulatory agency requesting notice.
- D. The cost of testing and any repairs or corrections identified during the testing shall be paid for solely by the customer.

Section 4.1. General Statement. The District shall provide recycled water where the District

determines recycled water is technically and economically feasible. However, each use must be approved on a case-by-case basis. Determination of the specific uses shall be in accordance with the treatment standards and water quality requirements set forth in Title 22, Division 4, Chapter 3 of the California Code of Regulations and to preserve the public health. Each use shall, in addition, be subject to the availability of distribution facilities or the technical and economic feasibility of making such facilities available, as determined by District.

Section 4.2. District's Liability. The District is not responsible for any condition of the recycled water itself, or any substance that may be mixed with or be in recycled water as delivered to any customer, except as required by Title 22 and applicable regulations. The District shall not be liable for any damage from recycled water, including that resulting from inadequate capacity, interrupted service, defective plumbing, broken or faulty services, or recycled water mains; or any conditions beyond the control of the District. All users shall accept the pressure provided at the location of the Service Connection and hold the District harmless from any and all liability, damage, loss, costs, fees or expenses of whatever type or nature, arising from low pressure or high pressure conditions, or from interruptions of service.

Section 4.3. Conditions of Service. Recycled water service will be made available to the customer in accordance with the following terms and conditions:

- A. Compliance with Regulations. The District's recycled water shall be used in a manner that complies with all applicable federal, state, and local statutes, ordinances, regulations and other applicable requirements for the treatment level supplied, as determined by the District.

The use of recycled water shall not, at any time, cause pollution, contamination, or a private or public nuisance, as defined by section 13050 of the California Water Code. Recycled water shall be used by customers at all times in a manner that does not cause illness or injury to any person and in a manner that does not harm or damage any real or personal property of any person or entity, including the District. Customers shall not discharge recycled water into any watercourse unless Waste Discharge Requirements for such discharge have been previously obtained by the customer from the Central Valley Regional Water Quality Control Board.

- B. Studies and Reports. The cost and preparation of any study or report necessary to comply with California Environmental Quality Act (CEQA) or obtaining any permit or other approval required from a regulatory agency shall be the responsibility of the applicant.
- C. Service Constraints. All service is contingent on the quantity and quality of recycled water available to the District from CDCR at CCI and shall be provided in accordance with the terms of the Agreements between the District and CDCR and between the District and the customer.
- D. Distribution. The District reserves the right to control and schedule distribution as necessary to: 1) maintain an acceptable working pressure; 2) safeguard the public health; 3) manage the availability of recycled water supply to each of the District's customers; and 4) construct, maintain, and operate the facilities.



- E. Deliveries. Deliveries (or runs) of recycled water shall, in no event, be less than 15% or more than 100% of the rated capacity (as determined by the District) of the involved meters.
- F. Metering. All recycled water use shall be metered, and all recycled water used on any premises where a meter is installed must pass through a meter. Customers shall be held responsible and charged for all recycled water passing through the meter(s), unless otherwise specified by the District.
- G. Best Management Practices. Each applicant must demonstrate its ability to comply with the Recycled Water Use Guidelines and Best Management Practices (Sections 7.1.1 – 7.1.6 hereafter), including, but not limited to, an adequate reuse system, including adequate tailwater ponds and recycling pumps.

Section 4.4. Request for Service.

- A. Application. All requests for recycled water service must be made by the applicant completing and signing the appropriate District application form. Upon receipt of an application, the District will review the application and may prescribe requirements and conditions in the District's sole discretion, in writing to the applicant as to the off-site and on-site facilities necessary to be constructed, the manner of connection, the financial responsibility, and the use of the recycled water. Prior to receiving recycled water service, the proposed use shall be approved by the District and any other regulatory agency which asserts jurisdiction to approve the proposed use. The District will inspect on-site recycled water facilities to assure initial and future continued compliance with the District's regulations and other applicable requirements.
- B. Recycled Water Use Agreement. Upon approval of the application by the District in its sole discretion, and issuance of all required regulatory agency permits, a Recycled Water Agreement shall be executed between the District and customer authorizing the applicant to receive recycled water service subject to the terms and conditions of these rules and regulations and federal, state, and local regulatory agencies rules and regulations. Such agreement shall include, but not be limited to, the property location, quantity of recycled water to be used, permitted uses, and rate to be charged for the recycled water. Such agreement shall require any customer before applying recycled water to any land the customer does not own to supply to the District the landowner's consent on a form be supplied by the District.

Section 4.5. Disputed Recycled Water Bills. The District will investigate any dispute over the correctness of a recycled water bill. Bills reflecting clerical or meter errors shall be adjusted, taking into consideration the volume of business, seasonable demand, and any other factors that may assist in determining an equitable charge.

Section 4.6. Non-Registering Recycled Water Meter. When a meter is found to be out of order, the charge for water will be based on, at the option of the District, either the average monthly consumption for the preceding months during which the meter is known to have registered correctly, or the consumption as registered by a "substitute meter". Consideration will also be given to volume of business, seasonal demand and any other factors that may assist in determining an equitable charge.

Section 4.7. Wholesale Recycled Water Service. Wholesale recycled water service to another water agency shall be specifically dealt with in a special agreement, by and between the involved water agency and the District covering the terms and conditions for service.

Section 4.8. Discontinuance of Service.

- A. Turn-off At Customer's Request. A customer may request that service be discontinued, either temporarily or permanently, only if permitted and in the manner provided in the Recycled Water Agreement.
  
- B. Turn-off by the District. The District may discontinue a customer's service for any of the reasons set forth in Part E of the District's Standard Rules and Regulations and for the following additional reasons:
  - 1. Water Quality. Service may be discontinued if CDCR discontinues recycled water deliveries to the District for any reason or, at any point in the District's distribution system, the recycled water does not meet the requirements of the District or any regulatory agency. Service will, in the latter case, be restored at such time as recycled water again meets the requirements of regulatory agencies.
  
  - 2. For Non-Compliance With Terms & Conditions Contained in District's Recycled Water Agreement. The customer's failure to comply with any of the terms and conditions contained in the District's standard recycled water agreement shall result in an enforcement action. The District shall have the right to enforce the agreement by any method provided in the agreement or by any applicable federal, state or local law, rule or regulation.
  
  - 3. For Non-Compliance With Regulations. Service may be suspended or terminated in the manner provided herein at any time the customer's operations do not conform to these special rules and regulations as determined by the District in its sole discretion. Where safety of water supply or public health is endangered, or regulations have been violated, service may be suspended immediately without notice. Otherwise, all defects noted shall be corrected within the period of time specified by the District.
  
  - 4. For Waste of Water. In order to protect against serious and negligent waste or misuse of recycled water, the District may suspend service if such wasteful practices are not remedied after notice to such effect has been given to the customer.
  
  - 5. For Unauthorized Use of Recycled Water. When the District has discovered an unauthorized use, the service may be suspended without notice. Any person obtaining recycled water without District approval will be liable for a penalty charge, as set forth in Part J of these Rules and Regulations. The District shall, as appropriate, notify the State Department of Health Services and the Kern County Department of Environmental Health Services of such unauthorized use. Repeated

unauthorized usage shall be considered as tampering with District property and may result in the offender being charged and prosecuted.

Section 4.9. Re-Establishment of Service. The District shall have the right to refuse to re-establish service following termination of service for violation of these provisions or any Recycled Water Agreement. Any request to re-establish service subsequent to the termination of recycled water service shall be in the manner prescribed for initially obtaining recycled water service from the District, which may include the collection of a security deposit, as set forth in Part G of these Rules and Regulations.

Section 4.10. Special Rules Pertaining to Use of Recycled Water in the Cummings Basin.

- A. No recycled water shall be used in the Cummings Basin north and west of the South Quarter Corner of Section 25, T.32S., R.31E., M.D.B.&M., that is, west of Pellisier Road [County Road No. 241] and north of the westerly extension of Highline Road.
- B. Customers using recycled water to irrigate crops (including turf grass) in the Cummings Basin as a condition of receiving recycled water for irrigation shall elect to participate in the Southern San Joaquin Valley Water Quality Coalition, Kern River Sub-Basin. The District shall establish a surface water quality monitoring station in Chanac Creek at the eastern boundary of Parcel Map No. 4117 subject to approval of the Central Valley Regional Water Quality Control Board, and shall take and analyze samples collected therefrom when and as may be required by the Regional Board as part of any WDR Conditional Waiver Program.
- C. The District shall monitor Cummings Basin groundwater quality on a monthly basis by taking and analyzing samples from Well No. 36C2 near the Northwest Corner of Section 36, T.32S., R.31E., M.D.B.&M., commonly referred to as "SSCSD's Cummings Valley Well No. 1." Analyses of such samples shall be public documents, available to inspection and copying by members of the public.
- D. Customers in the Cummings Basin shall not discharge recycled water into Chanac Creek or any other water course except pursuant to Waste Discharge Requirements issued by the Central Valley Regional Water Quality Control Board. Any such discharge shall be grounds for termination of the Recycled Water Agreement between the customer and the District.
- E. Customers using recycled water to irrigate crops in the Cummings Valley shall demonstrate to the District's satisfaction that their recycling systems, including tailwater ponds and pumps, are sized, constructed, located and maintained such so as to preclude any accidental overflows or discharges to adjoining lands or Chanac Creek. Customers shall grant the District the right to position mobile diesel pumps at tailwater ponds for emergency back up operation by customers in the event a customer's pump fails. All costs of operating District mobile diesel pumps shall be promptly reimbursed by the customer. At a minimum, the District shall install a mobile diesel pump at any tailwater pond which has overflowed in the previous five years.

- F. As used herein, “Cummings Basin” shall mean all the land overlying the Cummings Valley Groundwater Basin and all non-overlying lands within the Cummings Valley Watershed as defined in Findings of Fact and Conclusions of Law in Kern County Superior Court Case No. 97210.

Section 5.1. On-Site Facilities. Customer shall operate, maintain and control all on-site recycled water facilities in accordance with the requirements established by District, federal, state, and local regulatory agencies. It shall be the sole responsibility of the recycled water user to:

- A. Designate a recycled water supervisor who is responsible for the recycled water system at each use area under the user’s control. Specific responsibilities of the recycled water supervisor include the proper installation, operation, and maintenance of the irrigation system; compliance of the project with the District’s rules and regulations, prevention of potential hazards, implementation of Best Management Practices and preservation of the recycled water distribution system in its “as built” form. Designated recycled water supervisors shall obtain instruction in the use of recycled water from an institution approved by the State DOHS.
- B. Maintain a copy of these rules and regulations, irrigation system layout map, and a recycled water system operations manual at the use area. These documents shall be available to operating personnel at all times.
- C. Ensure that all on-site operations personnel are trained and familiarized with the use of recycled water.
- D. Furnish its operations personnel with maintenance instructions, irrigation schedules, controller charts, and record drawings to ensure proper operation in accordance with the on-site facilities design, the Recycled Water Agreement, and these rules and regulations.
- E. Prior to the initiation of recycled water service, the recycled water user shall submit plans and specifications for recycled water distribution facilities to the District for review and approval.
- F. The recycled water user shall provide written notification, in a timely manner, to the District of any material change or proposed change in the character of the use of recycled water.
- G. Ensure that the design and operation of customer’s recycled water facilities remain in compliance with all the terms of the Recycled Water Agreement and all the terms of these rules and regulations.
- H. Implement on-site controls, which meet the requirements established by District, federal, state, and local regulatory agencies to protect the health of customer’s employees and the public.
- I. Notify the District immediately of any and all failures in the system resulting in an unauthorized discharge or a contamination of another system due to a cross-connection on the premises. Customer complaints or complaints received by

customers concerning recycled water use that may involve public illness shall be reported to the State DOHS, the Kern County DEH, and to the District which shall maintain a log of all complaints regarding recycled water.

- J. Protect all recycled water storage facilities, including tailwater ponds, against erosion, overland runoff, and other impacts resulting from a 20-year, 24-hour frequency storm unless the Central Valley Regional Board Executive Officer approves relaxed storm protection measures for the facility.
- K. Protect all recycled water storage facilities against 20-year frequency peak stream flows as defined by the Flood Plain Management Division of the Kern County Engineering and Survey Services Department, unless the such division approves relaxed storm protection measures for the facility.
- L. Protect all potable drinking water fountains and eating facilities from spray of recycled water.
- M. Ensure that the recycled facilities are operated at all times in full compliance with all federal, state, local and District recycled water requirements.
- N. Ensure that all recycled facilities are operated at all times in a manner that does not result in a discharge of recycled water into a watercourse, or cause illness or injury to any person or damage any real or personal property of any person, including the District.

#### Section 5.2. District Recycled Water System Facilities.

- A. Ownership, operation and maintenance of all recycled water system facilities up to, and including, the District's valve meter assembly at the Service Connection, shall be the responsibility of the District.
  - 1. Tampering with District Property. No person shall at any time tamper with District property. Such tampering constitutes a misdemeanor or felony criminal violation punishable by law. Only authorized District personnel may operate District facilities. A customer may operate District recycled water facilities only if expressly authorized in a Recycled Water Agreement.
  - 2. Unauthorized Use of Recycled Water. Customers who open the valve of a Service Connection without District approval may be liable for a penalty charge, as determined by the District, and for the cost of water usage, based either on the meter reading (if available) or the estimated consumption during the time water service was received without proper arrangements. Repeatedly turning on service without making proper arrangements shall be considered as tampering with District property and may result in the offender being charged and prosecuted.

Use of recycled water on a site that has not been approved for the use of recycled water requires the immediate notification of State DOHS and/or Kern County DEH and/or Central Valley Regional Water Quality Control Board.

3. Property Damage. Any repair costs incurred by District as a result of damage inflicted by the customer or others will be billed to the responsible party. Failure by the responsible party to pay for such costs shall constitute grounds for discontinuance of water service and/or legal action by the District. Amounts paid by the District shall incur interest at 12% per month until paid in full.

Section 5.3. Access to customer's Premises.

- A. The Tehachapi-Cummings County Water District, the Central Valley Regional Water Quality Control Board, the State DOHS, the Kern County DEH, or any other regulatory agency, and any authorized representative of these agencies, upon presentation of proper credentials, shall have the right to enter upon the recycled water use site during reasonable hours, or at any time during an emergency, for the following reasons:
  1. Monitoring and inspecting all recycled water systems to ascertain compliance with these rules and regulations and other regulatory requirements of any regulatory agency.
  2. Installing, maintaining, repairing and reading District owned facilities serving the customer's premises.

Where necessary, keys and/or lock combinations shall be provided to the District for site access.

Section 6.1. Termination of Service. Tehachapi-Cummings County Water District may terminate service to a recycled water user who uses, transports, or stores such water in violation of these special rules and regulations, in violation of the District's Standard Rules and Regulations, or in violation of any Recycled Water Agreement with the District.

The Central Valley Regional Water Quality Control Board may initiate enforcement action against any recycled water user, including but not limited to, the termination of the reclaimed water service, who:

- A. Discharges recycled water in violation of any applicable discharge requirement prescribed by the Regional Board or by the State Water Resources Control Board, or in a manner which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.
- B. Uses, transports, or stores such water in violation of the rules and regulations governing the design, construction and use of recycled water distribution and disposal systems promulgated by the District; or in a manner which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.

Section 6.2. Investigation and Initial Determination. District shall investigate all reports of non-compliance with any provision of these special rules and regulations and/or the Recycled Water Agreement to determine the seriousness of the violation. Determination regarding the seriousness will be based upon: 1) the magnitude and duration of the violation; 2) its effect on the operation of the District's

recycled water system; 3) its effect on third parties; 4) its impact on public and environmental health and safety; 5) the history and good faith of the customer; and 6) its effect on District's compliance with regulatory agency rules and regulations or regulatory agency permit conditions.

Section 7.1. Recycled Water Use Guidelines and Best Management Practices. As a supplier of recycled water, the District must ensure that the District's customers are aware of their responsibilities regarding recycled water use. The following Sections 7.1.1 through 7.1.6 constitute the District's Recycled Water Use Guidelines and Best Management Practices ("BMP"). The BMP are consistent with those promulgated by the State of California Department of Health Services, in Title 17 and Title 22 of the California Code of Regulations. The implementation of the BMP is essential in controlling soil erosion, over spray and ponding, promoting efficient irrigation practices and preventing discharged of recycled water offsite or into watercourses.

Section 7.1.1. General Operational Controls.

- A. The use of recycled water must be limited to the areas designated and approved by the District.
- B. All recycled water valves and outlets shall be properly tagged to warn the public and employees that the water is not safe for drinking.
- C. All recycled water piping and appurtenances in new installations and appurtenances in retrofit installations shall be colored purple or distinctively wrapped with purple tape in accordance with Chapter 7.9, section 4049.54 of the California Health and Safety Code.
- D. Where feasible, different piping materials should be used to assist in water system identification.
- E. All recycled water valves, outlets and sprinkler heads should be of a type that can only be operated by designated personnel.
- F. No recycled water shall be discharged into any watercourse.
- G. The recycled water piping system shall not include any hose bibbs. The use or installation of hose bibbs on any on-site water system that presently operates or is designed to operate with recycled water, regardless of the hose bibb style, construction or identification is strictly prohibited.
- H. No physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying standard District water. Backflow preventers shall be required at the discretion of the district.
- I. The use of recycled water shall at no time create odors, slime, deposits, become a public or private nuisance or create a trespass of any kind.
- J. The use area shall be maintained to prevent the breeding of flies, mosquitoes or other vectors.

- K. Reclaimed water facilities shall be operated in accordance with best management practices (BMP's) to prevent direct human consumption of reclaimed water and to minimize misting, ponding, and runoff. BMP's shall be implemented that will minimize public contact and preclude discharges onto areas not under customer control and discharges into watercourse.
- L. Customers shall ensure that all recycled water facilities are maintained, operated and repaired at all times in a manner that does not cause illness or injury to any person and in a manner that does not cause damage or injury to the real or personal property of any person or entity, including the District.

Section 7.1.2. Posting of On-Site Notices. All use areas where recycled water is used and that are accessible to the public shall be posted with conspicuous signs, in a size no less than 4 inches by 8 inches, that include the following wording and picture in a size no less than 4 inches high by 8 inches wide: "RECYCLED WATER - DO NOT DRINK". The sign(s) shall be of a size easily readable by the public. The prescribed wording should also be translated into Spanish and other appropriate languages and included in the required signs.



Figure 1

All water outlets shall be posted as "potable" or "non-potable", as appropriate

Section 7.1.3. Worker/Public Protection. Workers, residents, and the public shall be made aware of the potential health hazards associated with contact or ingestion of recycled water, and should be educated about proper hygienic practices to protect themselves and their families.

- A. Workers and others must be notified that recycled water is in use, through the posting of signs, etc.
- B. The following measures should be taken to minimize contact with recycled water:



1. Workers/public should not be subjected to recycled water sprays.
  2. Workers should be provided with the appropriate clothing during prolonged contact with recycled water.
- C. Potable drinking water should be provided for workers.
  - D. Toilet and washing facilities should be provided.
  - E. Precautions should be taken to avoid contact with food and food should not be taken into areas that are still wet with recycled water.
  - F. A first aid kit should be available on site, to prevent cuts and other injuries to contact recycled water.

Section 7.1.4. General Crop Irrigation Uses. All windblown spray and surface runoff of reclaimed water applied for irrigation onto property not owned or controlled by the discharger or reclaimed water user shall be prevented by implementation of BMP's.

Irrigation with reclaimed water shall be during periods of minimal human use of the service area. Consideration shall be given to allow an adequate dry-out time before the irrigated area will be used by the public.

All drinking fountains located within the approved use area shall be protected by location and/or structure from contact with recycled water spray, mist, or runoff. Protection shall be by design, construction practice, or system operation.

Facilities that may be used by the public, including but not limited to eating surfaces and playground equipment and located within the approved use areas, shall be protected to the maximum extent possible by siting and/or structure from contact by irrigation with recycled water spray, mist or runoff. Protection shall be by design, construction practice or system operation.

Section 7.1.5. Efficient Irrigation. The following methods of irrigation management should be applied to reduce run off, ponding and over spray and preclude discharges of recycled water to watercourses. When followed, these methods will result in uniform irrigation and efficient operation.

- A. Hardware.

All irrigation systems must have the appropriate equipment/hardware for the application.

1. Install irrigation system according to the design.
2. Make sure all sprinkler heads are uniform in brand, model and nozzle size. Where different arcs are needed at the same station, match precipitation rates by changing nozzles.
3. Measure spacing between sprinkler heads. Place heads per manufacturer's recommendations.

4. Where lower precipitation rates are required, such as on slopes, reduce nozzle size and spray angle per manufacturer's recommendations.
5. Install booster pumps to increase pressure where needed.
6. Install pressure reducers to decrease pressure where needed, often on steep hillsides where main lines run downhill.
7. Make sure piping is sized to transmit water in the quantity demanded by the system.
8. Use check valves either in-line or built into the sprinkler head assembly to virtually eliminate low head drainage after the valve has closed. THESE DEVICES SUBSTANTIALLY REDUCE RUN OFF AND PONDING FROM INDIVIDUAL SPRINKLER HEADS.
9. Use automatic flow control devices that shut down a system if a break or other similar high flow/low pressure situation develops during irrigation. THESE DEVICES CAN SAVE SIGNIFICANT AMOUNTS OF WATER AND ELIMINATE RUN OFF OR PONDING IF A BREAK SHOULD OCCUR.
10. The use of centralized control systems or controllers that measure or can be programmed to use evaporation rates, or systems that use controls such as moisture sensors is recommended.

#### B. Maintenance.

Maintenance is often the most overlooked irrigation system component. Perform the following routinely, and to fix a problem with the irrigation system.

1. Adjust sprinkler heads so they achieve 80% head to head coverage through out their intended arc. There should be no obstruction that would interfere with the free rotation and smooth operation of any sprinkler, such as trees, tall grass, shrubs, signs, etc. The system should be tested during the daytime so adjustments can be made.
2. Adjust valves or pressure regulators so that the systems are operating at the pressure required by the sprinkler heads or emitters. Test pressures periodically with a pressure gauge to maintain appropriate pressure levels.
3. Routinely test the accuracy of time clocks. Have the time clock recalibrated or repaired as necessary.
4. Repair or replace broken risers, sprinklers, valves, etc. as soon as they are discovered. Replace with appropriate make and model of equipment to maintain uniformity through out the system.

5. Routinely check backflow devices, pumps, etc. for leaks and repair or replace as necessary.
6. Routinely clean screens and backwash filters to keep systems operating optimally.

### C. Management

System management determines: 1) the appropriate duration of the irrigation cycle, and 2) the frequency at which irrigation occurs.

1. **Duration:** The duration or length of an irrigation cycle (run time) should be long enough to fill up the root zone reservoir. If total run times are longer than required, then deep percolation losses occur. There are exceptions to this general rule. A common and important exception to this rule is to reduce levels of salts in the root zone reservoir. This is accomplished by applying additional water to force salts down past the root zone. This process, called leaching, is a common use of irrigation water. Run times are also dependent on distribution uniformity (DU). DU is a measurement of how evenly water is applied to the irrigated area. Run times are reduced by higher levels of DU.
2. **Frequency:** The frequency of an irrigation cycle should be as often as necessary to meet the water requirements of the vegetation. This is determined by measuring the amount of moisture remaining in the root zone reservoir between irrigation cycles. When an appropriate moisture level is determined, the irrigation cycles should be scheduled to ensure watering frequency is such to maintain that level.
3. **Practices for optimizing management of an irrigation system:**
  - a) Use tensiometers, gypsum blocks, soil probes, the “feel method”, and/or the California Irrigation Management Information System to estimate soil moisture levels. Inspect and maintain regularly to ensure accuracy and reliability.
  - b) Use automatic rain shut-off devices to reduce irrigation if significant rainfall occurs.
  - c) Use multiple rain shut-off devices to reduce ponding if precipitation rate is higher than the infiltration rate of the soil.
  - d) Irrigate in the evening or early morning to avoid the heat and/or windy parts of the day. This will reduce evaporation losses and minimize windblown spray from entering unintended areas.
  - e) Group irrigated areas into zones of similar water use. For example, irrigate grass areas separately from shrub areas, sunny areas separately from shady areas, etc.

- f) As needed, aerate the soil to improve infiltration of air and water into the soil.
- g) Provide as much flexibility as possible into the design of the irrigation system. Built in ability to make changes as necessary can add to the efficiency of the system.
- h) Perform good horticultural practices; fertilization, mowing, de-thatching, aeration, and pest control, as necessary to create the best growing environment for landscape vegetation.

Because irrigation systems have constant wear and tear, periodic checks and adjustments are all part of good landscape water management programs.

D. Reuse System and Tailwater Ponds:

- 1. Each customer shall have a system to collect and reuse tailwater, including tailwater ponds with recycling booster pumps of sufficient number, size, construction and location to (a) recycle all excess irrigation water for reuse, (b) contain and confine all irrigation water on the customer's fields and (c) preclude discharge of any recycled water onto adjoining lands or into any watercourse.
- 2. Each customer shall allow the District to position on those customer tailwater ponds the District selects District owned mobile diesel pumps to be operated by a customer as an emergency backup if a customer's recycling pump fails. At a minimum, the District shall position a mobile diesel pump on any tail water pond which within the previous five years has overflowed onto adjoining land or into a watercourse. The customer shall provide fuel for such pumps and shall promptly reimburse the District for any costs incurred by the District during emergency operation of such backup pumps.

Section 7.1.6. Use of Recycled Water Adjacent to Potable Wells.

- A. Irrigation with recycled water shall not take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:
  - 1. A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface.
  - 2. The well contains an annular seal that extends from the surface into the aquitard.
  - 3. The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.
  - 4. The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.

5. The owner of the well approves of the elimination of the buffer zone requirement.
- B. No impoundment of recycled water shall take place within 100 feet of any domestic water supply well.
- C. Crop Irrigation with recycled water shall be prohibited within the Cummings Valley north and west of the intersection of Pellisier Road (County Road No. 241) and the western extension of Highline Road.
- D. Other special restrictions applicable to use of recycled water in the Cummings Valley and its watershed are set forth in section 4.11 of the District's Rules and Regulations Governing Use of Recycled Water.

Section 8.1. Recycled Water Inspection and Monitoring Program. The Recycled Water Inspection and Monitoring Program set forth in the following Sections 8.1.1 through 8.1.5 is designed to insure compliance with all federal, state and local regulations governing the use of recycled water. The District's "Rules and Regulations Governing the Use of Recycled Water" provides the legal authority for the implementation of this Recycled Water Inspection and Monitoring Program. The key components of this program include the District's Cross Connection Control Program. In addition, educational information may be provided by the District's staff to prevent any unintentional misuse of recycled water.

Section 8.1.1. Plan Check Function. All new recycled water users proposing to install recycled water irrigation systems are required to submit plans for review and approval by the District and Regulatory Authority. Plan review is conducted by the District's staff to verify conformance with District standards. The irrigation system is inspected following construction to verify conformance with the approved plans.

Section 8.1.2. Application for Service. The District's "Rules and Regulations Governing the Use of Recycled Water" requires all customers desiring or required to obtain recycled water service to submit an application on a form developed by the District. This provision also requires that an agreement be signed prior to any connection to any District owned recycled water facilities.

Section 8.1.3. Recycled Water Agreement. After review of the application for service, a recycled water service agreement is prepared. This agreement is between the District and the customer, and is a condition of obtaining recycled water service.

Section 8.1.4. Inspection and Monitoring. Recycled water meters are read periodically by District water operators, meter readers and other District personnel. If any problems are discovered (ponding, run-off, inappropriate use, over spray, missing signs, etc.), the Wastewater/Recycled Water Supervisor, or his designee, will respond within 72 hours. Any issues that have potential health risks will be responded to immediately and reported to the County Department of Environmental Health Services.

In addition, all recycled water users will be inspected a minimum of annually. This routine inspection is conducted to verify compliance with the provisions established in the District's "Rules and Regulations Governing the Use of Recycled Water", the Recycled Water Agreement, and any other federal, state or local regulations. The inspection will be conducted with the designated "On-Site Recycled Water Supervisor". Any violations, deficiencies, or unacceptable findings will be noted and the On-Site Recycled Water Supervisor will be required to perform corrective action.

Section 8.1.5. Non-Compliance Issues. It is the policy of the District to remedy a violation as soon as possible through progressive enforcement procedures. This procedure provides the customer due process, and considers the seriousness of the violation when determining the appropriate enforcement action.

Enforcement mechanisms (notices, penalties, fines and termination of service) are described in more detail in the District's "Rules and Regulations Governing the Use of Recycled Water". Enforcement mechanisms are also included in the District's Recycled Water Agreements.

#### PART Q. RIGHT TO AMEND, ETC.; PROVISIONS PART OF EVERY WATER SERVICE AGREEMENT; CERTAIN OTHER CONTRACTS.

Section 1. Right to Amend. The District retains the right at any time and from time to time, with or without notice, to amend, repeal, or add provisions additional to, any provision in these Rules and Regulations, either by actual amendment hereof, or by successor Rules and Regulations and amendments thereto. Any such change, including but not limited to, increases in rates or re-categorization or uses for rate purposes, or any rule or regulation, shall apply to water service commenced theretofore or thereafter, except to the extent as may be provided in any Term M&I Agreement or other contract.

Section 2. Provisions as Amended Part of Water Service Agreements. Every provision of these Rules and Regulations, as the same may be changed from time to time, whether before or after the entering into of any water service agreement (whether by approval of application alone or by reasons of a Term M&I Agreement) shall be deemed a part of each such water service agreement, and without thereby limiting the foregoing, each water user and co-signing owner shall be deemed to have agreed to District's right to waste, seepage and return flow as provided in Part K, and to have quitclaimed to District any otherwise right, title or interest of water user therein.

Section 3. Incorporation of Provisions of the KCWA Contracts and Master Contract. Every water service agreement is also subject to the provisions of the KCWA Contracts as they may be hereafter amended, and to the extent provided or later provided therein, or otherwise by law, to the provisions of the Master Water Supply Contract between DWR and the KCWA, as the same may be hereafter amended.

## TERM M & I AGREEMENT

THIS AGREEMENT is entered into effective \_\_\_\_\_, \_\_\_\_\_, by and between TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT, a county water district ("District" hereinafter) and \_\_\_\_\_ ("Water User" hereinafter).

### A. Recitals.

(i) Water User has filed an application with District for water service under date of \_\_\_\_\_, \_\_\_\_\_, for M & I use as defined in District's Rules and Regulations. To the extent any water taken by Water User qualifies for agricultural rates, the Rules and Regulations shall govern the same and this agreement shall be inapplicable thereto.

(ii) This is a "term M & I agreement", entered into pursuant to the Rules and Regulations.

### B. Agreement.

Now, therefore, it is agreed between the parties, in consideration of the concurrent approval of Water User's application for service, and the lower rates for M & I water taken pursuant to a term M & I agreement, as follows:

1. During the term of this agreement, and each annual period hereunder, Water User agrees to purchase from District all water used, sold or distributed by Water User for M & I use as defined in the District's Rules and Regulations, over and above quantities of "local water available to Water User", and used, sold or distributed by it, as that quoted term is defined and limited in paragraph 2 hereof. Such water to be purchased from District after consideration of local water available to and used by Water User is hereinafter referred to as the "net imported M & I requirement".

2. "Local water available to Water User" shall include only the following:

(a) As to water intended to be produced, extracted or diverted from Tehachapi Basin or its watershed, Brite Basin, or its watershed, or Cummings Basin, or its watershed, as such terms

are defined in the three judgments in the respective ground water adjudications,<sup>1</sup> local water available to Water user shall include only the following annual quantities and other rights of which Water User owns or leases, and as such annual quantities and other rights are or shall have been reduced, and thereafter adjusted from time to time, by the Court in allocating the allowable annual production from the particular basin, or otherwise reduced in any annual period pursuant to any provisions of the particular judgment as amended from time to time: (i) Such annual quantity or other right originally adjudicated to said Water User in the particular judgment (if any), as so reduced and adjusted, and (ii) such annual quantity or other right originally adjudicated to another party in the particular judgment but subsequently acquired or leased by Water User, as so reduced and adjusted, provided that such transfer complied with all conditions and procedures set forth in the particular judgment.

Notwithstanding the foregoing, said quantities and rights shall be local water available to Water User only in the quantities used or to be used (i) within the basin area as to which the water rights were adjudicated, (ii) within an area to which water appropriated pursuant to an adjudicated water right under the particular judgment may legally be transported.<sup>2</sup> If Water User was entitled under any written agreement in effect when the particular judgment was entered to a transfer of any water right, such quantity shall, upon such transfer, be considered as “originally adjudicated” to said Water User.

(b) Local sources of water not consisting of water which would be produced, extracted or diverted from Tehachapi Basin or its watershed, Brite Basin or its watershed, or Cummings Basin or its watershed, and which would not, if left uncaptured, percolate into any one of said basins. Notwithstanding the foregoing sentence, “Local water available to Water User” shall not include appropriations of groundwater in Cummings Basin as distinguished from extractions by a person exercising overlying rights.

3. As Water User’s net imported M & I requirement increases, it shall pay for the installation of any new turnout and connection in the same manner as upon original application, and shall file application therefor, or obtain the remainder of said requirement through any Exchange Pool or similarly named vehicle which may be established pursuant to the reserved jurisdiction of the Court in any of the referenced groundwater adjudications, to the extent the requirement is available therefrom.

4. This agreement is subject to all the provisions of the District’s Rules and Regulations including all future amendments thereof. Any application for service concurrently approved or hereafter approved shall likewise constitute a part of this agreement.

5. Within thirty (30) days of the execution of this agreement, and prior to each August 15 thereafter during the term of this agreement, Water User shall furnish to District a written estimate of its

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<sup>1</sup> Tehachapi-Cummings County Water District v. Frank Armstrong, et al., Kern County Superior Court No. 97209 (Cummings Basin); Tehachapi-Cummings County Water District v. City of Tehachapi, a municipal corporation, et al., Kern County Superior Court No. 97210 (Tehachapi Basin); and Tehachapi-Cummings County Water District v. Irving P. Austin, et al., Kern County Superior Court No. 97211 (Brite Basin).

<sup>2</sup> If there is a connected water system of Water User serving either of said types of areas, and other areas, the form of this agreement must be first revised to provide for the method of treatment thereof.



net imported M & I requirement for each calendar year, or portion thereof, then remaining under this agreement. This estimate shall not constitute a contractual obligation to take the estimated quantity. Nothing herein shall limit the right of District to require other and further reports pursuant to the powers reserved under paragraph 4.

6. Notwithstanding any other provision of this agreement, Water User agrees to pay District for a minimum quantity of five (5) acre-feet per each annual period or any partial annual period under this agreement, unless failure of Water User to receive that quantity is due to inability of District to deliver.

7. If the Water User should at any time substantially fail to comply with this agreement, and District on account thereof terminates this agreement, or should Water user terminate the same other than for a reason hereinabove set forth, Water User shall be obligated to forthwith pay to District, in addition to any amounts otherwise owing to District, the difference between the amount of money which Water User was obligated to pay to District for water sold and delivered pursuant to this agreement and the amount of money which Water User would have been obligated to pay to District had said water so sold and delivered been originally sold and delivered at the normal M & I rate. Nothing herein contained is intended to foreclose the District from seeking such damages as it may sustain from any breach, substantial or not, of this agreement by Water User whether or not such breach leads to District's termination of this agreement.

8. The annual period under this agreement shall be the calendar year, and if the first annual period be less than a full calendar year, "local water available to Water User" for that short annual period shall be in such proportion as the number of days under this agreement in that calendar year bears to 365. It is contemplated that any injunction and "physical solution" under any of the referenced judgments will be on a calendar year basis. If one should at any time be on another basis, Water User agrees to an amendment to the annual period under this agreement with such prorations as may be equitable to accomplish the purpose and intent of this agreement.

9. In lieu of Water User taking direct delivery from District of all water used, sold, or distributed by Water User for M & I use over and above quantities of local water available to Water User, and used, sold, and distributed by it, such supplemental water requirements may be taken by Water User under and pursuant to the provisions of the Exchange Pool contained in the amendment to judgment in the Tehachapi Basin adjudication, Kern County Superior Court No. 97210. If Water User's application states that it intends to obtain such requirements through the Exchange Pool, so long as it does so, no connection shall be required.

10. This agreement shall have a term ending \_\_\_\_\_, \_\_\_\_\_. (Here insert the end of the calendar year which is closest to six years from the effective date of this agreement, whether said date is more or less than six years in total.)

WHEREFORE, the parties have executed this agreement as of the dates opposite their respective signatures.

Dated:

TEHACHAPI-CUMMINGS COUNTY  
WATER DISTRICT

By \_\_\_\_\_  
President

By \_\_\_\_\_  
Secretary

Dated:

\_\_\_\_\_  
DISTRICT

By \_\_\_\_\_  
President

By \_\_\_\_\_  
Secretary

**TERM M&I AGREEMENT**  
**[For Existing Recharge Water Customers]**

THIS AGREEMENT is entered into effective \_\_\_\_\_, \_\_\_\_\_, by and between TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT, a county water district ("District" hereinafter) and \_\_\_\_\_ ("Water User" hereinafter).

A. Recitals.

(i) As provided in Part C of the District's Rules and Regulations, it is District policy to meet the present and future needs of its Term M&I Agreement Customers from the District's State Water Project ("SWP") water supply pursuant to the District's two water supply contracts with the Kern County Water Agency ("KCWA") both dated December 16, 1966 (the "KCWA WATER SUPPLY CONTRACTS"). Water User for many years has had a Term M&I Agreement with the District, for M&I use as defined in District's Rules and Regulations, and wishes to enter into a further Term M&I Agreement, as herein provided. To the extent any water taken by Water User qualifies for agricultural rates, the Rules and Regulations shall govern the same and this agreement shall be inapplicable thereto.

(ii) This is a "Term M&I Agreement", entered into pursuant to the Rules and Regulations.

(iii) Pursuant to Part K of the District's Rules and Regulations, as amended, the District claims all right, title and interest in and to all return flows into any groundwater basin within the District's boundaries of water imported by the District, whether by means of waste, seepage or percolation before or after delivery, use or reuse, or from the District's intentional recharge of IMPORTED WATER by the District in District spreading areas, together with the right to recapture and otherwise utilize same (all such return flows hereafter "RECHARGE WATER").

(iv) Pursuant to Section 3 of Part C of the District's Rules and Regulations, as amended, the District in its discretion may elect to allow retail purveyors having Term M&I Agreements with the District to pump RECHARGE WATER in lieu of taking surface deliveries of IMPORTED WATER.

(v) Water User wishes to reduce the cost of treating IMPORTED WATER by substituting therefor RECHARGE WATER to be pumped by Water User from the \_\_\_\_\_ Basin.

(vi) In accordance with the longstanding holdings of the California Supreme Court (*City of Los Angeles v. City of Glendale* (1943) 23 Cal. 2d 68, 76-77 and *City of Los Angeles v. City of San Fernando* (1975) 14 Cal. 3d 123, 257-261), and other holdings of the Courts, the District and the Water User have the right to recharge, store and withdraw IMPORTED WATER from the \_\_\_\_\_ Basin.

B. Agreement.

Now, therefore, it is agreed between the parties, in consideration of the terms hereof, and the lower rates for M&I water taken pursuant to a Term M&I Agreement, as follows:

1. During the term of this agreement, and each annual period hereunder, Water User agrees to purchase from the District (a) all water used, sold or distributed by Water User for M&I use as defined in the District's Rules and Regulations, over and above quantities of "LOCAL WATER AVAILABLE TO WATER USER", as that quoted term is defined and limited in paragraph 2 hereof, (hereinafter referred to as the "NET IMPORTED M&I REQUIREMENT") provided, however, District shall have no obligation to sell to Water User more than \_\_\_\_\_ [insert Water User's 2040 projected

SWP water demand from Table 2-13 of the 2010 Tehachapi Regional UWMP] and (b) sufficient water to establish and maintain Water User's BANKED WATER RESERVE ACCOUNT as provided in paragraph 3 hereafter. Water User shall pay the District for the water purchased hereunder at the Term M&I rate for the Water User's pressure zone, as such rates and zones are established and modified from time to time by the District's Board of Directors.

2. "LOCAL WATER AVAILABLE TO WATER USER" shall include only the following:

(a) As to water intended to be produced, extracted or diverted from Tehachapi Basin or its watershed, as such terms are defined in the judgment, as amended, in *Tehachapi-Cummings County Water District v. City of Tehachapi, a municipal corporation, et al.*, Kern County Superior Court No. 97210 (Tehachapi Basin), LOCAL WATER AVAILABLE TO WATER USER shall include only the following annual quantities and other rights of which Water User owns or leases, and as such annual quantities and other rights are or shall have been reduced, and thereafter adjusted from time to time, by the Court in allocating the allowable annual production from the Basin, or otherwise reduced in any annual period pursuant to any provisions of the judgment as amended from time to time: (i) Such annual quantity or other right originally adjudicated to said Water User in the judgment as so reduced and adjusted, and (ii) such annual quantity or other right originally adjudicated to another party in the judgment but subsequently acquired or leased by Water User, as so reduced and adjusted, provided that such transfer complied with all conditions and procedures set forth in the judgment.

(b) As to water intended to be produced, extracted or diverted from the Brite Basin or its watershed, as such terms are defined in the judgment in *Tehachapi-Cummings County Water District v. Irving P. Austin, et al.*, Kern County Superior Court No. 97211 (Brite Basin), LOCAL WATER AVAILABLE TO WATER USER shall include only extractions by Water User lawfully exercising overlying rights until such time as such rights may be curtailed or modified in any future amendment to such judgment.

(c) As to water intended to be produced, extracted or diverted from the Cummings Basin or its watershed, as such terms are defined in the judgment in *Tehachapi-Cummings County Water District v. Frank Armstrong, et al.*, Kern County Superior Court No. 97209 (Cummings Basin), local water available to Water User shall only include extractions by Water User lawfully exercising overlying rights until such time as such rights may be curtailed or modified in any future amendment to such judgment.

(d) As to water intended to be produced or diverted from any basin other than the Tehachapi, Brite and Cummings Basins, any native water which Water User has a right to divert or pump.

3. In addition to its NET IMPORTED M&I REQUIREMENT, Water User shall purchase from the District and direct the District to spread and store in the Tehachapi [or Cummings] Basin for Water User's account sufficient water to establish and thereafter maintain a BANKED WATER RESERVE ACCOUNT ("BWRA") equal to, at a minimum, five times the annual average of Water User's SWP water demand over the previous five calendar years as set forth in the table entitled "BANKED WATER RESERVE ACCOUNT CALCULATION" attached hereto as **Exhibit A** which the District shall update annually by February 1 (the "BWRA TABLE"). Water User may spread and store water for its BWRA in its own recharge facilities in whole or in part in lieu of directing the District to spread its BWRA water in District spreading facilities. Water User shall pump and draw from its BWRA whenever the District is unable to supply all of the Water User's NET IMPORTED M&I REQUIREMENT on account of drought, damage to SWP or District facilities, or any other event. During the first ten years of the term of this agreement, Water User shall purchase each year, at a minimum,

sufficient water to achieve its BWRA goal as set forth in the BWRA TABLE by December 31, \_\_\_\_\_[insert 10<sup>th</sup> year from effective date]. Water User shall not be required in any one year to purchase for its BWRA more than twice its NET IMPORTED WATER REQUIREMENT for such year. Upon termination of this agreement, Water User shall own the water in its BWRA free of any and all restrictions imposed by this agreement and Water User may continue to store, or may pump, or may sell, or otherwise dispose of such water as it sees fit.

4. This agreement is subject to all the provisions of the District's Rules and Regulations including all future amendments thereof, except to the extent inconsistent with a material term of this agreement.

5. Within thirty (30) days of the execution of this agreement, and prior to each November 1 thereafter during the term of this agreement, Water User shall furnish to District a written estimate of its NET IMPORTED M&I REQUIREMENT for the next calendar year. This estimate shall not constitute a contractual obligation to take the estimated quantity. Nothing herein shall limit the right of District to require other and further reports pursuant to the powers reserved under paragraph 4 above.

6. Notwithstanding any other provision of this agreement, Water User agrees to pay District for a minimum quantity the greater of (i) its scheduled BWRA input or (ii) if its BWRA is full, five (5) acre-feet per each annual period or any partial annual period under this agreement, unless failure of Water User to receive that quantity is due to inability of District to deliver all or a portion of such supply.

7. If the Water User should at any time substantially fail to comply with this agreement, and District on account thereof terminates this agreement, or should Water User terminate the same other than for a reason hereinabove set forth, Water User shall be obligated to forthwith pay to District, in addition to any amounts otherwise owing to District, the difference between the amount of money which Water User was obligated to pay to District for water sold and delivered pursuant to this agreement and the amount of money which Water User would have been obligated to pay to District had said water so sold and delivered been originally sold and delivered at the normal M&I rate during the calendar year of such termination or substantial failure to comply with this agreement. Nothing herein contained is intended to foreclose the District from seeking such damages as it may sustain from any breach, substantial or not, of this agreement by Water User whether or not such breach leads to District's termination of this agreement.

8. The annual period under this agreement shall be the calendar year, and if the first annual period be less than a full calendar year, "LOCAL WATER AVAILABLE TO WATER USER" for that short annual period shall be in such proportion as the number of days under this agreement in that calendar year bears to 365.

9. In lieu of Water User taking direct delivery from District, Water User's NET IMPORTED M&I REQUIREMENT may be provided in accordance with this paragraph 9. For purposes of this paragraph 9, (i) "IMPORTED WATER" means SWP water purchased by the District pursuant to the KCWA WATER SUPPLY CONTRACTS and (ii) "WATER USER'S WELL[S]" means that [those] certain well[s] in the \_\_\_\_\_ Basin as listed in **Exhibit B** hereto, as such list may be modified from time to time as a result of Water User constructing or acquiring new wells and/or abandonment of then existing wells, provided, however, Water User shall obtain the District's prior written consent to change Water User's extraction wells which shall not be withheld unless the District reasonably determines that such new well or wells will substantially interfere with another well or wells in the vicinity.

(a). Substitution of Recharge Water. Water User may pump RECHARGE WATER in lieu of taking surface delivery of IMPORTED WATER at the price and subject to the terms

and provisions hereinafter set forth.

(b). Place of Delivery. Any RECHARGE WATER supplied by the District in lieu of surface deliveries of IMPORTED WATER shall be delivered underground in the \_\_\_\_\_ Basin at the depth of groundwater as it fluctuates in WATER USER'S WELL[S]. Water User shall be responsible for all costs, liability and expense of pumping RECHARGE WATER to the surface and transporting same for use within Water User's boundaries.

(c). Place of Use. Water User shall use RECHARGE WATER to provide retail water to its customers within the District's boundaries and for no other purpose.

(d). Scheduling. On or before November 1 of each year for the balance of the term of the agreement, Water User shall notify the District in writing of the proportion of its NET IMPORTED M&I REQUIREMENT for the following calendar year it wishes to be met with RECHARGE WATER in lieu of surface deliveries of IMPORTED WATER. On or before February 28<sup>th</sup> of each year, the District shall notify Water User of the estimated amount of RECHARGE WATER which is available to be substituted for surface deliveries of IMPORTED WATER in such calendar year. Periodically thereafter, the District shall provide updated estimates as SWP delivery allocations are revised.

(e). Metering. The Water User shall install a meter of manufacture and model approved by the District at WATER USER'S WELL[S] at Water User's expense. The meter shall be maintained in good working order and regularly calibrated so as to comply with the standards of the American Water Works Association per their manuals M6, M33 and M36. Water User shall provide the District with proof satisfactory to the District that Water User has obtained the right to exclusively operate WATER USER'S WELL[S] for the purposes set forth herein and that the owner of WATER USER'S WELL[S] and surrounding lands has conveyed to the District in writing the right to enter such lands to take meter readings at WATER USER'S WELL[S].

(f). Reduction or Termination of Substitute Deliveries. In the event a third party demonstrates that new or increased pumping of RECHARGE WATER by Water User as herein provided is causing significant impacts on the third party's existing well or wells, the Water User shall confer with such third party and mitigate such impacts to a level acceptable to such third party, failing which the District in its sole discretion may determine the rate of pumping and quantities of RECHARGE WATER which Water User may extract in lieu of surface deliveries of IMPORTED WATER provided, however, the District shall provide Water User with fifteen (15) days prior written notice of any reduction or termination of allowed pumping of RECHARGE WATER hereunder.

(g). Price. For RECHARGE WATER delivered and metered by the District hereunder, except for water recharged through facilities owned and operated by the Water User, Water User shall pay the District, in addition to the Term M&I rate, a surcharge determined by the District from time to time to recapture the construction, operation and maintenance costs of the District's recharge facilities.

(h). Spreading Loss Factor. For all water spread, whether in the District's or the Water User's spreading facilities, a spreading loss factor of 6% will be imposed pursuant to Section 1 of Part B of the District's Rules and Regulations for losses on account of evaporation, phreatophyte consumption and any other losses incurred in the transportation and spreading of RECHARGE WATER.

(i). Disclaimer. Water User acknowledges that the District's right to RECHARGE WATER within the Cummings, Brite and Tehachapi Basins has not been determined but is a matter within the continuing jurisdiction of the Kern County Superior Court in Case No. 97209, 97210

and 97211. Water User acknowledges that paragraph 2 of the Judgments in each such case generally prohibits the exportation outside of the particular groundwater basin of any native groundwater extracted from such basin. Water User further acknowledges that paragraph 5 of the Judgments in each such case provides, in part:

"Nothing in this Judgment contained shall be deemed a determination whether the Plaintiff or any other party will or will not have any rights in any return flow from water subsequently imported, which matter shall be within the continuing jurisdiction of the Court."

Water User further acknowledges that the State of California, a defendant in Case No. 97209, has objected to the District's Amended Findings of Fact, Conclusions of Law and Judgment in Case No. 97209, in which the District claims the right to return flow from the use of imported waters or waste or seepage from the District's imported water project in the Cummings Basin, and that the Court has not ruled on such objection. While the District has claimed and continues to claim a right to return flow from the use of imported waters in the Cummings, Brite and Tehachapi Basins, including the right to extract and export outside of such basins imported SWP water intentionally percolated by the District in District recharge areas for storage in such basins and subsequent extraction and beneficial use, all consistent with rulings from the California Appellate Courts, the District makes no warranties or representations to Water User as to the validity of the District's position on these issues. Water User has sought its own legal advice concerning the validity of the District's claim to RECHARGE WATER and Water User's right to export RECHARGE WATER for use on lands which do not overlie the groundwater basin from which the RECHARGE WATER will be pumped and has relied upon its own independent legal advice in entering into this agreement and acquiring rights in and improving and repairing WATER USER'S WELL[S]. Accordingly, Water User acknowledges that the District shall have no liability to Water User in the event that it is ultimately determined in Case Nos. 97209, 97210 and 97211 or any other proceeding that the District does not have the right to sell RECHARGE WATER in the Cummings, Brite and Tehachapi Basins or Water User may not export RECHARGE WATER for use outside of the basin or basins in which the District had spread RECHARGE WATER.

10. The District's obligation to supply water hereunder is conditioned upon the availability of sufficient SWP water under the KCWA WATER SUPPLY CONTRACTS to enable the District to meet all of its Customers' water demands. In event the District in any year has insufficient SWP water available to meet the full needs of Water User pursuant to the terms of this agreement and its other customers, the District's available SWP water in that year shall be allocated in accordance with the District's Rules and Regulations or other policies adopted by the District from time to time, provided that such policies recognize any priorities mandated by statute or recognized under the KCWA WATER SUPPLY CONTRACTS OR KCWA's contract with the State of California referenced therein. Provided, however, the Water User shall draw upon Water User's BWRA to make up any such shortages.

11. This agreement shall have a term ending \_\_\_\_\_, \_\_\_\_\_ [(Here insert the end of the calendar year which is closest to 10 years from the effective date of this agreement, whether said date is more or less than 10 years in total.); provided, however, that each year on the anniversary date of this agreement, this agreement shall extend one additional year, unless, at least 90 days prior to such anniversary date either party provides notice to the other that it will not consent to such further extension(s) of this agreement and further, provided, however, this agreement shall terminate upon termination of the KCWA WATER SUPPLY CONTRACTS (December 31, 2039) unless and to the extent the terms of such agreements are extended.

WHEREFORE, the parties have executed this agreement as of the dates opposite their respective signatures.

Dated: \_\_\_\_\_

TEHACHAPI-CUMMINGS COUNTY  
WATER DISTRICT

By \_\_\_\_\_  
President

By \_\_\_\_\_  
Secretary  
("District")

Dated: \_\_\_\_\_

\_\_\_\_\_

By \_\_\_\_\_  
President

By \_\_\_\_\_  
Secretary  
("Water User")



**ORDINANCE 2015-1**

**AN ORDINANCE OF THE TEHACHAPI-CUMMINGS  
COUNTY WATER DISTRICT ESTABLISHING RESTRICTIONS AND  
PRIORITIES AS TO SALE OF DISTRICT WATER IN VIEW  
OF THREATENED WATER SHORTAGE EMERGENCY**

**A. RECITALS**

- (i) There is a threatened water shortage during the calendar year 2014 of water from the State Water Project, and in turn a threatened shortage to this District under its contract with Kern County Water Agency for State Water Project water.
- (ii) Water Code Sections 31026 and 31027 permit this District to establish restrictions and prohibitions of specific uses during a water shortage emergency.
- (iii) It is the intent of this ordinance to establish the same through priorities of use.

**B. ORDINANCE**

**BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE TEHACHAPI-  
CUMMINGS COUNTY WATER DISTRICT AS FOLLOWS:**

Sec. 1. The Board of Directors finds and determines in all respects as set forth in Part A of this Ordinance.

Sec. 2. The priority of sales of District water during calendar year 2015 shall be as follows:

- 1. Wheeled water for water rights holders in Tehachapi Basin.
- 2. Maintain enough water in the system to provide for fire-fighting efforts all year.
- 3. Direct-delivery M&I use, including normal M&I demand for construction projects; Voluntary 20% reduction for existing customers compared with 2014.
- 4. Agricultural water:
  - a. Stock water for animals
  - b. Permanent crops
  - c. Food crops grown in hothouses
  - d. Cover crops primarily for erosion control, including grains and cereals
  - e. Annual food crops for human consumption
    - i. On land cultivated in 2014
    - ii. On land that was fallow in 2014
  - f. Turf sod where recycled water is available
  - g. Annual crops for animal consumption
    - i. On land cultivated in 2014

- ii. On land that was fallow in 2014
  - b. Non-food crops
    - i. On land cultivated in 2014
    - ii. On land that was fallow in 2014
- 5. Conjunctive use recharge water for current year demand where return-flow or banked water is available
- 6. Recharge water for groundwater banking
  - a. M&I end uses
  - b. Agricultural end uses

Cut off of water sales shall be in the reverse of the order listed above. Notwithstanding other provisions of this ordinance, if conflicts occur between different water users within the same category, priority of water service will be given to crops having already been planted over crops anticipated to be planted. Depending on conditions, water may be withheld from any land where the proposed crop is not yet planted, regardless of its place in the priority list.

Sec. 3. The following additional findings are hereby made in support of Section 2 and succeeding sections of this Ordinance:

1. The District pumps water from District wells for water rights holders in Tehachapi Basin and delivers that water through the District's system to turnouts at the point of use. The water is part of the adjudicated safe yield of the native groundwater of the Basin and has nothing to do with imported water supply or shortages thereof.
2. Jacobsen Reservoir needs to be maintained at a minimum elevation of 4,341', which is approximately 450 acre-feet of storage, in order to provide sufficient pressure to flow to all dip tanks in the system. It may be necessary to temporarily curtail flow to customers during a fire event to preserve sufficient pressure in the system to provide water to dip tanks.
3. Direct-delivery M&I customers typically have no substitute water supply. It is important to the local economy and to the District's tax base that local construction projects not be delayed due to the lack of water. Some of the District's direct-delivery M&I customers are large landscape accounts primarily for maintenance of grass (parks, schools, cemeteries). These types of accounts can reduce consumption 20% without permanent damage to their facilities. The District will develop and distribute monthly water budgets for these accounts by June 1.
4. Agricultural water service is prioritized so as to cause the least economic dislocation

to those who have relied on agriculture for their living and to protect the highest irretrievable investment among agriculture.

- a-c. For this reason, animals, permanent crops and food crops grown in hothouses, which involve substantial investment, are given highest priority.
  - d. Although cover crops are typically not harvested for profit, and therefore have no direct economic impact, their cultivation is critical to preserving topsoil from wind erosion. Sufficient water needs to be preserved in the system to provide for the establishment of cover crops on tilled ground during autumn.
  - e. New food crops for human consumption are the next priority due to the importance of food sources, particularly during a drought wherein food production from other areas in California will be severely reduced. Land farmed in the prior year has a higher priority over newly cultivated land. This is true for Categories f and g as well.
  - f. Turf sod farmers who have signed up to receive recycled water need a backup supply in the event that the recycled water cannot be delivered. To encourage these farmers to enroll in the District's recycled water program, they are given a higher priority for imported surface water than some other uses.
  - g. Annual crops for animal consumption, such as alfalfa hay, are given a higher priority than non-food crops because of the substantial local market for such commodities.
  - h. Non-food crops are given the lowest agricultural priority because they are not essential to sustaining life and their temporary absence will cause no great harm.
5. The District has sufficient banked groundwater to supply conjunctive use customers in 2015; therefore, providing new recharge water during the drought is considered a low priority.
6. The 20% State Water Project allocation means that providing water for new groundwater banking during 2015 is impossible; therefore, this is given the lowest priority of all. In future years, when normal SWP allocations are restored, groundwater banking will be done on a large scale to replenish emergency supplies used during 2015.

Sec. 4. The General Manager shall:

- (a) Report to the Board of Directors at frequent intervals concerning anticipated available water and requests therefore;
- (b) Report to the Board of Directors promptly any desirable amendments to this ordinance;
- (c) Cause the permissible over-extractions under the Amendments to Judgment in said Tehachapi Basin case to be administered in such fashion as to minimize the effect of the anticipated shortage of State Water, with due regard for the ultimate "repayment" of any such over-extractions; and
- (d) Assist persons in other basins within the District toward maximum utilization of groundwater for the same purpose as stated in (c) above.

Sec. 5. This Ordinance shall be effective and operative immediately upon adoption.

Sec. 6. The General Manager shall forthwith send a copy of this Ordinance to every heretofore or anticipated customer for District water.

Sec. 7. In accordance with Water Code Section 31027, the Secretary of this District and Board of Directors shall cause a copy of this Ordinance to be published once in the Tehachapi News within ten (10) days, but such direction shall not delay the effective and operative date of this Ordinance.

**ADOPTED AND APPROVED this 18<sup>th</sup> day of March, 2015.**



David E. Worden, President

**ATTEST:**



Lori Bunn, Secretary to the Board of Directors

# **WATER SHORTAGE CONTINGENCY PLAN**

## **BEAR VALLEY CSD**

Bear Valley CSD, being totally supplied by groundwater, does not address in this plan, a 50% loss of State Water Project (SWP) water supplies as they have only peripheral effect on the District.

In the best interest of Bear Valley and its consumers, BVCS D has existing water shortage regulations (Ord. 06-221) adopted in advance of an actual or threatened water shortage in order to reduce consumption and reserve a sufficient supply of water for public health and safety. BVCS D also has in place more aggressive measures to support water supply interruptions in excess of 30% and up to 50% from catastrophic failure due to earthquake fire or extensive power failure.

The State of California requires that an urban water shortage contingency plan include up to a 50% reduction in consumption. It is not known how much the existing water shortage regulations will reduce consumption. The mandatory measures alone would not reduce consumption by 50% and this goal could probably only be achieved with strict enforcement and significant voluntary reductions.

### **STAGES OF ACTION**

The water shortage regulations include three stages of implementation. Actions in each stage would be undertaken by BVCS D and/or its consumers. When staff determines that water supply condition warrants activating a water alert or stage change, the General Manager will approve and notify the board. Presently there are not any defined triggers (i.e., water allocations, snow pack levels, etc.) for moving from one stage to the next. Any decision to change stages will however be based on the combination of water supplies, weather conditions, trends in water usage, groundwater levels, and water production.

Conservation measures gradually increase with each stage. The consumers are given opportunities to voluntarily reduce consumption in Stage 1. If these efforts are not sufficient, then Stage II is implemented which includes additional mandatory and voluntary measures. If these are not sufficient, then Stage III, which includes several other mandatory regulations, is implemented.

## **ESTIMATE OF MINIMUM SUPPLY NEXT 3 YEARS**

Over the past two decades BVCS D has pumped groundwater to meet all water supply demands. During dry years there is less water infiltrating from rainfall, snowfall, runoff and irrigation, and the localized impact on groundwater supplies can be somewhat significant. As a result, BVCS D closely monitors groundwater levels in its wells. There has not been a significant problem when proper pumping levels are monitored and applied and fairly consistent water supplies have been available during different hydrologic years. It is expected that there will be no water shortages during the next three years.

## **CATASTROPHIC SUPPLY INTERRUPTION PLAN**

BVCS D has written guidelines in its Emergency Response Plan to address a catastrophic non-drought related interruption in water supply (i.e. power outage, system failure, natural disaster, etc.). The water shortage regulations would be used to reduce consumption after a catastrophic supply interruption and additional more stringent methods such as strict water rationing could be put in place.

## **PROHIBITION, PENALTIES AND CONSUMPTION REDUCTION METHODS**

Description of prohibitions, penalties and consumption reduction methods in each stage of the water shortage regulations are provided below:

### **STAGE ONE CONDITIONS**

During a stage one condition, customers are asked to use water wisely and to practice water conservation measures so that water is not wasted. All water withdrawn from district facilities shall be put to reasonable beneficial use. Water conservation measures include, but are not limited to:

1. Preventing excessive water from flowing off the property served onto adjacent properties or sidewalks, gutters, surface drains, storm drains, or over land.
2. Use of drip irrigation systems or other methods designed to prevent excessive surface irrigation of landscaped areas, resulting in conditions such as puddling or runoff.
3. Immediate repair of all observable leaks of water on the customer's premises.
4. Use of a broom or a blower instead of a hose to clean driveways and paved surfaces.

5. Use of water in washing down of driveways and other paved surfaces only when necessary to alleviate immediate fire or sanitation hazards.
6. Being careful not to leave a hose running while washing a vehicle.
7. Use of low flow shower heads and shortening the time spent in the shower.
8. Use of volume reduction devices in toilets and being careful not to use the toilet as an ashtray or wastebasket.
9. Reduction in water consumption for bathing, hand dishwashing and irrigation by reduction of flow time for these activities.
10. Running only full loads in the washing machine and dishwasher.
11. Capturing cold tap water while waiting for hot water to come down the pipes, to be used later on house plants or garden.
12. Serving water to customers at the Oak Tree Country Club and Mulligan Room only upon specific request.

## **STAGE TWO CONDITIONS**

During a stage two condition, the following water conservation measures shall apply, including all provisions of a stage one condition:

### 1. Lawn Watering:

a. Lawn watering and landscape irrigation is permitted only Monday through Saturday between the hours of five o'clock (5:00) P.M. and eight o'clock (8:00) A.M., local time. However, this watering is permitted at any time on these days if a handheld hose is used, equipped with a nozzle that automatically shuts off when released, or when a handheld container or a drip irrigation system is used.

b. Lawn watering and landscape irrigation is prohibited on Sundays.

2. Construction Water: Construction water for grading and compacting may be used at any time, provided the water is from a source other than the BVCSD potable water system.

3. Potable Metered Water: Potable metered water may be used for other construction between seven o'clock (7:00) A.M. and five o'clock (5:00) P.M., local time.

4. Washing Vehicles, Equipment: Washing of vehicles or other equipment is permitted only if done using a handheld bucket or a handheld hose equipped with a nozzle that automatically shuts off when released.

## **STAGE THREE CONDITIONS**

During a stage three condition, all the provisions of stages one and two conditions shall apply, and in addition, the following restriction shall apply: All high volume users (defined as over 4,000 cubic feet per month) shall submit to BVCSD water use curtailment plans for at least thirty percent (30%) overall reduction in water use. The plans shall be furnished on a district form within ten (10) days of notice by BVCSD of the declaration of a stage three condition.

### **ENFORCEMENT AUTHORITY:**

Based on meter information provided by the district water supervisor of the water supplies available, the general manager is authorized and directed to implement the provisions of this chapter. Additionally, the general manager is authorized to make minor and limited exceptions to prevent undue hardship or unreasonable restrictions; provided, that water shall not be wasted or used unreasonably and the purpose of this chapter can be accomplished. Any exceptions shall be reported to the board at its next meeting.

### **DURATION OF CONSERVATION LEVELS:**

As soon as a water shortage condition is determined to exist, the water conservation measures provided for by this chapter for that condition shall apply to all district water service until a different condition is declared.

### **USE OF NONPOTABLE WATER:**

Nothing in this chapter shall prohibit or limit the use of non-potable water on the golf course or for other irrigation purposes, provided the state department of health services has determined that the use would not be detrimental to public health.

### **WATER RATES AND SURCHARGES:**

Special water conservation rates shall apply during stage conditions one, two and three, and in addition, surcharges shall apply during stage conditions two and three, as established by resolution of the board of directors.



### **IMPLEMENTATION OF STAGE ONE, TWO OR THREE CONDITIONS:**

The general manager or his designee shall monitor BVCSD's projected supply and demand for water on a daily basis and determine the extent of the conservation required through the implementation or termination of stages one, two and three conditions in order for the district to prudently plan for and supply water to its customers. Thereafter, the general manager may order that stage one, two or three conditions be implemented or terminated in accordance with the applicable provision of this chapter. The declaration of a stage condition shall be made by public announcements, posting of notices in three (3) locations accessible to the public and publication of the notice in the "Tehachapi News" and on the BVCSD website. The stage designated shall become effective immediately upon announcement. The declaration of any stage condition shall be reported to the board at its next meeting. The board shall then ratify the declaration, rescind the declaration or direct the declaration of a different stage.

### **EXCEPTION:**

Notwithstanding any other provision of this chapter, failure to practice the stage one condition water conservation measures specified in subsection [7-4-6](#) A of this chapter shall not be considered a violation of this chapter.

### **REMEDIES:**

- A. Water Use Curtailment Plans: The general manager is authorized to require submission of water use curtailment plans from high volume users in order to protect the minimum supplies necessary to provide for public health, sanitation, and fire protection. Failure to provide curtailment plans in a timely manner or plans that do not meet the required cutbacks shall authorize BVCSD to install flow restrictors at the meter or termination of service.
- B. Remedies Not Exclusive: Remedies for violations of this chapter are not exclusive and may be imposed cumulatively in the discretion of BVCSD. For example, a violator may pay a surcharge, be subject to a flow restrictor, have water service be discontinued, and be prosecuted criminally.
- C. Property Owner Responsible For Charges: Surcharges and the cost of disconnecting or limiting service shall be the responsibility of the property owner and the person in whose name service is maintained. Surcharges shall be considered normal charges for water used, and collected through BVCSD's routine water billing process.

### **NOTICE or APPEAL:**

- A. Notice: The general manager shall determine if and when violations occur and mail a notice of violation, together with a copy of this chapter, to the property owner or to the person in whose name the service is maintained. In making this determination, the general manager may grant an exemption in emergency situations for health and safety reasons.
  
- B. Appeals Of Violations: Any customer disagreeing with the notice of violation may appeal by written notice received by BVCSD within ten (10) days of the mailing of the notice of violation. Any notice not appealed within ten (10) days is final. Upon timely filing of an appeal, BVCSD shall mail a notice to the property owner and the person in whose name service is maintained at least ten (10) days prior to the regular or special meeting at which the appeal will be heard. The board may, in its discretion, affirm, reverse, or modify the notice of violation.

**PENALTY:**

Any person violating any of the provisions of this chapter or wilfully and knowingly refusing to comply with the rules, regulations, and determinations of BVCSD shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished according to section [1-4-1](#) of the Bear Valley CSD Code.

## RESOLUTION 14/15-16

### **A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BEAR VALLEY COMMUNITY SERVICES DISTRICT, DECLARING THE EXISTENCE OF A STAGE THREE CONDITION APPLICABLE TO WATER USAGE THROUGHOUT THE DISTRICT PURSUANT TO BEAR VALLEY COMMUNITY SERVICES DISTRICT CODE CHAPTER 7-4 (WATER CONSERVATION) AND IN FURTHERANCE OF THE EMERGENCY WATER CONSERVATION REGULATIONS ADOPTED BY AND PENDING BEFORE THE STATE WATER RESOURCES CONTROL BOARD**

The Board of Directors of the Bear Valley Community Services District resolves as follows:

#### **Section 1. Findings.** The Board finds as follows:

- A. On January 17, 2014, Governor Edmund G. Brown Jr. issued Governor's Proclamation No. 1-17-2014, declaring a State of Emergency in California due to severe drought conditions. The Proclamation called on all Californians to reduce their water usage by 20 percent.
- B. On April 25, 2014, the Governor issued an executive order to strengthen the state's ability to manage water and habitat effectively in drought conditions and called on all Californians to redouble their efforts to conserve water.
- C. On July 15, 2014, the California Water Resources Control Board ("State Water Board") adopted Resolution No. 2014-0038, which made findings that emergency drought conditions existed that warranted the need for emergency regulations to prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water, and to promote water recycling and water conservation throughout the state.
- D. The resolution added a new Article 22.5, including Sections 863, 864, and 865 to Title 23 of the California Code of Regulations ("CCR"), which established certain emergency water conservation regulations ("Emergency Regulations").
- E. Among other things, the Emergency Regulations required public water supply distributors, such as the Bear Valley Community Services District ("District"), to implement a mandatory water conservation measure or measures intended to achieve a comparable reduction in water consumption by persons served relative to the amounts consumed in 2013.
- F. In response to the Emergency Regulations, the District declared the existence of a Stage Two Condition pursuant to District Code Chapter 7-4 by the adoption of Resolution 14/15-4. The declaration of the Stage Two Condition required customers to follow all water conservation measures listed in District Code section 7-4-6(A) through (B). The declaration also triggered the imposition of a 20% surcharge in basic water rates under the District's applicable water rate resolution for amounts used by residential customers in excess of 10 Units (1,000 cubic feet), which surcharge went into effect commencing with the District's October 2014 billing cycle.
- G. Drought conditions continue to persist in California due to record low snowpack in the Sierra Nevada mountains, decreased water levels in most of California's reservoirs, reduced flows in the state's rivers and shrinking supplies in underground water basins. The area within and surrounding the District has experienced similar limited snow and rainfall over the winter

months and is subject to the same drought conditions experienced throughout the state, which are the basis for the Governor's Executive Order and the revised Emergency Regulations.

- H. As a result of these conditions and the low likelihood of additional precipitation in 2015 that would reduce the severity of the existing drought conditions, on March 17, 2015, the State Water Board adopted Resolution No. 2015-0013, which readopted and amended the Emergency Regulations for an additional 270-day period commencing on March 27, 2015. Among the amendments to the Emergency Regulations was a revision to 23 CCR § 865 that requires distributors of public water supplies such as the District to take one or more of the following actions by May 11, 2015:
  - (1) Limit outdoor irrigation of ornamental landscapes or turf with potable water by the persons it serves to no more than two days per week; or
  - (2) Implement another mandatory conservation measure or measures intended to achieve a 20 percent reduction in water consumption by persons it serves relative to the amount consumed in 2013.
- I. On April 1, 2015, Governor Brown issued Executive Order B-29-15 ("Executive Order"), which, among other things, directed the State Water Board to impose additional water conservation measures to achieve a 25 percent reduction in potable urban water usage as compared to amounts used in 2013.
- J. On April 17, 2015, the State Water Board released draft revisions to the Emergency Regulations, which are intended to implement Governor Brown's Executive Order. As applicable to the District, the draft revisions are similar to the amended Emergency Regulations adopted by the State Water Board on March 17, 2015, except that the proposed revision to 22 CCR § 865 would require the District to implement one or more mandatory conservation measures intended to achieve a 25 percent reduction in water consumption by persons it serves relative to the amount consumed in 2013.
- K. The proposed amended Emergency Regulations would require the District to submit a report by December 15, 2015 to the State Water Board that includes: (A) the total potable water production (i.e., usage), by month, from June through November, 2015, and total potable water production, by month, for June through November 2013; or (B) Confirmation that the District has limited outdoor irrigation of ornamental landscapes or turf with potable water by the persons it serves to no more than two days per week.
- L. The proposed amended Emergency Regulations would also add monitoring and enforcement authority to the State Water Board under draft regulation 23 CCR § 866, which provides that when a water supplier such as the District does not meet its conservation standard required by Section 865, then the State Water Board's Executive Director or designee may issue conservation orders requiring additional actions by the supplier to come into compliance with the applicable conservation standard (e.g., 25% reduction in usage for the District over 2013 levels).
- M. The State Water Board anticipates adoption of the draft revised Emergency Regulations by May 6, 2015, with an implementation date shortly thereafter.
- N. During the five full months in which District water customers have been subject to the Stage Two Condition (October 2014 – February 2015), residential customers have reduced water consumption by approximately 12 percent over the corresponding months in 2013.

- O. While the efforts to date of District residents to conserve water during the Stage Two Condition are commendable, in order to achieve the goal of a 25 percent reduction in usage over 2013 levels additional conservation measures will be necessary.
- P. Accordingly, in order to promptly address the existing and pending water conservation mandates under the Emergency Regulations, it is necessary for the Board of Directors to Declare a Stage Three Condition and implement the additional corresponding water conservation measures set forth in District Code section 7-4-6(C).

**Section 2. Declaration of Stage Three Condition.** Based on the above findings, the Board hereby declares the existence of a Stage Three Condition throughout the District. During the duration of the Stage Three Condition, customers are required to follow all water conservation measures listed in District Code section 7-4-6(A) through (C).

**Section 3. Adjustment of Water Rates and Surcharges.** In accordance with District Code section 7-4-10, the special water conservation rates and surcharges adopted by the Board for a Stage Three Condition are hereby imposed and will become effective at the start of the June 2015 billing cycle for each applicable customer of the District.

**Section 4 Publication and Posting.** Pursuant to District Code section 7-4-11, the General Manager is directed to cause notice to be posted declaring the Stage Three Condition and the implementation of the related mandatory water conservation measures under the District Code in three locations accessible to the public within the District, and to also cause notice of the declaration to be published in the “Tehachapi News” and on the District’s website.

**Section 5. Effective Date and Termination Date.** This resolution will become effective immediately upon adoption. Unless extended or previously repealed by the Board, this resolution and the Stage Three Condition declared hereunder will terminate on January 30, 2016.

PASSED, APPROVED AND ADOPTED on April 23, 2015, by the following vote:

AYES:           BARON, GRACE, LACLAIRES, RITCHIE, ZANUTTO  
 NOES:           NONE  
 ABSENT:        NONE  
 ABSTAIN:       NONE

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Charlene LaClaire, Board President  
 Bear Valley Community Services District

ATTEST:

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Kristy McEwen  
 Secretary to the Board of Directors

## Chapter 13.22 - WATER SHORTAGE CONTINGENCY MEASURES

Sections:

## 13.22.010 - Purpose.

The purposes of this chapter are to address conditions when the city's production and supply of water is insufficient to meet customer demand and to implement state regulations addressing drought conditions presently existing in the state of California which requires a water shortage contingency plan to address water shortage situations which include shortages of ten percent to fifty percent. This chapter provides for three stages of alert conditions. When any stage is implemented by the city, the stage and this chapter shall supersede Chapter 13.20 where the two are inconsistent and the more restrictive measures of this chapter shall apply.

(Ord. No. 15-05-724, § 1(Exh. A), 4-20-2015)

## 13.22.020 - Guidelines for determination of water conservation stages.

A water conservation stage shall be determined in accordance with the provisions of this chapter. A water conservation stage shall be called and imposed by resolution of the city council and shall remain in full force and effect until otherwise determined or discontinued by resolution of the city council declaring that existing water supply conditions and the supply of water available for distribution within the city's service area has been replenished or augmented. The city manager shall promulgate guidelines (the "guidelines") which shall set forth the criteria for determining when a particular conservation stage is to be implemented and terminated.

(Ord. No. 15-05-724, § 1(Exh. A), 4-20-2015)

## 13.22.030 - Water conservation stages.

A water conservation stage shall be determined in accordance with the provisions of this chapter and the guidelines.

- A. Water Conservation Stage 1. A water conservation stage 1 ("stage 1") shall be called pursuant to the guidelines or emergency or drought-related regulations imposed by state or federal regulatory agencies. During stage 1, compliance shall be voluntary. All water withdrawn from city facilities shall be put to reasonable beneficial use. Water conservation measures shall include the following as well as such other measures as may be implemented by the city from time to time:
1. Preventing excessive run-off from entering adjacent properties, sidewalks, gutters, surface drains or storm drains.
  2. Use of drip irrigation systems or other methods designed to prevent excessive surface irrigation of landscaped areas, resulting in conditions such as puddling or runoff.
  3. Repair of any and all observable leaks of water on the premises.
  4. Use of a broom or blower to clean driveways and paved or hard surfaces.
  5. Use of water for washing down driveways and paved or hard surfaces only when necessary to alleviate immediate fire or sanitation hazards.
  6. Use of a shut off nozzle when using a hose to wash a vehicle or hand watering.

7. Use of low flow shower heads and shortening time in the shower.
  8. Use of volume reduction devices in toilets and being careful not to use the toilet as an ashtray or wastebasket.
  9. Reduction in water consumption for bathing, hand dishwashing and irrigation by reduction of flow time for these activities.
  10. Running only full loads in the washing machine and dishwasher.
- B. Water Conservation Stage 2. A water conservation stage 2 ("stage 2") shall be called pursuant to the guidelines and when it is apparent that the city's production or supply facilities cannot meet customer demand under a stage 1 conditions or pursuant to emergency or drought-related regulations imposed by state or federal regulatory agencies. During stage 2, all measures in stage 1 shall apply and shall be mandatory. In addition to the stage 1 measures, the following shall apply in stage 2 which shall be mandatory:
1. Irrigation of lawns, landscaping, foliage, gardens, flowerbeds, and other outdoor areas shall be limited as follows: street addresses ending in odd numbers may only water on Mondays, Wednesdays, and Fridays; and addresses ending in even numbers may water only on Tuesdays, Thursdays and Saturdays. Irrigation of any type is prohibited on Sundays. The only exception shall be areas irrigated with non-potable water. Any single irrigation station may not run longer than ten minutes per day.
  2. Outdoor irrigation of turf and ornamental landscaping shall be prohibited between the hours of ten a.m. and four p.m. daily.
  3. Any and all observable leaks of water on a resident's premises shall be repaired within twenty-four hours of notification to customer.
  4. No hosing down of non-landscaped or hardscape areas.
  5. Construction water shall be prohibited during a stage 2 alert condition.
  6. The washing of boats, vehicles or mobile equipment shall only be allowed in car washes or by using a bucket and hose with an automatic shut off nozzle for rinsing.
  7. The use of water in ornamental fountains or water features shall only be permitted if the water is recirculated.
  8. The city manager will have the right to reduce the amount of water used in irrigating any park site, greenbelt or open areas within the city limits.
  9. No outdoor irrigation shall be permitted during and forty-eight hours after a measurable rainfall event.
  10. Restaurants and other food service establishments shall serve water to customers only on request.
  11. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily and prominently display notice of this option.
  12. Other restrictions may be imposed if deemed necessary by the city manager or city council.
- C. Water Conservation Stage 3. A water conservation stage 3 ("stage 3") shall be called pursuant to the guidelines and when it is apparent that the reductions achieved from stage 1 and stage 2 conditions are not sufficient to allow the city's production and supply to meet customer demand or pursuant to any emergency or drought-related regulations imposed by state or

federal regulatory agencies. During stage 3, all measures in stages 1 and 2 shall apply and shall be mandatory. In addition to the stage 1 and stage 2 measures, the following restrictions on water use shall apply which shall be mandatory:

1. No irrigating of lawns. Plants, trees and bushes may be irrigated by use of a bucket or the use of reclaimed gray water as allowed by state and county health rules and regulations. No runoff shall occur.
2. Hosing down of unlandscaped or hard surfaces is prohibited.
3. The introduction of water into swimming pools, wading pools and spas shall be prohibited.
4. No washing of motor or recreational vehicles, except at a car wash facility.
5. Parks may irrigate trees and shrubbery with buckets only or other methods which ensure that no more than twenty gallons of water are used on a single tree or shrub during a period of one week. Irrigation of playing fields and open spaces shall be prohibited.

(Ord. No. 15-05-724, § 1(Exh. A), 4-20-2015)

#### 13.22.040 - Extensions of water conservation stages.

In the event the city experiences a facility malfunction or supply interruption during high water use periods, stages 1, 2, or 3 restrictions may be implemented immediately by the city manager. In the event of a prolonged stage 3 condition, the city council shall have the authority to take any other action available to ensure that the city's water supply is not jeopardized.

(Ord. No. 15-05-724, § 1(Exh. A), 4-20-2015)

#### 13.22.050 - Enforcement.

- A. **Civil Enforcement.** The city shall have all remedies available in its Municipal Code and ordinances for the enforcement of this chapter including, without limitation, Section 1.16.065 (administrative citations). Any fine, penalty, interest, or costs imposed on a violator of this chapter may, in addition to all other remedies available to the city thereunder, be added to the violator's water bill and thereafter be subject to enforcement therein including, without limitation, disconnection or turnoff of water service.
- B. **Criminal Enforcement.** Any person violating any provision of this chapter or failing to comply with any of its requirements shall be deemed guilty of a misdemeanor unless the violation is made an infraction by ordinance and shall be punishable as described in Chapter 1.20 of the Municipal Code.

(Ord. No. 15-05-724, § 1(Exh. A), 4-20-2015)



## **Golden Hills Community Services District Water Shortage Contingency Plan**

In the best interest of the Golden Hills CSD and its consumers, Golden Hills CSD has adopted water shortage regulations in advance of an actual or threatened water shortage in order to reduce consumption and reserve a sufficient supply of water for public health and safety. Golden Hills CSD staff is investigating more aggressive measures to encourage water conservation. Because the Golden Hills CSD is totally supplied by groundwater, it is unlikely that a 50% reduction in the State Water Project (SWP) supply will have much impact in any single year.

### ***Stages of Action***

The water shortage regulations include three stages of implementation. Actions in each stage would be undertaken by the Golden Hills CSD and/or its consumers. When staff determines that the water supply condition warrants activating a water alert or stage change, the General Manager will implement the appropriate alert or change and notify the board. Presently there are no defined triggers (i.e., water allocations, snow pack levels, etc.) for moving from one stage to the next. However, any decision to change stages will be based on the combination of water supplies, weather conditions, trends in water usage, groundwater levels, water tank levels, and water production.

Conservation measures gradually increase with each stage. The consumers are given opportunities to voluntarily reduce consumption in Stage I. If these efforts are not sufficient, then Stage II is implemented which includes additional mandatory and voluntary measures. If these are not sufficient, then Stage III, which includes several other mandatory regulations, is implemented.

The State of California requires that an urban water shortage contingency plan include up to a 50% reduction in consumption. The voluntary measures alone would not reduce consumption by 50% and this goal could probably only be achieved with strict enforcement of significant mandatory reductions.

### ***Estimate of Minimum Supply – Next 3 Years***

Over the past two decades the Golden Hills CSD has pumped groundwater to meet all water supply demands. While there may be less water infiltrating from rainfall, snowfall, runoff and irrigation during dry years, it does not critically impact groundwater supplies in the short term. The Golden Hills CSD has taken an active role in groundwater banking and currently has banked approximately a four year supply which exceeds the Golden Hills CSD's allowed pumping allocation. As a result of its conjunctive use programs, the Golden Hills CSD should have fairly consistent water supplies during different hydrologic years. It is expected that no water shortages would occur during the next three years.

**Table X-1: Minimum Three Year Supply**

Source	Year 1	Year 2	Year 3	Normal
<b>Tehachapi Basin Service Area</b>				
<b>Golden Hill CSD Supply <sup>1</sup></b>				
Tehachapi Basin owned Allowed Pumping Allocation	866	866	866	866
Tehachapi Basin leased Allowed Pumping Allocation	603	603	603	603
Imported Water				
Current Year Supply	-	-	-	-
Recovery of water previously banked in Tehachapi Basin	395	395	395	395
<b>Golden Hills CSD Minimum Supply</b>	<b>1,864</b>	<b>1,864</b>	<b>1,864</b>	<b>1,864</b>
Notes:				
<sup>1</sup> Presumes that Golden Hills and Tehachapi would each recover 20% of the water they have in storage at the beginning of each year. Presumes that Golden Hills and Tehachapi would both forgo SWP water as their supply is adequate without new imports.				

***Catastrophic Supply Interruption***

The Golden Hills CSD has written guidelines in its Emergency Response Plan to address a catastrophic non-drought related interruption in water supply (i.e. power outage, system failure, natural disaster, etc.). The water shortage regulations could be used to reduce consumption after a catastrophic supply interruption.

***Prohibition, Penalties, and Consumption Reduction Methods***

Description of prohibitions, penalties and consumption reduction methods in each stage of the water shortage regulations are provided below:

**Stage I Water Alert**

Stage I Water Alert activates voluntary water conservation by Golden Hills CSD customers, and the desired reduction would be at least ten percent (10%) of normal water usage. There would be no change to the rate structure.

**Stage II Water Alert**

A Stage II Water Alert shall apply when it is apparent that even with a ten percent (10%) decrease from normal demands or Stage I Water Alert measures, the Golden Hills CSD's water production facilities or supply cannot meet customer demand. A fifteen percent (15%) increase of the current water rates may be imposed. In addition to pricing incentives, the General Manager may implement the following water restrictions on the use of water:

1. Alternate day irrigation of landscaping. There shall be no run-off as a result of irrigation. (West side would water on Monday, Wednesday and Friday. East side would water on Tuesday, Thursday and Saturday. There would be no watering on Sunday.)
2. No hosing down of un-landscaped areas.
3. The washing of boats and vehicles shall only be allowed in car washes or by using a bucket for the wash water and a hose equipped with a shutoff nozzle for rinsing.
4. The use of water in ornamental fountains shall only be allowed where all water in the fountain is re-circulated.

5. The introduction of water into swimming pools, wading pools, and spas shall be prohibited.
6. The Golden Hills CSD will have the right to reduce the amount of water used in irrigating any park site or any other greenbelt or open area within its boundaries. All irrigation of park, greenbelt or open area landscaping will be performed during the hours of 8:00 PM and 6:00 AM, and no run-off will be allowed.
7. Other restrictions may be imposed if deemed necessary and appropriate by the General Manager and Board of Directors of the Golden Hills CSD.

### **Stage III Water Alert**

Should the District lose twenty-five percent (25%) or more of its water production capabilities, a Stage III Water Alert would be declared. The current base rate and increments may be increased by twenty-five percent (25%), and any or all of the following restrictive uses may be applied by the General Manager:

1. No irrigating of lawns. Plants and bushes may be watered by use of a bucket or the use of reclaimed gray water as allowed by State and County Health rules and regulations. No run-off will occur.
2. No hosing down of un-landscaped areas.
3. No washing of motor or recreational vehicles, including boats, except at a car wash facility.
4. The management of the car wash must provide the General Manager with evidence that a normal wash/rinse cycle can be accomplished at the site through the use of 10 gallons water or less. Such washing shall require use of an automatic shut-off nozzle.
5. The introduction of water into swimming pools, wading pools, and spas shall be prohibited.
6. The Golden Hills CSD will have the right to reduce the amount of water used in irrigating any park site or any other greenbelt or open area within its boundaries. All irrigation of park, greenbelt or open area landscaping will be performed during the hours of 8:00 PM and 6:00 AM, and no run-off will be allowed.
7. Parks may irrigate trees and shrubbery only with buckets or other methods which insure that no more than twenty (20) gallons of water are used on a single tree or shrub during a period of one (1) week. Irrigation of playing fields and open spaces shall be prohibited.

In the event that the Golden Hills CSD experiences a line breakage or facility malfunction during high water usage periods (late spring and summer), Stage III Water Alert restrictions may be implemented at once.

In the event of a prolonged Stage III Water Alert, which may include drought conditions, the Board of Directors shall have the authority to take any other action available to insure that the Golden Hills CSD's water supply is not jeopardized and may impose a building moratorium until such time as the water supply is increased by either the construction of additional water storage and production facilities, or natural supply.

### ***Enforcement of Water Restrictions***

Any failure to comply with any of these provisions shall constitute a violation, regardless of whether the failure to comply is caused by an account holder, a consumer, or any other person or entity.

In the event of violation of any terms of these water restrictions imposed by the Golden Hills CSD, the General Manager will have the authority to issue warnings and/or impose surcharges on the water uses, as indicated below, Such surcharges are incentives to comply with the water restrictions and to recover part of the costs incurred to monitor water use and impose these restrictions during times of water supply deficiencies. In the event of continued water abuse, the General Manager will have the authority to lock the meter or remove the meter from the property. The account holder and/or tenant shall be notified of each violation by 1<sup>st</sup> class mail or by delivery of a notice to the household.

1. During a Stage II Water Alert, the General Manager shall have the authority to impose the following surcharge to the account holder or their tenant:
  - a. First violation within twelve months: Issuance of written warning; no surcharge.
  - b. Second violation within twelve months: \$50.00 surcharge on next billing.
  - c. Third violation within twelve months: \$100.00 surcharge on the next billing plus the possible installation of flow restriction devices at the discretion of the General Manager.
  - d. Fourth and subsequent violation within twelve months: \$250.00 surcharge on the next billing, plus the possible installation of flow restriction devices at the discretion of the General Manager or shutoff of service at the discretion of the Board of Directors.
2. During a Stage III Water Alert, the General Manager shall have the authority to impose the following surcharges on the account holder or their tenant:
  - a. First violation within twelve months: Issuance of written warning; no surcharge.
  - b. Second violation within twelve months: \$100.00 surcharge on next billing.
  - c. Third violation within twelve months: \$200.00 surcharge on the next billing plus the possible installation of flow restriction devices at the discretion of the General Manager.

- d. Fourth and subsequent violation within twelve months: \$500.00 surcharge on the next billing, plus the possible installation of flow restriction devices at the discretion of the General Manager or shutoff of service at the discretion of the Board of Directors.

#### ***Analysis of Revenue Impacts of Reduced Sales During Shortages***

The Golden Hills CSD bills its customers on a one hundred (100) cubic foot basis. As a result, water shortage regulations which aim to reduce water consumption can also reduce revenue for the Golden Hills CSD. Water conservation during droughts has a major impact on revenue. Although the decrease in water deliveries means reduced pumping costs, there are considerable fixed expenses and overhead costs which are not affected by the amount of water delivered.

The Golden Hills CSD has developed a plan that raises water rates in water shortages by up to twenty-five percent (25%). The higher unit rate is intended to discourage use, but it will also help to offset the revenue lost by selling a lower volume of water. The suitability of this twenty-five percent (25%) increase is not known.

Implementation of the water shortage regulations will have a large impact on expenditures and revenues. Additional costs are expected for billing and operations. Golden Hills CSD staff will provide personnel to implement the plan. It is likely that expenses will increase for public notification and informational programs. Fines collected for water waste will be source of revenue, although it is anticipated to be minor. Overall, the Golden Hills CSD anticipates that the increase in revenue will be less than the increase in expenses.

#### **Draft Ordinance and Monitoring Procedure**

The Golden Hills CSD has previously (2007) adopted Ordinance No. 30, which provides the establishment of rules and regulations for water service and connections. Water meters are read monthly, but during a period of drought, the water consumption can be tracked more frequently. Reading customers' water meters more frequently would be time consuming and costly. During a shortage the data will be evaluated to determine its effectiveness in reducing water consumption.



## **GOLDEN HILLS COMMUNITY SERVICES DISTRICT 2015 WATER SHORTAGE CONTINGENCY PLAN**

**Stage III Water Alert is effective immediately.** Details of water irrigation schedule are in red:

- Alternate day irrigation of landscaping. There shall be no run-off as a result of irrigation. Odd numbered homes (example 21001) will water on **Tuesday, Thursday and Saturday**. Even numbered homes (example 21002) will water on **Wednesday, Friday and Sunday**. There will be no watering on Monday, and no irrigation between the hours of 10:00 am – 4:00 pm.
- The washing of boats and vehicles shall only be allowed in car washes or by using a bucket for the wash water and a hose equipped with a shutoff nozzle for rinsing.
- The use of water in ornamental fountains shall only be allowed where all water in the fountain is re-circulated.
- No hosing down of unlandscaped areas.
- The management of the car wash must provide the General Manager with evidence that a normal wash/rinse cycle can be accomplished at the site through the use of 10 gallons water or less. Such washing shall require use of an automatic shut-off nozzle.
- The introduction of water into swimming pools, wading pools, and spas shall be prohibited.
- The District will have the right to reduce the amount of water used in irrigating any park site or any other greenbelt or open area within its boundaries. All irrigation of park, greenbelt or open area landscaping will be performed during the hours of 8:00 PM and 6:00 AM, and no run-off will be allowed.

### **Enforcement of Water Restrictions**

Any failure to comply with any of these provisions shall constitute a violation, regardless of whether the failure to comply is caused by an account holder, a consumer, or any other person or entity.

In the event of violation of any terms of the water restrictions herein imposed by the District, the General Manager will have the authority to issue warnings and/or impose surcharges on the water users, as indicated below. Such surcharges are compliance

incentives and a process to respond to decreased consumption revenues, along with increased monitoring costs. In the event of continued water abuse, the General Manager will have the authority to lock the meter or remove the meter from the property. The account holder and/or tenant shall be notified of each violation by 1<sup>st</sup> class mail or by delivery of a notice to the household.

1. First violation within twelve months: Issuance of written warning; no surcharge.
2. Second violation within twelve months: \$100.00 surcharge on the next billing.
3. Third violation within twelve months: \$200.00 surcharge on the next billing plus the possible installation of flow restriction devices at the discretion of the General Manager.
4. Fourth and subsequent violation within twelve months: \$500.00 surcharge on the next billing, plus the possible installation of flow restriction devices at the discretion of the General Manager or shutoff of service at the discretion of the Board of Directors.

## ORDINANCE NO. 30

**AN ORDINANCE PROVIDING FOR ESTABLISHMENT OF RULES AND REGULATIONS FOR WATER SERVICE AND CONNECTIONS; PROVIDING FOR MEANS OF COLLECTION OF CHARGES AND FOR PENALTIES AND ENFORCEMENT MEASURES IN CASE OF NONPAYMENT OF CHARGES OR FOR CERTAIN VIOLATIONS; PROVIDING FOR APPEALS IN CERTAIN CIRCUMSTANCES; PROVIDING FOR DISPOSITION OF REVENUES RECEIVED PURSUANT TO THIS ORDINANCE, AND FOR USES TO WHICH SUCH REVENUES RECEIVED PURSUANT TO THIS ORDINANCE, AND FOR USES TO WHICH SUCH REVENUES SHALL BE APPLIED; PROVIDING FOR EFFECTIVE DATE OF THIS ORDINANCE AND OF CHARGES HEREUNDER; AND REPEALING ORDINANCES IN CONFLICT HERewith CONSOLIDATED INCLUDING UNAMENDED PORTIONS OF ORDINANCE NO. 2 (11/22/67) AS AMENDED BY ORDINANCE NOS. 16 (5/22/89), 19 (2/25/91), 21 (11/25/91), 22 (3/3/93), 25 (4/5/95) and 26 (11/14/95)**

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE GOLDEN HILLS COMMUNITY SERVICES DISTRICT, as follows:

### **SECTION 1**

#### **Definitions**

The following terms when used in this Ordinance shall have the following respective meanings:

1. *"Board of Directors"* or *"Board"* shall mean the Board of Directors of the Golden Hills Community Services District.
2. *"Commercial user"* shall mean any user who is not a residential user, industrial user or institutional user.
3. *"Commercial water service"* shall mean the furnishing of water to a commercial user.
4. *"Date of presentation"* shall mean the date upon which a bill or notice is mailed or delivered personally to the consumer.



- E. In the event a user of a hydrant meter service violates any District ordinances, rules and regulations as may additionally be augmented by contract with the user, such a violation shall be deemed a misdemeanor punishable pursuant to section 19 of the Penal Code.
- F. All contracts for hydrant meter service shall include a provision which shall set a civil penalty in an amount provided for in the then current Water Rates Resolution for the taking of water by the user through a bypass of the hydrant meter or at any point along the District service system other than the metered connection provided to the user for such purpose. Additionally, such a violation shall result in the immediate discontinuance of service to the user; shall be deemed a misdemeanor punishable pursuant to section 19 of the Penal Code; and, may be charged criminally under applicable sections of the Penal Code including section 592.

## **SECTION 15**

### **Shortages of Supply, Service Interruptions or Excessive Pressure**

1. The District will exercise reasonable diligence to provide continuous and adequate water service to users and to avoid any shortage or interruption of water delivery. However, the District cannot, and does not, guarantee complete freedom from shortage or interruption.
2. The District shall have the right to suspend water service temporarily to

make necessary repairs or improvements to the District's water system. In each case of temporary suspension of service, the District will make reasonable efforts to notify the users affected as soon as circumstances permit and will prosecute the work of repair or improvement with due diligence.

3. During any period of threatened or actual water shortage, the District shall have the right through a resolution or ordinance to apportion its available water supply among users in such a manner as appears most equitable under the circumstances then prevailing and with due regard to public health and safety. Failure by a user, or other individual, to abide by the District's apportionment shall be deemed a violation of this Ordinance and shall be a misdemeanor punishable pursuant to section 19 of the Penal Code.
4. The Board may adopt, from time to time, water shortage regulations by resolution or ordinance. Said regulations shall be kept on file at the District's office and a violation of those regulations shall be deemed a violation of this Ordinance and shall be a misdemeanor punishable pursuant to section 19 of the Penal Code.
5. The District shall not be liable for interruption, shortage or insufficiency of water supply or insufficient or excessive water pressure, or variations in water quality or any loss or damage occasional thereby.
6. An adequate pressure reducing valve may be necessary on the user's service line to control water pressure. Installation, maintenance and the

determination of whether there is a need for an individual pressure regulating valve will be the sole responsibility of the user.

## **SECTION 16**

### **Temporary/Vacation Disconnections**

1. Users may request that the District temporarily shut off water service to their premises at any time and for any duration. However, such service disruptions and reconnections shall only be accomplished during normal District operating hours and the user shall agree to hold the District harmless for any problems that may arise from the disconnection and reconnection of service to the user's water system. Furthermore, unless expressly requested by the user, the District shall not lock off the water meter in question. The costs, if any, for such service shall be provided for in the then current Water Rates Resolution.

## **SECTION 17**

### **Tampering With District Property, Improper and Unauthorized Connections**

1. No one except an authorized District employee shall, at any time, in any manner, operate the curb cocks or valves or water main valves or pumps within the District's system or interfere with meters or their connections or parts of the water distribution system. The only exception to this rule is

**RESOLUTION NO. 745 OF THE  
BOARD OF DIRECTORS OF  
GOLDEN HILLS COMMUNITY SERVICES DISTRICT**

**ADOPTION OF WATER SHORTAGE REGULATIONS**

WHEREAS, Government Code section 61621.5 provides that a community services district may adopt by ordinance regulations to govern the use of its facilities and property; and

WHEREAS, with adoption of Ordinance No. 2, as amended from time to time, this District has established rules and regulations for water service and connections, and Ordinance No. 16 amending Ordinance No. 2, adopted May 22, 1989, provides at section 5, paragraph 2 as follows:

"During any period of threatened or actual water shortage the District shall have the right to apportion its available water supply among users in such a manner as appears most equitable under the circumstances then prevailing and with due regard to public health and safety."

;and

WHEREAS, it is in the best interest of the District and its landowners and consumers that explicit regulations be adopted in advance of an actual or a threatened water shortage in order to expeditiously reduce water consumption and preserve sufficient water for public health and safety.

NOW, THEREFORE, BE IT RESOLVED that acting pursuant to the above-referenced provisions of Ordinance No. 16, the attached water shortage regulations are adopted.

BE IT FURTHER RESOLVED, that District the General Manager is authorized and directed to do all things necessary and appropriate to disseminate information regarding adoption of these water shortage regulations and to implement such regulations, when appropriate.

All the foregoing, being on the motion of Director Mitchell, and seconded by Director Morse, is hereby authorized by the following vote, namely:

AYES: Directors Cassil, Cornelison, Sharp, Mitchell, Morse

NOES: None

ABSENT: None

  
President

I hereby certify that the foregoing is a true copy of the Resolution of the Board of Directors of GOLDEN HILLS COMMUNITY SERVICES DISTRICT as duly passed and adopted by said Board of Directors on July 6, 1993.



Secretary of the Board of Directors

(SEAL)

## **STALLION SPRINGS COMMUNITY SERVICES DISTRICT WATER SHORTAGE CONTINGENCY PLAN**

In the best interest of the District and its consumers, the District has adopted water shortage regulations, in advance of an actual or threatened water shortage, in order to reduce consumption and reserve a sufficient supply of water for public health and safety. District staff is also investigating more aggressive measures to encourage water conservation.

### **FINDINGS:**

The Stallion Springs Community Services District (SSCSD) Board recognizes that water shortages have occurred in the past and will occur in the future due to: increased demand or limited supplies of potable water as the result of drought or curtailment of supply.

The SSCSD Board also finds that Southern California has been experiencing a gradual reduction in per capita water supply resulting from population growth and lack of supply replacement. Demographic changes in population, within Stallion Springs CSD boundaries, have caused additional demand that will be challenging in times of supply shortages.

### **ESTIMATE OF MINIMUM SUPPLY OVER THE NEXT THREE YEARS**

Stallion Springs CSD relies primarily on groundwater for production. During dry years there is less water infiltrating from rainfall, snowfall, runoff and irrigation and the localized impact on groundwater can be somewhat significant. In addition to these natural water basin recharge supplies, groundwater is also dependent upon State Water Project recharge.

Because the District's water supply is delivered through a combination of sources, including imported State Water Project water (recharged into the Cummings Basin for Stallions Springs CSD use), groundwater from the Cummings Basin and groundwater from within the Stallion Springs CSD boundaries (outside of the adjudicated basin), a 50% reduction in the State Water Project (SWP) supply will have an impact in any given year.

Stallion Springs CSD closely monitors levels in its wells. There has not been a significant problem when proper pumping levels are monitored and observed. Fairly consistent water supplies have been available during different hydrologic years. It is expected that there will not be a water supply shortage within the next three years.

### **SCOPE OF CONSERVATION PROGRAM:**

The provisions of this Water Shortage Contingency Plan is to develop protocols to respond to long term and short term water shortages by authorizing the Board to select the most appropriate level of conservation measures based on then current conditions. The Board shall conduct duly noticed public meetings to inform water customers of any change in the

level of water conservation needed to meet the limited water supply and measures needed to meet those limitations.

## **WATER REDUCTION STAGE TRIGGERING MECHANISMS**

Emergency response stage actions become effective when the Stallion Springs CSD Board of Directors declares that the District is unable to provide sufficient water supply to meet ordinary demands, to the extent that insufficient supplies would be available for human consumption, sanitation and/or fire protection.

### **WATER SHORTAGE CONDITIONS DESCRIBED:**

**A. Stage One Condition - Moderate Water Shortage:** This condition exists when the District determines that it may not be able to meet ninety percent (90%) or more of the projected water demands of its customers, either now or within six (6) months, and that water use should be reduced by not less than ten percent (10%).

**B. Stage Two Condition - Severe Water Shortage:** This condition applies during periods when the District determines that it may not be able to meet eighty percent (80%) or more of the projected water demands of its customers, either now or within six (6) months, and that water use should be reduced by not less than twenty percent (20%).

**C. Stage Three Condition - Critical Water Shortage:** A stage three condition applies during periods when the District determines that it will not be able to meet seventy percent (70%) or more of the projected water demands of its customers now or within six (6) months, and that a reduction of not less than thirty percent (30%) in potable water use is required to meet minimal needs of all its customers.

**D. Stage Four Condition - Urgent Water Shortage:** A stage four condition applies during periods when the District determines that it will not be able to meet fifty percent (50%) or more of the projected water demands of its customers now or within (6) months, and that a reduction of not less than fifty percent (50%) in potable water use is required to meet minimal needs of all its customers.

### **WATER USE IN LANDSCAPING:**

A. California Legislature: The California legislature has found and declared that:

1. Landscapes are essential to the quality of life in California by providing areas for active and passive recreation and as an enhancement to the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development; and

2. Landscape design, installation, and maintenance can and should be water efficient.

B. District: The District finds and declares that:

1. The current rate of home construction on unoccupied lots will in the future substantially increase the present demands for potable water.
2. The amount of potable water used for landscaping during the months of summer is about three (3) times the amount used for domestic household purposes, resulting in potential water shortages.

#### C. Efficient Water Use:

It is the intent of the District, realizing that water shortages can develop at any time, to promote the most efficient use of water in landscaping throughout the year while respecting the economic, environmental, aesthetic, and lifestyle choices of property owners.

#### D. Landscaping Information Available:

In order to avoid unnecessary expenses, potentially incurred by property owners during periods of water shortages, the District shall provide information to all property owners and renters regarding the design, installation, and maintenance of water efficient landscapes and the use of drought resistant plants and efficient irrigation systems.

### **WATER REDUCTION MEASURES:**

**A. Stage One Conditions:** During a stage one condition, customers are asked to use water wisely and to practice water conservation measures so that water is not wasted. All water withdrawn from District facilities shall be put to reasonable beneficial use. Water conservation measures include, but are not limited to:

1. Preventing excessive water from flowing off the property served onto adjacent properties or sidewalks, gutters, surface drains, storm drains, or over land.
2. Use of drip irrigation systems or other methods designed to prevent excessive surface irrigation of landscaped areas, resulting in conditions such as puddling or runoff.
3. Immediate repair of all observable leaks of water on the customer's premises.
4. Use of a broom or a blower instead of a hose to clean driveways and paved surfaces. Use of water in cleaning of driveways and other paved surfaces only when necessary to alleviate immediate fire or un-sanitation hazards.
5. Being careful not to leave a hose running while washing a vehicle.
6. Use of low flow shower heads and shortening the time spent in the shower.



7. Use of volume reduction devices in toilets and being careful not to use the toilet as an ashtray or wastebasket.
8. Reduction in water consumption for bathing, hand dishwashing and irrigation by reduction of flow time for these activities.
9. Running only full loads in the washing machine and dishwasher.
10. Capturing cold tap water while waiting for hot water to come down the pipes, to be used later on house plants or garden.
11. Serving water to customers at the any and all restaurants within the service is only upon specific request.

**B. Stage Two Conditions:** During a stage two condition, the following water conservation measures shall apply, including all provisions of a stage one condition:

1. Lawn Watering:

- a. Lawn watering and landscape irrigation is permitted Monday through Saturday between the hours of five (5:00) P.M. and eight (8:00) A.M. local time. However, this watering is permitted at any time on these days if a handheld hose is used, equipped with a nozzle that automatically shuts off when released, or when a handheld container or a drip irrigation system is used.
- b. Lawn watering and landscape irrigation is prohibited on Sundays.

2. Construction Water: Construction water for grading and compacting may be used at any time provided the water is from a source other than the District potable water system.

3. Potable Metered Water: Potable metered water may be used for other construction between seven o'clock (7:00) A.M. and five o'clock (5:00) P.M., local time.

4. Washing Vehicles, Equipment: Washing of vehicles or other equipment is permitted only if done using a handheld bucket or a handheld hose equipped with a nozzle that automatically shuts off when released.

**C. Stage Three Conditions:** During a stage three condition, all the provisions of stages one and two conditions shall apply, and in addition, the following restriction shall apply: All high volume users (defined as over 8,000 cubic feet on a bi-monthly basis) shall submit to the District water use curtailment plans for at least thirty percent (30%) overall reduction in water use. The plans shall be furnished on a District form within ten (10) days of notice by the District of the declaration of a stage three condition.

**D. Stage Four Conditions:** During a stage four condition, all the provisions of stages one, two and three shall apply, and in addition, the following restrictions apply: Water supply conditions are substantially diminished and remaining supplies must be allocated to preserve human health and environmental integrity. All customers are only permitted to use water at

the minimum required for public health protection. Firefighting is the only allowable outdoor water use.

#### **DURATION OF CONSERVATION LEVELS:**

As soon as a water shortage condition is determined to exist, the water conservation measures provided for by this chapter for that condition shall apply to all District water service until a different condition is declared.

#### **USE OF NONPOTABLE WATER:**

Nothing in this policy shall prohibit or limit the use of non-potable water on the golf course or for other irrigation purposes; provided the California Department of Public Health and the Central Valley Regional Water Quality Control Board have determined that the use would not be detrimental to public health.

#### **IMPLEMENTATION OF STAGE ONE, TWO OR THREE CONDITIONS:**

The General Manager, or his/her designee, shall monitor the District's projected supply and demand for water on a daily basis and determine the extent of the conservation required through the implementation or termination of stages one, two, three and four conditions in order for the District to prudently plan for and supply water to its customers. Thereafter, the General Manager may order that stage one, two, three or four conditions be implemented or terminated in accordance with the applicable provision of this policy.

The declaration of a stage condition shall be made by public announcements, posting of notices in three (3) locations accessible to the public and publication of the notice in the "Tehachapi News" and on the District website. The stage designated shall become effective immediately upon announcement. The declaration of any stage condition shall be reported to the Board at its next meeting. The Board shall then ratify the declaration, rescind the declaration or direct the declaration of a different stage.

#### **ENFORCEMENT AUTHORITY:**

The Board of Directors shall consider an ordinance consistent with this policy which provides for enforcement authority, legal remedies, including fines, penalties and/or termination of water service, and an appeal procedure.



Appendix G  
SB X7-7 Verification Forms

Regional Alliance CSD SB X7-7 Verification Form

SB X7-7 RA2 Table-1: Baseline Period Ranges for Regional Alliance			
Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	5,181	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 <sup>1</sup>	10	Years
	Year beginning baseline period range	2000	
	Year ending baseline period range <sup>2</sup>	2009	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range <sup>3</sup>	2007	
<sup>1</sup> 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 delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period.			
<sup>2</sup> The ending year must be between December 31, 2004 and December 31, 2010.			
<sup>3</sup> The ending year must be between December 31, 2007 and December 31, 2010.			
NOTES:			

Regional Alliance CSD SB X7-7 Verification Form

<b>SB X7-7 RA2 Table 5: Gallons Per Capita Per Day (GPCD) for Regional Alliance</b>				
<b>Baseline Years</b>		<b>Regional Service Area Population*</b>	<b>Regional Annual Gross Water Use* <i>(in Units selected in Table 0)</i></b>	<b>Daily Per Capita Water Use (GPCD)</b>
<b>10 to 15 Year Baseline GPCD</b>				
Year 1	2000	19,746	4,210	190
Year 2	2001	20,031	4,334	193
Year 3	2002	20,422	4,614	202
Year 4	2003	20,870	4,423	189
Year 5	2004	21,791	4,828	198
Year 6	2005	22,419	4,547	181
Year 7	2006	23,708	5,002	188
Year 8	2007	24,297	5,290	194
Year 9	2008	24,647	5,181	188
Year 10	2009	24,827	4,971	179
Year 11				
Year 12				
Year 13				
Year 14				
Year 15				
<b>10-15 Year Average Baseline GPCD</b>				<b>190</b>
<b>5 Year Baseline GPCD</b>				
<b>Baseline Years</b>		<b>Regional Service Area Population*</b>	<b>Regional Gross Water Use* <i>(in Units selected in Table 0)</i></b>	<b>Daily Per Capita Water Use</b>
Year 1	2003	20,870	4,423	189
Year 2	2004	21,791	4,828	198
Year 3	2005	22,419	4,547	181
Year 4	2006	23,708	5,002	188
Year 5	2007	24,297	5,290	194
<b>5 Year Average Baseline GPCD</b>				<b>190</b>
<b>2015 Compliance Year GPCD</b>				
<b>2015</b>		25,698	3,844	<b>134</b>
*All participating agencies must submit population and gross water tables, SB X7-7 Tables 0 through 6, as applicable, showing the individual agency's calculations. These individual agency tables will be submitted with the individual or Regional Urban Water Management Plan.				
NOTES:				

Regional Alliance CSD SB X7-7 Verification Form

<b>SB X7-7 RA2 Table 6: Gallons per Capita per Day for Regional Alliance</b> <i>Summary From Table SB X7-7 Table 5</i>	
10-15 Year Baseline GPCD	190
5 Year Baseline GPCD	190
2015 Compliance Year GPCD	134
NOTES:	

<b>SB X7-7 RA2 Table 7: 2020 Target Method for Regional Alliance</b> <i>Select Only One</i>		
Target Method		Supporting Documentation
<input type="checkbox"/>	Method 1	SB X7-7 RA2 Table 7A
<input type="checkbox"/>	Method 2	SB X7-7 RA2 Tables 7B, 7C, and 7D <i>Contact DWR for these tables</i>
<input checked="" type="checkbox"/>	Method 3	SB X7-7 RA2 Table 7-E
<input type="checkbox"/>	Method 4	Method 4 Calculator
NOTES:		

Regional Alliance CSD SB X7-7 Verification Form

SB X7-7 RA2 Table 7-E: Target Method 3 for Regional Alliance				
Alliance May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
<input type="checkbox"/>		North Coast	137	130
<input type="checkbox"/>		North Lahontan	173	164
<input type="checkbox"/>		Sacramento River	176	167
<input type="checkbox"/>		San Francisco Bay	131	124
<input type="checkbox"/>		San Joaquin River	174	165
<input type="checkbox"/>		Central Coast	123	117
<input checked="" type="checkbox"/>	<b>100%</b>	Tulare Lake	188	179
<input type="checkbox"/>		South Lahontan	170	162
<input type="checkbox"/>		South Coast	149	142
<input type="checkbox"/>		Colorado River	211	200
<b>2020 Target</b> <i>(If more than one region is selected, this value is calculated.)</i>				<b>179</b>
NOTES:				

SB X7-7 RA2 Table 7-F: Confirm Minimum Reduction for 2020 Target for Regional Alliance			
5 Year Baseline GPCD <i>From SB X7-7 Table 5</i>	Maximum 2020 Target*	Calculated 2020 Target <i>From Method Selected in Table 7</i>	Confirmed 2020 Target
190	181	179	179
<i>* Maximum 2020 Target is 95% of the 5 Year Baseline GPCD</i>			
NOTES:			



Regional Alliance CSD SB X7-7 Verification Form

SB X7-7 RA2 Table 8: 2015 Interim Target GPCD for Regional Alliance		
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
179	190	185
NOTES:		

SB X7-7 RA2 Table 9: 2015 Compliance for Regional Alliance						
Actual 2015 GPCD	2015 Interim Target GPCD	OPTIONAL Economic Adjustment*	TOTAL Adjustments	Adjusted 2015 GPCD	2015 GPCD <i>(Adjusted if applicable)</i>	Did Alliance Achieve Targeted Reduction for 2015?
134	185	<i>From Methodology 8 (Optional)</i>	0	134	134	YES
*Adjustments for extraordinary economic growth can be applied either to the individual suppliers' data or to the aggregate regional alliance data (but not both) depending upon availability of suitable data and methods. (Weather normalization, extraordinary events and changes in distribution area should be made for each individual water supplier, if applicable.)						
NOTES:						

Bear Valley CSD SB X7-7 Verification Form

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries		Acre Feet
	2008 total volume of delivered recycled water		Acre Feet
	2008 recycled water as a percent of total deliveries		Percent
	Number of years in baseline period <sup>1</sup>	10	Years
	Year beginning baseline period range	2000	
	Year ending baseline period range <sup>2</sup>	2009	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2004	
	Year ending baseline period range <sup>3</sup>	2008	
<sup>1</sup> 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 delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period.			
<sup>2</sup> The ending year must be between December 31, 2004 and December 31, 2010.			
<sup>3</sup> The ending year must be between December 31, 2007 and December 31, 2010.			
NOTES:			

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
<input type="checkbox"/>	<b>1. Department of Finance (DOF)</b> DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
<input checked="" type="checkbox"/>	<b>2. Persons-per-Connection Method</b>
<input type="checkbox"/>	<b>3. DWR Population Tool</b>
<input type="checkbox"/>	<b>4. Other</b> DWR recommends pre-review
NOTES:	

Bear Valley CSD SB X7-7 Verification Form

<b>SB X7-7 Table 3: Service Area Population</b>		
<b>Year</b>		<b>Population</b>
<b>10 to 15 Year Baseline Population</b>		
Year 1	2000	4,232
Year 2	2001	4,430
Year 3	2002	4,631
Year 4	2003	4,789
Year 5	2004	4,992
Year 6	2005	5,071
Year 7	2006	5,184
Year 8	2007	5,281
Year 9	2008	5,254
Year 10	2009	5,285
<i>Year 11</i>		
<i>Year 12</i>		
<i>Year 13</i>		
<i>Year 14</i>		
<i>Year 15</i>		
<b>5 Year Baseline Population</b>		
Year 1	2004	4,992
Year 2	2005	5,071
Year 3	2006	5,184
Year 4	2007	5,281
Year 5	2008	5,254
<b>2015 Compliance Year Population</b>		
	<b>2015</b>	5,314
<b>NOTES:</b>		

Bear Valley CSD SB X7-7 Verification Form

SB X7-7 Table 4: Annual Gross Water Use *								
Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	Deductions					Annual Gross Water Use	
		Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>		
<b>10 to 15 Year Baseline - Gross Water Use</b>								
Year 1	2000	1,055			-		-	1,055
Year 2	2001	1,107			-		-	1,107
Year 3	2002	1,123			-		-	1,123
Year 4	2003	990			-		-	990
Year 5	2004	1,123			-		-	1,123
Year 6	2005	1,018			-		-	1,018
Year 7	2006	1,089			-		-	1,089
Year 8	2007	1,114			-		-	1,114
Year 9	2008	1,102			-		-	1,102
Year 10	2009	1,002			-		-	1,002
<i>Year 11</i>	0	-			-		-	-
<i>Year 12</i>	0	-			-		-	-
<i>Year 13</i>	0	-			-		-	-
<i>Year 14</i>	0	-			-		-	-
<i>Year 15</i>	0	-			-		-	-
<b>10 - 15 year baseline average gross water use</b>								<b>1,072</b>
<b>5 Year Baseline - Gross Water Use</b>								
Year 1	2004	1,123			-		-	1,123
Year 2	2006	1,018			-		-	1,018
Year 3	2007	1,089			-		-	1,089
Year 4	2008	1,114			-		-	1,114
Year 5	2009	1,102			-		-	1,102
<b>5 year baseline average gross water use</b>								<b>1,089</b>
<b>2015 Compliance Year - Gross Water Use</b>								
<b>2015</b>	654	-			-		-	<b>654</b>
* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3								

Bear Valley CSD SB X7-7 Verification Form

<b>SB X7-7 Table 4-A: Volume Entering the Distribution System(s)</b>			
Complete one table for each source.			
<b>Name of Source</b>		<b>Groundwater</b>	
<b>This water source is:</b>			
<input checked="" type="checkbox"/>	The supplier's own water source		
<input type="checkbox"/>	A purchased or imported source		
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	<b>Volume Entering Distribution System</b>	<b>Meter Error Adjustment</b> <i>* Optional (+/-)</i>	<b>Corrected Volume Entering Distribution System</b>
<b>10 to 15 Year Baseline - Water into Distribution System</b>			
Year 1	2000	1055	1,055
Year 2	2001	1107	1,107
Year 3	2002	1123	1,123
Year 4	2003	990	990
Year 5	2004	1123	1,123
Year 6	2005	1018	1,018
Year 7	2006	1089	1,089
Year 8	2007	1114	1,114
Year 9	2008	1102	1,102
Year 10	2009	1002	1,002
Year 11	0		-
Year 12	0		-
Year 13	0		-
Year 14	0		-
Year 15	0		-
<b>5 Year Baseline - Water into Distribution System</b>			
Year 1	2004	1123	1,123
Year 2	2006	1018	1,018
Year 3	2007	1089	1,089
Year 4	2008	1114	1,114
Year 5	2009	1102	1,102
<b>2015 Compliance Year - Water into Distribution System</b>			
<b>2015</b>	<b>654</b>		<b>654</b>
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>			
<b>NOTES:</b>			

Bear Valley CSD SB X7-7 Verification Form

<b>SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Annual Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use (GPCD)</b>
<b>10 to 15 Year Baseline GPCD</b>				
Year 1	2000	4,232	1,055	223
Year 2	2001	4,430	1,107	223
Year 3	2002	4,631	1,123	216
Year 4	2003	4,789	990	185
Year 5	2004	4,992	1,123	201
Year 6	2005	5,071	1,018	179
Year 7	2006	5,184	1,089	188
Year 8	2007	5,281	1,114	188
Year 9	2008	5,254	1,102	187
Year 10	2009	5,285	1,002	169
<i>Year 11</i>	0	-	-	
<i>Year 12</i>	0	-	-	
<i>Year 13</i>	0	-	-	
<i>Year 14</i>	0	-	-	
<i>Year 15</i>	0	-	-	
<b>10-15 Year Average Baseline GPCD</b>				<b>196</b>
<b>5 Year Baseline GPCD</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use</b>
Year 1	2004	4,992	1,123	201
Year 2	2006	5,071	1,018	179
Year 3	2007	5,184	1,089	188
Year 4	2008	5,281	1,114	188
Year 5	2009	5,254	1,102	187
<b>5 Year Average Baseline GPCD</b>				<b>189</b>
<b>2015 Compliance Year GPCD</b>				
<b>2015</b>		5,314	654	<b>110</b>
NOTES:				

Bear Valley CSD SB X7-7 Verification Form

<b>SB X7-7 Table 6: Gallons per Capita per Day</b> <i>Summary From Table SB X7-7 Table 5</i>	
10-15 Year Baseline GPCD	196
5 Year Baseline GPCD	189
2015 Compliance Year GPCD	110
NOTES:	

<b>SB X7-7 Table 7: 2020 Target Method</b> <i>Select Only One</i>		
Target Method		Supporting Documentation
<input 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 checked="" type="checkbox"/>	Method 3	SB X7-7 Table 7-E
<input type="checkbox"/>	Method 4	Method 4 Calculator
NOTES:		

Bear Valley CSD SB X7-7 Verification Form

SB X7-7 Table 7-E: Target Method 3				
Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
<input type="checkbox"/>		North Coast	137	130
<input type="checkbox"/>		North Lahontan	173	164
<input type="checkbox"/>		Sacramento River	176	167
<input type="checkbox"/>		San Francisco Bay	131	124
<input type="checkbox"/>		San Joaquin River	174	165
<input type="checkbox"/>		Central Coast	123	117
<input checked="" type="checkbox"/>	100%	Tulare Lake	188	179
<input type="checkbox"/>		South Lahontan	170	162
<input type="checkbox"/>		South Coast	149	142
<input type="checkbox"/>		Colorado River	211	200
<b>Target</b> <i>(If more than one region is selected, this value is calculated.)</i>				<b>179</b>

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
189	179	179	179

\* 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
179	196	187

NOTES:



## Bear Valley CSD SB X7-7 Verification Form

**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 Reduction for 2015?
		Enter "0" if Adjustment Not Used			TOTAL Adjustments	Adjusted 2015 GPCD		
		Extraordinary Events	Weather Normalization	Economic Adjustment				
110	187	<i>From Methodology 8 (Optional)</i>	<i>From Methodology 8 (Optional)</i>	<i>From Methodology 8 (Optional)</i>	-	110	110	<b>YES</b>
NOTES:								

City of Tehachapi SB X7-7 Verification Form

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	2,178	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 <sup>1</sup>	10	Years
	Year beginning baseline period range	2000	
	Year ending baseline period range <sup>2</sup>	2009	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2004	
	Year ending baseline period range <sup>3</sup>	2008	
<sup>1</sup> 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 delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period.			
<sup>2</sup> The ending year must be between December 31, 2004 and December 31, 2010.			
<sup>3</sup> The ending year must be between December 31, 2007 and December 31, 2010.			
NOTES:			

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
<input checked="" type="checkbox"/>	<b>1. Department of Finance (DOF)</b> DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
<input type="checkbox"/>	<b>2. Persons-per-Connection Method</b>
<input type="checkbox"/>	<b>3. DWR Population Tool</b>
<input type="checkbox"/>	<b>4. Other</b> DWR recommends pre-review
NOTES:	

City of Tehachapi SB X7-7 Verification Form

<b>SB X7-7 Table 3: Service Area Population</b>		
<b>Year</b>		<b>Population</b>
<b>10 to 15 Year Baseline Population</b>		
Year 1	2000	6558
Year 2	2001	6601
Year 3	2002	6670
Year 4	2003	6748
Year 5	2004	6920
Year 6	2005	7015
Year 7	2006	7465
Year 8	2007	7764
Year 9	2008	8149
Year 10	2009	8436
<i>Year 11</i>		
<i>Year 12</i>		
<i>Year 13</i>		
<i>Year 14</i>		
<i>Year 15</i>		
<b>5 Year Baseline Population</b>		
Year 1	2004	6920
Year 2	2005	7015
Year 3	2006	7465
Year 4	2007	7764
Year 5	2008	8149
<b>2015 Compliance Year Population</b>		
	<b>2015</b>	8,815
NOTES: Population data from DOF Table E-8 for		

City of Tehachapi SB X7-7 Verification Form

SB X7-7 Table 4: Annual Gross Water Use *								
Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	Deductions					Annual Gross Water Use	
		Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>		
<b>10 to 15 Year Baseline - Gross Water Use</b>								
Year 1	2000	1,671			-		-	1,671
Year 2	2001	1,657			-		-	1,657
Year 3	2002	1,833			-		-	1,833
Year 4	2003	1,787			-		-	1,787
Year 5	2004	1,946			-		-	1,946
Year 6	2005	1,835			-		-	1,835
Year 7	2006	2,070			-		-	2,070
Year 8	2007	2,266			-		-	2,266
Year 9	2008	2,178			-		-	2,178
Year 10	2009	2,131			-		-	2,131
<i>Year 11</i>	0	-			-		-	-
<i>Year 12</i>	0	-			-		-	-
<i>Year 13</i>	0	-			-		-	-
<i>Year 14</i>	0	-			-		-	-
<i>Year 15</i>	0	-			-		-	-
<b>10 - 15 year baseline average gross water use</b>								<b>1,937</b>
<b>5 Year Baseline - Gross Water Use</b>								
Year 1	2004	1,946			-		-	1,946
Year 2	2005	1,835			-		-	1,835
Year 3	2006	2,070			-		-	2,070
Year 4	2007	2,266			-		-	2,266
Year 5	2008	2,178			-		-	2,178
<b>5 year baseline average gross water use</b>								<b>2,059</b>
<b>2015 Compliance Year - Gross Water Use</b>								
<b>2015</b>	1,737	-			-		-	<b>1,737</b>
* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3								
NOTES:								

City of Tehachapi SB X7-7 Verification Form

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

Complete one table for each source.

<b>Name of Source</b>		Groundwater		
<b>This water source is:</b>				
<input checked="" type="checkbox"/>	The supplier's own water source			
<input type="checkbox"/>	A purchased or imported source			
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System	Meter Error Adjustment <i>* Optional (+/-)</i>	Corrected Volume Entering Distribution System	
<b>10 to 15 Year Baseline - Water into Distribution System</b>				
Year 1	2000	1671		1,671
Year 2	2001	1657		1,657
Year 3	2002	1833		1,833
Year 4	2003	1787		1,787
Year 5	2004	1946		1,946
Year 6	2005	1835		1,835
Year 7	2006	2070		2,070
Year 8	2007	2266		2,266
Year 9	2008	2178		2,178
Year 10	2009	2131		2,131
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
<b>5 Year Baseline - Water into Distribution System</b>				
Year 1	2004	1946		1,946
Year 2	2004	1835		1,835
Year 3	2005	2070		2,070
Year 4	2006	2266		2,266
Year 5	2007	2178		2,178
<b>2015 Compliance Year - Water into Distribution System</b>				
	<b>2015</b>	1737		1,737
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>				
NOTES:				

City of Tehachapi SB X7-7 Verification Form

<b>SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Annual Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use (GPCD)</b>
<b>10 to 15 Year Baseline GPCD</b>				
Year 1	2000	6,558	1,671	227
Year 2	2001	6,601	1,657	224
Year 3	2002	6,670	1,833	245
Year 4	2003	6,748	1,787	236
Year 5	2004	6,920	1,946	251
Year 6	2005	7,015	1,835	234
Year 7	2006	7,465	2,070	248
Year 8	2007	7,764	2,266	261
Year 9	2008	8,149	2,178	239
Year 10	2009	8,436	2,131	226
<i>Year 11</i>	0	-	-	
<i>Year 12</i>	0	-	-	
<i>Year 13</i>	0	-	-	
<i>Year 14</i>	0	-	-	
<i>Year 15</i>	0	-	-	
<b>10-15 Year Average Baseline GPCD</b>				<b>239</b>
<b>5 Year Baseline GPCD</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use</b>
Year 1	2004	6,920	1,946	251
Year 2	2004	7,015	1,835	234
Year 3	2005	7,465	2,070	248
Year 4	2006	7,764	2,266	261
Year 5	2007	8,149	2,178	239
<b>5 Year Average Baseline GPCD</b>				<b>246</b>
<b>2015 Compliance Year GPCD</b>				
<b>2015</b>		8,815	1,737	<b>176</b>
NOTES:				

City of Tehachapi SB X7-7 Verification Form

<b>SB X7-7 Table 6: Gallons per Capita per Day Summary From Table SB X7-7 Table 5</b>	
10-15 Year Baseline GPCD	239
5 Year Baseline GPCD	246
2015 Compliance Year GPCD	176
NOTES:	

<b>SB X7-7 Table 7: 2020 Target Method Select Only One</b>		
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:		

<b>SB X7-7 Table 7-A: Target Method 1 20% Reduction</b>	
10-15 Year Baseline GPCD	2020 Target GPCD
239	191
NOTES:	

<b>SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target</b>			
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
246	234	191	191
* Maximum 2020 Target is 95% of the 5 Year Baseline GPCD			
NOTES:			

City of Tehachapi SB X7-7 Verification Form

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
191	239	215
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 Reduction for 2015?
		Enter "0" if Adjustment Not Used			TOTAL Adjustments	Adjusted 2015 GPCD		
		Extraordinary Events	Weather Normalization	Economic Adjustment				
176	215	<i>From Methodology 8 (Optional)</i>	<i>From Methodology 8 (Optional)</i>	<i>From Methodology 8 (Optional)</i>	-	176	176	YES
NOTES:								



Golden Hills CSD SB X7-7 Verification Form

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	1,437	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 <sup>1</sup>	10	Years
	Year beginning baseline period range	2000	
	Year ending baseline period range <sup>2</sup>	2009	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range <sup>3</sup>	2007	
<p><sup>1</sup> 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 delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period.</p>			
<p><sup>2</sup> The ending year must be between December 31, 2004 and December 31, 2010.</p>			
<p><sup>3</sup> The ending year must be between December 31, 2007 and December 31, 2010.</p>			
NOTES:			

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
<input type="checkbox"/>	<b>1. Department of Finance (DOF)</b> DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
<input checked="" type="checkbox"/>	<b>2. Persons-per-Connection Method</b>
<input type="checkbox"/>	<b>3. DWR Population Tool</b>
<input type="checkbox"/>	<b>4. Other</b> DWR recommends pre-review
NOTES:	

Golden Hills CSD SB X7-7 Verification Form

<b>SB X7-7 Table 3: Service Area Population</b>		
<b>Year</b>	<b>Population</b>	
<b>10 to 15 Year Baseline Population</b>		
Year 1	2000	7,434
Year 2	2001	7,505
Year 3	2002	7,576
Year 4	2003	7,647
Year 5	2004	7,872
Year 6	2005	8,059
Year 7	2006	8,642
Year 8	2007	8,795
Year 9	2008	8,880
Year 10	2009	8,727
<i>Year 11</i>		
<i>Year 12</i>		
<i>Year 13</i>		
<i>Year 14</i>		
<i>Year 15</i>		
<b>5 Year Baseline Population</b>		
Year 1	2003	7,647
Year 2	2004	7,872
Year 3	2005	8,059
Year 4	2006	8,642
Year 5	2007	8,795
<b>2015 Compliance Year Population</b>		
	<b>2015</b>	8,787
NOTES:		

Golden Hills CSD SB X7-7 Verification Form

SB X7-7 Table 4: Annual Gross Water Use *								
Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	Deductions					Annual Gross Water Use	
		Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>		
<b>10 to 15 Year Baseline - Gross Water Use</b>								
Year 1	2000	1,174			-		-	1,174
Year 2	2001	1,240			-		-	1,240
Year 3	2002	1,324			-		-	1,324
Year 4	2003	1,323			-		-	1,323
Year 5	2004	1,374			-		-	1,374
Year 6	2005	1,295			-		-	1,295
Year 7	2006	1,393			-		-	1,393
Year 8	2007	1,443			-		-	1,443
Year 9	2008	1,437			-		-	1,437
Year 10	2009	1,368			-		-	1,368
<i>Year 11</i>	0	-			-		-	-
<i>Year 12</i>	0	-			-		-	-
<i>Year 13</i>	0	-			-		-	-
<i>Year 14</i>	0	-			-		-	-
<i>Year 15</i>	0	-			-		-	-
<b>10 - 15 year baseline average gross water use</b>								<b>1,337</b>
<b>5 Year Baseline - Gross Water Use</b>								
Year 1	2003	1,323			-		-	1,323
Year 2	2004	1,374			-		-	1,374
Year 3	2005	1,295			-		-	1,295
Year 4	2006	1,393			-		-	1,393
Year 5	2007	1,443			-		-	1,443
<b>5 year baseline average gross water use</b>								<b>1,366</b>
<b>2015 Compliance Year - Gross Water Use</b>								
<b>2015</b>	1,032	-			-		-	<b>1,032</b>
* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3								
NOTES:								

Golden Hills CSD SB X7-7 Verification Form

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

Complete one table for each source.

<b>Name of Source</b>		Groundwater		
<b>This water source is:</b>				
<input checked="" type="checkbox"/>		The supplier's own water source		
<input type="checkbox"/>		A purchased or imported source		
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		Volume Entering Distribution System	Meter Error Adjustment <i>* Optional (+/-)</i>	Corrected Volume Entering Distribution System
<b>10 to 15 Year Baseline - Water into Distribution System</b>				
Year 1	2000	1174		1,174
Year 2	2001	1240		1,240
Year 3	2002	1324		1,324
Year 4	2003	1323		1,323
Year 5	2004	1374		1,374
Year 6	2005	1295		1,295
Year 7	2006	1393		1,393
Year 8	2007	1443		1,443
Year 9	2008	1437		1,437
Year 10	2009	1368		1,368
Year 11	0			0
Year 12	0			0
Year 13	0			0
Year 14	0			0
Year 15	0			0
<b>5 Year Baseline - Water into Distribution System</b>				
Year 1	2003	1323		1,323
Year 2	2004	1374		1,374
Year 3	2005	1295		1,295
Year 4	2006	1393		1,393
Year 5	2007	1443		1,443
<b>2015 Compliance Year - Water into Distribution System</b>				
	<b>2015</b>	1032		1,032
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>				
<b>NOTES:</b>				

Golden Hills CSD SB X7-7 Verification Form

<b>SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Annual Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use (GPCD)</b>
<b>10 to 15 Year Baseline GPCD</b>				
Year 1	2000	7,434	1,174	141
Year 2	2001	7,505	1,240	148
Year 3	2002	7,576	1,324	156
Year 4	2003	7,647	1,323	154
Year 5	2004	7,872	1,374	156
Year 6	2005	8,059	1,295	143
Year 7	2006	8,642	1,393	144
Year 8	2007	8,795	1,443	146
Year 9	2008	8,880	1,437	144
Year 10	2009	8,727	1,368	140
<i>Year 11</i>	0	-	-	
<i>Year 12</i>	0	-	-	
<i>Year 13</i>	0	-	-	
<i>Year 14</i>	0	-	-	
<i>Year 15</i>	0	-	-	
<b>10-15 Year Average Baseline GPCD</b>				<b>147</b>
<b>5 Year Baseline GPCD</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use</b>
Year 1	2003	7,647	1,323	154
Year 2	2004	7,872	1,374	156
Year 3	2005	8,059	1,295	143
Year 4	2006	8,642	1,393	144
Year 5	2007	8,795	1,443	146
<b>5 Year Average Baseline GPCD</b>				<b>149</b>
<b>2015 Compliance Year GPCD</b>				
<b>2015</b>		8,787	1,032	<b>105</b>
NOTES:				

Golden Hills CSD SB X7-7 Verification Form

<b>SB X7-7 Table 6: Gallons per Capita per Day</b> <i>Summary From Table SB X7-7 Table 5</i>	
10-15 Year Baseline GPCD	147
5 Year Baseline GPCD	149
2015 Compliance Year GPCD	105
NOTES:	

<b>SB X7-7 Table 7: 2020 Target Method</b> <i>Select Only One</i>		
Target Method	Supporting Documentation	
<input 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 checked="" type="checkbox"/> Method 3	SB X7-7 Table 7-E	
<input type="checkbox"/> Method 4	Method 4 Calculator	
NOTES:		

Golden Hills CSD SB X7-7 Verification Form

SB X7-7 Table 7-E: Target Method 3				
Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
<input type="checkbox"/>		North Coast	137	130
<input type="checkbox"/>		North Lahontan	173	164
<input type="checkbox"/>		Sacramento River	176	167
<input type="checkbox"/>		San Francisco Bay	131	124
<input type="checkbox"/>		San Joaquin River	174	165
<input type="checkbox"/>		Central Coast	123	117
<input checked="" type="checkbox"/>	100%	Tulare Lake	188	179
<input type="checkbox"/>		South Lahontan	170	162
<input type="checkbox"/>		South Coast	149	142
<input type="checkbox"/>		Colorado River	211	200
<b>Target</b> <i>(If more than one region is selected, this value is calculated.)</i>				<b>179</b>
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
149	141	179	141
<i>* Maximum 2020 Target is 95% of the 5 Year Baseline GPCD</i>			
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
141	147	144
NOTES:		

Golden Hills CSD SB X7-7 Verification Form

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 Reduction for 2015?
		Enter "0" if Adjustment Not Used			TOTAL Adjustments	Adjusted 2015 GPCD		
		Extraordinary Events	Weather Normalization	Economic Adjustment				
105	144	<i>From Methodology 8 (Optional)</i>	<i>From Methodology 8 (Optional)</i>	<i>From Methodology 8 (Optional)</i>	-	105	105	YES
NOTES:								



## Stallion Springs CSD SB X7-7 Verification Form

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	464	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 <sup>1</sup>	10	Years
	Year beginning baseline period range	2000	
	Year ending baseline period range <sup>2</sup>	2009	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2005	
	Year ending baseline period range <sup>3</sup>	2009	
<p><sup>1</sup> 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 delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period.</p>			
<p><sup>2</sup> The ending year must be between December 31, 2004 and December 31, 2010.</p>			
<p><sup>3</sup> The ending year must be between December 31, 2007 and December 31, 2010.</p>			
NOTES:			

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
<input type="checkbox"/>	<b>1. Department of Finance (DOF)</b> DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
<input checked="" type="checkbox"/>	<b>2. Persons-per-Connection Method</b>
<input type="checkbox"/>	<b>3. DWR Population Tool</b>
<input type="checkbox"/>	<b>4. Other</b> DWR recommends pre-review
NOTES:	

Stallion Springs CSD SB X7-7 Verification Form

<b>SB X7-7 Table 3: Service Area Population</b>		
<b>Year</b>		<b>Population</b>
<b>10 to 15 Year Baseline Population</b>		
Year 1	2000	1,522
Year 2	2001	1,495
Year 3	2002	1,545
Year 4	2003	1,686
Year 5	2004	2,007
Year 6	2005	2,274
Year 7	2006	2,417
Year 8	2007	2,457
Year 9	2008	2,364
Year 10	2009	2,379
<i>Year 11</i>		
<i>Year 12</i>		
<i>Year 13</i>		
<i>Year 14</i>		
<i>Year 15</i>		
<b>5 Year Baseline Population</b>		
Year 1	2005	2,274
Year 2	2006	2,417
Year 3	2007	2,457
Year 4	2008	2,364
Year 5	2009	2,379
<b>2015 Compliance Year Population</b>		
<b>2015</b>		2,782
NOTES:		

Stallion Springs CSD SB X7-7 Verification Form

SB X7-7 Table 4: Annual Gross Water Use *								
Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	Deductions					Annual Gross Water Use	
		Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>		
<b>10 to 15 Year Baseline - Gross Water Use</b>								
Year 1	2000	310			-		-	310
Year 2	2001	330			-		-	330
Year 3	2002	334			-		-	334
Year 4	2003	323			-		-	323
Year 5	2004	385			-		-	385
Year 6	2005	399			-		-	399
Year 7	2006	450			-		-	450
Year 8	2007	467			-		-	467
Year 9	2008	464			-		-	464
Year 10	2009	470			-		-	470
<i>Year 11</i>	0	-			-		-	-
<i>Year 12</i>	0	-			-		-	-
<i>Year 13</i>	0	-			-		-	-
<i>Year 14</i>	0	-			-		-	-
<i>Year 15</i>	0	-			-		-	-
<b>10 - 15 year baseline average gross water use</b>								<b>393</b>
<b>5 Year Baseline - Gross Water Use</b>								
Year 1	2005	399			-		-	399
Year 2	2006	450			-		-	450
Year 3	2007	467			-		-	467
Year 4	2008	464			-		-	464
Year 5	2009	470			-		-	470
<b>5 year baseline average gross water use</b>								<b>450</b>
<b>2015 Compliance Year - Gross Water Use</b>								
<b>2015</b>	421	-			-		-	<b>421</b>
* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3								
NOTES:								

Stallion Springs CSD SB X7-7 Verification Form

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

Complete one table for each source.

<b>Name of Source</b>		Source 1		
<b>This water source is:</b>				
<input type="checkbox"/>		The supplier's own water source		
<input type="checkbox"/>		A purchased or imported source		
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System	Meter Error Adjustment <i>* Optional (+/-)</i>	Corrected Volume Entering Distribution System	
<b>10 to 15 Year Baseline - Water into Distribution System</b>				
Year 1	2000	310		310
Year 2	2001	330		330
Year 3	2002	334		334
Year 4	2003	323		323
Year 5	2004	385		385
Year 6	2005	399		399
Year 7	2006	450		450
Year 8	2007	467		467
Year 9	2008	464		464
Year 10	2009	470		470
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
<b>5 Year Baseline - Water into Distribution System</b>				
Year 1	2005	399		399
Year 2	2006	450		450
Year 3	2007	467		467
Year 4	2008	464		464
Year 5	2009	470		470
<b>2015 Compliance Year - Water into Distribution System</b>				
	<b>2015</b>	421		421
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>				
NOTES:				

Stallion Springs CSD SB X7-7 Verification Form

<b>SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Annual Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use (GPCD)</b>
<b>10 to 15 Year Baseline GPCD</b>				
Year 1	2000	1,522	310	182
Year 2	2001	1,495	330	197
Year 3	2002	1,545	334	193
Year 4	2003	1,686	323	171
Year 5	2004	2,007	385	171
Year 6	2005	2,274	399	157
Year 7	2006	2,417	450	166
Year 8	2007	2,457	467	170
Year 9	2008	2,364	464	175
Year 10	2009	2,379	470	176
<i>Year 11</i>	0	-	-	
<i>Year 12</i>	0	-	-	
<i>Year 13</i>	0	-	-	
<i>Year 14</i>	0	-	-	
<i>Year 15</i>	0	-	-	
<b>10-15 Year Average Baseline GPCD</b>				<b>176</b>
<b>5 Year Baseline GPCD</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use</b>
Year 1	2005	2,274	399	157
Year 2	2006	2,417	450	166
Year 3	2007	2,457	467	170
Year 4	2008	2,364	464	175
Year 5	2009	2,379	470	176
<b>5 Year Average Baseline GPCD</b>				<b>169</b>
<b>2015 Compliance Year GPCD</b>				
<b>2015</b>		2,782	421	<b>135</b>
NOTES:				

Stallion Springs CSD SB X7-7 Verification Form

<b>SB X7-7 Table 6: Gallons per Capita per Day</b> <i>Summary From Table SB X7-7 Table 5</i>	
10-15 Year Baseline GPCD	176
5 Year Baseline GPCD	169
2015 Compliance Year GPCD	135
NOTES:	

<b>SB X7-7 Table 7: 2020 Target Method</b> <i>Select Only One</i>		
Target Method	Supporting Documentation	
<input 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 checked="" type="checkbox"/> Method 3	SB X7-7 Table 7-E	
<input type="checkbox"/> Method 4	Method 4 Calculator	
NOTES:		

Stallion Springs CSD SB X7-7 Verification Form

SB X7-7 Table 7-E: Target Method 3				
Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
<input type="checkbox"/>		North Coast	137	130
<input type="checkbox"/>		North Lahontan	173	164
<input type="checkbox"/>		Sacramento River	176	167
<input type="checkbox"/>		San Francisco Bay	131	124
<input type="checkbox"/>		San Joaquin River	174	165
<input type="checkbox"/>		Central Coast	123	117
<input checked="" type="checkbox"/>	100%	Tulare Lake	188	179
<input type="checkbox"/>		South Lahontan	170	162
<input type="checkbox"/>		South Coast	149	142
<input type="checkbox"/>		Colorado River	211	200
<b>Target</b> <i>(If more than one region is selected, this value is calculated.)</i>				<b>179</b>

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
169	160	179	160
<i>* Maximum 2020 Target is 95% of the 5 Year Baseline GPCD</i>			

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
160	176	168

NOTES:

## Stallion Springs CSD SB X7-7 Verification Form

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 Reduction for 2015?
		Enter "0" if Adjustment Not Used			TOTAL Adjustments	Adjusted 2015 GPCD		
		Extraordinary Events	Weather Normalization	Economic Adjustment				
135	168	<i>From Methodology 8 (Optional)</i>	<i>From Methodology 8 (Optional)</i>	<i>From Methodology 8 (Optional)</i>	-	135	135	<b>YES</b>
NOTES:								



Appendix H  
AWWA Water Audit Reporting Worksheets



# AWWA Free Water Audit Software: Reporting Worksheet

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?	Click to access definition
+	Click to add a comment

Water Audit Report for: **TCCWD**  
 Reporting Year: **2015**      1/2015 - 12/2015

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: ACRE-FEET 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

<----- Enter grading in column 'E' and 'J' ----->

Volume from own sources:	+	?	5	1,752.000	acre-ft/yr
Water imported:	+	?	5	5,160.000	acre-ft/yr
Water exported:	+	?			acre-ft/yr

### Master Meter and Supply Error Adjustments

Pcnt:	+	?	5	1.25%	acre-ft/yr
Value:					acre-ft/yr
Pcnt:	+	?	5	0.25%	acre-ft/yr
Value:					acre-ft/yr

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

**WATER SUPPLIED: 6,912.000** acre-ft/yr

### AUTHORIZED CONSUMPTION

Billed metered:	+	?	5	6,056.000	acre-ft/yr
Billed unmetered:	+	?			acre-ft/yr
Unbilled metered:	+	?			acre-ft/yr
Unbilled unmetered:	+	?		86.400	acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

**AUTHORIZED CONSUMPTION: 6,142.400** acre-ft/yr

Click here: ?  
for help using option buttons below

Pcnt:	+	?	5	1.25%	acre-ft/yr
Value:					acre-ft/yr

Use buttons to select percentage of water supplied  
OR value

### WATER LOSSES (Water Supplied - Authorized Consumption)

**769.600** acre-ft/yr

### Apparent Losses

Unauthorized consumption:	+	?		17.280	acre-ft/yr
---------------------------	---	---	--	--------	------------

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

Customer metering inaccuracies:	+	?		0.000	acre-ft/yr
Systematic data handling errors:	+	?		15.140	acre-ft/yr

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

**Apparent Losses: 32.420** acre-ft/yr

Pcnt:	+	?	5	0.25%	acre-ft/yr
Value:					acre-ft/yr

Pcnt:	+	?	5	0.25%	acre-ft/yr
Value:					acre-ft/yr

### Real Losses (Current Annual Real Losses or CARL)

**Real Losses = Water Losses - Apparent Losses: 737.180** acre-ft/yr

**WATER LOSSES: 769.600** acre-ft/yr

### NON-REVENUE WATER

**NON-REVENUE WATER: 856.000** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

### SYSTEM DATA

Length of mains:	+	?		miles
Number of active AND inactive service connections:	+	?		
Service connection density:	?			conn./mile main

Are customer meters typically located at the curbside or property line? Select... (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line:	+	?		ft
--	---	---	--	----

Average operating pressure:	+	?		psi
-----------------------------	---	---	--	-----

### COST DATA

Total annual cost of operating water system:	+	?		\$/Year
Customer retail unit cost (applied to Apparent Losses):	+	?		
Variable production cost (applied to Real Losses):	+	?		\$/acre-ft

Use Customer Retail Unit Cost to value real losses

### WATER AUDIT DATA VALIDITY SCORE:

Add a grading value for 8 parameter(s) to enable an audit score to be calculated

### PRIORITY AREAS FOR ATTENTION:

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

1: Water imported

2: Customer metering inaccuracies

3: Total annual cost of operating water system



# AWWA Free Water Audit Software: Reporting Worksheet

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?	Click to access definition
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Water Audit Report for: **Bear Valley CSD**  
 Reporting Year: **2015**      1/2015 - 12/2015

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: ACRE-FEET 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

----- Enter grading in column 'E' and 'J' ----->

Volume from own sources:	+ ?	653.940	acre-ft/yr
Water imported:	+ ?		acre-ft/yr
Water exported:	+ ?		acre-ft/yr

### Master Meter and Supply Error Adjustments

Pcnt:	Value:	acre-ft/yr
+ ?	<input checked="" type="radio"/> <input type="radio"/>	
+ ?	<input checked="" type="radio"/> <input type="radio"/>	
+ ?	<input checked="" type="radio"/> <input type="radio"/>	

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

**WATER SUPPLIED:**      **653.940** acre-ft/yr

### AUTHORIZED CONSUMPTION

Billed metered:	+ ?	592.000	acre-ft/yr
Billed unmetered:	+ ?		acre-ft/yr
Unbilled metered:	+ ?		acre-ft/yr
Unbilled unmetered:	+ ?	8.174	acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

**AUTHORIZED CONSUMPTION:**      **600.174** acre-ft/yr

Click here: ?  
for help using option buttons below

Pcnt:	Value:	acre-ft/yr
1.25%	<input checked="" type="radio"/> <input type="radio"/>	

Use buttons to select percentage of water supplied  
OR value

### WATER LOSSES (Water Supplied - Authorized Consumption)

**53.766** acre-ft/yr

### Apparent Losses

Unauthorized consumption:	+ ?	1.635	acre-ft/yr
---------------------------	-----	-------	------------

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

Customer metering inaccuracies:	+ ?	0.000	acre-ft/yr
Systematic data handling errors:	+ ?	1.480	acre-ft/yr

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

**Apparent Losses:**      **3.115** acre-ft/yr

Pcnt:	Value:	acre-ft/yr
0.25%	<input checked="" type="radio"/> <input type="radio"/>	

<input checked="" type="radio"/> <input type="radio"/>	acre-ft/yr	
0.25%	<input checked="" type="radio"/> <input type="radio"/>	acre-ft/yr

### Real Losses (Current Annual Real Losses or CARL)

**Real Losses = Water Losses - Apparent Losses:**      **50.651** acre-ft/yr

**WATER LOSSES:**      **53.766** acre-ft/yr

### NON-REVENUE WATER

**NON-REVENUE WATER:**      **61.940** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

### SYSTEM DATA

Length of mains:	+ ?	7	110.0	miles
Number of <u>active</u> AND <u>inactive</u> service connections:	+ ?	6	2,953	
Service connection density:	?		27	conn./mile main

Are customer meters typically located at the curbside or property line?            (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line: + ?  
**Average length of customer service line has been set to zero and a data grading score of 10 has been applied**

Average operating pressure:	+ ?	3	110.0	psi
-----------------------------	-----	---	-------	-----

### COST DATA

Total annual cost of operating water system:	+ ?		\$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?		
Variable production cost (applied to Real Losses):	+ ?		\$/acre-ft <input type="checkbox"/> Use Customer Retail Unit Cost to value real losses

### WATER AUDIT DATA VALIDITY SCORE:

Add a grading value for 6 parameter(s) to enable an audit score to be calculated

### 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



# AWWA Free Water Audit Software: Reporting Worksheet

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Water Audit Report for: **City of Tehachapi (1510020)**  
Reporting Year: **2015**      1/2015 - 12/2015

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: ACRE-FEET 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

----- Enter grading in column 'E' and 'J' ----->

Volume from own sources:	+ ? 8	1736.879	acre-ft/yr
Water imported:	+ ? n/a	0.000	acre-ft/yr
Water exported:	+ ? n/a	0.000	acre-ft/yr

### Master Meter and Supply Error Adjustments

Pcnt:	+ ? 10	-2.50%	<input checked="" type="radio"/>	<input type="radio"/>	Value:		acre-ft/yr
	+ ?		<input type="radio"/>	<input type="radio"/>			acre-ft/yr
	+ ?		<input type="radio"/>	<input type="radio"/>			acre-ft/yr

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

**WATER SUPPLIED:**      **1,781.414** acre-ft/yr

### AUTHORIZED CONSUMPTION

Billed metered:	+ ? 8	1,352.655	acre-ft/yr
Billed unmetered:	+ ? n/a	0.000	acre-ft/yr
Unbilled metered:	+ ? 9	146.586	acre-ft/yr
Unbilled unmetered:	+ ?	22.268	acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

**AUTHORIZED CONSUMPTION:**      **1,521.508** acre-ft/yr

Click here: ?  
for help using option  
buttons below

Pcnt:	1.25%	<input checked="" type="radio"/>	<input type="radio"/>	Value:		acre-ft/yr
-------	-------	----------------------------------	-----------------------	--------	--	------------

Use buttons to select  
percentage of water supplied  
**OR**  
value

### WATER LOSSES (Water Supplied - Authorized Consumption)

**259.906** acre-ft/yr

### Apparent Losses

Unauthorized consumption:      **4.454** acre-ft/yr

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

Customer metering inaccuracies:	+ ? 8	38.442	acre-ft/yr
Systematic data handling errors:	+ ?	3.382	acre-ft/yr

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

**Apparent Losses:**      **46.277** acre-ft/yr

Pcnt:	0.25%	<input checked="" type="radio"/>	<input type="radio"/>	Value:		acre-ft/yr
-------	-------	----------------------------------	-----------------------	--------	--	------------

2.50%	<input checked="" type="radio"/>	<input type="radio"/>	Value:		acre-ft/yr
0.25%	<input type="radio"/>	<input type="radio"/>	Value:		acre-ft/yr

### Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses:      **213.629** acre-ft/yr

**WATER LOSSES:**      **259.906** acre-ft/yr

### NON-REVENUE WATER

**NON-REVENUE WATER:**      **428.760** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

### SYSTEM DATA

Length of mains:	+ ? 7	50.0	miles
Number of <u>active</u> AND <u>inactive</u> service connections:	+ ? 9	3,085	
Service connection density:	?	62	conn./mile main

Are customer meters typically located at the curbside or property line?      Yes

Average length of customer service line:      + ?      (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure:      + ? 5      80.0      psi

### COST DATA

Total annual cost of operating water system:	+ ? 10	\$2,632,387	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ? 10	\$1.82	\$/1000 gallons (US)
Variable production cost (applied to Real Losses):	+ ? 9	\$142.46	\$/acre-ft

Use Customer Retail Unit Cost to value real losses

### WATER AUDIT DATA VALIDITY SCORE:

**\*\*\* YOUR SCORE IS: 81 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: Unauthorized consumption**

**3: Systematic data handling errors**



# AWWA Free Water Audit Software: Reporting Worksheet

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Water Audit Report for: **Golden Hills CSD (1510045)**  
Reporting Year: **2015**      1/2015 - 12/2015

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: ACRE-FEET 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

----- Enter grading in column 'E' and 'J' ----->

Volume from own sources:	+ ?	5	1,032.000	acre-ft/yr
Water imported:	+ ?		0.000	acre-ft/yr
Water exported:	+ ?		0.000	acre-ft/yr

### Master Meter and Supply Error Adjustments

Pcnt:	Value:	acre-ft/yr
+ ?	3	<input checked="" type="radio"/> <input type="radio"/>
+ ?		<input type="radio"/> <input checked="" type="radio"/>
+ ?		<input type="radio"/> <input type="radio"/>

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

**WATER SUPPLIED: 1,032.000** acre-ft/yr

### AUTHORIZED CONSUMPTION

Billed metered:	+ ?	9	917.000	acre-ft/yr
Billed unmetered:	+ ?			acre-ft/yr
Unbilled metered:	+ ?			acre-ft/yr
Unbilled unmetered:	+ ?		12.900	acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

**AUTHORIZED CONSUMPTION: 929.900** acre-ft/yr

Click here: ?  
for help using option buttons below

Pcnt:	Value:	acre-ft/yr
1.25%	<input checked="" type="radio"/> <input type="radio"/>	

Use buttons to select percentage of water supplied  
**OR**  
value

### WATER LOSSES (Water Supplied - Authorized Consumption)

**102.100** acre-ft/yr

### Apparent Losses

Unauthorized consumption:	+ ?		2.580	acre-ft/yr
---------------------------	-----	--	-------	------------

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

Customer metering inaccuracies:	+ ?	8	13.964	acre-ft/yr
Systematic data handling errors:	+ ?		2.293	acre-ft/yr

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

**Apparent Losses: 18.837** acre-ft/yr

Pcnt:	Value:	acre-ft/yr
0.25%	<input checked="" type="radio"/> <input type="radio"/>	

1.50%	<input type="radio"/> <input checked="" type="radio"/>	
0.25%	<input checked="" type="radio"/> <input type="radio"/>	

### Real Losses (Current Annual Real Losses or CARL)

**Real Losses = Water Losses - Apparent Losses: 83.263** acre-ft/yr

**WATER LOSSES: 102.100** acre-ft/yr

### NON-REVENUE WATER

**NON-REVENUE WATER: 115.000** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

### SYSTEM DATA

Length of mains:	+ ?	5	66.0	miles
Number of active AND inactive service connections:	+ ?	8	2,819	
Service connection density:	?		43	conn./mile main

Are customer meters typically located at the curbside or property line?  (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line: + ?

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure:	+ ?	8	65.0	psi
-----------------------------	-----	---	------	-----

### COST DATA

Total annual cost of operating water system:	+ ?	10	\$2,000,000	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?	8	\$4.57	\$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	+ ?	7	\$600.00	\$/acre-ft

Use Customer Retail Unit Cost to value real losses

### WATER AUDIT DATA VALIDITY SCORE:

**\*\*\* YOUR SCORE IS: 67 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: Unauthorized consumption**

**3: Systematic data handling errors**



# 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: **Stallion Springs CSD**  
 Reporting Year: **2015**      1/2015 - 12/2015

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: ACRE-FEET 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

<----- Enter grading in column 'E' and 'J' ----->

Volume from own sources:	+ ?	5	421.000	acre-ft/yr
Water imported:	+ ?			acre-ft/yr
Water exported:	+ ?			acre-ft/yr

### Master Meter and Supply Error Adjustments

Pcnt:	?	Value:		acre-ft/yr
	+		● ○	
	+		● ○	
	+		● ○	

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

**WATER SUPPLIED: 421.000** acre-ft/yr

### AUTHORIZED CONSUMPTION

Billed metered:	+ ?	5	310.000	acre-ft/yr
Billed unmetered:	+ ?			acre-ft/yr
Unbilled metered:	+ ?			acre-ft/yr
Unbilled unmetered:	+ ?		5.263	acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

**AUTHORIZED CONSUMPTION: 315.263** acre-ft/yr

Click here: ?  
for help using option buttons below

Pcnt:	?	Value:		acre-ft/yr
	1.25%		● ○	

Use buttons to select percentage of water supplied  
OR value

### WATER LOSSES (Water Supplied - Authorized Consumption)

**105.738** acre-ft/yr

### Apparent Losses

Unauthorized consumption:	+ ?		1.053	acre-ft/yr
---------------------------	-----	--	-------	------------

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

Customer metering inaccuracies:	+ ?		0.000	acre-ft/yr
Systematic data handling errors:	+ ?		0.775	acre-ft/yr

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

**Apparent Losses: 1.828** acre-ft/yr

Pcnt:	?	Value:		acre-ft/yr
	0.25%		● ○	

Pcnt:	?	Value:		acre-ft/yr
	0.25%		● ○	

### Real Losses (Current Annual Real Losses or CARL)

**Real Losses = Water Losses - Apparent Losses: 103.910** acre-ft/yr

**WATER LOSSES: 105.738** acre-ft/yr

### NON-REVENUE WATER

**NON-REVENUE WATER: 111.000** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

### SYSTEM DATA

Length of mains:	+ ?		miles
Number of <u>active</u> AND <u>inactive</u> service connections:	+ ?		
Service connection density:	?		conn./mile main

Are customer meters typically located at the curbside or property line? Select... (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line:	+ ?		ft
--	-----	--	----

Average operating pressure:	+ ?		psi
-----------------------------	-----	--	-----

### COST DATA

Total annual cost of operating water system:	+ ?		\$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?		
Variable production cost (applied to Real Losses):	+ ?		\$/acre-ft

Use Customer Retail Unit Cost to value real losses

### WATER AUDIT DATA VALIDITY SCORE:

Add a grading value for 8 parameter(s) to enable an audit score to be calculated

### 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: Customer metering inaccuracies

3: Total annual cost of operating water system

# Appendix I

## Energy Intensity Calculations

Urban Water Supplier:

TCCWD

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Wholesale Non-Potable Deliveries

Table O-1B: Voluntary Energy Intensity - Total Utility Approach

Enter Start Date for Reporting Period End Date	1/1/2015 12/31/2015	Urban Water Supplier Operational Control	
		Sum of All Water Management Processes	Non-Consequential Hydropower
	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)	6744	0	6744
Energy Consumed (kWh)	78,817,868	0	78817868
Energy Intensity (kWh/AF)	11687.1	0.0	11687.1

Quantity of Self-Generated Renewable Energy

None kWh

Data Quality (Estimate, Metered Data, Combination of Estimates and Metered Data)

Combination of Estimates and Metered Data

Data Quality Narrative:

Narrative:

**Includes metered energy for TCCWD booster pumping and groundwater pumping as follows:**  
**Natural gas usage converted to kWh = 68,892,504 kWh (using conversion factor of 1 MMBtu = 293 kWh).**  
**Pumping energy usage = 1,617,764 kWh**  
**Energy for SWP water deliveries from Harvey O. Banks Pumping Plant at the south edge of the Bay-Delta to the Wind Gap Pump Station (Reach 16), estimated to be 8,307,600 kWh (5,160 AF at 1,610 kWh/AF).**



**Urban Water Supplier:**

Bear Valley CSD

**Water Delivery Product** (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Voluntary Energy Intensity - Total Utility Approach			
Enter Start Date for Reporting Period <span style="float: right;">1/1/2015</span> End Date <span style="float: right;">12/31/2015</span>	Urban Water Supplier Operational Control		
	Sum of All Water Management Processes	Non-Consequential Hydropower	
	Total Utility	Hydropower	Net Utility
<i>Volume of Water Entering Process (AF)</i>	653.9	0	653.9
<i>Energy Consumed (kWh)</i>	2081299	0	2081299
<i>Energy Intensity (kWh/AF)</i>	3182.9	0.0	3182.9

**Quantity of Self-Generated Renewable Energy**

None

 kWh

**Data Quality** (*Estimate, Metered Data, Combination of Estimates and Metered Data*)

Metered Data

**Data Quality Narrative:**

Water volume from BVCSD well production records. Energy consumed from SCE billing records.

**Narrative:**

**Urban Water Supplier:**

City of Tehachapi

**Water Delivery Product** (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

**Table O-1B: Voluntary Energy Intensity - Total Utility Approach**

Enter Start Date for Reporting Period End Date	1/1/2015 12/31/2015	Urban Water Supplier Operational Control	
		Sum of All Water Management Processes	Non-Consequential Hydropower
	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)	1755	0	1755
Energy Consumed (kWh)	1952750	0	1952750
Energy Intensity (kWh/AF)	1112.7	0.0	1112.7

**Quantity of Self-Generated Renewable Energy**

None kWh

**Data Quality** (Estimate, Metered Data, Combination of Estimates and Metered Data)

Metered Data

**Data Quality Narrative:**

Total water pumped from wells based on City meter readings. Total energy consumed based on SCE billing summaries.

**Narrative:**

**Urban Water Supplier:**

Golden Hills CSD

**Water Delivery Product** (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

**Table O-1B: Voluntary Energy Intensity - Total Utility Approach**

Enter Start Date for Reporting Period End Date	1/1/2015 12/31/2015	Urban Water Supplier Operational Control		
		Sum of All Water Management Processes	Non-Consequential Hydropower	
		Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)		1032	0	1032
Energy Consumed (kWh)		1171898	0	1171898
Energy Intensity (kWh/AF)		1135.6	0.0	1135.6

**Quantity of Self-Generated Renewable Energy**

kWh

**Data Quality** (Estimate, Metered Data, Combination of Estimates and Metered Data)

Metered Data

**Data Quality Narrative:**

**Total water pumped from wells based on meter readings. Total energy consumed based on SCE billing summaries.**

**Narrative:**