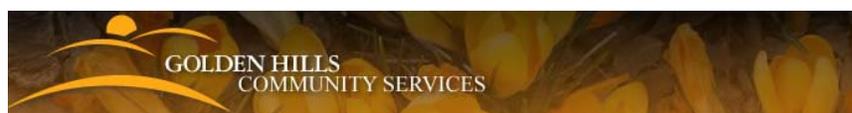
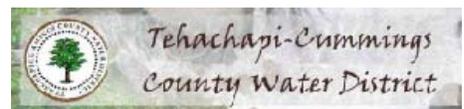




2010 TEHACHAPI

REGIONAL URBAN WATER MANAGEMENT PLAN



**For Tehachapi-Cummings County Water District,
Golden Hills CSD, Stallion Springs CSD,
Bear Valley CSD, City of Tehachapi**

Tehachapi, California

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DWR “Review for Completeness” Checklist

2010 Greater Tehachapi Regional Urban Water Management Plan

	Reference in 2010 Tehachapi RUWMP
Plan Preparation	Section, Water Code §
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	1.0 10620(d)(2)
	Section, Water Code §
Notify, at least 60 days prior to the public hearing on the plan required by Section 10642, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Any city or county receiving the notice may be consulted and provide comments	1.4, Table 1-1 Coordination with appropriate agencies. 10621(b)
	Section, Water Code §
Provide supporting documentation that the UWMP or any amendments to, or changes in, have been adopted as described in Section 10640 et. seq.	1.4, Table 1-1 Coordination with appropriate agencies. 10621(c)
	Section, Water Code §
Provide supporting documentation that the urban water management plan has been or will be provided to any city or county within which it provides water, no later than 60 days after the submission of this urban water management plan.	3.5, 4.5, 6.5 10635(b)
	Section, Water Code §
Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economical elements of the population within the service area prior to and during the preparation of the plan.	1.4, Table 1-1 10642
	Section, Water Code §
Provide supporting documentation that the urban water supplier made the plan available for public inspection and held a public hearing about the plan. For public agencies, the hearing notice is to be provided pursuant to Section 6066 of the Government Code. The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water. Privately-owned water suppliers shall provide an equivalent notice within its service area.	1.4, Table 1-1 to be updated after second workshop and Appendix A. 10642

	Section, Water Code §
Provide supporting documentation that the plan has been adopted as prepared or modified.	2.11, 3.11, 4.11, 5.11, 6.11 10642
	Section, Water Code §
Provide supporting documentation as to how the water supplier plans to implement its plan.	2.11, 3.11, 4.11, 5.11, 6.11 10643
	Section, Water Code §
Provide supporting documentation that, in addition to submittal to DWR, the urban water supplier has submitted this UWMP to 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. This also includes amendments or changes.	2.11, 3.11, 4.11, 5.11, 6.11 and Appendix A – to be updated prior to submittal to DWR 10644(a)
	Section, Water Code §
Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the urban water supplier has or will make the plan available for public review during normal business hours.	2.11, 3.11, 4.11, 5.11, 6.11 and Appendix A – to be updated prior to submittal to DWR 10645
System Description	Section, Water Code §
Describe the water supplier service area.	2.1, 2.1.3, 3.1, 4.1, 5.1, 6.1 10631(a)
	Section, Water Code §
Describe the climate and other demographic factors of the service area of the supplier.	2.1, 2.1.3, 3.1, 4.1, 5.1, 6.1 10631(a)
	Section, Water Code §
Indicate the current population of the service area.	2.1, 2.1.3, 3.1, 4.1, 5.1, 6.1 10631(a)
	Section, Water Code §
Provide population projections for 2015, 2020, 2025, and 2030 based on data from State, regional, or local service area population projects.	2.1, 2.1.3, 3.1, 4.1, 5.1, 6.1 10631(a)
	Section, Water Code §
Describe other demographic factors affecting the supplier's water management planning.	2.1, 2.1.3, 3.1, 4.1, 5.1, 6.1 10631(a)

System Demands	Section, Water Code §
Provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	10608.20(e) 2.10, Table 2-19
	Section, Water Code §
<i>Wholesalers:</i> Include an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions. <i>Retailers:</i> Conduct at least one public hearing that includes general discussion of the urban retail water supplier’s implementation plan for complying with the Water Conservation Bill of 2009.	10608.36 10608.26(a) 2.6,2.6.2, Table 2-39
	Section, Water Code §
Report progress in meeting urban water use targets using the standardized form.	2.1, 3.10,4.10, 5.10, 6.10 10608.40
	Section, Water Code §
Quantify past, current, and projected water use, identifying the uses among water use sectors, for the following: (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, conjunctive use, and (I) agriculture.	2.4, 3.4, 4.4, 5.4, 6.4 10631(e)(1)
	Section, Water Code §
Provide documentation that either the retail agency provided the wholesale agency with water use projections for at least 20 years, if the UWMP agency is a retail agency, OR, if a wholesale agency, it provided its urban retail customers with future planned and existing water source available to it from the wholesale agency during the required water-year types.	2.2, 2.3, 2.4 10631(k)
	Section, Water Code §
Include projected water use for single-family and multifamily residential housing needed for lower income households, as indentified in the housing element of any city, county, or city and county in the service are of the supplier.	10631.1(a) Data not available at that level of detail, Not present in document
	Section, Water Code §
System Supplies	Section, Water Code §
Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	2.2, 2.3, 3.2, 3.3, 4.2, 4.3, 5.2, 5.3, 6.2, 6.3 10631(b)

	Section, Water Code §
Indicate whether groundwater is an existing or planned source of water available to the supplier. If yes, then complete 15 through 21 of the UWMP checklist. If no, then indicate “not applicable” in lines 15 through 21 under the UWMP location column.	2.2, 3.2, 4.2, 5.2, 5.5, 6.2 10631(b)
	Section, Water Code §
Indicate whether a groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization	2.2, 3.2, 4.2, 5.2, 6.2 10631(b)(1)
	Section, Water Code §
Describe the groundwater basin.	2.2, 3.2, 4.2, 5.2, 6.2 10631(b)(2)
	Section, Water Code §
Indicated whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	2.2, 3.2, 4.2, 5.2, 6.2, Appendix B 10631(b)(2)
	Section, Water Code §
Describe the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. If the basin is not adjudicated, indicate “not applicable” in the UWMP location column.	2.2, 3.2, 4.2, 5.2, 6.2 10631(b)(2)
	Section, Water Code §
For groundwater basins that are no adjudicated, provide information as to whether DWR 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. If the basin is adjudicated, indicate “not applicable” in the UWMP location column.	2.2, 3.2, 4.2, 5.2, 6.2 10631(b)(2)
	Section, Water Code §
Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	2.4, 3.4, 4.4, 5.4, 6.4 10631(b)(3)

	Section, Water Code §
Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years.	2.2, Figure 2-4 10631(b)(4)
	Section, Water Code §
Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d) 2.3.14, Table 2-12
	Section, Water Code §
Include a detailed description of all water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years, excluding demand management programs address in (f)(1). Include specific projects, describe water supply impacts, and provide a timeline for each project.	10631(h) 2.5,2.74 and Tables 2-13, 2-17-19, 2-22-39
	Section, Water Code §
Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	2.2.8- 2.2.8.2, 2.9-2.9.2, 3.9, 4.2.8, 4.9, 5.2.7, 5.9, 6.2.8, 6.9, 10631(i)
	Section, Water Code §
Provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier. Coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	1.2, 2.8-2.8.5, 3.8-3.8.5, 4.8-4.8.5, 5.8-5.8.5, 6.8-6.8.5 10633
	Section, Water Code §
Describe the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	2.8-2.8.1, 3.8-3.8.1, 4.8-4.8.1, 5.8-5.8.1, 6.8- 6.8.1 10633 (a)
	Section, Water Code §
Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	2.8, 3.8, 4.8, 5.8, 6.8 10633(b)
	Section, Water Code §
Describe the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.	2.8, 3.8, 4.8, 5.8, 6.8 10633(c)

	Section, Water Code §
Describe and quantify the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.	2.8, 3.8, 4.8, 5.8, 6.8 10633(d)
	Section, Water Code §
The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	2.8-2.8.3, 3.8-3.8.3, 4.8-4.8.3, 5.8-5.8.3, 6.8-6.8.3 10633(e)
	Section, Water Code §
Describe the actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.	2.8, 3.8, 4.8, 5.8, 6.8 10633(f)
	Section, Water Code §
Provide a plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.	2.8-1-2.8-5 Tables 2.41-46 10633(g)
Water Shortage Reliability And Water Shortage Contingency Planning	Section, Water Code §
Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	1.0, 2.1 10620(f)
	Section, Water Code §
Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage and provide data for (A) an average water year, (B) a single dry water year, and (C) multiple dry water years.	2.3, 3.3, 4.3, 5.3, 6.3 10631(c)(1)

	Section, Water Code §
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.	2.3, 3.3, 4.3, 5.3, 6.3 10631(c)(2)
	Section, Water Code §
Provide an urban water shortage contingency analysis that specifies stages of action, including up to a 50-percent water supply reduction, and an outline of	2.7.1, 3.7.1, 4.7.1, 5.7.1, 6.7.1 10632(a)
	Section, Water Code §
Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.	2.3-2.3.1, 3.3, 4.3, 5.3, 6.3 10632(b)
	Section, Water Code §
Identify 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.	2.7.5, 3.7.8, 4.7.8, 5.7.8, 6.7.8 10632(c)
	Section, Water Code §
Identify 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.	2.7.5, 3.7.6, 4.7.6, 5.7.6, 6.7.6 10632(d)
	Section, Water Code §
Specify 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.	2.7.5, 3.7.6, 4.7.6, 5.7.6, 6.7.6 10632(e)
	Section, Water Code §
Indicated penalties or charges for excessive use, where applicable.	2.7.5, 3.7.6, 4.7.6, 5.7.6, 6.7.6 10632(f)

	Section, Water Code §
Provide an analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), 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.	2.7.5, 3.7.7, 4.7.7, 5.7.7, 6.7.7 10632(g)
	Section, Water Code §
Provide a draft water shortage contingency resolution or ordinance.	2.7.5, 3.7.5, 4.7.5, 5.7.5, 6.7.5 10632(h)
	Section, Water Code §
Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	2.7.5, 3.7.9, 4.7.9, 5.7.9, 6.7.9 10632(i)
	Section, Water Code §
Provide information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments, and the manner in which water quality affects water management strategies and supply reliability.	2.2, 3.2, 4.2, 5.2, 6.2, Appendix D 10634

	Section, Water Code §
<p>Assess The Water Supply Reliability During Normal, Dry, And Multiple Dry Water Years By Comparing The Total Water Supply Sources Available To The Water Supplier With The Total Projected Water Use Over The Next 20 Years, In Five-Year Increments, For A Normal Water Year, A Single Dry Water Year, And Multiple Dry Water Years. Base The Assessment On The Information Compiled Under Section 10631, Including Available Data From State, Regional, Or Local Agency Population Projections Within The Service Area Of The Urban Water Supplier.</p>	<p>2.5-2.5.3, Table 2-17 Projected Normal Year Water Supply (AFY), Table 2-18 Projected Normal Year Water Demand (AFY), Table 2-19 Projected Normal Year Supply and Demand Comparison (AFY), Table 2-20 Projected Single Dry Year Water Supply (AFY), Table 2-21 Projected Single Dry Year Water Demand (AFY), Table 2-22 Projected Supply During Multiple Dry Year Period Ending in 2015, Table 2-23 Projected Demand During Multiple Dry Year Period Ending in 2015, Table 2-24 Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2015, Table 2-25 Projected Supply During Multiple Dry Year Period Ending in 2020, Table 2-26 Projected Demand During Multiple Dry Year Period Ending in 2020, Table 2-27 Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2020, Table 2-28 Projected Supply During Multiple Dry Year Period Ending in 2025, Table 2- 29 Projected Demand During Multiple Dry Year Period Ending in 2025, Table 2-30 Projected Supply & Demand Comparison During Multiple Dry Year Period ending in 2025, Table 2-31 Projected Supply During Multiple Dry Year Period Ending in 2030, Table 2-32 Projected Demand During Multiple Dry Year Period Ending in 2030, Table 2-33 Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2030, Table 2-34 Projected Demand During Multiple Dry Year Period Ending in 2035, Table 2-35 Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2035, Table 2-36 Projected Supply During Multiple Dry Year Period Ending in 2040, Table 2-37 Projected Demand During Multiple Dry Year Period Ending in 2040, Table 2-38 Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2040, 3.5, 4.5, 5.5, 6.5 10635(a)</p>

Demand Management Measures	Section, Water Code §
Describe how each water demand management measure is being implemented or scheduled for implementation. Use the list provided.	2.6, Table 2-39 Demand Management Measures – Specific to Greater Tehachapi 10631(f)(1)
	Section, Water Code §
Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	2.6, 3.6, 4.6, 5.6, 6.6 10631(f)(3)
	Section, Water Code §
Provide an estimate, if available, of existing conservation savings on water use within the supplier’s service area, and the effect of the savings on the ability to further reduce demand.	2.6.2, 3.6.2, 4.6.2, 5.6.2, 6.6-6.6.2 10631(f)(4)
	Section, Water Code §
Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water supplier’s legal authority to implement the work.	2.6.2, 3.6.2, 4.6.2, 5.6.2, 6.6.2. Cost benefit not applicable – will be updated in 2015 10631(g)
	Section, Water Code §
Include the annual reports submitted to meet the Section 6.2 requirements, if a member of the CUWCC and signer of the December 10, 2008 MOU.	3.6 and Appendix D 10631(j)

1.0 Introduction, Agency Coordination, and Service Area Information

Law

10620

(a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d) (1) An urban water supplier may satisfy the requirements of this part by participation in area wide, regional, watershed, or basin wide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

(d) (2) 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.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

(f) 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.

1.1 PURPOSE and Urban Water Management Plan Summary

The California Water Code (CWC) requires urban water suppliers within the state to prepare and adopt Urban Water Management Plans (UWMP) for submission to the Department of Water Resources (DWR). These plans, which must be filed every five years, must satisfy the requirements of the Urban Water Management Planning Act (UWMPA) of 1983 including amendments that have been made to the Act. The UWMPA requires that urban water suppliers servicing 3,000 or more connections, or supplying more than 3,000 acre-feet (AF) of water annually, to prepare an UWMP.

This Regional Urban Water Management Plan (RUWMP/Plan) describes and evaluates the practical and efficient uses of water, the degree of usage by the five agencies, reclamation and conservation activities and a detailed evaluation of water supply and demands pertaining to the five agencies for at least 20 years into the future. This RUWMP was prepared to ensure water service reliability during normal, dry, or multiple dry years, and is in compliance with the requirements of Water Code section 10620. The five agencies included in this RUWMP are: Tehachapi-Cummings County Water District (TCCWD- lead agency), Bear Valley Community Services District (Bear Valley CSD), Golden Hills Community Services District (Golden Hills CSD), Stallion Springs Community Services District (Stallion Springs CSD), and the City of

Tehachapi (City). These agencies cooperate on various regional issues and have formed a Water Availability Preservation Committee comprised of representatives from each of these agencies. A regional plan is being submitted, as opposed to separate individual plans, to share information, avoid duplication of efforts, reduce costs, and implement a more coordinated regional approach to water management. It is anticipated that this RUWMP will be adopted by these five agencies and that the Plan will identify implementable solutions that will be used in each of the agencies water resources planning efforts.

None of the participating agencies are required to submit an UWMP, as none of them serve 3,000 or more connections, nor do they supply 3,000 or more AF of water per year for urban uses. TCCWD, the wholesale agency for the area, provides State Water Project (SWP) water primarily for agriculture but also for urban uses. Currently TCCWD supplies less than 2,500 AF of water for urban uses per year (in 2009 TCCWD supplied 2,328 AF of urban water). TCCWD also acts as the court-appointed watermaster for the three adjudicated basins in the Greater Tehachapi Area (GTA), from which the water purveyors produce most of the water delivered in their service areas. However, TCCWD does not supply the agencies with this native groundwater. They have rights pursuant to the Judgments to exercise their groundwater supplies, which supply is not provided by TCCWD. Under Water Code Section 10617, TCCWD is exempt from submitting an UWMP, this exemption is based on TCCWD providing untreated water for recharge that is then accessed by the retail providers. The participating agencies are submitting this regional plan to serve as a coordination effort with its local retail agencies so that the group has a better understanding of the reliability of its supplies for future Integrated Regional Water Management Plan (IRWMP) efforts.

1.1.1 Conclusion and Summary

1.1.1.1 Demands vs. Supply Summary

The four retail purveyors who are part of this RUWMP each pump groundwater from Cummings, Tehachapi or Bear Valley groundwater basins. Additional entities within the TCCWD Service Area pump from the Tehachapi, Cummings and Brite Basins. Since the Judgments have taken into account long-term hydrology, which include wet and dry periods, in determining the safe yields for each basin, each of these basins is capable of providing a consistent water supply independent of drought, providing the pumping stays reasonably close to the Judgment and stored imported surface supplies.

Imported water from the SWP provides the remaining water to the service area. This imported water may be from the current year's SWP allocation which is highly variable, or may include carryover from San Luis Reservoir which can be used by TCCWD to add flexibility to its SWP water supply. The water stored in the groundwater basins may have been deliberately placed in storage or may include return flows of imported water. This stored water can be recovered to supplement supplies during droughts, years of low SWP allocations, or when the cost of natural gas causes the importation of SWP water to be cost-prohibitive.

The TCCWD Service Area has a population of 36,300. The annual water demand for the service area in 2010 was 12,314 AF. This demand was met by a combination of local groundwater, recycled water, and imported water from the SWP. These sources provide an estimated average annual supply of 22,487 AF (not including recycled water). With forecasted population growth, the 2020 population is estimated to be 40,914 with a potential demand of 15,097 AF with conservation practices in place. The supply exceeds demand by 6,200 AF.

Projected Normal Year Supply and Demand Comparison (AFY)		
	2015	2020
Supply totals	21,379	21,297
Demand totals	14,986	15,097
Difference (supply minus demand)	6,393	6,200
Difference as % of Supply	30%	29%
Difference as % of Demand	43%	41%

1.1.1.2 DMMS and conservation potential for Region as a whole

None of the agencies have previously developed an UWMP, as they were not required to submit a plan (each retail entity delivers less than 3,000 acre-feet per year (AFY) and/or has less than 3,000 service connections). The agencies do however have conservation measures already in place to improve efficiency of water use. In addition, all of these agencies are located in Kern County. Elements of the Kern County Water Code, as detailed in the following sections, are also implemented on a regional level. Water Resource Ordinances, Rules and Regulations implementing the required Best Management Practices (BMPs) are described and demand management measures are summarized in the plan for each agency.

1.1.1.3 Regional Compliance via the Alliance Methodology

All five of the participating agencies have agreed to set the baseline and conservation targets as a regional alliance. They have also agreed to define their base daily per capita water use pursuant to WC 10608.12(b)(3). The five calendar years ending December 31, 2007 will be used to determine the baseline gallons per capita day (gpcd) for the regional alliance.

Baseline water use for the regional alliance is 191 gpcd. This is more than the Tulare Lake hydrologic region target of 188 gpcd. Since the lower of these two numbers must be used to calculate the water conservation target, the 2020 target for the regional alliance is 179 gpcd (188 x .95). The 2015 interim target is 185 gpcd, the midpoint between 191 and 179 gpcd.

Since the baseline gpcd for the regional alliance is already so low, they are not subject to the 20 percent water conservation requirement. WC 10608.20(b)(3) sets a water conservation goal of 95 percent of the hydrologic region's target.

1.2 Urban Water Management Planning Act

In 1983, State Assembly Bill (AB) 797 modified the CWC Division 6, by creating the UWMPA. Several amendments to the original UWMPA, which were introduced since 1983, have increased the data requirements and planning elements to be included in the 2010 Plans.

Initial amendments to the UWMPA required that the total projected water use be compared to water supply sources over the next 20 years, in 5-year increments. Recent DWR guidelines also suggest projecting through a 25-year planning horizon to maintain a 20-year timeframe until the next UWMP update has been completed.

Other amendments require that plans include provisions for recycled water use, demand management measures (DMMs), and a water shortage contingency plan. The UWMPA requires inclusion of a Water Shortage Contingency Plan, which meets the specifications set forth therein. Recycled water was added in the reporting requirements for water usage and figures prominently in the requirements for evaluation of alternative water supplies, when future projections predict the need for additional water supplies. Each urban water purveyor must coordinate the preparation of the Water Shortage Contingency Plan with other urban water purveyors in the area, to the extent practicable. Each water supplier must also describe their water demand management measures to the extent that they are being implemented in each of the respective service areas. Any DMMs that are scheduled to be implemented should also be discussed.

Amendments to State Senate Bill (SB) 610 (Costa, 2001) and AB 901 (Daucher, 2001), which became effective beginning January 1, 2002 require counties and cities to consider information relating to the availability of water supply to supply new large developments.

The most recent amendments includes SB 318 (Alpert, 2004), which requires the plan to describe the opportunities for development of desalinated water, including but not limited to, brackish groundwater, ocean water, and groundwater as a long-term water supply alternative. AB 105 (Wiggins, 2004) requires urban water suppliers to submit their UWMPs to the California State Library.

Other key requirements are described below.

Key Requirements

Key requirements from the UWMPA (AB 797), Sections 10631, 10632, and 10633, are summarized as follows:

Section 10631

This section requires an evaluation of the methods related to the conservation of water, as well as describing the local water demand and supply. Originally 16 (BMPs) were suggested for cost effectiveness evaluations. In 1997, the California Urban Water Conservation Council (CUWCC), who administers the Memorandum of Understanding (MOU), revised the list of BMPs. Four BMPs were eliminated, two new ones were added, and others were revised

resulting in a new list of 14 BMPs. Recent state legislation revised section 10631 to make it consistent with the current MOU and the 14 BMPs.

AB 1420

AB 1420 (Stats. 2007, Ch. 628) amended the UWMPA, Water Code Section 10610 et seq., to require, effective January 1, 2009, that the terms of, and eligibility for, any water management grant or loan made to an urban water supplier and awarded or administered by the DWR, State Water Resources Control Board (SWRCB), or California Bay-Delta Authority or its successor agency (collectively referred to as “Funding Agencies”) , be conditioned on the implementation of the water DMMs, previously known as BMPs as defined in Section 10631 above and in Water Code Section 10631(f).

BMP Implementation under AB 1420 specifies that:

1. The urban water supplier is currently implementing all BMPs at a coverage level determined by the CUWCC MOU;
2. The urban water supplier has submitted a schedule, budget, and finance plan commencing within the first year of the agreement for which grant funds are requested to implement all BMPs at the coverage level determined by the CUWCC MOU; or
3. The urban water supplier has demonstrated by providing supporting documentation that certain BMPs are “not locally cost effective. “Not locally cost effective” means that the present value of the local benefits of implementing a BMP is less than the present value of the local costs of implementing that BMP.

AB 1465

AB 1465 states that water suppliers that are members of the CUWCC, and that comply with the MOU regarding urban water conservation in California, are required to describe their water DMMs in their UWMP to be in compliance.

SB x7-7

SB x7-7 enacted in 2009 (Chapter 4, Statutes of 2009 Seventh Extraordinary Session) requires the state to achieve a 20 percent reduction in urban per capita water use by December 31, 2020. The law establishes that the measure of increased efficiency is on a per capita basis. The law also requires the state to make incremental progress towards this goal by reducing per capita water use by at least 10 percent on or before December 31, 2015.

20x2020 Water Conservation Plan (20x2020Plan)

The 20x2020 Water Conservation Plan is a plan, developed by Governor Schwarzenegger, to reduce statewide per capita urban water use by 20 percent by the year 2020. The 20x2020 Plan sets forth a statewide road map to maximize the state’s urban water efficiency and conservation opportunities between 2009 and 2020, and beyond. It aims to set in motion a range of activities designed to achieve the 20 percent per capita reduction in urban water demand by 2020. These activities include improving an understanding of the variation in water use across California,

promoting legislative initiatives that incentivize water agencies to promote water conservation, and creating evaluation and enforcement mechanisms to assure regional and statewide goals are met.

AB 2572 Water Meter Compliance Requirements

Water Code Sections 525-529.7 limit the ability of water purveyors, both agricultural and urban, from receiving State grant and loan funds if metering requirements are not met. These laws apply to SWP contractors, Central Valley Project contractors, local, community, and private water suppliers. These sections of law are in addition to requirements contained in AB 1420 and SB x7-7.

Section 10632

This section requires the preparation of an urban water shortage contingency plan. Shortages of up to 50 percent are to be planned. To comply with this section, the purveyor must adopt a water shortage contingency ordinance.

Section 10633

This plan is to provide information on the availability of reclaimed water and its potential for use as a water source in the purveyors’ service area. Methods to increase the use of reclaimed water in areas where potable water is not required should be identified along with financial incentives to encourage its use for agricultural irrigation, landscape irrigation, wildlife enhancement, wetlands and industrial use.

1.3 Public Coordination and Plan Adoption

Law

<p>10620 (d) Discuss whether your agency participated in area, regional, watershed or basin wide plan and the anticipated benefits. Describe the coordination of the plan preparation. You may use the table below that includes a list of the type of agencies with which the supplier is required to coordinate UWMP preparation and examples of types of coordination. You may use this table or other formats to report the required information applicable to your agency. The types of agencies may be replaced with specific agency names.</p>

The UWMPA requires that the UWMP show that the five water agencies solicited public participation, during the preparation of the 2010 RUWMP.

In accordance with the UWMPA, the five agencies have each equally collaborated to prepare this RUWMP during the winter and spring of 2009/2010. In addition, the five agencies have collectively held two public workshops, one held on January 26, 2010 and the other on May 26, 2011. Public notifications regarding both of these workshops were published in the local newspaper, the Tehachapi News. In accordance with the CWC §10642, the five agencies encouraged the active involvement of diverse social, cultural, and economic elements of the population within each of the agencies’ service areas prior and during the preparation of this

Plan. The January 26, 2010 workshop was announced in the Tehachapi News and 47 letters inviting the public were sent. Preparation of this RUWMP was also initiated with a meeting held at the headquarters of TCCWD on November 12, 2009 (attended by representatives from the five participating agencies).

This Plan was also made available for public inspection and comment. Also in accordance with the UWMPA, the five agencies held a public hearing regarding the adoption of the 2010 RUWMP. The public was notified of the Draft Plan's availability and was notified of the opportunity to provide comments on its content. Notice was made at least 60 days prior to a public hearing and notification was published in the local newspaper, notifying interested parties that the draft 2010 RUWMP was available at the various District offices and/or on their respective webpages. Two publications were made in the Tehachapi News once a week for two successive weeks.

Copies of the Notice of Public Hearing and each agency's Resolution of Plan Adoption are included in Appendix A. This RUWMP includes all the information necessary to meet the requirements of the CWC Division 6, Part 2.6, UWMPA.

The five agencies followed normal procedures for reviewing and adopting their RUWMP:

- Review by respective agency staff of a preliminary draft plan
- Draft plan made available to public before public hearing. Copies of the Plan were on file at each of the agency offices
- Legal notice published in the Tehachapi News and mailed to stakeholders in the area;
- Public workshops were held to ensure public comments were incorporated in the final plan
- Adoption by resolution at Board and Council Meetings

1.4 Agency Coordination

Law

10621

(a) UWMPs are due by December 31 of years ending in '0' and '5'. Suppliers are encouraged to submit their UWMPs prior to the due date in order to allow sufficient time for DWR review and any necessary additions or revisions by suppliers.

(b) Suppliers are required to notify cities and counties in their service area of the opportunity to submit comments regarding the UWMP during the update process. The supplier may consult with and obtain comments from cities and counties that receive the notices required by this subdivision.

(c) When making changes or additions to an UWMP the supplier should follow the procedure set forth in Water Code sections 10640 through 10645.

The UWMPA requires that the RUWMP identify the water agency's efforts in coordination with appropriate local agencies. In response to this requirement, the five agencies collaborated and formalized a list of interested stakeholders and other entities interested in the development of the Plan. While preparing the 2010 RUWMP, the five agencies coordinated their efforts with

relevant agencies to ensure that the data and issues are presented accurately. Water use statistics and projections that are presented in the 2010 RUWMP have been discussed and mutually agreed upon by the five agencies submitting this regional Plan. The agencies have also coordinated with Kern County Water Agency (KCWA), and have coordinated water use projections and statistics within the County of Kern Greater Tehachapi Area Specific and Community Plan (GTASP). The five agencies have emphasized the need to concentrate planning efforts on aggressive development of local and regional resource options such as conservation (DMMs), and groundwater storage.

Table 1-1 summarizes the public involvement efforts undertaken by each agency to include various agencies and citizens in its planning process. Formal letters were sent out on behalf of TCCWD.

Table 1-1: (DWR Table 1) Coordination with Appropriate Agencies

Check at Least One Box Per Row	Invited to Public Workshop #1 Jan 26, 2010	Participated in UWMP Development	Commented on the Draft	Attended Public Workshop #1 Jan 26, 2010	Attended Public Workshop #2 May 26, 2011	Contacted for Assistance	Received Copy of Draft Plan	Sent Notice of Intention to Adopt	Not Involved/ No Information
Other Water Suppliers									
Alpine Forest Park Mutual Water Company	X			X					
Fairview Ranches Water Company	X								
Grand Oaks Water Company	X								
Kern County Water Agency	X								
Quail Valley Water District	X								
West Tehachapi Mutual Water Company	X								
Relevant Public Agencies									
California Correctional Institute	X			X					
Ca. Dpt. of Public Health, Div of Drinking Water & Env. Mngmt.	X								
County of Kern, Planning Department	X	X		X		X	X		
Golden Hills Sanitation Company	X			X	X				
Mojave Public Utilities District	X								
Mountain Meadows CSD	X								
Tehachapi Public Cemetery District	X								
Tehachapi Resource Conservation District	X								
Tehachapi Unified School District	X			X					
Tehachapi Valley Recreation & Parks District	X			X					
Other ²									
Assemblymember Jean Fuller	X								
Bear Valley Springs Association	X								
Bruce Lockway	X								
California Portland Cement Company	X								
Cesar E Chavez Foundation	X								
Cub Newspaper	X								
Cummings Valley Protective Association	X								
Dept. of Conservation, Tehachapi Rep - Glenn Baumann	X								
Greater Tehachapi Chamber of Commerce	X								
Greater Tehachapi Economic Development Council	X								
Hilltop Publishers	X								
Kern County Builders Exchange	X								
Kern County District 2 Supervisor Don Maben	X								
Kern Economic Development Corporation	X								
Kern Wind Energy Association	X								
Kuhs & Parker, Attorneys	X								
Lehigh Southwest Cement Company	X								
Main Street Tehachapi	X								
Skoo'kum H2O Monitoring	X								
Smart Growth Tehachapi	X								
State Senator Roy Ashburn	X								
Stockdale Investment Group, Inc.	X								
Tehachapi Area Association of Realtors	X								
Tehachapi Growers Association	X								
Tehachapi Heritage League	X								
Tehachapi News	X								
Tehachapi Valley Healthcare District	X								
The Mountain Signal	X								
Union Pacific Transportation	X								
William L. Nelson (consultant)	X						X		
Private citizens	X								

For complete list of entities receiving NOI to adopt UWMP, please see Appendix A

For complete list of "Other" agency representatives and private citizens in attendance at Workshop #1 and/or Workshop #2, please see Appendix A.

¹ "Notice of Public Workshop - January 26, 2010, Greater Tehachapi Regional Urban Water Management Plan" were mailed on December 30, 2009. Public notice was also placed in the "Tehachapi News" Newspaper for two weeks beginning January 13, 2010.

² For list of "Other" individuals and agencies who attended Public Workshop #1 and/or Public Workshop #2, See Workshop Sign-In sheets in Appendix A

1.5 Report Organization

This RUMWP contains seven sections and eleven subsections for each agency (Sections 2-6) which were prepared to follow the outline requirements listed in the UWMPA. The sections are 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 7 – References

Each water system provider’s description includes the subsections required in the UWMPA as follows:

- Subsection 1 – Service Area
- Subsection 2 – Water Supply
- Subsection 3 – Reliability of Supply
- Subsection 4 – Water Use, Past Current and Future
- Subsection 5 – Supply and Demand Comparison
- Subsection 6 – Demand Management Measures
- Subsection 7 – Water Shortage Contingency Plans
- Subsection 8 – Recycled Water
- Subsection 9 – Desalination
- Subsection 10 – Water Use Reduction Plan (Gallons Per Capita Day Baseline and Conservation Targets)
- Subsection 11 – Adoption and Implementation of UWMP

Additionally, the sections are preceded by the “DWR Review for Completeness Checklist.” This table is based on the 2010 UWMP Review Form and is provided to assist DWR staff during their review process.

1.6 Abbreviations

Abbreviations have been used in this report to improve readability. The abbreviations shown are spelled out in the text the first time it is used and subsequently identified by abbreviation only. They are also summarized in Table 1-2 as a reference.

Table 1-2: Abbreviations

Abbreviation	Definition
AB	Assembly Bill
Accord	Bay-Delta Accord
Act	Water Conservation Act
AF	acre-feet
AFY	acre-feet per year
AMR	Automated Meter Reader
BDCP	Bay-Delta Conservation Plan
BMPs	Best Management Practices
C	Degrees Celcius
CALFED Program	CALFED Bay-Delta Program
CDPH	California Department of Public Health
cfs	cubic feet per second
COG	Council of Government
CCI	California Department of Corrections and Rehabilitation Institution
CSD	Community Services District
CUWCC	California Urban Water Conservation Council
CWC	California Water Code
City	City of Tehachapi
Delta	Sacramento-San Joaquin Delta
DHCCP	Delta Habitat Conservation and Conveyance Program
DMMs	Demand Management Measures
DSC	Delta Stewardship Council
DWR	Department of Water Resources
EC	Electrical Conductivity
EIR	Environmental Impact Report
EIS	Environmental Impact Survey
ETo	Evapotranspiration
F	Degrees Fahrenheit
FWS	Fish and Wild Life Service
GHSC	Golden Hills Sanitation Company
gpcd	gallons per capita day
gpd	gallons per day
gpm	gallons per minute
GTA	Greater Tehachapi Area
GTASP	Greater Tehachapi Area Specific Plan
HEW	High Efficiency Washer
IRWMP	Integrated Regional Water Management Plan
KCWA	Kern County Water Agency
M&I	Municipal and Industrial

Abbreviation	Definition
maf	million acre-feet
MDB&M	Mount Diablo Baseline and Meridian
MDD	Maximum Day Demand
MGD	million gallons per day
mg/L	milligrams per liter
MOU	Memorandum of Understanding
MPN	Most Probable Number
MTBE	Methyl <i>tert</i> -ButylEther
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
RSA	Regional Service Area
RUWMP	Regional Urban Water Management Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SWP	State Water Project
SWRCB	State Water Resources Control Board
TCCWD	Tehachapi-Cummings County Water District
TDS	Total Dissolved Solids
µmhos/cm	microsiemens per centimeter
ULFT	Ultra-Low Flush Toilets
UWMP	Urban Water Management Plan
UWMPA	Urban Water Management Planning Act
WET	Water Education for Teachers
WWTF	Wastewater Treatment Facility
WWTP	Wastewater Treatment Plant

2.0 Tehachapi-Cummings County Water District

2.1 Service Area

The UWMPA requires that the RUWMP include a description of the water purveyor's service area and various aspects of the area served including climate, population, and other demographic factors.

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. 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 and shall be in five-year increments to 20 years or as far as data is available.

2.1.1 Description of the Tehachapi-Cummings County Water District

The TCCWD is located in the Tehachapi Mountains, east of the Southern San Joaquin Valley and encompasses approximately 266,000 acres. The TCCWD provides imported water supplies (SWP) and water resource management, and flood protection in the GTA as well as flood protection within several improvement districts in the Tehachapi Basin. The three groundwater basins managed by TCCWD include the Brite, Cummings and Tehachapi Basins. TCCWD imports supplemental water through the California Aqueduct, and sells this SWP water to several community services districts including the City of Tehachapi (City), California Department of Corrections and Rehabilitation's Correctional Institution in Tehachapi (CCI) and other retail water agencies within TCCWD through conjunctive use.

TCCWD provides wholesale imported water supplies to the following agencies:

- Bear Valley CSD,
- City of Tehachapi,
- Golden Hills CSD, and
- Stallion Springs CSD.

The TCCWD Service Area has a population of 36,300. The estimated annual water demand for the service area in 2010 is approximately 12,314 AF. This demand will be met by a combination of local groundwater, recycled water, and imported water from the SWP. These sources provide an estimated average annual supply of 23,422 AF (11,773 AF SWP@61% Reliability (Table 2-11) + 10,714 AF groundwater (Table 2-3) + 35 AF recycled, (Table 2-13)). The TCCWD Imported Water Project begins at Reach 16A of the California Aqueduct, upstream of the

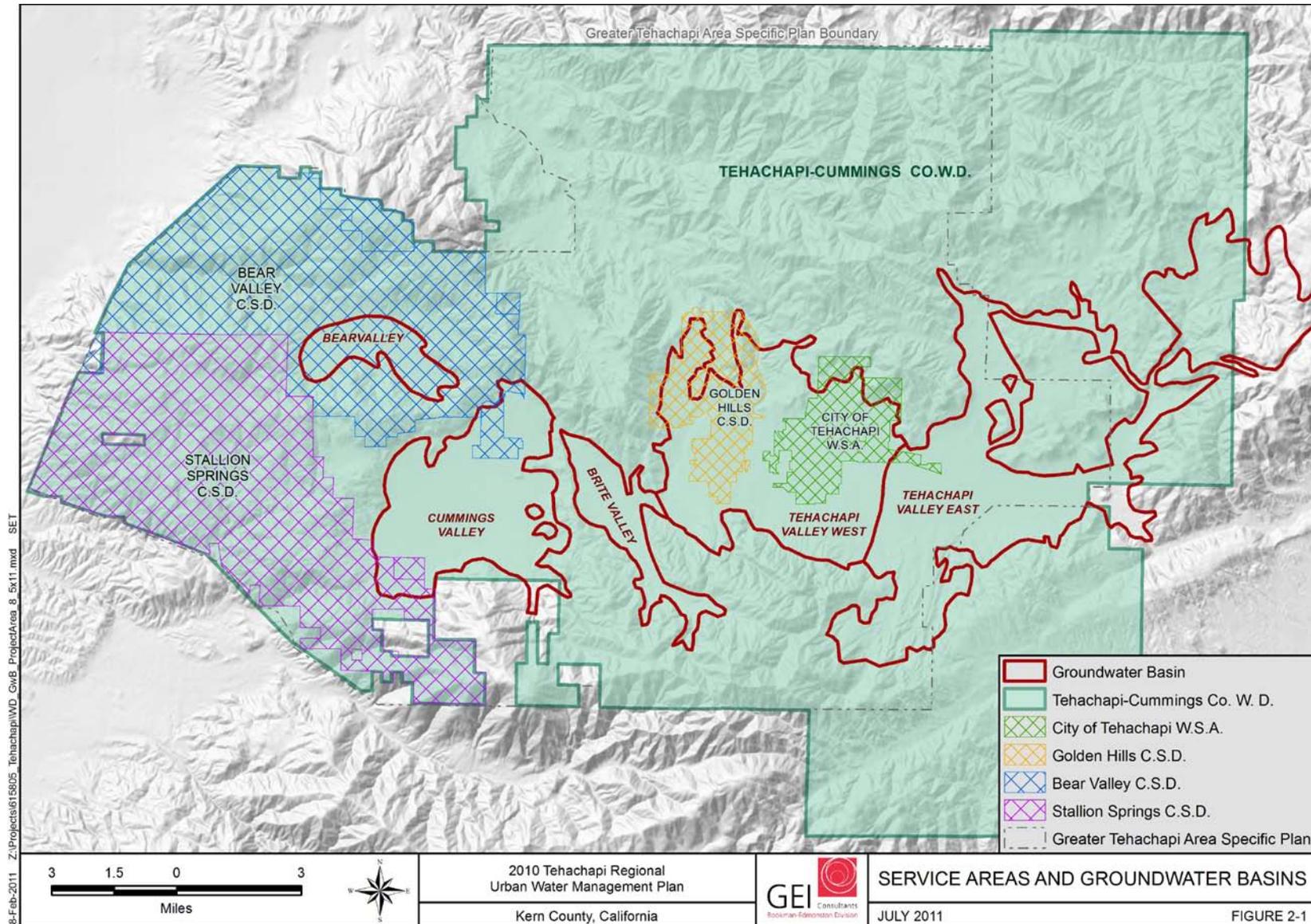
Edmonston Pumping Plant. The water is pumped up 3,075 vertical feet to Cummings Basin, where much of the water is used for agriculture and a conjunctive-use program for term Municipal and Industrial (M&I) customers. Cummings Basin is pressure zone 1, at the eastern end of Cummings Valley the water is lifted an additional 350 vertical feet to Jacobsen Reservoir, which serves as both a storage facility and a recreational lake. Once in Jacobsen Reservoir (Brite Lake) the water is served by gravity flow to its agricultural customers or M&I users. The reservoir level is pressure zone 2. A small amount of water is delivered to M&I customers in pressure zone 3, which is a high-elevation zone served by pump plant 5 in the extreme eastern portion of the district.

TCCWD water resources management responsibilities include Watermaster services for the Tehachapi, Cummings and Brite Groundwater Basins. They also convey groundwater for a small number of agricultural and municipal customers, and direct surface water deliveries to some small number of agricultural customers.

In addition to the four urban agencies, there are a number of other entities within the Tehachapi-Cummings Service Area that use the local groundwater. These local groundwater pumpers include agricultural users, rural homes, mutual water companies, industrial facilities, public entities pumping for their own use, and the CCI. These entities pump from the three groundwater basins and from outside of these basins. While this RUWMP must address these entities adequately to understand their use of local groundwater, they are not parties to the RUWMP and are not expected to adopt the RUWMP.

The service area boundaries for TCCWD and the primary retail agencies are illustrated in Figure 2-1.

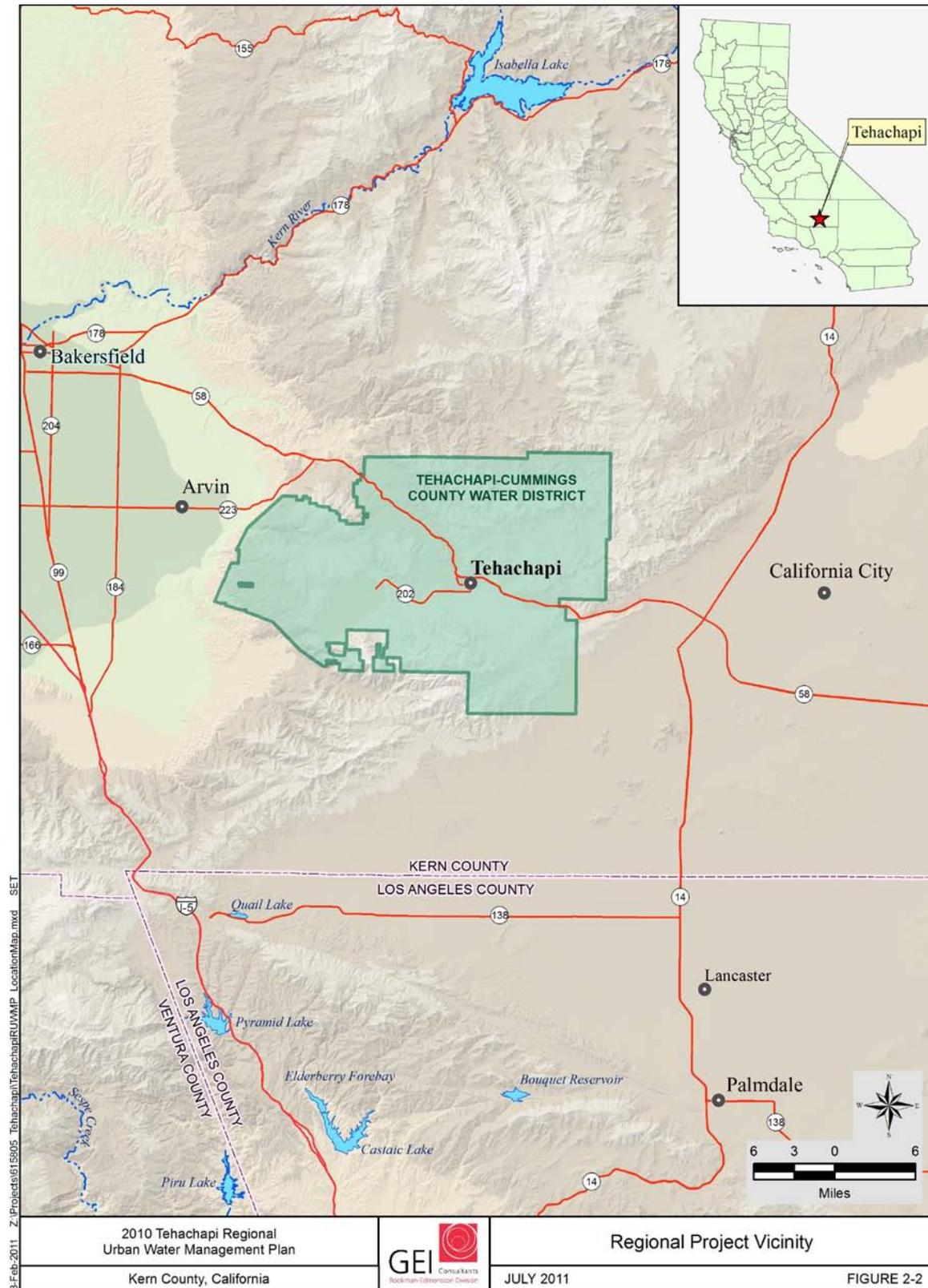
Figure 2-1: Service Areas and Groundwater Basins



2.1.2 Location

The GTA is located in southeastern Kern County along California Highway 58 between the San Joaquin Valley and the Mojave Desert. The Greater Tehachapi region is known for its four seasons, rural communities, Tehachapi Loop, electricity generating wind turbines, and proximity to Edwards Air Force Base. The GTA is located in the Tehachapi Mountains between Bakersfield and Mojave in Kern County, California. The City of Tehachapi is located 35 miles (56 km) east-southeast of Bakersfield at an elevation of 3,970 feet (Figure 2-2). Mountains surrounding the GTA are nearly 8,000 feet in elevation with several high peaks, such as, Double Mountain (7,960') south of Tehachapi Basin, Cummings Mountain (7,760') south of Cummings Basin and Bear Mountain (6,913') north of Bear Valley Basin. Much of the GTA's native water originates as snow on these mountains.

Figure 2-2: Regional Project Vicinity



2.1.3 Demographics

Law

10631

A plan shall be adopted in accordance with this chapter that shall do all of the following: (a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. 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 and shall be in five-year increments to 20 years or as far as data is available.

In April 2010, Bear Valley CSD serviced a population of 5,172. Currently, there are 3,613 assessable parcels, 2,874 water service connections, and 468 sewer service connections. The population density was 132 people per square mile. In 2010, there were approximately 2,600 housing units at an average density of 67 per square mile.

In April 2010, the City of Tehachapi serviced a population of 8,673. Currently, there are 2,965 water service connections, and 2,850 sewer service connections.

In April 2010, Golden Hills CSD serviced a population of 8,656. Currently, there are approximately 4,000 assessable parcels and 2,777 water service connections served by Golden Hills CSD. There are also 287 sewer service connections served by the Golden Hills Sanitation Company (GHSC).

In April 2010, Stallion Springs CSD serviced a population of 2,488. Currently, there are 2,510 assessable parcels, 1,175 water service connections, and 325 sewer service connections.

In addition, it is estimated that the population of the GTA not residing in one of the four service territories listed above is 11,311 as of April 2010, consisting of 5,570 persons residing in the county portion of the GTA and 5,741 inmates at the CCI.

All of the population figures for April 2010 are taken from the recently-released U.S. Census.

2.1.4 Land Use

The GTA relies on Kern County's General Plan regarding Land Use. The County's Land Use, Open Space, and Conservation Elements of the General Plan address physical and environmental constraints throughout Kern County. The recently adopted GTASP provides additional guidance for land use decisions.

Land use within the region is primarily agriculture, which is a major industry in the GTA and Kern County. The County's General Plan states that agriculture has been, and will continue to be, vital to the economy of Kern County. Historically, the GTA is known for fruit orchards, cattle ranching, sod farming, and organic farming. Current crops (including organically grown

crops) include apples, peaches, pears, carrots, lettuce, broccoli, onions, sugar beets, lilacs, grapes (winery), oats, and turf sod. Current total crop acreage is 3,184.7 acres. The recently adopted GTASP provides additional guidance for land use decisions.



There are also large cattle/horse ranches and an ostrich farm. Irrigated acreage in cultivation is approximately 2,897 acres. Non-irrigated acreage in cultivation is approximately 269 acres.¹ Most farming occurs in the Cummings Valley portion of the GTA. Overall, agricultural land use designations under the General Plan equal approximately 62 percent or 109,000 acres of the total 176,000 acres in the GTA.

Commercial land within the region consists of the following land use types, which are consistent with the land use designations in the GTASP. These include: business parks, community commercial, neighborhood commercial and regional commercial. Public facilities land use consists of open space, parks, airports, and public buildings such as schools, police and fire stations, local government offices, and a correctional institution.

Given Kern County's current Land Use Plan, it is prudent to verify the impacts to the region's water demands and should be developed in accordance with the Kern County's General Plan and the GTASP, so as to achieve planning horizon consistency.

This RUWMP was prepared in coordination with Kern County planning staff. The Final Kern County GTASP (October 2010), the Final Existing Conditions Report – GTASP Water Supply & Sewer Availability, and the GTASP Water Supply Assessment were also referenced.

2.1.5 Climate

Tehachapi is known for its four-season climate, which can be considered special in California. The wet season is generally November through May, although thunderstorms are likely during the summer. Average temperatures range from 87 °F (30.6 °C)/57 °F (13.9 °C) in July to 51 °F (10.6 °C)/30 °F (-1.1 °C) in January. The area typically collects 15-20 inches of snow each winter. There is an average of 31.1 days with highs of 90 °F (32 °C) or higher and an average of 94.8 days with lows of 32 °F (0 °C) or lower annually.

The highest recorded temperature was 105 °F on July 27, 1934. The lowest recorded temperature was -4 °F on January 14, 1932, and December 3, 1958. Annual precipitation averages 11.08 inches (data specific to Tehachapi Valley Floor – DWR monitoring station) and

¹ Tehachapi Resource Conservation District. "RCD – Watershed Information Sharing Project for Tehachapi Conservation District." <http://www.carcd.org/wisp/tehachapi/index.htm> (January 24, 2008).

there is measurable precipitation on average of 42 days annually. The wettest year was 1983 with 27.77 inches and the driest year was 1989 with 4.30 inches. The most precipitation in one month was 11.59 inches in March 1983. The most precipitation in 24 hours was 3.40 inches on March 1, 1983. The snowiest year was 1967 when 62.0 inches fell. The most snow in one month was 44.0 inches in January, 1933. Climate data specific to the Tehachapi area is shown in Table 2-1.

Table 2-1: (DWR Table 3) Climate

	Jan	Feb	Mar	Apr	May	Jun
Standard Monthly Average E_t ¹	1.55	2.24	3.72	5.10	6.82	7.80
Average Rainfall (inches)	2.14	1.94	2.36	0.71	0.46	0.12
Average Temperature (Fahrenheit)	41.80	43.60	45.90	50.40	57.70	66.00
	Jul	Aug	Sep	Oct	Nov	Dec
Standard Monthly Average E_t ¹	8.68	7.75	5.70	4.03	2.10	1.24
Average Rainfall (inches)	0.08	0.28	0.22	0.55	1.19	1.46
Average Temperature (Fahrenheit)	72.40	71.40	65.70	56.60	47.10	41.70

¹ E_t data from California Department of Water Resources, California Irrigation management Information System, Reference Evapotranspiration Zones, November 2005. Standard Monthly Average E_t is for Zone 14, Mid-Central Valley, Southern Sierra Nevada, Tehachapi & High Desert Mountains.

2.1.6 Historical and Projected Population

The region’s population has grown from approximately 28,400 to approximately 35,000, an increase of about 23 percent, 2.9 percent per year between 2000 and 2008. As of 2010, the population is 36, 300, an increase of less than 2 percent per year for the past two years. In response to this growth, the County of Kern is updating the planning and environmental information for most of the unincorporated portions of the GTA. The newly updated GTASP will allow the County to identify and coordinate implementation strategies and policies for future land uses by balancing the competing social, economic, resource and environmental factors for any future growth in the region.

Table 2-2 and Figure 2-3 illustrates the population projections for each of the agencies and the total for the region, as provided by each agency. As a check, they were compared to projections provided by the Kern Council of Governments (COG) for the Greater Tehachapi Regional Service Area (RSA) and by the Kern County Planning Department. From 2010 through 2035, the Kern COG projections are within 1.7 percent of the TCCWD projections. Kern COG does not include a 2040 projection. The TCCWD projections are used in this investigation. As of January 2010, Kern County Planning used a 2.0 percent rate of growth for the current GTASP effort. The projections in Table 2-2 average 1.25 percent annual population growth over the 30-year period for the region.

Figure 2-3: Population Projections

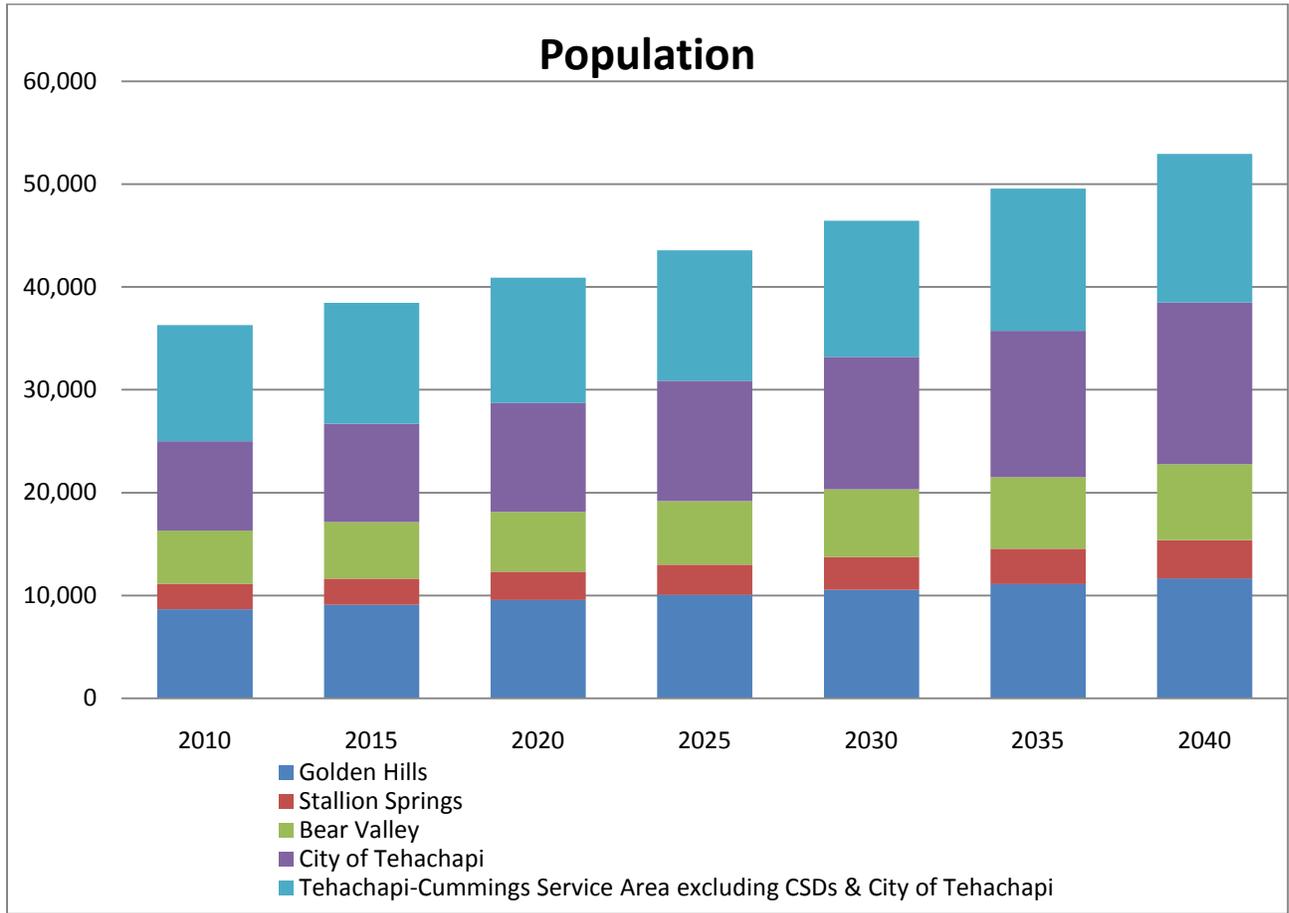


Table 2-2: (DWR Table 2) Population of Tehachapi-Cummings Service Area

	2010	2015	2020	2025	2030	2035	2040
Community Service Districts and City of Tehachapi							
Golden Hills ¹	8,656	9,098	9,562	10,049	10,562	11,101	11,667
Stallion Springs ²	2,488	2,551	2,748	2,960	3,189	3,436	3,701
Bear Valley ³	5,172	5,490	5,827	6,185	6,566	6,969	7,397
City of Tehachapi ⁴	8,673	9,576	10,572	11,673	12,888	14,229	15,710
Tehachapi-Cummings Service Area Excluding CSDs & City of Tehachapi ⁵	11,311	11,741	12,205	12,705	13,243	13,823	14,447
Total	36,300	38,455	40,914	43,573	46,447	49,557	52,923

¹ Golden Hills CSD 2010 population per 2010 census. Projection at 1.0%/year.

² Stallion Springs 2010 population per 2010 census. Projection at 0.5%/year until 2015, then at 1.5% after 2015.

³ Bear Valley CSD population per 2010 census. Projection at 1.2%/year with a cap of 8,000.

⁴ City of Tehachapi population per 2010 census. Projection at 2.0%/year.

⁵ Includes 5,741 inmates at the CCI, Tehachapi. No expansion of prison is anticipated. Remaining population projected to grow at 1.5%/year.

These projections were compared with projections for the GTA provided by Kern County. The GTA covers a larger geographic area than the TCCWD Service Area, but the differences in population and projected population are quite small. Between 2010 and 2035 the variation is less than 2 percent.

2.2 Water Supply

The UWMPA requires that the RUWMP include a description of the agency’s existing and future water supply sources for the next 20 years. The description of water supplies must include detailed information on the groundwater basin such as water rights, determination if the basin is in overdraft, adjudication decree (if applicable) and other information from the groundwater management plan (if available).

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

- (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five –year increments (to 20 years or as far as data is available), (a). 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:
 - (b) (1) A copy of any groundwater management plan adopted by the urban water supplier....
 - (b) (2) A description of any groundwater basin or basins from which the urban supplier pumps groundwater. For those basins for which a court or board has adjudicated the rights to pump groundwater a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether or the department has identified the basin or basins as overdrafted....

The sources of water supply to the TCCWD Service Area are imported water from the SWP; runoff from local watersheds; groundwater from the Bear, Brite, Cummings and Tehachapi groundwater basins, groundwater from non-adjudicated areas, and wastewater effluent.

2.2.1 Local Watersheds

The sources of local surface water supply to the TCCWD Service Area are from runoff from Cummings and Tehachapi watersheds.

2.2.1.1 Tehachapi Watershed

The Tehachapi Watershed contains 50.6 square miles or 32,420 acres. Elevations within the watershed range from 3,800 feet to 7,960 feet above sea level.

The drainages within the watershed include Brite Creek, Water Canyon Creek, Antelope Creek, and Blackburn Creek. Tehachapi Creek receives flows from Brite Creek and Water Canyon and drainages to the north, and flows westward from Tehachapi Valley. Both Antelope and Blackburn Canyon Creek watershed drainages are now controlled by flood control reservoirs and channels which facilitate improved water conservation and recharge. Surface water in the eastern portion of the adjudicated Tehachapi Basin drains to Proctor Lake, which during unusually high-flow events can spill through Proctor Gap to Cache Creek, which flows eastward to the Mojave Desert.



The DWR considers the groundwater basin in Sand Canyon, east/northeast of Tehachapi, to be a part of the eastern Tehachapi Basin; however, this groundwater basin was excluded from the Judgment. This portion of the groundwater basin drains directly to Cache Creek and east to the Mojave Desert.

2.2.1.2 Cummings Watershed

The Cummings Basin is bounded on the North by the Sierra Nevada Mountains and on the South by the Tehachapi Mountains.

Alluvium in the Cummings Valley is represented by alluvial fan and floodplain material deposited by Cummings Creek to the south, Chanac Creek to the east, and intermittent streams to the north. The alluvium is derived predominantly from granitic rock and a smaller metamorphic rock source along the basin's east margin. The depth to basement increases from approximately 50 feet in the southern valley to 450 feet at the northeastern boundary of the valley floor (Michael 1962).

2.2.2 Existing Groundwater Sources

Table 2-3: (DWR Table 5) Groundwater Rights

Basin Name	Pumping Right
Tehachapi Basin Allowed Pumping Allocation¹	
Golden Hills CSD Allowed Pumping Allocation	866
City of Tehachapi Allowed Pumping Allocation	1,822
Other Pumpers	2,836
Tehachapi Basin Allowed Pumping Allocation ¹	5,524
Cummings Basin, Natural Safe Yield²	4,090
Brite Basin, Natural Safe Yield²	500
Bear Valley Basin Safe Yield³	600
Groundwater Supply in Tehachapi-Cummings Service Area	10,714

¹ The Tehachapi Basin Adjudication uses the term "Allowed Pumping Allocation". In addition to their Allowed Pumping Allocation, Golden Hills and Tehachapi have entered leases with other pumpers.

² Cummings Basin and Brite Basin have been adjudicated. But, without a physical solution.

³ Operating experience of Bear Valley CSD.

2.2.2.1 Groundwater Basins

The Cummings and Tehachapi basins are relatively flat at an altitude of approximately 4,000 feet. The Tehachapi Mountains rise 7,700 feet south of the Cummings Basin and 8,000 feet to the south of the Tehachapi Basin.

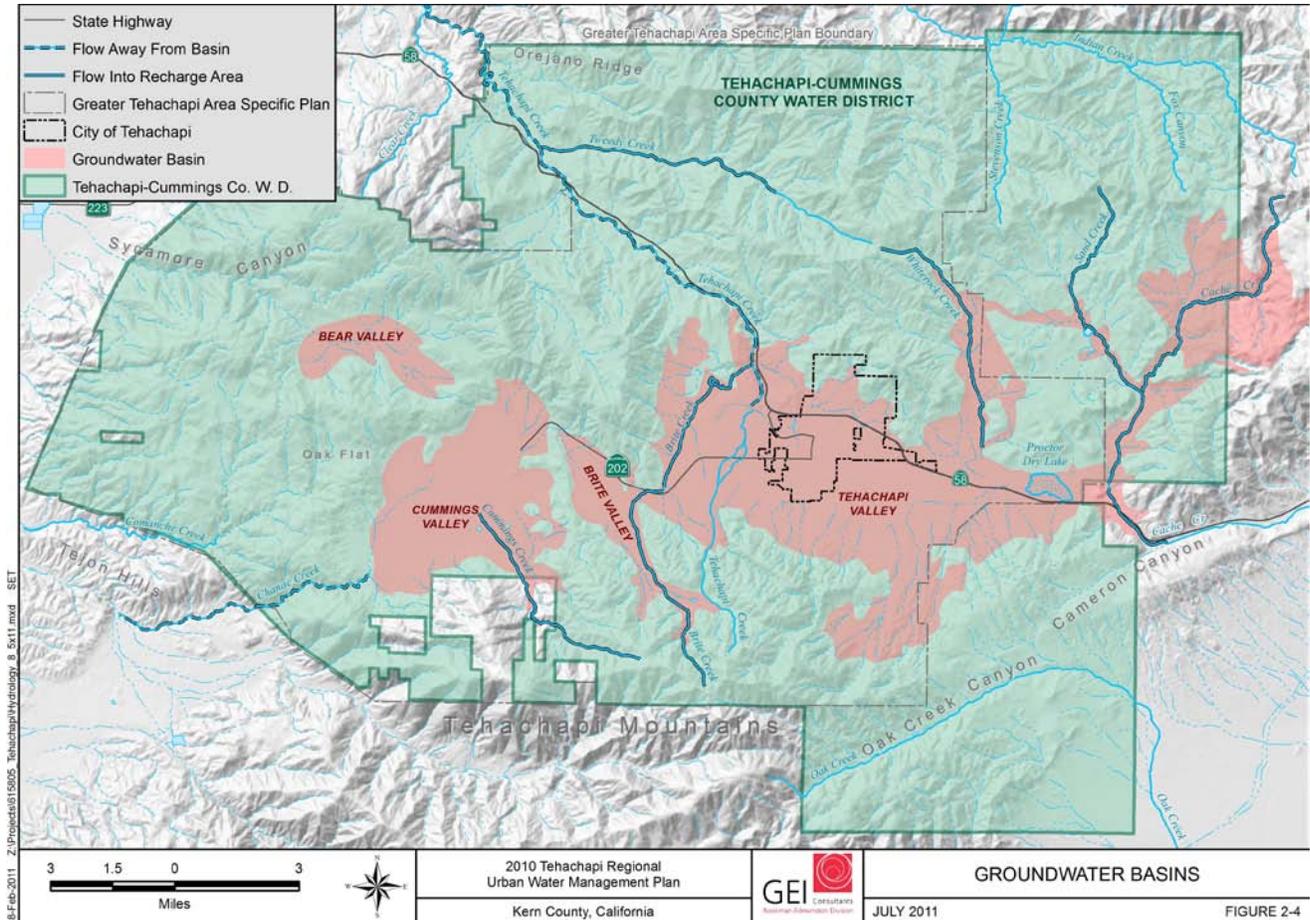
The Cummings, Brite, and Tehachapi groundwater basins (See Figure 2-4) are all bounded by the Tehachapi Mountains to the south and the Sierra Nevada to the north. The primary water-bearing units are the Pleistocene to Recent alluvial fans around the margins of the basins deposited by creeks draining the Tehachapi Mountains and the Sierra Nevada, and flood plain deposits in the centers of the basins (Dibble and Warne, 1970). The sediments are cobbles, gravels, sands, silts, and clays with the coarser materials in the alluvial fans and the finer sediments in the floodplains. In 1966, lawsuits were filed in Superior Court for three of the groundwater basins within the TCCWD Service Area: Cummings, Brite, and Tehachapi. Today, TCCWD serves as the watermaster for these basins. A portion of the eastern Tehachapi Basin is outside of the adjudicated boundaries.

An additional basin, Bear Valley Basin is managed by the sole pumper in the basin, Bear Valley CSD. Water within this basin is produced by shallow alluvial wells as well as deeper hard-rock wells in the underlying and surrounding mostly granitic structures.

Bear Valley CSD, as required by AB 3030, has its own Groundwater Management Plan for the Bear Valley Basin. However, because the other basins are adjudicated basins no groundwater management plans are required nor exist.

The 2003 update of Bulletin 118 does not identify Tehachapi (Basin 5-28), Cummings (Basin 5-27), Brite (Basin 5-80) or Bear Valley (no basin number) basins as overdrafted, nor does it project that these basins will become overdrafted if present management conditions continue.

Figure 2-4: Groundwater Basins



2.2.2.2 Tehachapi Basin

The Tehachapi Basin surface is the Tehachapi Valley floor, encircled on the west by the foothill area of the low-lying ridge running between the Tehachapi Mountains on the south, the Sierra Nevada on the north, and on the east by a ridge of the Sierra Nevada and the Tehachapi Mountains separated by the Proctor Gap, a subsurface barrier ridge. The Tehachapi Groundwater Basin is generally elongated east and west approximately nine miles wide and approximately oval-shaped and five miles at its widest. The Tehachapi Groundwater Basin may be pictured as a bowl, the bottom and the sides of which are composed of impervious material.

The bowl is filled with heterogeneous pervious alluvium deposited through geologic time by the streams carrying eroded materials from the surrounding watershed areas.

The Tehachapi Basin is an adjudicated groundwater basin. The base water rights of the basin were established by the California Superior court case 97210 (The Tehachapi Basin Case). The physical solution to meeting the parties' water needs, included exchange pool provisions that are available, and were established by filing the "Amendment to Judgment" in the Tehachapi Basin Case 97210. This created "allowed pumping allocations" for each party and the party's domestic rights which restricted total annual extractions within the Tehachapi Basin to the safe yield of 5,500 AF.

In addition to restriction of groundwater extractions, the Judgment and Amendment prohibit the export of native groundwater to lands outside the Tehachapi Basin and surface water lands outside the Tehachapi Watershed.

TCCWD has contracted with Fugro, to develop a further understanding of the Tehachapi Basin. In June 2009, Fugro completed a report entitled, "Tehachapi Groundwater Basin Study—Final Report" (Fugro 2009A). The Fugro report determined that the perennial yield of the Tehachapi Groundwater Basin is approximately 5,200 AFY. For purposes of this plan, we will use the adjudicated safe yield of 5,500 AFY.

Deliveries of SWP to agricultural and M&I users, and for artificial recharge in conjunctive use programs from 2001 to 2007 are presented in Table 2-4 below (Fugro 2009A). The Fugro report divides SWP deliveries to Tehachapi Basin into several categories "M&I SWP Deliveries", "Agriculture SWP Deliveries," and "Conjunctive Use SWP Deliveries."

Table 2-4: Historical SWP Deliveries, SWP Allocation and Conjunctive Use in the Tehachapi Basin

Water Year	TCCWD Total Net SWP Deliveries (AF)	Entitlement Percentage of TCCWD SWP Contract (%)	Tehachapi Basin Total SWP Deliveries (AF)	Tehachapi Basin Percentage of Total TCCWD Deliveries (%)	Tehachapi Basin M&I SWP Deliveries (AF)	Tehachapi Basin Agriculture SWP Deliveries (AF)	Tehachapi Basin Conjunctive Use SWP Deliveries (AF)
2001	3,534	39	967	27.4	123	844	0
2002	6,238	70	1,260	20.2	267	993	0
2003	6,553	90	2,113	32.5	317	1,554	262
2004	6,768	65	1,138	16.8	418	720	0
2005	5,731	90	1,321	23.1	209	855	257
2006	5,258	100	1,028	19.6	263	519	246
2007	6,964	60	1,948	28.0	438	1,074	436
2008	5,352	35	1,129	21.1	441	638	50
2009	4,626	40	1,121	24.2	400	233	488
2010	5,401	50	1,039	19.2	384	450	205
Average	5,643	64	1,306	23.2	326	788	194

Note: SWP deliveries by TCCWD account for losses in lake storage due to deep percolation through the lake bottom and evaporation.

The Tehachapi Groundwater Basin is recharged with imported water (SWP) at two locations:

1. **Antelope Basin:** Recharge at Antelope Basin is intended to augment the groundwater supply of the City of Tehachapi and the Golden Hills CSD. (Fugro 2009A)
2. **Water Canyon:** Recharge at China Hill is intended to augment the groundwater supply of Golden Hills CSD. (Fugro 2009A)

Use of Tehachapi Basin Groundwater

Groundwater is pumped from the Tehachapi Basin by M&I and agricultural users in accordance with the adjudication. In addition, the Judgment allows temporary and permanent transfers of allowed pumping allocations occur.

Other Users

Other users of the Tehachapi Basin groundwater supplies include agricultural, rural residential, and limited M&I.

Water Quality Issues in the Tehachapi Basin

Considerable uncertainty exists in the quantification of historical and future nitrate inputs to Tehachapi Basin. Groundwater nitrate measurements are available only from a small number of wells that have been sampled since the early to mid 1990s. During recent construction of a nitrate transport model, it was concluded that insufficient historical nitrogen loading and

groundwater nitrate monitoring data existed to adequately develop the model. A groundwater nitrate monitoring program has been proposed for the Tehachapi Basin (Fugro 2009A).

Potential sources of nitrate included effluent from the City's wastewater treatment plant (WWTP), effluent from the GHSC's WWTP, wastewater discharge from septic tanks, existing nitrates in the soils beneath the City's former wastewater lagoon, and nitrates from agricultural and domestic fertilizer applications.

2.2.2.3 Cummings Valley Basin

The Cummings Valley Basin surface is generally the Cummings Valley floor, bordered on the south by the Tehachapi Mountains, on the north by the Sierra Nevada, with low-lying ridges connecting these two ranges on the east and west sides of the basin. The Cummings Basin is generally elongated in a northeasterly manner, approximately six miles at the longest point and four miles at the widest point.

Inflow of surface and subsurface water from the surrounding watershed including Cummings Creek replenishes the basin. Surface water from Chanac Creek draining a portion of the Brite Valley also flows into the Cummings Groundwater Basin. The annual safe yield of the basin was established in the Judgment, California Superior Court, Kern County, Case No. 97209, of the Cummings basin to be 4,090 AFY.

Use of Cummings Basin Groundwater

While Cummings Basin is adjudicated, the adjudication did not include implementation of a physical solution. Thus, while a safe yield was established, there is no restriction on pumping for use within the basin (overlying use). The groundwater cannot be exported from the basin. The CCI, and various private entities, farms and residences pump from the basin for overlying use. A small private water company, Fairview Water Company, LLC, operates in the northwest corner of the basin. Stallion Springs CSD and Bear Valley CSD purchase imported water from TCCWD. TCCWD delivers this water to direct recharge in the basin. Stallion Springs CSD and Bear Valley CSD produce this water from wells located in Cummings Basin and export it to the portions of their service areas that are outside of the basin.

TCCWD also makes direct deliveries to agricultural users overlying the basin. These deliveries are made with the intent of accomplishing in-lieu recharge. Prior to 1995, TCCWD was able to make these deliveries for less than the cost of pumping groundwater, and the basin was kept in balance. Since then, agricultural users have been able to produce groundwater for less than the cost of purchasing imported water which cost has increased as a result of higher natural gas prices. As a result of the fact that some farmers preferentially pump groundwater rather than purchasing SWP water due to the cost differential, Cummings Basin is now in overdraft. Extractions have exceeded the safe yield in four of the past nine years and hydrographs of key wells showed that the water table was dropping and had been doing so for the past ten years. In addition, the basin is increasingly being used for M&I customers through a conjunctive use

program. Spreading losses in this program have not been recognized over the years. This has also contributed to the depletion of the basin. Beginning in 2010, a 6 percent spreading loss factor has been added to TCCWD's conjunctive use programs in both Tehachapi and Cummings Basin.

Water levels in the central portion of the basin have dropped about 50 feet in the past ten years (some of this may be due to localized cones of depression). The groundwater production in 2009 was 4,406 AF, exceeding the adjudicated safe yield of 4,090 AF. (Tehachapi-Cummings 2009B)

TCCWD anticipates the development and implementation of a program to correct this overdraft. A key to the anticipated program is a new rate structure which recognizes the lower delivery costs for SWP water delivered to pressure zone 1 (Cummings Valley) prior to being lifted to Jacobsen Reservoir, and providing adequate income from M&I customers to finance the replacement of spreading losses. It is anticipated that additional work on the existing groundwater model will be initiated during fiscal year 2011-2012. The remainder of this investigation is predicated on this program being implemented and correcting the overdraft. Preliminary Groundwater Model findings estimate that spreading losses in Cummings Valley average 4.8 percent which is rounded up to 6 percent based on the expectation that losses would be higher as more water is recharged to meet greater demands. The basin is recharged with imported water (SWP) at two locations:

1. **Chanac Creek Recharge Site:** A 10,057-foot stretch of Chanac Creek that spills into a 19-acre percolation pond at the north east end of the Basin. Based on analysis of one-year's operations, recharge losses were determined to be 1.68 percent plus additional potential losses via stream seepage. (Fugro 2009B)
2. **Cummings Pond Recharge Site:** A 14.3-acre site located in the south-central region of the Basin. During the 2009 water year about 445 AF of imported water was recharged into this site. Based on analysis of one-year's operations, recharge losses were determined to be 13.18 percent. (Fugro 2009B)

Other Pumpers

Other users of the Cummings Basin groundwater supplies include agricultural and M&I users such as the CCI. The CCI pumps 565 AFY as an overlying user in Cummings Basin. Any amounts greater than this are purchased from TCCWD through the conjunctive use program, similar to Bear Valley CSD and Stallion Springs CSD. CCI consumes 900 to 1,000 AFY.

Water Quality Issues in the Cummings Basin

Groundwater quality characterization in the Cummings Basin is predominately of the calcium-bicarbonate type (Stetson 1969). The average electrical conductivity (EC) of groundwater is 530 microsiemens ($\mu\text{mhos/cm}$) and a range of 470-640 based on data from seven wells. The average total dissolved solids (TDS) is 344 milligrams (mg/L). With respect to impairments there are some existing issues related to high levels of nitrates. Currently, one of Bear Valley CSD's wells are off-line due to high levels of nitrates. Perchlorate contamination in Cummings Basin is

actively and successfully managed without loss of water supply. Active monitoring and mitigation programs for MTBE and perchlorate in surface soils are in place to monitor and mitigate against potential future water quality impacts.

2.2.2.4 Brite Valley Groundwater Basin

The Brite Valley Groundwater Basin is a northwest to southeast trending valley basin bounded on the north by the Sierra Nevada and on the south by the Tehachapi Mountains, with low-lying ridges connecting the two ranges on its east and west sides. The elevation ranges from 4,200 to 5,000 feet. The northeast portion of the basin is drained by Brite Creek which flows into the Tehachapi Valley. The northwest portion of the basin is drained by Chanac Creek which flows into Cummings Valley. Average precipitation values range from 10 to 14 inches per year.

The adjudication of the Brite Basin determined the “natural safe yield” of the basin to be 500 AF and the “base water rights” of pumpers to be 631 AF. Current groundwater production totals approximately 328 AF for agricultural and M&I uses. At this time, groundwater levels are stable and no restrictions on groundwater production have been established within the basin.

SWP water is distributed from Jacobson Reservoir (Brite Lake) which is located in Brite Basin. A portion of the water lost due to seepage from the lake is captured by wells operated by TCCWD and returned to Jacobsen Reservoir.

Use of Brite Valley Basin Groundwater

The use of groundwater derived from the Brite Valley Groundwater Basin is primarily groundwater pumping. Pumping from this basin is mainly from several agricultural and small M&I users.

Water Quality Issues in the Brite Valley Basin

Characterization of the Groundwater in the Brite Valley basin is of the calcium-bicarbonate type with an EC ranging between 550 and 770 $\mu\text{mhos/cm}$ (Michael 1962). With respect to impairments, there are no groundwater quality impairments suggested by the references obtained.²

2.2.2.5 Bear Valley Basin

Bear Valley Basin is located entirely within the limits of Bear Valley Springs. Thus, Bear Valley CSD is in complete control of pumping from the Basin.

While the Bear Valley Basin is quite small and responds quickly to precipitation, the production of the basin is limited by the productivity of its hydrology. Bear Valley CSD’s Groundwater

² California Department of Water Resources, San Joaquin District. Well completion report files. *California’s Groundwater – Bulletin 118* by DWR.

Management Plan estimates that the safe yield of their alluvial wells is 200 AFY and their hard-rock wells is 400 AFY for a total safe yield of 600 AFY.

This water is Bear Valley CSD's least expensive supply and is pumped preferentially. Some of the wells in the groundwater basin which have substandard water quality are pumped for irrigation.

2.2.3 Adjudication

California does not have a statewide program to manage groundwater or a mandatory State groundwater management statute. Groundwater management in California is a local responsibility accomplished under the authority of the CWC and a number of court decisions.

The need for imported water to supplement the Tehachapi area's dwindling groundwater supply was foreseen in 1947. Each of the previously described basins (except Bear Valley Basin) is adjudicated under California Superior Court Order, as follows.

2.2.3.1 Tehachapi Basin

California Superior Court, Kern County, Case No. 97210 was filed 1971. By 1972, the Tehachapi Basin was severely depleted. In 1973, the Amended Judgment (see Appendix I) was filed and determined the following:

- Safe yield is 5,500 AFY;
- Initial Base Water Right of 8,200 AF;
- Established an Annual Allowed Pumping Allocation of 5,524 AF of the Initial Base Water Right (prescriptive right);
- Provided for domestic users to pump up to three AFY (not reduced);
- Appointed TCCWD as Watermaster and designated duties, powers, and responsibilities;
- Established Exchange Pool as part of the physical solution;
- Established necessary rules and regulations;
- Under continuing jurisdiction of the Court; and
- Injunction against exporting water.

2.2.3.2 Cummings Groundwater Basin

The Case of "Tehachapi-Cummings County Water District, a body corporate and politic, Plaintiff vs. Frank Armstrong, et al., Defendants", Kern County Superior Court No. 97209, went to trial in December 1970. The case was duly and regularly continued further for trial to March 1, 1971. A Judgment was filed on March 6, 1972, whereupon defendant, State of California and its subsidiary departments and agencies appealed. A partial reversal followed by the Court of Appeal, 49 Ca. App. 3rd, 992 (1975), as modified in 50 Cal. App. 3rd, 528 A (1975), and has been remanded back to the trial court. Further hearing before the trial court was

held on April 9, 1976 and the hearing was continued to allow the parties' time to review data and make further preparations.

Under the provisions of said Judgment, which appointed the TCCWD as Watermaster for the Cummings Basin, it is uncertain when the Watermaster Report is due with the Court. The Findings of Fact indicate that the period of administration and enforcement of the Judgment should be on the water year (October 1 through September 30). However, due to the method of collection of available data, a calendar year appeared to be a more desirable time period for administration and enforcement of the Judgment. The Watermaster submits annual reports to the Court on a calendar year basis. The Judgment determined the following:

- Safe Yield is 4,090 AFY;
- Appointed TCCWD as Watermaster and designated duties, powers, and responsibilities;
- Injunction against exporting water;
- Under continuing jurisdiction of the Court; and
- Overlying Rights.

2.2.3.3 Brite Valley Groundwater Basin

California Superior Court, Kern County, Case No. 97211, was filed in 1970. The Judgment determined the following:

- Safe Yield is 500 AFY;
- Overlying rights;
- No injunction against pumping; and
- Under continuing jurisdiction of the Court.

2.2.4 Surface Water

2.2.4.1 Imported SWP Water

The SWP is the only source for imported water in the GTA. The main transport structure of the SWP is the California Aqueduct, which conveys water from Northern California to Southern California. This facility is managed by the DWR. The aqueduct is an artificial concrete-lined water transport channel that is 444 miles in length.

TCCWD receives SWP supplies through executed contracts with KCWA, which is one of the 29 agencies having contracts with DWR for water supplies. The Master Contract is between DWR and KCWA for additional SWP supply (Master Contract).

On December 16, 1966 TCCWD executed two contracts with KCWA for access to the SWP supplies. One contract is for 5,000 AF of agricultural water (4,300 firm and 700 surplus), and the second is for 15,000 AF of M&I water.

On June 8, 1971, in a special district election, 65 percent of the TCCWD voters turned out to support obtaining a \$6.5 million federal loan under Public Law 984 and a \$2.5 million general obligation bond for construction of the pipeline and pump stations to deliver California SWP water to the GTA. The election passed by a 91 percent margin.

However, due to conditions TCCWD cannot expect 100 percent delivery of their Table A allocation each year. Based on the State Water Project Reliability Report 2009³, erosion in the ability to deliver SWP continues, with the dominant factor for these reductions being restrictive operational requirements contained in the federal biological opinions, and the forecasted effects of climate change.

In addition, TCCWD contract with KCWA for agricultural water includes 700 AF of additional water supplies. Under short-term and temporary drought conditions and reductions in allocations of SWP it is anticipated that there will not be additional water readily available to TCCWD.

Uses of Imported Water

All payments to KCWA for imported SWP water are funded with special property taxes. System maintenance costs, including labor, are paid from general property taxes. The other costs of making deliveries – predominately power costs for pumping and conveyance through the Tehachapi-Cummings pipeline – are recovered by charging customers for the water delivered. Deliveries



to Bear Valley CSD, Stallion Springs CSD, Golden Hills CSD and the City of Tehachapi are accomplished via the groundwater basin. That is, the imported water is recharged into one of the groundwater basins via percolation ponds or drainage channels and then pumped out by the municipal agencies. Making the deliveries in this manner provides storage and eliminates the cost of surface water treatment plants.

Historically, TCCWD has never imported more than 45 percent of its SWP “Table A” Amount. Each SWP contract contains a SWP “Table A”, which states the maximum annual delivery amount from the SWP over the period of the contract. These annual amounts usually increase over time. Most contractors’ SWP Table A Amounts reached a maximum in 1990. The total of all contractors’ maximum SWP Table A Amounts is 4,173 million acre-feet (maf) per year. SWP Table A is used to define each contractor’s portion of the available water supply that DWR will allocate and deliver to that contractor.

³ 2009 State Water Project Delivery Reliability Report (2009 Report, August 2010)

The SWP Table A amounts in any particular contract are not guarantees of annual delivery amounts but are used to allocate individual contractors' portion of the total delivery amount available.

Imported SWP is pumped up from the California Aqueduct into the GTA where it is:

- Delivered directly to agricultural users overlying the Cummings, Tehachapi, and Brite Basin Areas.
- Potentially delivered directly to M&I users and the CCI overlying the Cummings and Tehachapi Basin Areas. Prior to 1993, Stallion Springs CSD took direct deliveries of SWP water for surface water treatment. For a few years in the mid-1980s, Golden Hills CSD also treated direct surface water deliveries to provide a portion of their demands. CCI also operated a water treatment facility to augment supplies. None of the water treatment plants are in operation today.
- Recharged in the Cummings Groundwater Basin for ultimate use by M&I customers: Bear Valley CSD, Stallion Springs CSD and the CCI. Evaporation losses from this recharge are estimated at 6 percent (Tehachapi-Cummings, 2010).
- Recharged in the Tehachapi Basin for ultimate use by M&I Customers: the City of Tehachapi and Golden Hills CSD. Evaporation losses from this recharge are also estimated at 6 percent
- Captured return flow water from agricultural application of SWP water is owned by TCCWD and can be delivered anywhere in their district for M&I and agricultural customers. The district claims ownership of return flows, which are calculated as 15 percent of all metered imported water applied for agricultural use.
- Stored in Jacobsen Reservoir (Brite Lake).

Water Quality Issues with Imported Water

Surface water quality is dependent on the quality of water in the California Aqueduct. TCCWD receives imported surface water supplies from KCWA, who takes direct deliveries from the California Aqueduct.

Water samples are typically measured at 15 SWP stations and analyzed by DWR on a monthly basis to determine levels of dissolved solids and concentrations of nutrients, chlorides, sulfates, sodium, trace metals and other constituents. SWP water quality data are available electronically through DWR's internet home page (www.water.ca.gov) and reported monthly in the SWP Operations Data Report ([http:// www.omwq.water.ca.gov/monthlyreports page /index.cfm](http://www.omwq.water.ca.gov/monthlyreports/page/index.cfm)).

Yearly summaries of water quality are also available in Bulletin 132-05 (DWR 2006). Check 41 (Milepost 303) is located in the Tehachapi Afterbay, which is approximately 10 miles south of where TCCWD draws SWP supplies (Milepost 293). Samples from Check 41 are analyzed for herbicides, pesticides, and other organic substances. General characterization of the SWP water

at Check 41 shows an EC ranging between 280 and 320 $\mu\text{mhos/cm}$, nitrates at levels near 0.3 mg/L, and chloride levels near 35 mg/L.⁴

2.2.5 Groundwater Modeling Study

Local groundwater supply and conditions are examined for each of the five GTA agencies. Fugro completed a Groundwater Modeling Study in which a groundwater flow model for the Tehachapi Groundwater Basin was developed for the years 1986 to 2004. A manual calibration of the model was performed by adjusting appropriate hydraulic parameters until an acceptable match between the measured and modeled groundwater elevations was achieved. The function of the model was to calculate the groundwater elevations and groundwater storage levels in the Basin subject to transient groundwater recharge and discharge stresses. Overall, the model was effective in demonstrating measurable results of the various scenarios on groundwater levels and storage. Recommendations of additional data collection efforts were made in this study for the purpose of refining components of the hydrologic balance and for improving the groundwater model. The scenarios that were studied are identified below.

Scenario 1

Evaluated the “future baseline conditions” in the Basin; it represented a “no change” future condition in which water demands were constant from year to year (2005 to 2035).

Scenario 2

The five GTA agencies each produce as much water as is beneficially used in each of their respective service areas. Each agency accesses local groundwater in their respective basins through their own groundwater well pumping facilities as listed in Table 2-5.

Table 2-5: Local Groundwater Systems

District	Number of Wells		Number of Service Connections
	Active	Inactive	
Bear Valley Community Services District	28		2,874
Golden Hills Community Services District	15		2,777
Stallion Springs Community Services District	7	3	1,175
City of Tehachapi	7		2,965

TCCWD is the watermaster for the Cummings Basin. TCCWD watermaster has enlisted the cooperation of growers and conjunctive use pumpers in Cummings Basin to help balance the use of imported water with the use of local groundwater supplies. Stemming from this, TCCWD engaged in a Groundwater Modeling Study which consists of the development of a numerical model to simulate groundwater flow and water quality in the Cummings Groundwater Basin.

⁴ DWR Bulletin 132-05, December 2006

The model was based upon hydrogeologic data for the 21-year period of 1981-2001. The primary objective of the Groundwater Modeling Study is to develop a calibrated basin-wide numerical model of the Cummings Groundwater Basin. The overall objective of the model is to provide a tool to enhance the TCCWD's ability to manage and protect the groundwater resources within the basin. Bear Valley CSD has a similar groundwater model for Bear Valley Basin.

2.2.6 Sources of Recharge and Discharge

Groundwater recharge occurs from stream recharge, deep percolation of precipitation, treated sewage effluent, applied agricultural and municipal water, and septic tank leach fields. Deep percolation from stream runoff is the primary source of recharge. Due to arid conditions, groundwater recharge by precipitation is sporadic. Most recharge from precipitation occurs near the mountain fronts and from long duration storms. Treated wastewater from Bear Valley CSD is used for either irrigation or released into an ephemeral creek bed (Sycamore Creek). The current discharge is approximately 25 AFY to irrigation and 70 AFY to the creek. Improved operations will enable Bear Valley to put 35 AFY to beneficial use for irrigation so that only 60 AFY will be discharged to the creek. Treated water from Stallion Springs CSD's WWTP, which is secondary treated effluent, is discharged to Chanac Creek and none of it is used for any beneficial use within the GTA. Effluent from the CCI's WWTP is currently discharged to a spray field on state property. Treated wastewater from the City's WWTP is reclaimed for irrigation of alfalfa or transferred to ponds where it evaporates. Treated water from GHSC WWTP is solely ponded and not reclaimed. It is estimated that greater than 50 percent of the water delivered to a home goes to outside irrigation of lawns/trees. It is estimated that 25 percent of this municipal irrigation water percolates back into the aquifer (Summary Expert Report Phase 3 – Basin Yield and Overdraft Antelope Valley Area of Adjudication, Robert Beeby et al, July, 2010).

2.2.7 Water Supply Projections

In determining the adequacy of the water supply facilities, the source must be large enough to meet the varying water demand conditions, as well as provide sufficient water during potential emergencies such as power outages and natural disasters.

2.2.7.1 Current Supply Capacity

Standby production is required for system reliability. Under normal operating conditions, it is possible that many of the agency's smaller wells can be rotated out of service during maximum day demand (MDD) conditions due to equipment malfunctions, servicing, or for water quality concerns, without imposing shortages. However, multiple large wells cannot be rotated out without imposing shortages. To address this vulnerability, the City and Golden Hills CSD have constructed an intertie between their distribution systems, which can be activated to allow water to flow to the agency having the groundwater production problem. In 2010 Bear Valley CSD installed a large production well as a backup supply in the event that their largest production well

failed. Stallion Springs CSD has constructed two large production wells in Cummings Basin and is investigating a third.

2.2.7.2 Future Supply Capacity

The future sources of supply for the five agencies will continue to be groundwater well production and imported surface water supplies. Additional conjunctive use programs, water transfers and other programs are currently being investigated.

Potential projects and programs that have been identified by each agency to help secure future sources of supply are identified below (Kern IRWMP Project List):

- Nitrate/Perchlorate Contaminant Blending Project-New Source (Stallion Springs CSD/Fairview Ranch Estates & other users in Cummings Valley)
- Tehachapi Basin Nitrate Study (Golden Hills CSD/the City)
- Tehachapi Basin Regional Water Treatment Facility (Golden Hills CSD, TCCWD, the City, Bear Valley CSD, and Stallion Springs CSD)
- Golden Hills CSD Recycled Water Project (Golden Hills CSD/wastewater treatment facility (WWTF) – private owner)
- Golden Hills CSD/TCCWD Well Abandonment Program (Golden Hills CSD/TCCWD)
- Golden Hills CSD Urban Water Conservation Program (Golden Hills CSD/partner to be determined)
- Golden Hills CSD Wellhead Treatment Project (Golden Hills CSD)
- Tehachapi Basin East Well Field Development Program (Golden Hills CSD, the City, TCCWD)
- Public Facility Distribution Line & Nitrate Removal Program (Golden Hills CSD, the City, TCCWD)
- Public Facility Distribution Line & Nitrate Removal Program (TCCWD/the City)
- Tehachapi Regional Water Conservation Program (CUWCC BMPs)
- Cummings Valley Salt/Nutrient Management Plan (TCCWD, Bear Valley CSD, Stallion Springs CSD, CCI)
- Brite Valley Recovery Well (TCCWD, the City, Golden Hills CSD)

This RUWMP includes a projection of the agencies' supply capacity requirements through the planning horizon 2040. These projections are summarized in Table 2-6 Current and Planned Water Supplies, in five year increments.

Table 2-6: (DWR Table 4) Current and Planned Water Supplies TCCWD (AFY)

	2010	2015	2020	2025	2030	2035	2040
Tehachapi-Cummings Service Area, not including recycled water							
State Water Project (Tehachapi-Cummings CWD contracts with Kern Water Agency) ¹							
Average reliability of Table A Amount (Projected for 2010)	50.0%	60.3%	59.8%	59.3%	58.9%	58.9%	58.9%
Carryover water (from 2009)	2,000	0	0	0	0	0	0
Table A supply (Average amount delivered to Tehachapi-Cummings)	9,650	11,639	11,541	11,444	11,366	11,366	11,366
Losses in Tehachapi-Cummings System	16.4%	16.4%	16.4%	16.4%	16.4%	16.4%	16.4%
SWP Supply	8,067	9,730	9,648	9,567	9,502	9,502	9,502
Groundwater							
Cummings Basin Natural Safe Yield ²	4,090	4,090	4,090	4,090	4,090	4,090	4,090
Tehachapi Basin Allowed Pumping Allocation ³	5,524	5,524	5,524	5,524	5,524	5,524	5,524
Brite Basin Safe Yield (Adjudication)	500	500	500	500	500	500	500
Bear Valley Basin, potable and non-potable ⁴	600	600	600	600	600	600	600
Groundwater	10,714	10,714	10,714	10,714	10,714	10,714	10,714
Tehachapi-Cummings Service Area, not including recycled water	18,781	20,444	20,362	20,281	20,216	20,216	20,216

¹ SWP reliability for 2010 based on June 22, 2010 Notice to State Project Contractors. Reliability for 2015 and beyond based on Draft 2009 SWP Reliability Report data files specific to Kern County Water Agency. Supply after 2010 and 2025 before linearly interpolated from SWP Reliability Report. Supply held constant after 2025.

Tehachapi-Cummings CWD conveyance capacity limits deliveries in wet years reducing the average SWP supply by approximately 2 percent of the Table A Amount. Tehachapi-Cummings CWD is currently negotiating a possible sale to West Kern Water District. The term of the sale is three years starting with 2010. Losses of SWP through Tehachapi-Cummings CWD distribution system have historically been 16.4%.

Bear Valley CSD, Stallion Springs CSD, Golden Hills CSD and City of Tehachapi use groundwater first, then SWP. SWP supply to these entities assumed to match demand.

SWP Amount 19,300
 SWP reliability in 2009 60.91%
 SWP reliability in 2029 58.89%

² Cummings Basin Natural Safe Yield in 4,090 AF per adjudication. Per Fugro (March 2004), Cummings Basin Perennial Yield is 3,444 AF (3,644 AF minus 200 AF which leave the basin). While the basin is adjudicated, pumping is not limited. This analysis presumes that Cummings Basin is operated to keep the safe yield at 4,090 AFY.

³ Tehachapi Basin is adjudicated. As of 2010, Golden Hills leases 800 AF of allowed pumping allocation from Lehig Southwest Cement Company and 38 AF from the Hospital District. In turn, Golden Hills leased 200 AF to the city of Tehachapi and 35 AF to CalWater. These leases are presumed to expire in 2024 for purposes of this projection. In 2010, this groundwater supply exceeds demand by a negligible amount (see Table 12 for demand).

⁴ Bear Valley Basin projection provided by Clint Stewart based on operations experience.

2.2.8 Desalination

The UWMPA requires that the UWMP address the opportunities for development of desalinated water, including ocean water, brackish water and groundwater.

Law

<p>10631</p> <p>A plan shall be adopted in accordance with this chapter and shall do all of the following:</p> <p>(i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish groundwater, and groundwater as a long-term supply.</p>
--

2.2.8.1 Seawater Desalination

Because the agencies are not located in a coastal zone, it is not practical nor economically feasible to implement a seawater desalination program.

At this point in time, TCCWD has determined that desalination is not a cost-effective solution for water supply needs due to the local project and water resource opportunities that are currently available at a lower cost. Development of seawater or brackish groundwater is cost-prohibitive considering TCCWD’s other options. TCCWD would consider taking 100 percent of SWP allocations every year, prior to implementation of seawater or brackish water desalination.

The opportunity for desalination is further discussed in Section 10. Note that the suggested desalination table, DWR Table 18, is not provided.

2.2.8.2 Brackish Groundwater

The groundwater that underlies the agencies is not brackish in nature and does not require desalination. However, there are SWP districts located on the Westside that do have brackish water. This creates a potential for treatment for agricultural use and exchanged for SWP water (or other water in Kern County) for use by TCCWD. Technology is quickly improving in this area and is considered a foreseeable option when planning ahead.

2.3 Reliability of Supply

The UWMPA requires that the UWMP address the reliability of the agency's water supplies. This includes supplies that are vulnerable to seasonal or climatic changes. In addition, an analysis must be included to address supply availability in a single dry year and in multiple dry years.

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

(c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortages, to the extent practicable. For any water source that may not be available at the consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to replace that source with alternative source of supply or water demand management Provide data for each of the following: (1) An average water year, (2) A single dry water year, and (3) multiple dry years.

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.

(b) An estimate of the minimum water supply available during each of the next three-years based on the driest three-year historic sequence for the agency's water supply.

2.3.1 Water Supply Reliability

The following sections discuss the reliability of each water source. There are two aspects of supply reliability that must be considered. The first relates to the immediate service needs and is a primary function of the availability and adequacy of the supply facilities. The second aspect is climate-related, and involves the availability of water during mild or severe drought periods. This chapter considers the agencies water supply reliability during three water scenarios; normal water year, single dry water year, and multiple dry water years. These scenarios are defined as follows:

- **Normal Year:** The normal year is a year in the historical sequence that most closely represents the median runoff levels and patterns. The supply quantities for this condition are derived from historical average yields.

- **Single Dry Year:** This is defined as the year with the minimum useable supply. The supply quantities for this condition are derived from the minimum historical annual yield.
- **Multiple Dry Years:** This is defined as the three consecutive years in which there are limited useable supplies. Water systems are more vulnerable to these droughts of long duration, because they deplete water storage reserves in local and state reservoirs and in groundwater basins. The supply quantities for this condition are derived from the minimum of historical three-year running annual averages.

Table 2-7 defines the basis of the water year specific to this RUWMP.

Table 2-7: (DWR Table 9) Basis of Water Year Data

	Base Year(s)	Hist. Sequence
State Water Project (Data from Draft 2009 SWP Reliability Report data specific to T-C)		
Normal Water Year		1922 - 2003
Single-Dry Water Year	1977	
Multiple-Dry Water Years	1990 - 1993	

The five agencies’ water supplies are described in more detail in the agency specific sections. Potential sources of supply evaluated in this RUWMP consist of the following four categories:

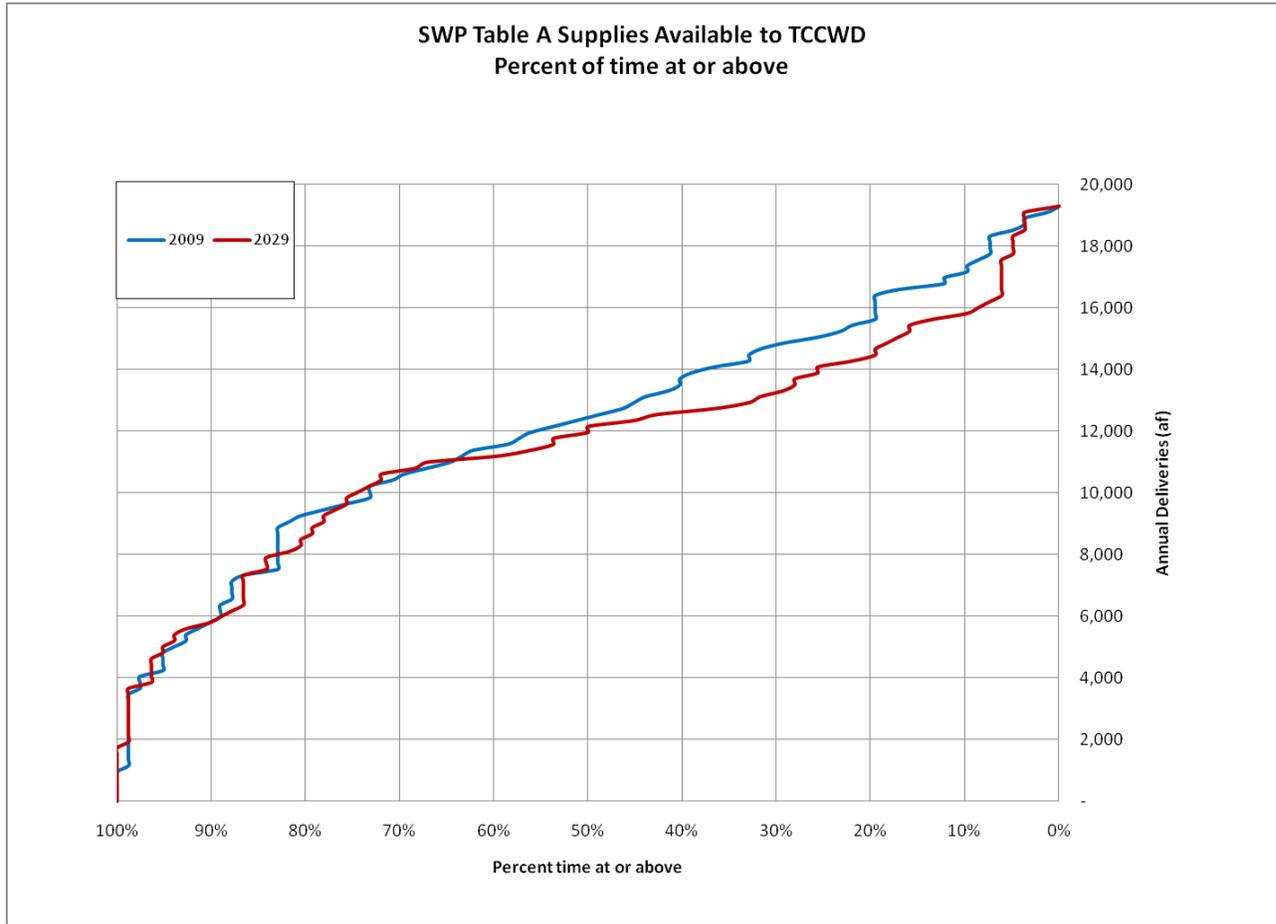
1. Surface Water (Imported SWP)
2. Groundwater
3. Surface Water (local runoff)
4. Recycled Water

2.3.1.1 Reliability of Imported Water from the SWP

The SWP faces a number of challenges including environmental conflicts, reliability of conveyance facilities, and the impacts of climate change. In summary, the anticipated availability of water from the SWP is significantly less than each contractor’s Table A Amount. The Draft 2009 SWP Reliability Report was released at the end of January 2010. Along with the release, electronic files were made available of the delivery reliability for each SWP contractor. This investigation uses the data specific to KCWA, the DWR contractor that provides SWP water to TCCWD.

Figure 2-5 shows the modeled reliability of the SWP in terms of the percentage of time that the allocation to TCCWD would be at or above a specified delivery amount. As the regulatory environment evolves and physical conditions change the projected reliability will change.

Figure 2-5: Percent Reliability of Imported Surface Water (SWP)



TCCWD is also limited by the capacity of their mainline connecting from the California Aqueduct to the TCCWD Service Area. This pipeline has a maximum capacity of 21 cubic feet per second (cfs). This flow rate limits TCCWD to 15,200 AFY of deliveries, assuming the mainline is kept running full for an entire year. Therefore, even in a 100 percent allocation year on the SWP, TCCWD cannot deliver its 19,300 AF, and is limited to 15,200 AF. The impacts of the limitation are shown in Figure 2-6 near the end of this section.

Table 2-8 summarizes the anticipated water delivery reliability for the SWP.

Table 2-8: (DWR Table 8) Water Supply Reliability (AFY)

	Normal Water Year	Single Dry Water Year	Multiple Dry Water Years		
			Year 1	Year 2	Year 3
State Water Project, 2009 (Table A Amount of 19,300 AFY)					
Percentage of Table A Amount	61%	6%	22%	27%	26%
Table A amount in AF	11,773	1,158	4,246	5,211	5,018

Table 2-8 reviews the projected water delivery shortages in the SWP based on the State Water Project Delivery Reliability Report 2009⁵. As noted in Table 2-9, there are significant vulnerabilities that impact the reliability of supply of SWP sources.

Table 2-9: (DWR Table 10) Factors in Inconsistency of Water Supplies

Name of Supply	Legal	Environmental	Water Quality	Climatic
State Water Project	Wanger Decision and possible future legal actions.	Delta Habitat.	Delta water quality requirements	Global warming
Tehachapi Groundwater Basin	No impact	No impact	No impact	Global warming may affect future supply
Cummings Groundwater Basin	Adjudication without a physical solution ¹	No impact	No impact	Global warming may affect future supply
Brite Groundwater Basin	Adjudication without a physical solution ¹	No impact	No impact	Global warming may affect future supply
Bear Valley Basin	No impact	No impact	No impact	Global warming may affect future supply

¹ While there have been court cases addressing water rights in these basins and they remain under the jurisdiction of the courts, groundwater rights remain as overlying rights and no individual pumper is restricted.

Monterey Agreement

The Monterey Agreement is an agreement between the DWR and 27 of the 29 SWP contractors on a statement of principles intended to resolve water allocation procedures, financial matters, and disputes concerning interpretation of water service contracts. Among these items, the Agreement included provisions for a water turn-back program; water exchanges; storage of water outside a contractor’s service area; consensus of KCWA not to block 130,000 AF of entitlement (now referred to as Table A Amount) to be permanently transferred from KCWA to urban contractors; deletion of provisions requiring agricultural contractors to take the first reductions during shortages; sale or lease of the Kern Water Bank property and facilities for the relinquishment of 45,000 AFY of agricultural entitlement; using a portion of SWP revenues to establish a rate-stabilization fund for agricultural contractors; payment reductions for urban contractors; and certain rights to transport non-SWP water in SWP facilities at the same power costs as SWP water in proportion to their Table A Amount.

In September of 2000, the California Third Appellate District Court invalidated the Monterey Agreement Environmental Impact Report (EIR). DWR has certified its EIR which has also been challenged, Monterey Amendment to the SWP Contracts (Including Kern Water Bank Transfer)

⁵ Draft State Water Project Delivery Reliability Report, 2009

and Associated Actions as Part of a Settlement Agreement (Monterey Plus)... February 2010; SCH#: 2003011118. These challenges may have an effect on the reliability of SWP.

Bay-Delta Programs

The Sacramento-San Joaquin Delta (Delta) in Northern California covers 738,000 acres, which includes a myriad of waterways and islands. The Delta is a critical portion of the SWP water transportation system, since water released from the Oroville Dam must flow from north of the Delta to the export pumps in the southern portion of the Delta, causing a reversal in the normal flow direction.

To resolve conflicting needs within the Delta, the Bay-Delta Accord (Accord) was signed in December 1994. The Accord created the CALFED Bay-Delta Program (CALFED Program), a consortium of several state and federal agencies. The CALFED Program has since been replaced by programs such as the Bay-Delta Conservation Plan (BDCP) and the Delta Habitat Conservation and Conveyance Program (DHCCP). The Delta Reform Act of 2009 created the Delta Stewardship Council (DSC), an independent state agency. Its mission is to help achieve the two co-equal goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta's ecosystem. These goals must be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place. The DSC is required to develop a comprehensive management plan for the Delta (Delta Plan) by January 1, 2012.

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. These organizations have formed the BDCP Steering Committee with the goal of identifying water flow and habitat restoration actions to recover endangered and sensitive species and their habitats in California's Sacramento-San Joaquin River Delta.

A range of alternatives for providing species/habitat protection and improving water supply reliability will be evaluated through the development of an EIR/Environmental Impact Statement (EIS). Lead agencies for the EIR/EIS are the DWR, the Bureau of Reclamation, the United States (U.S.) Fish and Wildlife Service, and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, in cooperation with the California Department of Fish and Game, the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers.

The DHCCP was formed in 2008 as a result of Governor Schwarzenegger's call for studies to assess potential habitat restoration and water conveyance options in the Delta. The DHCCP is a partnership between the DWR and the Bureau of Reclamation to evaluate the ecosystem restoration and water conveyance alternatives identified by the BDCP. DHCCP activities include an environmental review of the BDCP. The DHCCP will advance the preferred alternative for water conveyance facilities and habitat restoration.

The United States Fish & Wildlife Service (FWS), and National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service, both federal permitting agencies, are participating in the BDCP Planning Process as advisors and are co-lead agencies for the EIS. In their role, NOAA and FWS are cooperating to assist in developing a conservation plan that can form the basis of an incidental take permit and will determine whether the resulting plan complies with federal law.

DHCCP goals include:

- Analyzing BDCP proposed actions and alternatives to those actions through a formal EIR/EIS process.
- Analyzing options and considering areas of concern presented by the public during the EIR/EIS process.
- Developing engineering options for habitat restoration and water conveyance.

2.3.1.2 Reliability of Groundwater

Reliability of groundwater supply to the region depends on part on several factors, including:

- Reliability of water from the source (i.e. existing wells); and
- Useable groundwater in storage due to artificial recharge.

DWR's criterion for groundwater reliability is defined as groundwater supplies are capable of meeting projected demands 90 percent of the time for an average water year, single dry year, and multiple dry year conditions.

Reliability of Groundwater from Tehachapi Basin

Tehachapi Basin is managed under an adjudication and pumping is kept within the basin's safe yield. An investigation in 2009 (Fugro, 2009) found that with continued operation of the existing conjunctive use programs (delivery of SWP water to the area), the basin would operate satisfactorily through 2023 (beyond 2023 was not evaluated) with a maximum annual SWP delivery need of 3,300 AF (16.5 percent of the 20,000 AF maximum TCCWD SWP Table A contract amount). That said, development of an additional recharge basin would be beneficial in order to create additional groundwater storage for multiyear droughts.

Based on Fugro's analysis, it is reasonable to assume that groundwater pumping quantities in the Tehachapi Basin could be sustained during a 3-year drought within a 19-year future simulation analysis through 2023. This 3-year stoppage of deliveries represents a hypothetical future scenario in which TCCWD is unable to acquire SWP water due to some extreme circumstance (conveyance system disaster, natural disaster).

Reliability of Groundwater from Cummings Basin

A groundwater study of Cummings Basin (Fugro 2004) reviewed the impact of a number of scenarios.

One of the Scenarios (#2) in that investigation analyzed the impact of a five-year drought, replicating the rain fall of 1959 through 1963 combined with ongoing pumping. Groundwater levels did decline significantly and the changes extended over the entire 21-year model period. That said, groundwater extraction quantities were sustained during the modeled five year drought.

Based on Fugro’s analysis, it is reasonable to assume that groundwater pumping quantities in the Cummings Basin could be sustained during a 3-year drought.

Reliability of Groundwater from Brite Valley Basin

Current groundwater production is only 66 percent of the safe yield determined in the 1970 Judgment. Groundwater levels are stable in the basin. Therefore, no reliability issues are expected to create constraints on supply from Brite Valley Basin.

Reliability of Groundwater from Bear Valley Basin

Groundwater availability in Bear Valley is limited to the safe yield defined in the groundwater management plan. The safe yield takes into account portions of the area with poor water quality which is used for irrigation. Therefore, no reliability issues are expected to create constraints on use of groundwater from Bear Valley Basin.

Summary of Reliability of Groundwater

Each of the above basins operates based on the safe yield defined for that basin. Historic pumping from 2005 to 2010 shows each year’s pumping and how the amount pumped is not as much impacted by hydrology as it is demand and the safe yield. Table 2-10 summarizes and compares the groundwater availability by comparing groundwater safe yield allocations to historic pumping by basin.

Table 2-10: Historical Groundwater Production from DWR Table 6 and Basin Safe Yield (AFY)

	Safe Yield ¹	Year					
		2005	2006	2007	2008	2009	2010
Cummings Basin	4,090	3,647	3,900	3,729	3,958	4,406	3,650
Tehachapi Basin	5,524	4,315	4,648	4,632	5,127	4,569	4,252
Brite Basin	500	325	328	328	328	346	345
Bear Valley Basin	600	506	528	491	535	631	509

¹ Natural safe yield for Cummings and Brite basins. Allowed pumping for Tehachapi Basin. Safe yield for Bear Valley Basin.

Since the safe yields for each basin are determined on a review of scientific analyses and adjudication, groundwater production for future years is based on the safe yield numbers and are not adjusted for hydrologic conditions.

Table 2-11: (DWR Table 8) Groundwater Availability/Reliability

	Normal Water Year	Single Dry Water Year	Multiple Dry Water Years		
			Year 1	Year 2	Year 3
State Water Project, 2009 (Table A Amount of 19,300 AFY)					
Percentage of Table A Amount	61%	6%	22%	27%	26%
Table A amount in AF	11,773	1,158	4,246	5,211	5,018
Cummings Basin Natural Safe Yield	4,090	4,090	4,090	4,090	4,090
Tehachapi Basin Allowed Pumping Allocation	5,524	5,524	5,524	5,524	5,524
Brite Basin Natural Safe Yield	500	500	500	500	500
Bear Valley Basin Safe Yield	600	600	600	600	600
Total	22,487	11,872	14,960	15,925	15,732

2.3.1.3 Reliability of Recycled Water

In the Cummings Basin, TCCWD recently entered into an agreement to purchase tertiary treated (Title 22) recycled water effluent from the CCI. Today, the CCI has tertiary wastewater treatment with land application under a Waste Discharge Order and Wastewater Reclamation Requirements issued by the Central Valley Regional Water Quality Control Board (RWQCB).

TCCWD entered into an agreement with the CCI in December 2006, to purchase tertiary treated, disinfected effluent from the CCI's upgraded WWTP for a term of 25 years from completion of the upgraded plant. The contract calls for delivery of between 1,000 and 1,200 AF of effluent annually to be available to TCCWD for recycling. Due to conservation efforts within the CCI, it is anticipated that the available water will be 900 to 1,000 AFY.

TCCWD is constructing a pipeline to deliver a portion of the CCI effluent to a golf course. A contract has been executed to deliver 300 AF to Horse Thief Country Club where it would replace 300 AF of SWP water. The remaining 600 to 700 AF is available for agriculture where it would replace groundwater pumping or SWP imports.

2.3.1.4 Transfer and Exchange Opportunities

Transfer and exchange opportunities exist for imported water, but are negligible for groundwater. TCCWD can pump its return flow, or banked water, and deliver it to any basin for beneficial use.

Any of a number of existing and proposed water banks could be used or developed to store imported water supplies where this a viable solution to the area's challenges.

The Judgments for Cummings, Tehachapi and Brite Basins restrict transfers of native groundwater from each of these basins.

The area has ongoing conjunctive use programs with both in-lieu deliveries and direct recharge. Several years ago, Bear Valley CSD used an in-lieu program to address a localized cone of depression in its Cummings Basin well field. Under this program, Bear Valley CSD paid agricultural pumpers near the Bear Valley CSD wells an amount equal to the difference between TCCWD's agricultural rate and the cost to pump groundwater for each acre-foot that the

agricultural pumpers took from TCCWD rather than from the ground. Bear Valley CSD ended this program after it purchased land surrounding its well field and prohibited the pumping of groundwater on their land by anyone other than Bear Valley CSD.

SWP water is indirectly delivered to Bear Valley CSD, Stallion Springs CSD, Golden Hills CSD, the City and the CCI by TCCWD by use of recharge facilities near those areas. This method allows the agencies to avoid the cost of surface water treatment plants by allowing the water to be naturally treated by movement through the aquifer. Existing TCCWD financial mechanisms limit this recharge to short-term storage for TCCWD unless water purveyors are willing to cover the costs to purchase imported water for long-term storage. Aside from the short-term opportunities Golden Hills CSD and City have long-term banking programs (City and Golden Hills CSD currently store SWP water in Tehachapi Basin).

Table 2-12 summarizes current opportunities for transfer and exchanges. TCCWD has entered into a short-term sale to West Kern Water District. The term of the sale is three years starting in 2010. If TCCWD’s SWP allocation is greater than 35 percent, 2,000 AFY will be sold to West Kern Water District. - If that level of SWP allocation is not realized, water would not be transferred.

Table 2-12: (DWR Table 11) Transfer and Exchange Opportunities (AFY)

Source Transfer Agency	Transfer or Exchange	Short Term	Proposed Quantities (afy)	Long Term	Proposed Quantities
From Tehachapi-Cummings to West Kern Water District ¹	Transfer	X	"0" or 2,000	-----	-----

¹ This transfer agreement is for 2010 through 2012. If Tehachapi-Cummings SWP allocation is greater than 35%, then 2,000 AF will be sold to West Kern.

2.3.2 Summary of Reliability of All Sources

Table 2-13 summarizes the current and planned water supplies for the five agencies and illustrates the reliability of these supplies in five year increments through 2040. In determining SWP reliability, calculations were based on the most recent June 22, 2010 notice to State Project Contractors regarding reliability (50 percent). The Reliability for 2015 and beyond is based on the Draft 2009 SWP Reliability Report data files specific to KCWA. Data used to calculate reliability, from 2015 through 2025, was linearly interpolated from the Draft 2009 SWP Reliability Report. Supply reliability after 2025 was held constant.

TCCWD conveyance limits deliveries in wet years and thus reduces average SWP supply, and this limitation is also factored into the calculation of Table “A” availability in Table 2-3. By comparing Figure 2-6 to Figure 2-5, it is calculated that the conveyance limitations reduce average SWP imports by approximately 2 percent of the Table "A" Amount (Figure 2-6).

Figure 2-6: **Conveyance Reliability of Imported Surface Water (SWP)**

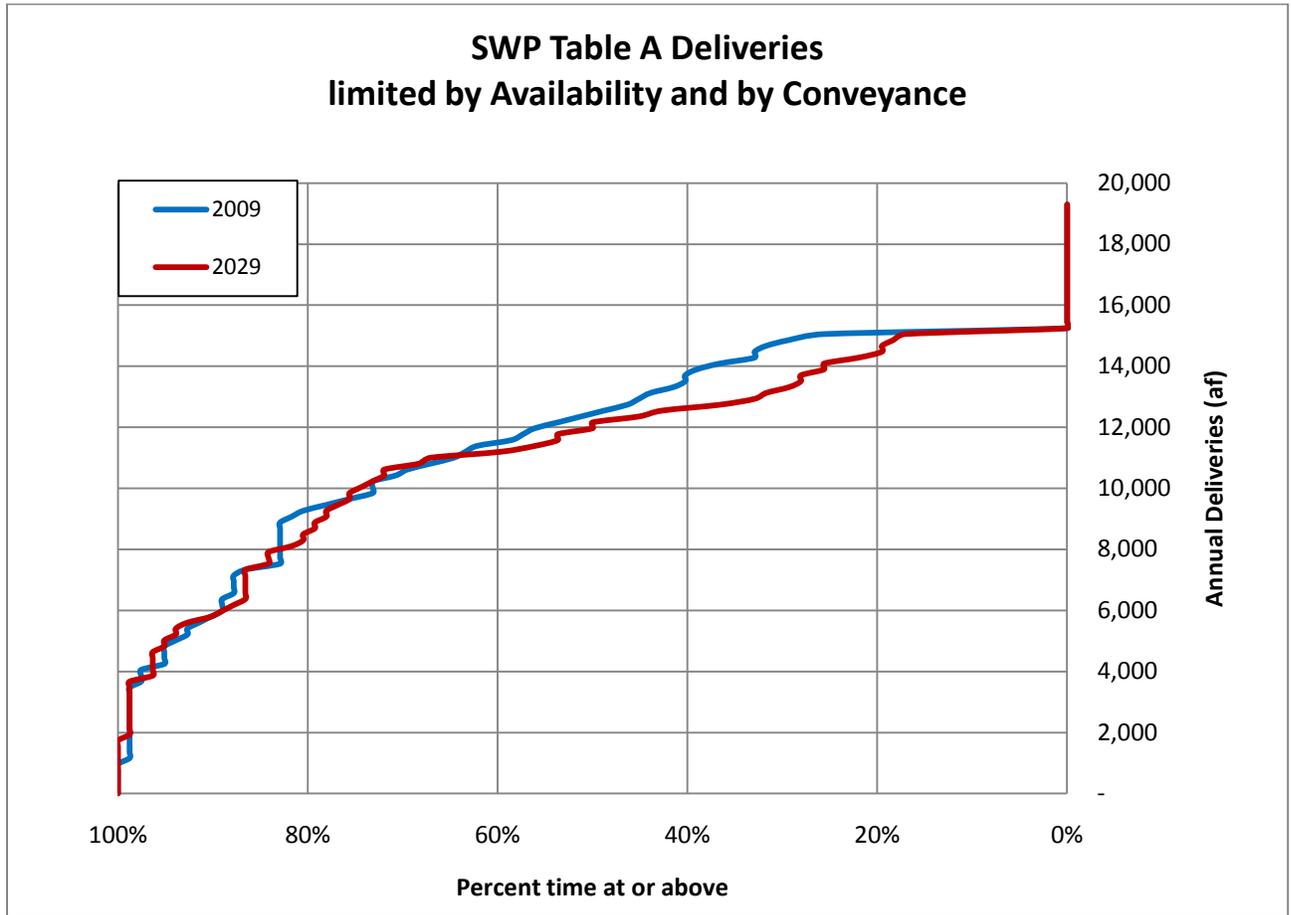


Table 2-13: (DWR Table 4) Current and Planned Water Supplies (AFY)

	2010	2015	2020	2025	2030	2035	2040
Tehachapi-Cummings Service Area, not including recycled water							
State Water Project (Tehachapi-Cummings CWD contracts with Kern Water Agency) ¹							
Average reliability of Table A Amount (Projected for 2010)	50.0%	60.3%	59.8%	59.3%	58.9%	58.9%	58.9%
Carryover water (from 2009)	2,000	-	-	-	-	-	-
Table A supply (Average amount delivered to Tehachapi-Cummings)	9,650	11,639	11,541	11,444	11,366	11,366	11,366
Losses in Tehachapi-Cummings System	16.4%	16.4%	16.4%	16.4%	16.4%	16.4%	16.4%
SWP Supply	8,067	9,730	9,648	9,567	9,502	9,502	9,502
Groundwater							
Cummings Basin Natural Safe Yield ²	4,090	4,090	4,090	4,090	4,090	4,090	4,090
Tehachapi Basin Allowed Pumping Allocation ³	5,524	5,524	5,524	5,524	5,524	5,524	5,524
Brite Basin Safe Yield (Adjudication)	500	500	500	500	500	500	500
Bear Valley Basin, potable and non-potable ⁴	600	600	600	600	600	600	600
Groundwater	10,714	10,714	10,714	10,714	10,714	10,714	10,714
Tehachapi-Cummings Service Area, not including recycled water	18,781	20,444	20,362	20,281	20,216	20,216	20,216
Golden Hills CSD							
State Water Project	-	-	-	670	749	831	917
Tehachapi Basin Allowed Pumping Allocation ³	866	866	866	866	866	866	866
Tehachapi Basin Leased Allowed Pumping Allocation ³	603	603	603	-	-	-	-
Golden Hills CSD	1,469	1,469	1,469	1,536	1,615	1,697	1,783
City of Tehachapi							
State Water Project	-	18	-	389	619	873	1,153
Tehachapi Basin Allowed Pumping Allocation ³	1,822	1,822	1,822	1,822	1,822	1,822	1,822
Tehachapi Basin Leased Allowed Pumping Allocation ³	200	200	200	-	-	-	-
City of Tehachapi	2,022	2,040	2,022	2,211	2,441	2,695	2,975
Bear Valley CSD							
State Water Project water recharged in Cummings Basin for Bear Valley	356	721	723	795	871	952	1,038
Cummings Basin pumped for overlying use ⁴	22.00	22.00	22.00	22.00	22.00	22.00	22.00
Bear Valley Basin, potable and non-potable ⁵	600	600	600	600	600	600	600
Bear Valley CSD	956	1,321	1,323	1,395	1,471	1,552	1,638
Stallion Springs CSD							
State Water Project water recharged in Cummings Basin for Stallion Springs	260	294	309	332	358	386	416
Cummings Basin pumped for overlying use	139	196	206	222	239	257	277
Stallion Springs CSD	399	490	514	554	597	643	693
Tehachapi-Cummings Service Area, not including Participating Retailers⁶							
Tehachapi-Cummings Service Area, not including recycled water	18,781	20,444	20,362	20,281	20,216	20,216	20,216
Bear Valley CSD	(956)	(1,321)	(1,323)	(1,395)	(1,471)	(1,552)	(1,638)
Stallion Springs CSD	(399)	(490)	(514)	(554)	(597)	(643)	(693)
Golden Hills CSD	(1,469)	(1,469)	(1,469)	(1,536)	(1,615)	(1,697)	(1,783)
City of Tehachapi	(2,022)	(2,040)	(2,022)	(2,211)	(2,441)	(2,695)	(2,975)
Tehachapi-Cummings Service Area, not including Participating Retailers ⁶	13,935	15,124	15,034	14,585	14,092	13,629	13,127
Recycled Water (current and projected use)							
California Correctional Institution WWTP ⁷	-	900	900	900	900	900	900
Bear Valley WWTP (Used for golf course irrigation) ⁸	35	35	35	35	35	35	35
Recycled Water (current and projected use)	35	935	935	935	935	935	935
Desalination	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total	18,816	21,379	21,297	21,216	21,151	21,151	21,151

¹ SWP reliability for 2010 based on June 22, 2010 Notice to State Project Contractors.

Reliability for 2015 and beyond based on Draft 2009 SWP Reliability Report data files specific to Kern County Water Agency. Supply after 2010 and 2025 before linearly interpolated from SWP Reliability Report. Supply held constant after 2025.

Tehachapi-Cummings CWD conveyance capacity limits deliveries in wet years reducing the average SWP supply by approximately 2 percent of the Table A Amount.

Tehachapi-Cummings CWD is currently negotiating a possible sale to West Kern Water District. The term of the sale is three years starting with 2010. Losses of SWP through Tehachapi-Cummings CWD distribution system have historically been 16.4%.

Bear Valley CSD, Stallion Springs CSD, Golden Hills CSD and City of Tehachapi use groundwater first, then SWP. SWP supply to these entities assumed to match demand.

SWP Amount	19,300
SWP reliability in 2009	60.91%
SWP reliability in 2029	58.89%

² Cummings Basin Natural Safe Yield in 4,090 AF per adjudication. Per Fugro (March 2004), Cummings Basin Perennial Yield is 3,444 AF (3,644 AF minus 200 AF which leave the basin). While the basin is adjudicated, pumping is not limited. This analysis presumes that Cummings Basin is operated to keep the safe yield at 4,090 AFY.

Part of Stallion Springs service area overlies Cummings Basin (40% by consumption) and is served groundwater. The remainder is outside of Cummings Basin and Stallion Springs purchases State Water Project water as replenishment water.

The majority of Bear Valley's use is outside of Cummings Basin and Bear Valley purchases State Water Project water as replenishment. Bear Valley has 22 AFY of overlying use for Cummings Valley Elementary School.

³ Tehachapi Basin is adjudicated. As of 2010, Golden Hills leases 800 AF of allowed pumping allocation from Lehigh Southwest Cement Company and 38 AF from the Hospital District. In turn, Golden Hills leased 200 AF to the city of Tehachapi and 35 AF to CalWater. These leases are presumed to expire in 2024 for purposes of this projection. In 2010, this groundwater supply exceeds demand by a negligible amount (see Table 12 for demand).

⁴ Bear Valley Basin projection provided by Clint Stewart based on operations experience.

⁵ SWP supplies were allocated to meet the growing demands of Participating Retailers first. Thus this table shows the supply to "Tehachapi-Cummings Service Area, not including Participating Retailers" delining.

⁶ Based on current water use by CCI, a recycled supply of 900 AF is projected. See Table 33 for more information of wastewater plant effluent.

⁷ WWTP effluent is used for golf course irrigation. Treated effluent beyond that needed for irrigation is discharges to Sycamore Creek and leaves Tehachapi-Cummings Service Area to the west.

Calculations in Table 2-13 also take into account losses of SWP water through TCCWD's distribution system, which have historically been 16.4 percent. Although TCCWD will take actions to reduce the losses, for the purposes of this plan it is assumed that the loss will remain constant over the next 30 years. It is hoped that losses can be reduced to less than 16.4 percent, but until it can be demonstrated that losses actually can be reduced, it must be assumed that they cannot. Most of TCCWD's losses are attributed to Jacobsen Reservoir, an open-air reservoir which also serves as a regional recreational lake. Most evaporation losses occur during the summer, concurrently with TCCWD's peak agricultural demand. Jacobsen Reservoir is filled in May and June to provide peaking capacity and to ensure that demand is satisfied even during short-term outages of its pumping facilities.

With respect to water resources, Bear Valley CSD, Stallion Springs CSD, Golden Hills CSD, and the City all use groundwater as a primary source which is then supplemented by SWP water, as necessary. Table 2-13 projects future SWP supplies to these entities to match demand.

Of the SWP water applied within Tehachapi and Cummings Basins for agricultural use, 15 percent is considered return flow. TCCWD is credited with that recharged water and can sell it for beneficial use anywhere within the GTA. TCCWD has determined that approximately 90 percent of the return flow from imported water is expected to be applied within these Tehachapi and Cummings Basins in future years. TCCWD retains the right to produce this water. (90% * 15% = 13.5% of SWP deliveries to agriculture). TCCWD anticipates producing this water during droughts, years of low SWP allocations, or when the cost of natural gas causes the importation of SWP water to be cost-prohibitive.

2.4 Water Use – Past, Current and Future

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

(b) (3) 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 shall be based on information that is reasonably available, including but not limited to, historic records.

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

Single-family residential, B) Multifamily residential, 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, and I) Agricultural.

The water use projections shall be in the same 5-year increments to 20 years or as far as data is available.

2.4.1 Past, Current and Projected Water Deliveries

Figures 2-7 and 2-8 show water deliveries by service sector and by area of deliveries. Both of these charts include all deliveries made by the CSDs, the City, and all deliveries made outside of

these entities whether made by TCCWD or groundwater pumped by a variety of entities for their own use. Figure 2-7 shows that agriculture and M&I use are of roughly equal importance in the area. Agricultural use is anticipated to remain roughly constant while M&I use is projected to increase slowly with population. Figure 2-8 shows that each of the CSDs and the City are individually a small portion of the total water deliveries in the area. All deliveries by the CSDs and the City are M&I. Outside of the CSDs and the City, TCCWD makes deliveries to agricultural and to M&I users. In addition individual entities produce groundwater for their own use or (in the case of mutual water companies) for delivery to their customers. In a limited number of cases, TCCWD produces and delivers groundwater on behalf of another entity.

Table 2-14 (DWR Table 12) shows the past, current and projected water deliveries by each agency and basin by Water Use Sector. The data for 2005 and 2010 reflects actual deliveries. The rest of the years are based on a combination of projected population increases and demand reduction targets for 2015 and 2020 as described in Subsection 2.10 for the Regional Alliance and Subsection 10 for each agency.

Table 2-14: DWR Table 12) Past, Current and Projected Water Deliveries (AF)

Water Use Sector	2005	2010	2015	2020	2025	2030	2035	2040
Tehachapi Basin Service Area								
Golden Hills CSD¹								
Water Sales	1,191	1,137	1,341	1,373	1,443	1,517	1,594	1,676
System Losses	104	73	86	88	93	97	102	108
Golden Hills CSD	1,295	1,210	1,427	1,462	1,536	1,615	1,697	1,783
City of Tehachapi²								
Metered Deliveries	1,563	1,810	1,886	1,851	2,043	2,256	2,491	2,750
Subtotal	1,563	1,810	1,886	1,851	2,043	2,256	2,491	2,750
System Losses	270	148	154	151	167	184	204	225
City of Tehachapi	1,833	1,958	2,040	2,002	2,211	2,441	2,695	2,975
Users other than Golden Hills CSD and City of Tehachapi								
Agricultural								
Groundwater metered	25	15	31	31	31	31	31	31
Groundwater, unmetered deliveries (estimate of small users)	136	147	158	171	184	198	213	230
Groundwater, Grimway Farms	709	507	700	700	700	700	700	700
Imported Water Sales	855	450	650	650	650	650	650	650
Agricultural	1,725	1,119	1,539	1,552	1,565	1,579	1,594	1,611
M & I Use								
Groundwater, unmetered deliveries (estimate of small users)	239	160	172	186	200	215	232	250
Benz Bisco Park (groundwater wheeled by Tehachapi-Cummings)	64	62	68	68	68	68	68	68
Imported water sales (direct deliveries)	209	384	414	446	480	517	557	600
M & I Use	512	606	654	699	748	801	857	918
Users other than Golden Hills CSD and City of Tehachapi	2,237	1,725	2,193	2,251	2,313	2,380	2,452	2,529
Tehachapi Basin Service Area	5,365	4,893	5,661	5,715	6,060	6,435	6,843	7,288
Cummings Basin Service Area (incl deliveries of Bear Valley Basin water)								
Stallion Springs³								
Residential	330	330	405	426	458	494	532	573
Commercial	41	41	50	53	57	61	66	71
Subtotal	371	371	456	478	515	555	598	644
System Losses (7 %)	28	28	34	36	39	42	45	48
Stallion Springs	399	399	490	514	554	597	643	693
Bear Valley CSD⁴								
Residential	869	732	982	984	1,045	1,109	1,177	1,249
Commercial	56	38	51	51	54	58	61	65
Bear Valley CSD (use by Bear Valley CSD)	8	6	8	8	9	9	10	10
Other uses	6	6	8	8	9	9	10	10
System Losses	79	87	117	117	124	132	140	148
Total Potable Deliveries	1,018	869	1,166	1,168	1,240	1,316	1,397	1,483
Lake Fill	162	87	155	155	155	155	155	155
Bear Valley CSD	1,180	956	1,321	1,323	1,395	1,471	1,552	1,638
Users other than Stallion Springs CSD and Bear Valley CSD								
Agricultural								
Groundwater metered	2,604	2,749	2,400	2,400	2,400	2,400	2,400	2,400
Groundwater, unmetered deliveries (estimate of small users)	140	146	157	169	183	197	212	228
Imported Water Sales ⁵	3,742	1,574	4,200	4,200	4,200	4,200	4,200	4,200
Substitution of recycled water (CCI) for groundwater	-	-	(600)	(600)	(600)	(600)	(600)	(600)
Agricultural	6,486	4,469	6,157	6,169	6,183	6,197	6,212	6,228
M & I Use								
California Correctional Institution, Tehachapi (Native Safe Yield)	565	565	565	565	565	565	565	565
California Correctional Institution (SWP water recharged in Cummings Basin)	657	433	433	433	433	433	433	433
Groundwater, unmetered deliveries (estimate of small users)	172	51	55	59	64	69	74	80
Imported water sales (direct deliveries) ⁵	222	198	300	300	300	300	300	300
Substitution of recycled water (CCI) for groundwater	-	-	(50)	(50)	(50)	(50)	(50)	(50)
Substitution of recycled water (CCI) for imported water	-	-	(300)	(300)	(300)	(300)	(300)	(300)
M & I Use	1,616	1,247	1,003	1,007	1,012	1,017	1,022	1,028
Users other than Stallion Springs CSD and Bear Valley CSD	8,102	5,716	7,160	7,177	7,194	7,213	7,234	7,256
Cummings Basin Service Area (incl deliveries of Bear Valley Basin water)	9,681	7,071	8,971	9,014	9,143	9,282	9,429	9,587
Brite Basin Service Area								
Agricultural								
Groundwater, metered	-	-	-	-	-	-	-	-
Groundwater, unmetered deliveries (estimate of small users)	226	235	244	254	264	275	287	300
Imported water sales - direct deliveries	12	5	5	5	5	5	5	5
Agricultural	238	240	249	259	269	280	292	305
Municipal & Industrial								
Groundwater, metered.	39	49	39	39	39	39	39	39
Groundwater, unmetered deliveries (estimate of small users)	60	61	66	71	76	82	88	95
Imported water sales, direct deliveries	-	-	-	-	-	-	-	-
Municipal & Industrial	99	110	105	110	115	121	127	134
Brite Basin Service Area	336	350	354	368	384	401	420	439
Water Deliveries	15,382	12,314	14,986	15,097	15,587	16,117	16,692	17,314

¹ Golden Hills 2010 System Losses estimated at 8%. Future System Losses estimated at 5%.
If 2010 GPCD had been the same as the Agency Baseline GPCD, year 2010 deliveries would have been 1,392 AF (1210 AF * (143.6 GPCD/124.8 GPCD))

² City of Tehachapi does not differentiate between customer type.
If 2010 GPCD had been the same as the Agency Baseline GPCD, year 2010 deliveries would have been 2,253 AF (1,958 AF * (143.6 GPCD/124.8 GPCD))

³ Stallion Springs CSD split between System Losses, Commercial and Residential is estimated.
If 2010 GPCD had been the same as the Agency Baseline GPCD, year 2010 deliveries would have been 490 AF (399 AF * (175.8 GPCD/143.2 GPCD))

⁴ Bear Valley System losses projected as 10% of potable deliveries. Lake Fill projections based on long-term average.
If 2010 GPCD had been the same as the Agency Baseline GPCD, year 2010 deliveries would have been 1,277 AF (956 AF * (200.3 GPCD/150.0 GPCD))

⁵ Projections based on historic high annual delivery

Each CSD, the City, and TCCWD each collect water use data by different categories depending on the characteristics of their service area. Table 2-15 (DWR Table 6) illustrates further details regarding groundwater deliveries in the area by basin for the past 5-years, 2005-2010.

Figure 2-7: Deliveries by Water Use Sector

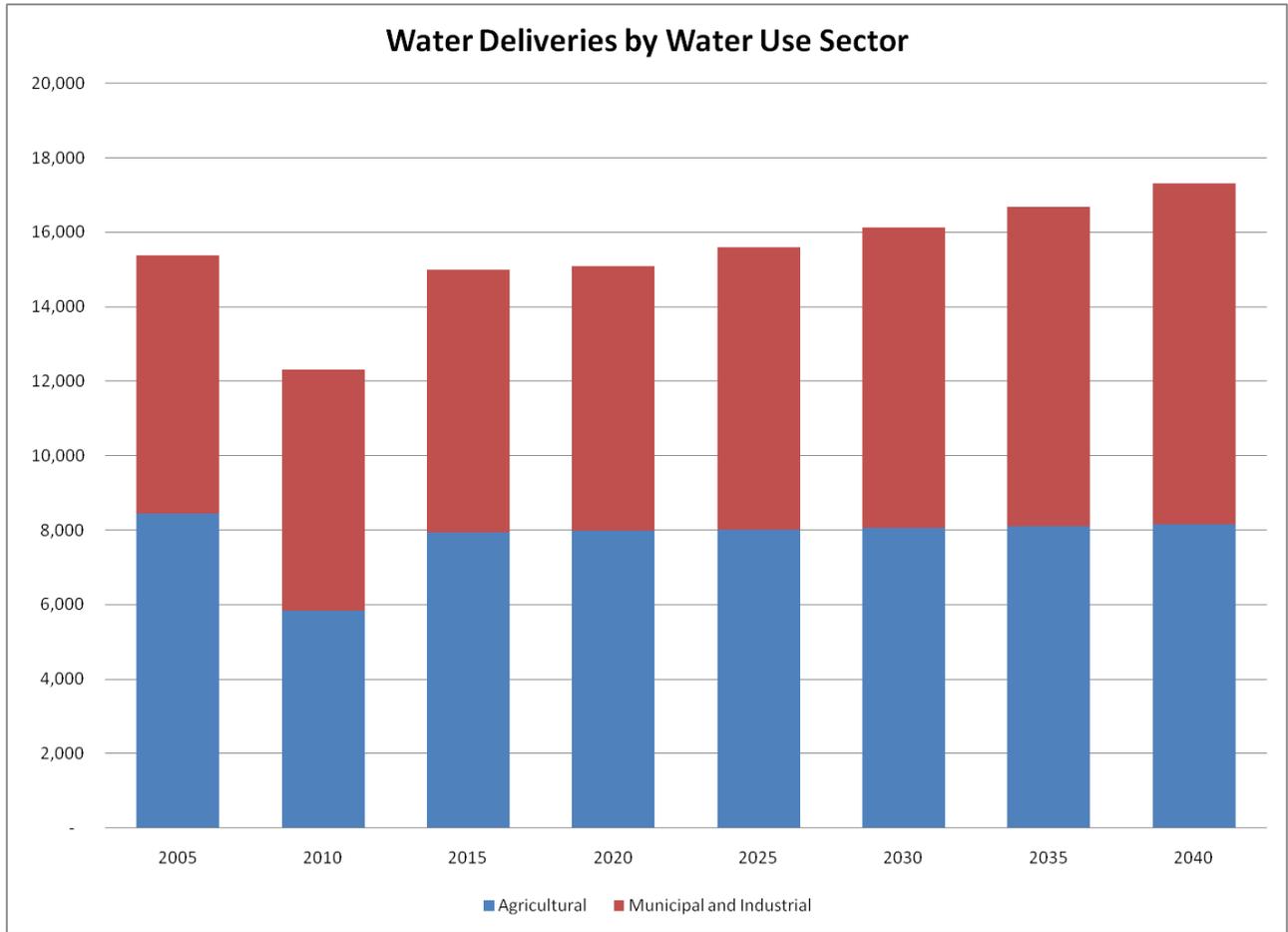


Figure 2-8: Water Deliveries by Area

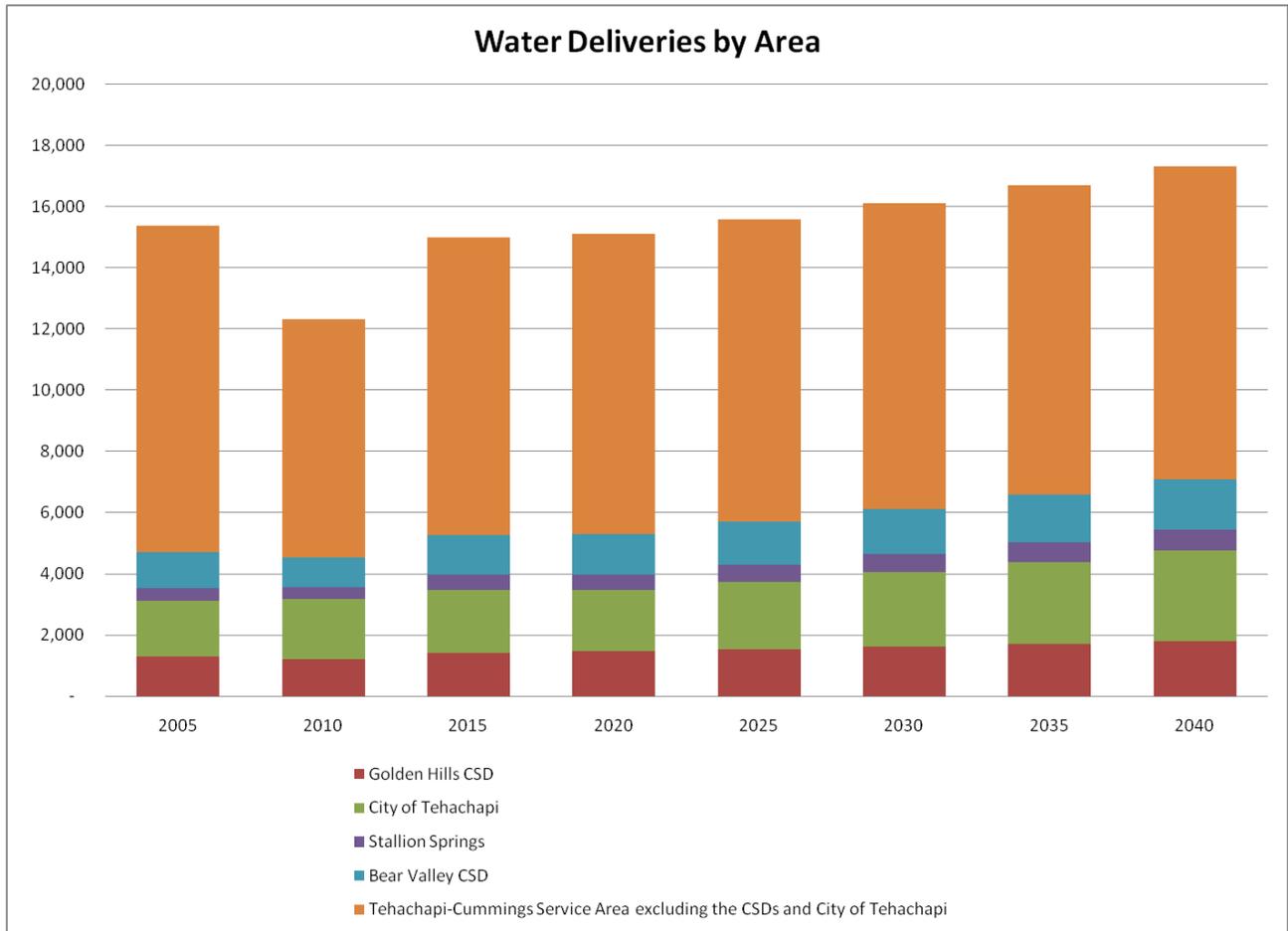


Table 2-15: (DWR Table 6) Groundwater Pumping (AF)

	2005	2006	2007	2008	2009	2010
Pumping by Groundwater Basin (does not include SWP water previously stored in groundwater basins)						
Tehachapi Basin (does not include SWP water delivered to the basin for Golden Hills and City of Tehachapi)						
Agricultural Deliveries						
Metered	25	95	19	20	20	15
Unmetered	136	143	143	143	147	147
Wheeled to Grimway Farms	709	567	452	1,030	624	507
Municipal & Industrial						
Metered	3,142	3,531	3,708	3,717	3,565	3,361
Unmetered	239	239	239	160	160	160
Wheeled to Benz Bisco Park	64	73	71	57	53	62
Tehachapi Basin groundwater	4,315	4,648	4,632	5,127	4,569	4,252
Cummings Basin Area (does not include SWP water delivered to the basin for Stallion Springs CSD and Bear Valley CSD)						
Agricultural Deliveries						
Metered	2,604	2,848	2,673	3,022	3,350	2,749
Unmetered	140	141	141	141	145	146
Municipal & Industrial						
Metered deliveries to CCI	565	565	565	565	565	565
Metered deliveries to Stallion Springs	166	174	178	180	295	139
Unmetered	172	172	172	50	51	51
Cummings Basin groundwater	3,647	3,900	3,729	3,958	4,406	3,650
Brite Basin Area (does not include SWP water delivered to the basin)						
Agricultural Deliveries						
Metered	0	0	0	0	0	0
Unmetered	226	229	229	229	235	235
Municipal & Industrial						
Metered	39	39	39	39	49	49
Unmetered	60	60	60	60	62	61
Brite Basin groundwater	325	328	328	328	346	345
Bear Valley Basin, potable and non-potable water	506	528	491	535	631	509
Groundwater Pumped in Tehachapi-Cummings Service Area (does not include SWP water delivered via the groundwater basins)	8,793	9,404	9,180	9,948	9,952	8,756

Table 2-16 contains further details describing groundwater pumping by agency/retailers for the past 6 years.

Table 2-16: (DWR Table 6) Historical Pumping by Participating Retailers (includes pumping of SWP water recharged in basins) (AF)

Pumping by Participating Retailers (includes pumping of SWP water recharged in basins)						
	2005	2006	2007	2008	2009	2010
Bear Valley CSD¹						
SWP water recharged in Cummings Basin for Bear Valley	652	673	743	698	530	425
Cummings Basin pumped for overlying use	22	20	22	21	22	22
Bear Valley Basin, potable	344	396	349	383	450	422
Bear Valley Basin for Lake Fill	162	132	142	152	181	87
Bear Valley CSD	1,180	1,221	1,256	1,254	1,183	956
Stallion Springs CSD						
SWP water recharged in Cummings Basin for Stallion Springs	233	276	289	284	281	260
Cumming Basin pumping for overlying use	166	174	178	180	189	139
Stallion Springs CSD	399	450	467	464	470	399
Golden Hills CSD²						
SWP water recharged in Tehachapi Basin for Golden Hills	0	0	0	0	0	0
Tehachapi Basin Allowed Pumping Allocation including leases	1,295	1,393	1,443	1,437	1,368	1,210
Golden Hills CSD	1,295	1,393	1,443	1,437	1,368	1,210
City of Tehachapi						
SWP water recharged in Tehachapi Basin for City of Tehachapi	0	248	444	6	119	0
Tehachapi Basin Allowed Pumping Allocation (including leases)	1,835	1,822	1,822	2,172	2,012	1,958
City of Tehachapi	1,835	2,070	2,266	2,178	2,131	1,958
Participating Retailers	4,709	5,134	5,432	5,333	5,152	4,523
Pumpers other than Participating Retailers						
Tehachapi Basin	1,185	1,433	1,367	1,518	1,189	1,084
Cummings Basin	3,459	3,706	3,529	3,757	4,195	3,489
Brite Basin	325	328	328	328	346	345
Pumpers other than Participating Retailers	4,969	5,467	5,224	5,603	5,730	4,918
Total, including SWP Water recharged in Cummings Basin and Tehachapi Basin	9,678	10,601	10,656	10,936	10,882	9,441
SWP Water recharged in Tehachapi Basin for City of Tehachapi and Golden Hills	0	(248)	(444)	(6)	(119)	0
SWP Water recharged in Cummings Basin for Bear Valley and Stallion Springs	(885)	(949)	(1,032)	(982)	(811)	(685)
Groundwater Pumped in Tehachapi-Cummings Service Area, does not include SWP water delivered via the groundwater basins	8,793	9,404	9,180	9,948	9,952	8,756

¹ Most Bear Valley CSD pumping from Cummings Basin is for use outside of Cummings Basin. SWP water is recharged in Cummings Basin to replace this water. Bear Valley CSD is the only overlying pumper for Bear Valley Basin. Recycled water (25 AFY average) is used for golf course irrigation.

² March 2011. At start of 2010, Golden Hill CSD had 675 AF of carryover in storage. Carryover can be accumulated for two years.

2.4.2 Sales to Other Agencies

Tehachapi-Cummings has in the past and anticipates in the future selling SWP water to other KCWA entities. In 1995 they sold 9,620 AF to KCWA Improvement District 4. Tehachapi-Cummings has a transfer agreement with West Kern Water District to sell them 2,000 AF when Table A allocations are greater than 35 percent. The term of this agreement is 2010 through 2012. Table 2-17 presents sales to other agencies. Because of the difficulty in projecting future sales to other agencies, no projections are shown.

Table 2-17: (DWR Table 13) Sales to Other Agencies

Water Distributed	2005	2010	2015	2020	2025	2030	2035	2040
West Kern Water District ²	-	2,000	-	-	-	-	-	-
Kern County Water Agency Improvement District ¹	9,620	-	-	-	-	-	-	-
	9,620	2,000	-	-	-	-	-	-

¹ In 2005 the district sold 9,620 af of SWP water to KCWA Improvement District 4.

² See Table 11 footnote.

2.4.3 Additional Water Uses and Losses

TCCWD, Golden Hills CSD, and the City place SWP water into storage when supply and financial resources are available. The goal for the area is that the combination of local groundwater and imported water stored in the groundwater basins can meet the areas demand for multiple years. Although the agencies have not adopted a policy regarding groundwater storage, the following projections of water use presume that Golden Hills CSD and the City place water into storage at a rate to accomplish this goal over a period of five years; and TCCWD, over five years, as shown in Table 2-18.

Table 2-18: (DWR Table 14) Additional Water Uses and Losses (AF)

Water Use	2010	2015	2020	2025	2030	2035	2040
Groundwater Storage (by owner of stored water)¹							
Golden Hills CSD							
Goal for total storage (5 years of demand in excess of Allowed Pumping Allocation)	3,015	3,015	3,015	3,351	3,743	4,154	4,587
Storage at beginning of year	2,172	3,015	3,015	3,351	3,743	4,154	4,587
Imported water added to storage to reach goal in 5 years.	169	0	67	78	82	87	0
City of Tehachapi							
Goal for total storage (5 years of demand in excess of Allowed Pumping Allocation)	1,000	1,090	1,000	1,943	3,093	4,363	5,765
Storage at beginning of year	666	1,090	1,000	1,943	3,093	4,363	5,765
Imported water added to storage to reach goal in 5 years.	85	(18)	189	230	254	280	0
Tehachapi-Cummings CWD²							
Goal for total storage (5 years of Service Area demand for imported water minus water stored by Golden Hills and Tehachapi)	5,162	17,253	17,901	19,072	20,182	21,371	22,646
Storage at beginning of year	12,454	17,797	21,435	25,072	28,710	32,347	35,985
Projected return flows	304	728	728	728	728	728	728
Imported water added to storage to reach goal in 5 years.	553	0	0	0	0	0	0
Imported water added to storage during this year	807	(18)	256	308	336	367	0
Recycled Water (current and projected use)							
California Correctional Institution WWTP (Within Cummings Basin for golf course irrigation and agricultural use)	900	900	900	900	900	900	900
Bear Valley WWTP (Used for golf course irrigation)	35	35	35	35	35	35	35
Recycled Water (current and projected use)	935	935	935	935	935	935	935
Additional Water Uses	1,742	917	1,191	1,243	1,271	1,302	935

¹ Golden Hills CSD has goal of storing an amount of SWP water in Tehachapi Basin equal to 5 years of demand in excess of the demand that can be met by their Allowed Pumping Allocation. This analysis assumes that the City of Tehachapi and Tehachapi-Cummings CWD establishes the same goal. Tehachapi-Cummings CWD goal would include the water stored by City of Tehachapi and by Golden Hills CSD. This analysis gives Golden Hills CSD and City of Tehachapi five years to meet their goal and Tehachapi-Cummings CWD fifteen years.

² Tehachapi-Cummings "storage at beginning of year" is return flows of SWP water. As of December 31, 2009, 3,537 AF of return flows were stored in Tehachapi Basin; 7,641 AF of return flows in Cummings Basin, and 1,276 AF of direct recharge in Tehachapi Basin. This water belongs to Tehachapi-Cummings CWD and will be used to meet shortages and when high energy costs limit the ability to import SWP water. From 2010 forward, return flows credited to Tehachapi-Cummings CWD will be 15 percent of SWP water applied on agriculture in Tehachapi and Cummings Basins.

2.5 Supply and Demand Comparison

The UWMPA requires that the UWMP demonstrate that sufficient water supplies will be available for the next 20 years.

Law

10635

(a) Every urban water supplier shall include, as part of this 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 suppliers 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 the state, or local agency population projections within the service area of the urban water supplier.

(b) 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.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

Supply forecasts in this section are built on the assumption that TCCWD, Golden Hills CSD and the City meet their water banking goals.

Previous sections of this analysis have projected the supply and the demand for the five agencies over the next 30 years. These projections have included an examination of the impacts of drought on each of the supply sources. This section compares those projections in order to assess the reliability of water service to customers during normal, dry and multiple dry water years. Prior to presenting the calculations, it will be useful to provide a brief qualitative review of the water supply sources. The four retail purveyors who are part of this RUWMP each pump groundwater from Cummings, Tehachapi or Bear Valley groundwater basins. Additional entities within the Tehachapi-Cummings Service Area pump from the Tehachapi, Cummings and Brite Basins. Since the Judgments have taken into account long term hydrology, which include wet and dry periods, in determining the safe yields for each basin, each of these basins is capable of providing a consistent water supply independent of drought, providing the pumping stays reasonably close to the Judgment and stored imported surface supplies.

Imported water, from the SWP provides the remaining water to the service area. This imported water may be from the current year's SWP allocation which is highly variable, or may include carryover from San Luis Reservoir which can be used by TCCWD to add flexibility to its SWP water supply. TCCWD carried over 1,972 AF into 2010 and plans to carryover about 2,000 AF into 2011. As an example, this water can be placed in storage in the basins. The water stored in the groundwater basins may have been deliberately placed in storage or may include return flows

of imported water. This stored water can be recovered to supplement supplies during droughts, years of low SWP allocations, or when the cost of natural gas causes the importation of SWP water to be cost-prohibitive. The tables in this investigation identify the current year’s imported supply as “State Water Project”. It identifies the previously stored water as “Recovery of stored SWP Water”. For purposes of these tables, annual recovery is limited to 20 percent of stored water.

As the current year’s SWP allocation and the SWP water stored by Tehachapi-Cummings can be allocated to any of the four urban purveyors and/or used to meet other demand within the Tehachapi-Cummings Service Area, the entire GTA is treated as a single entity in this section.

2.5.1 Projected Normal Year Supply and Demand Comparison

The projections of the normal year supply through the year 2040 show a supply in excess of 100 percent of projected year demand.

The supporting analysis is included as Tables 2-19 to 2-21 and serves to demonstrate the normal year supply and projected demand comparison.

Table 2-19: (DWR Table 40) Projected Normal Year Water Supply (AFY)

	2015	2020	2025	2030	2035	2040
Tehachapi-Cummings Service Area						
Supply ¹	21,379	21,297	21,216	21,151	21,151	21,151
% of Year 2010 ²	114%	113%	113%	112%	112%	112%

¹ From Table 4. Does not include recycled water or recovery of stored water.

² At the time this investigation the SWP allocation for 2010 is 40%.

Table 2-20: (DWR Table 41) Projected Normal Year Water Demand (AFY)

	2015	2020	2025	2030	2035	2040
Tehachapi-Cummings Service Area						
Demand ¹	14,986	15,097	15,587	16,117	16,692	17,314
% of year 2010	122%	123%	127%	131%	136%	141%

¹ From Table 12. does not include sales outside of Tehachapi-Cummings CWD Service Area, storage of imported water or demand for recycled water.

Table 2-21: (DWR Table 42) Projected Normal Year Supply and Demand Comparison (AFY)

	2015	2020	2025	2030	2035	2040
Tehachapi-Cummings Service Area						
Supply Totals	21,379	21,297	21,216	21,151	21,151	21,151
Demand Totals	14,986	15,097	15,587	16,117	16,692	17,314
Difference (supply minus demand)	6,393	6,200	5,629	5,033	4,459	3,837
Difference as % of Supply	30%	29%	27%	24%	21%	18%
Difference as % of Demand	43%	41%	36%	31%	27%	22%

2.5.2 Projected Single-Dry-Year Supply and Demand Comparison

The projections of a single-dry year supply through the year 2040 show a supply of 76 percent to 100 percent of normal supply. Dry-year supply increases over time as the agencies gradually place water in storage to meet their storage goal and as that goal increases with growth. The projections show that single-dry-year supply exceeds normal year demand in all years beginning in 2015. Were there a moderate shortage, the recovery of stored SWP water would remedy the shortage.

The supporting analysis is included as Tables 2-22 to 2-24 and serves to demonstrate this single dry year supply and demand comparison.

Table 2-22: (DWR Table 43) Projected Single Dry Year Water Supply (AFY)

	2015	2020	2025	2030	2035	2040
Tehachapi-Cummings Service Area						
State Water Project ¹	1,158	1,158	1,158	1,158	1,158	1,158
Groundwater Basins ¹	10,714	10,714	10,714	10,714	10,714	10,714
Recovery of Stored SWP Water ²	4,381	5,090	6,073	7,109	8,173	9,267
Total	16,253	16,962	17,945	18,981	20,045	21,139
% of Projected Normal	76%	80%	85%	90%	95%	100%

¹ See Table 8.

² See Table 14. Recovery by Tehachapi-Cummings CWD, City of Tehachapi and Golden Hills CSD of SWP water previously placed in storage. Presumes recovery of 20% of stored water in any one year.

Table 2-23: (DWR Table 44) Projected Single Dry Year Water Demand (AFY)

	2015	2020	2025	2030	2035	2040
Tehachapi-Cummings Service Area						
Demand ¹	14,986	15,097	15,587	16,117	16,692	17,314
% of Projected Normal	100%	100%	100%	100%	100%	100%

¹ From Table 12. Does not include sales outside of Tehachapi-Cummings CWD Service Area, storage of imported water or demand for recycled water.

Table 2-24: (DWR Table 45) Projected single dry year Supply and Demand Comparison (AFY)

	2015	2020	2025	2030	2035	2040
Tehachapi-Cummings Service Area						
Supply Totals	16,253	16,962	17,945	18,981	20,045	21,139
Demand Totals	14,986	15,097	15,587	16,117	16,692	17,314
Difference (supply minus demand)	1,267	1,865	2,358	2,864	3,353	3,826
Difference as % of Supply	8%	11%	13%	15%	17%	18%
Difference as % of Demand	8%	12%	15%	18%	20%	22%

2.5.3 Projected Multiple-Dry-Year Supply and Demand Comparison

The projections of a multi-dry-year supply through the year 2040 shows a supply ranging from 87 percent to 114 percent of a normal year supply. Note that in a normal year, recovery of SWP water is not included as a supply source. Dry-year supply can exceed normal supply as recovery of stored SWP water is not considered a supply source in a normal year.

Multiple-dry-year supply increases over time as the agencies gradually place water in storage to meet their storage goal and as that goal increases with growth. The projections show that supply exceeds normal year demand during any three-year drought. In a three-year drought ending in 2015, supply exceeds normal-year demand by 33, 35 and 29 percent in the first through third year of the drought. In a drought ending in 2040, supply exceeds normal-year demand by 37, 41 and 39 percent.

The supporting analysis is included as Tables 2-25 to 2-42 and serves to demonstrate the projected multi-year and supply demand comparison.

Table 2-25: (DWR Table 46) Projected Supply During Multiple Dry Year Period Ending in 2015

	2013	2014	2015
Tehachapi-Cummings Service Area			
State Water Project ¹	4,246	5,211	5,018
Groundwater Basins ²	10,714	10,714	10,714
Recovered SWP Water ³	3,542	3,542	3,542
Tehachapi-Cummings Service Area	18,502	19,467	19,274
% of Projected Normal	87%	91%	90%

¹ See Table 8.

² See Table 8.

³ SWP water previously placed in storage. See Table 14. Presumes 20% of stored water would be recovered in one year. Does not include recovery of return flows of delivered SWP water.

Table 2-26: (DWR Table 47) Projected Demand During Multiple Dry Year Period Ending in 2015

	2013	2014	2015
Tehachapi-Cummings Service Area			
Demand ¹	13,917	14,451	14,986
% of Projected Normal	100%	100%	100%

¹ Does not include sales outside of Tehachapi-Cummings Service Area, storage of imported water or demand for recycled water.

Table 2-27: (DWR Table 48) Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2015

	2013	2014	2015
Supply Totals	18,502	19,467	19,274
Demand Totals	13,917	14,451	14,986
Difference (supply minus demand)	4,585	5,016	4,289
Difference as % of Supply	25%	26%	22%
Difference as % of Demand	33%	35%	29%

Table 2-28: (DWR Table 49) Projected Supply During Multiple Dry Year Period Ending in 2020

	2018	2019	2020
Tehachapi-Cummings Service Area			
State Water Project ¹	4,246	5,211	5,018
Groundwater Basins ²	10,714	10,714	10,714
Recovered SWP Water ³	4,370	4,370	4,370
Tehachapi-Cummings Service Area	19,330	20,295	20,102
% of Projected Normal	90%	95%	94%

¹ See Table 8.

² See Table 8.

³ SWP water previously placed in storage. See Table 14. Presumes 20% of stored water would be recovered in one year. Does not include recovery of return flows of delivered SWP water.

Table 2-29: (DWR Table 50) Projected Demand During Multiple Dry Year Period Ending in 2020

	2018	2019	2020
Tehachapi-Cummings Service Area			
Demand ¹	15,053	15,075	15,097
% of Projected Normal	100%	100%	100%

¹ From Table 12. Does not include sales outside of Tehachapi-Cummings Service Area, storage of imported water or demand

Table 2-30: (DWR Table 51) Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2020

	2018	2019	2020
Supply Totals	19,330	20,295	20,102
Demand Totals	15,053	15,075	15,097
Difference (supply minus demand)	4,277	5,220	5,005
Difference as % of Supply	22%	26%	25%
Difference as % of Demand	28%	35%	33%

Table 2-31: (DWR Table 52) Projected Supply During Multiple Dry Year Period Ending in 2025

	2023	2024	2025
Tehachapi-Cummings Service Area			
State Water Project ¹	4,246	5,211	5,018
Groundwater Basin ²	10,714	10,714	10,714
Recovered SWP Water ³	5,243	5,243	5,243
Tehachapi-Cummings Service Area	20,203	21,168	20,975
% of Projected Normal	95%	99%	98%

¹ See Table 8.

² See Table 8.

³ SWP water previously placed in storage. See Table 14. Presumes 20% of stored water would be recovered in one year. Does not include recovery of return flows of delivered SWP water.

Table 2-32: (DWR Table 53) Projected Demand During Multiple Dry Year Period Ending in 2025

	2023	2024	2025
Tehachapi-Cummings Service Area			
Demand ¹	15,391	15,489	15,587
% of Projected Normal	100%	100%	100%

¹ From Table 12. Does not include sales outside of Tehachapi-Cummings Service Area, storage of imported water or demand for recycled water.

Table 2-33: (DWR Table 54) Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2025

	2023	2024	2025
Supply Totals	20,203	21,168	20,975
Demand Totals	15,391	15,489	15,587
Difference (supply minus demand)	4,812	5,679	5,388
Difference as % of Supply	24%	27%	26%
Difference as % of Demand	31%	37%	35%

Table 2-34: (DWR Table 55) Projected Supply During Multiple Dry Year Period Ending in 2030

	2028	2029	2030
Tehachapi-Cummings Service Area			
State Water Project ¹	4,246	5,211	5,018
Groundwater Basins ²	10,714	10,714	10,714
Recovered SWP Water ³	6,258	6,258	6,258
Tehachapi-Cummings Service Area	21,218	22,183	21,990
% of Projected Normal	99%	104%	103%

¹ See Table 8.

² See Table 8.

³ SWP water previously placed in storage. See Table 14. Presumes 20% of stored water would be recovered in one year. Does not include recovery of return flows of delivered SWP water.

Table 2-35: (DWR Table 56) Projected Demand During Multiple Dry Year Period Ending in 2030

	2028	2029	2030
Tehachapi-Cummings Service Area			
Demand ¹	15,905	16,011	16,117
% of Projected Normal	100%	100%	100%

¹ From Table 12. Does not include sales outside of Tehachapi-Cummings Service Area, storage of imported water or demand for recycled water.

Table 2-36: (DWR Table 57) Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2030

	2028	2029	2030
Supply Totals	21,218	22,183	21,990
Demand Totals	15,905	16,011	16,117
Difference (supply minus demand)	5,313	6,172	5,873
Difference as % of Supply	25%	28%	27%
Difference as % of Demand	33%	39%	36%

Table 2-37: (DWR Table 58) Projected supply during multiple dry year period ending in 2035 (AFY)

	2033	2034	2035
Tehachapi-Cummings Service Area			
State Water Project ¹	4,246	5,211	5,018
Groundwater Basins ²	10,714	10,714	10,714
Recovered SWP Water ³	7,311	7,311	7,311
Tehachapi-Cummings Service Area	22,271	23,236	23,043
% of projected normal	104%	109%	108%

¹ See Table 8.

² See Table 8.

³ SWP water previously placed in storage. See Table 14. Presumes 20% of stored water would be recovered in one year. Does not include recovery of return flows of delivered SWP water.

Table 2-38: (DWR Table 59) Projected Demand During Multiple Dry Year Period Ending in 2035

	2033	2034	2035
Tehachapi-Cummings Service Area			
Demand ¹	16,462	16,577	16,692
% of Projected Normal	100%	100%	100%

¹ From Table 12. Does not include sales outside of Tehachapi-Cummings Service Area, storage of imported water or demand for recycled water.

Table 2-39: (DWR Table 60) Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2035

	2033	2034	2035
Supply Totals	22,271	23,236	23,043
Demand Totals	16,462	16,577	16,692
Difference (supply minus demand)	5,809	6,659	6,351
Difference as % of Supply	26%	29%	28%
Difference as % of Demand	35%	40%	38%

Table 2-40: (DWR Table 61) Projected Supply During Multiple Dry Year Period Ending in 2040

	2038	2039	2040
Tehachapi-Cummings Service Area			
State Water Project ¹	4,246	5,211	5,018
Groundwater Basins ²	10,714	10,714	10,714
Recovered SWP Water ³	8,393	8,393	8,393
Tehachapi-Cummings Service Area	23,353	24,318	24,125
% of Projected Normal	109%	114%	113%

¹ See Table 8.

² See Table 8.

³ SWP water previously placed in storage. See Table 14. Presumes 20% of stored water would be recovered in one year. Does not include recovery of return flows of delivered SWP water.

Table 2-41: (DWR Table 62) Projected Demand During Multiple Dry Year Period Ending in 2040

	2038	2039	2040
Tehachapi-Cummings Service Area			
Demand ¹	17,065	17,189	17,314
% of Projected Normal	100%	100%	100%

¹ From Table 12. Does not include sales outside of Tehachapi-Cummings Service Area, storage of imported water or demand for recycled water.

Table 2-42: (DWR Table 63) Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2040

	2038	2039	2040
Supply totals	23,353	24,318	24,125
Demand totals	17,065	17,189	17,314
Difference (supply minus demand)	6,288	7,129	6,812
Difference as % of Supply	27%	29%	28%
Difference as % of Demand	37%	41%	39%

2.6 Demand Management Measures

The UWMPA identifies fourteen DMMs for urban water suppliers to address. These measures are derived from the original BMPs established in the UWMPA and the 1991 MOU.

Law

10631

(f) Provide a description of the suppliers' water demand management measures. This description shall include all of the following:

- 1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following.....
 - a. Water survey programs for single-family residential and multi-family residential customers
 - b. Residential plumbing retrofit
 - c. System water audits, leak detection
 - d. Metering with commodity rates for all new connections and retrofit of existing connections
 - e. Large landscape conservation programs and incentives
 - f. High-efficiency washing machine rebate programs
 - g. Public information programs
 - h. High school education programs
 - i. Conservation programs for commercial, industrial, and institutional accounts
 - j. Wholesale agency programs
 - k. Conservation pricing
 - l. Water conservation coordinator
 - m. Water waste prohibitions
 - n. Residential ultra-low-flush toilet replacement programs

The agencies as a region realize the importance of the BMPs, emphasized by the CUWCC, to ensure a reliable future water supply. 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.

None of the agencies have previously developed an UWMP, as they were not required to submit a plan (each retail entity delivers less than 3,000 AFY and/or has less than 3,000 service connections). The agencies do however have conservation measures already in place to improve efficiency of water use. In addition, all of these agencies are located in Kern County. Elements of the Kern County Water Code, as detailed in the following section, are also implemented on a regional level. Water Resource Ordinances, Rules and Regulations implementing the required BMPs are described in the following section.

Table 2-43 summarizes the DMMs being implemented by TCCWD. As a note, TCCWD is a wholesale water importing agency to the GTA, and does not supply direct deliveries to retail users but does provide direct deliveries to industrial and commercial users such as Cal-Portland Cement Plant, Horse Thief Golf Course and for temporary construction uses. There are several DMMs that are not applicable to TCCWD, however, TCCWD has made a commitment to help

further regional conservation by scheduling an implementation program for DMMs identified in the Table 2-43. DMMs for Bear Valley CSD, the City, Golden Hills CSD and Stallion Springs CSD are presented in their respective Sections.

Table 2-43: (DWR Table 16) Demand Management Measures – Specific to Greater Tehachapi

Demand Management Measure (DMM)	TCCWD ¹		
	Implemented	Planning to Implement	Not Applicable
DMM 1: Water Survey Program			✓
DMM 2: Residential Plumbing			✓
DMM 3: Water System Audit	✓		
DMM 4: Metering with Commodity Rates	✓		
DMM 5: Landscape Irrigation Programs			✓
DMM 6: Washing Machine Rebate Program			✓
DMM 7: Public Information	✓		
DMM 8: School Education	✓		
DMM 9: Commercial, Industrial, and Institutional Programs			✓
DMM 10: Wholesale Conservation Coordinator	✓		
DMM 11: Conservation Pricing	✓		
DMM 12: Water Conservation Coordinator	✓		
DMM 13: Water Waste Prohibition			✓
DMM 14: Ultra Low Flush Toilet Replacement			✓

¹ TCCWD is a wholesale water importer agency to the Greater Tehachapi Region, and does not have any direct deliverables to retailers, etc. As a result, DMMs do not apply to this Agency.

2.6.1 Water Resource Ordinances, Rules, and Regulations

2.6.1.1 Kern County

Kern County has an extensive Water Code (Kern County Code, Title 14) which governs water resources and water utility service. The Code is directly applicable to the GTA. Most noteworthy in the Code is the County’s prohibition of native groundwater export from the County.

The Kern County Board of Supervisors adopted Ordinance No. G-6502 which adds Subsection 19.102.190(K) to Chapter 19.102 of the Kern County Code, and adds Chapter 19.118 to the Kern County Code. These additions to the Kern County Code regulate the transportation or transfer of native groundwater outside of Kern County and its watersheds, including transportation or transfer through joint water conveyance facilities, and/or sales to owners of water conveyance facilities.

2.6.1.2 Tehachapi-Cummings County Water District

TCCWD serves three unique and separate functions related to water supply, first, as the wholesale water importer to the GTA; second, as the Court Appointed Watermaster which oversees and administers the Judgments for the Brite, Cummings and Tehachapi Basins; and

third, operation and maintenance of selected flood control structures and channels in the Tehachapi area.

The Board of Directors of the TCCWD imposes Rules and Regulations concerning delivery of imported SWP water, as well as recycled water use of its facilities and agency subventions. As Watermaster, the Board adopts Resolutions and seeks California Superior Court resolution of disputes arising under its Judgments. TCCWD also maintains Rules and Regulations for its distribution and use of Recycled Water (Appendix C).

Resolution No. 8-73 of the TCCWD Board of Directors, adopted June 13, 1973, claims a right to waste, seepage, and return flows into any of the three groundwater basins resulting from water imported by the District, along with the right to recapture and reuse said water. The claim extended to return flows whether from waste or seepage before any delivery of water delivered by the District, and from percolation after or as a result of use or reuse of imported waters by any water user. The district further expressed a reservation of its intentions for the future to later recapture said water, in reiterating its claim through Resolution No. 16-79 on December 15, 1976.

2.6.2 Demand Management Measures

TCCWD provides imported SWP water directly to agricultural customers and indirectly to water purveyors for M&I uses through its conjunctive use program. As an urban water wholesaler, TCCWD is not required to implement most of the DMMs; however, it is appropriate that TCCWD implement DMM 4 (metering with commodity rates), DMM 7 (public information), DMM 8 (school education) and DMM 10 (wholesale water agency assistance). This section describes TCCWD's program for these four DMMs.

DWR has assigned an enhanced terminology to the BMPs. Accordingly, this chapter will refer to them as DMMs.

DMM 1 – Water Survey Programs for Single Family and Multi-Family Residential Customers

This program consists of offering water audits to residential customers. Audit components include reviewing water usage history with the customer, identifying leaks inside and outside, and recommending improvements.

Because TCCWD is not an urban water purveyor, it has not implemented, and currently has no plans to implement, this DMM.

DMM 2 – Residential Plumbing Retrofit

This program consists of installing physical devices to reduce the amount of water used and to limit the amount of water, which can be used to limit the amount of water, which can be served to its customers.

Because TCCWD does not have retail residential customers, TCCWD has not implemented nor does TCCWD have plans to implement this DMM.

DMM 3 – System Water Audits, Leak Detection, and Repair

A water audit is a process of accounting for water use throughout a water system in order to quantify the unaccounted for water. Unaccounted for water is the difference between metered production and metered usage on a system-wide basis.

TCCWD's historical water loss rate is 16.4 percent, 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 does hope to reduce the amount of water losses over time. In 2011 TCCWD will operate the reservoir at lower levels in order to reduce surface area, and therefore, evaporation losses. Also in 2011, a bi-directional meter will be 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. If it appears that there are significant losses from other parts of the transmission system, TCCWD will seek out the causes of those losses. 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 by 2015. Even so, this plan incorporates the full 16.4 percent loss factor in its water supply and demand forecasting.

DMM 4 – Metering with Commodity Rates

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

TCCWD has metered connections and currently implements this DMM. TCCWD's water rates are highly tax subsidized, with property taxes covering approximately two-thirds of the true cost of imported water. Generally, the water rates paid by customers represent only the cost to pump imported water into the district and deliver the water within its three pressure zones. Water rates include the cost of system losses, which are primarily associated with Jacobsen Reservoir. Water rates are divided into three pressure zones, which represent areas served between pumping stations. By so doing, the district more accurately captures the cost of pumping so that there is less cross-subsidization between customer classes and areas. Water rates are further divided by customer class: agricultural, term M&I (long-term contract required) and regular M&I. TCCWD has a minimal monthly base charge of \$4.50 per customer regardless of meter size, which doesn't even cover its customer-related costs. Of the total amount received from water sales and services, 0.3 percent comes from fixed charges and 99.7 percent is from commodity charges.

The CUWCC's guideline is that at least 70 percent of water sales revenues come from commodity charges.

DMM 5 – Large Landscape Conservation Programs

This DMM calls for agencies to commence assigning reference evapotranspiration-based (ET_o) water budgets to accounts with dedicated irrigation meters and provide water-use audits to accounts with mixed-use meters.

Because TCCWD is not an urban water purveyor, it has not implemented, and currently has no plans to implement, this DMM. However, TCCWD will participate in agricultural water conservation programs.

DMM 6 – 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.

Because TCCWD is not an urban water purveyor, it has not implemented, and currently has no plans to implement, this DMM.

DMM 7 – Public Information System

This program consists of distributing information to the public through a variety of methods including brochures, radio and television, school presentations and videos, and web sites.

TCCWD participates in numerous ways in disseminating water conservation information to the public. TCCWD is a member of the Water Education Foundation, the California Water Awareness Campaign and the Water Association of Kern County. TCCWD provides financial support for the mobile irrigation lab of the Northwest Kern Resources Conservation District. TCCWD's website contains numerous links to water conservation sites. The district's general manager speaks to various community groups regarding the district's activities, the SWP and the need to conserve water. Finally, over the past year, TCCWD coordinated the distribution of four issues of the Water for Tomorrow magazine with the cooperation of the four public water purveyors in the region. The cost for these activities over the past year, including staff time, was \$6,500.

DMM 8 – School Education

This DMM requires water suppliers to implement a school education program that includes providing educational materials and instructional assistance.

For this DMM, the agencies rely on the KCWA for the dissemination of water conservation information to the local schools. For over 20 years KCWA has educated local students about Kern County's (local and state) water supplies and the importance of water and its conservation. Each year, thousands of students in kindergarten through twelfth grade learn about water treatment, water supply, groundwater and how water is used to grow food and fiber. TCCWD is a member unit of the KCWA. KCWA's active school education program, which covers all of

the member unit districts, provides a comprehensive water conservation curriculum to elementary (grades K-6) students in Kern County. They make the circuit in Tehachapi every year or two. They also provide to teachers by mail a lesson plan designed by the Water Education Foundation for grades 7-12. In addition, they offer “Project WET” (Water Education for Teachers) training to any Kern County teacher who will attend the training in Bakersfield. Occasionally the district’s general manager speaks to students in Tehachapi schools upon invitation from teachers. Over the past year the district has spent \$500 on this activity. KCWA provides their service at no charge to the district.

KCWA’s Water Education Program is designed to support classroom curriculum and align with the current California Content Standards. KCWA implements local school programs free of charge to all public and private schools in Kern County. These include:

- **Project WET** – KCWA is proud to be a facilitator of Project WET. Project WET is environmental education that promotes the awareness, appreciation, knowledge, and stewardship of water resources. Each year, KCWA holds a free Project WET workshop and practicum for Kern County first through twelfth grade teachers.
- **Grades K-6** – KCWA’s kindergarten through sixth grade program has been designed as a comprehensive approach to water education. The program focuses on active learning to engage students at all learning levels.
 - **Assembly Programs** – KCWA is pleased to offer assemblies and materials free of charge for use in Kern County classrooms.
 - **Incredible Journey Lesson** – This 60-minute “Project WET” activity is conducted by KCWA staff in the fifth grade classroom.
 - **Video Lessons** – As part of KCWA’s commitment to further students’ knowledge about local water, schools that book an assembly will receive three water education videos and coordinating lesson plans.
 - **Poster Contest** – Each year KCWA sponsors a poster contest for Kern County students in the first through sixth grades. The contest gives young artists the opportunity to express the role they can play in water conservation.
 - **WebQuests** – WebQuests are designed specifically for students in the third and fifth grades. Using the internet, students are able to explore the world of water.
- **Grades 7-12 (Water Science Units)** – KCWA offers two science units for the seventh through twelfth grades to help students fully understand the complexities of water and water conservation.
- **Scholarship** – After Jim Costa left the California State Senate in 2002, KCWA honored him by instituting a scholarship program for students in a course of study related to water resources.

DMM 9 – Conservation Programs for Commercial, Industrial and Institutional Programs

Because TCCWD is not an urban water purveyor, it has not implemented, and currently has no plans to implement, this DMM.

DMM 10 – Wholesale Agency Assistance

This DMM applies to wholesale agencies and defines a wholesaler's role in terms of financial, technical, and programmatic assistance to its retail agencies implementing DMMs.

TCCWD is a member of the Tehachapi Water Availability Preservation Committee, together with public water purveyors, mutual water companies, private water companies and other water professionals. TCCWD provides water conservation information to attendees. After adoption of the RUWMP, the district's general manager plans to pursue a regional water conservation program, which will more fully implement the fourteen DMMs throughout the GTA. Since none of the agencies have a need for (or an adequate budget for) a full-time water conservation coordinator, this program would establish two full-time positions at the wholesale agency to implement the water purveyors' programs. The water purveyors would pay the costs of the program via a yet-to-be-determined formula.

DMM 11 – Conservation Pricing

TCCWD uses a billing structure which includes a base rate of \$4.50 per month, and volume charges that vary by customer class and pressure zone. Agricultural deliveries are discounted because of return flows to the groundwater basins. Billings are done monthly to provide timely feedback to customers in regards to their water consumption.

DMM 12 – Conservation Coordinator

TCCWD's General Manager is the Conservation Coordinator for the district.

DMM 13 – Water Waste Prohibition

Because TCCWD is not an urban water purveyor it has not implemented, and currently has no plans to implement, this DMM. Urban water is sold to public water purveyors and mutual water companies, which have their own rules and regulations regarding water waste. They regulate their customers that they serve and TCCWD does not. TCCWD will address water waste by agricultural customers in its agricultural water use plan.

DMM 14 – Residential Ultra-Low Flush Toilet Replacement Program

State legislation requires the installation of efficient plumbing in new construction, and effective 1994 require that only Ultra-low flush toilet (ULFT) be sold in California. Subsequently, home constructed within the GTA since 1994 have ULFTs.

Because TCCWD is not an urban water purveyor, it has not implemented, and currently has no plans to implement, this DMM.

2.7 Water Shortage Contingency Plans

2.7.1 Stages of Action

The UWMPA requires that the UWMP include an urban water shortage contingency plan that addresses specific issues.

Law

10632

The plan 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.

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

2.7.1.1 History of Water Shortage and Conservation Resolutions

The State of California experienced a five year drought condition from 1987 to 1992. Subsequently, some of the participating agencies board of directors approved and adopted several resolutions and conservation measures for voluntary and mandatory conservation. Water resources ordinances, rules, regulations and policies that are in place to further assist in water conservation are being implemented by various local agencies as described below:

Kern County

Kern County has an extensive Water Code (Kern County Code, Title 14) which governs water resources and water utility service. The Code is directly applicable to the GTA.

Most notable in the Water Code is Kern County Ordinance No. G-6502. This ordinance regulates the transport or transfer of native groundwater outside of Kern County and its watersheds. This also regulates transport or transfer through joint use, of capacity in, and sales to, owners or operators of water conveyance facilities.

Tehachapi-Cummings County Water District

TCCWD serves three unique and separate functions related to water supply, first as the wholesaler of imported water to the GTA; second as the Court Appointed Watermaster which oversees and administers the Judgments for the Brite, Cummings, and Tehachapi Basins; and third, operation and maintenance of selected flood control structures and channels in the Tehachapi area.

As the Board of Directors of the TCCWD, the District imposes Rules and Regulations concerning the delivery of imported water and recycled water, use of its facilities and agency subventions. 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. In 2009, the Board adopted Ordinance 2009-1, establishing restrictions and priorities as to the sale of water in view of a threatened water shortage emergency. No such ordinance was required in 2010.

2.7.2 Water Shortage Stages and Reductions

Water agencies relying solely on surface water, are more likely to experience a water shortage than those agencies relying primarily on groundwater. TCCWD is vulnerable not only to reductions in SWP supply, but also to interruptions in flow caused by failures in the importation system. Both of these vulnerabilities are addressed here.

The participants of this RUWMP have a portfolio of diversified resources, as described in their respective Water Supply Sections. These resources include groundwater, local surface water, imported surface water, and recycled water supplies.

TCCWD is the wholesale water agency for the other four agencies participating in the UWMP and provides SWP water to these agencies through a conjunctive use program. TCCWD also provides SWP water to agriculture in the GTA. In fact, between one-half and two-thirds of all SWP water imported by TCCWD in a given year is delivered for agriculture.

This UWMP addresses scenarios that include possible interruptions in SWP deliveries within the region. This analysis demonstrates that the GTA can withstand short-term reductions in SWP deliveries. This can be sustained because TCCWD has an on-going groundwater banking program which can be relied upon during SWP interruptions. Golden Hills CSD and the City also have active groundwater banking programs.

2.7.3 Water Reduction Stage Triggering Mechanisms

Emergency response stage actions become effective when the Board of Directors of the participating agencies declares that an agency 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. TCCWD will only declare a water shortage during extremely low SWP allocation years. TCCWD has never imported more than 45 percent of its SWP allocation, so a 50 percent shortage of its surface water supply does not create a shortage condition for its customers. TCCWD currently has the ability to replace one-third of its peak summer demand with recovery of its banked groundwater supply. Moreover, recharging of the basins for its conjunctive use customers is not immediately required, which means that the normal demand for these customers can be delayed until SWP water becomes available. Also, because TCCWD has surplus SWP supply, it can carryover SWP in San Luis Reservoir for delivery in the following year to guard against a single-year interruption in SWP supplies. Because of these factors, TCCWD can meet current demand without the need to reduce the supply for any of its customers in SWP allocations as low as 10 percent. If DWR declares an

SWP allocation of less than 10 percent as of May 1 of any year, TCCWD's Board of Directors will consider invoking its water shortage contingency plan (shown in Ordinance 2009-1).

To address TCCWD's vulnerability to mechanical failures in its importation system, it has built in some redundancies. There is only one pipeline, so a catastrophic failure of the pipeline would result in the complete shutdown of the importation system. If this occurred during the peak summer season, the Board would be asked to invoke the water shortage contingency plan at a special meeting. TCCWD has redundant pumping facilities in that each pump plant has four engines and pumps, whereas only two are needed for most pumping operations and only three of the four are needed for peak summer flow. So a failure in one of the engines or pumps can be addressed with very little interruption in normal deliveries. Even during the peak summer season when three of the four engines at each pump plant are operating, there is sufficient water stored in the reservoir to backfill any reductions in supply caused by mechanical failure. Moreover, the district can produce the equivalent of one-third of its import system capacity from recovery wells pumping its banked groundwater.

2.7.4 Administration of Water Shortage Program

The administration of a water shortage contingency program as described in this section would involve coordination amongst TCCWD and a number of local agencies. An individual at each of the agencies would be identified as the Program Manager and be the primary coordinator of water shortage activities.

An appropriate organizational structure for a water shortage management team would be determined based on the actual situation. Specific individuals would be designated to fill the identified roles. It would most likely be unnecessary to hire additional staff or outside contractors to implement the program.

The major elements to be considered in a future regional water shortage program could include:

- Identifying district staff members to fill the key roles on the water shortage management team. It is anticipated that the General Manager for each district would designate appropriate individuals. Intensifying the public information program to provide comprehensive information on the water shortage and necessary actions that must be undertaken by each agency and the public. The scope of the public information program can be developed by reviewing published references, especially those published by DWR, and researching successful aspects of the current programs conducted by neighboring water agencies. A public information hotline may be advisable to answer any question regarding the program.
- Monitoring program effectiveness. Ongoing monitoring will be needed to track supply availability and actual water user reductions. The procedure will allow each of

the agencies to continuously re-evaluate the situation and make informal decisions as to whether another reduction level is needed.

- Coordination with other agencies. Since TCCWD services multiple agencies, it is critical to have on-going coordination efforts amongst the agencies and have a specific contact person who will be aware of conservation developments.
- Addressing new development proposals. During periods of severe water shortage, it may be necessary to impose additional requirements on new developments to reduce new demands or temporarily curtail new hook-ups.
- Adjusting water rates. Revenues from water sales should be reviewed periodically to determine whether an increase in rates might be needed to cover revenue shortfalls due to the decrease in demand.

It is required that the water shortage contingency plan undergo a formal public review process including a public hearing. A thorough public review process will help minimize future objections when mandatory prohibitions are in place. TCCWD will undergo this public review process during the UWMP public comment period.

2.7.5 Water Shortage Contingency Ordinance/Resolution

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that includes a draft water shortage contingency resolution or ordinance. Ordinance 2009-1 is the district's water shortage contingency ordinance and is included as Appendix C.

2.7.6 Prohibitions, Penalties and Consumption Reduction Methods

The UWMPA requires that the UWMP includes an urban water shortage contingency analysis that addresses methods to reduce consumption.

Law

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.....

- (d)** 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.
- (e)** 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 the area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.
- (f)** Penalties or charges for excessive use, where applicable.

2.7.6.1 Mandatory Prohibitions on Water Wasting

Mandatory compliance measures enacted during a water shortage are more severe than voluntary measures, produce greater savings, and are less costly to the agency. The principal drawback to

these measures is the customer resentment because the measures are not perceived as equitable. Therefore, such measures need to be accompanied by a good public relations campaign.

Mandatory measures may include:

- Ordinances making water waste illegal,
- Ordinances controlling landscape irrigation,
- Ordinances restricting non-irrigation outdoor water uses,
- Prohibitions on new connections or the incorporation of new areas,
- Rationing.

Prohibitions on new development may conflict with other policies and needs. However, if existing customers are called upon to make sacrifices during a drought period, they may feel that the agencies should concentrate on fulfilling current obligations rather than taking on new customers. Such prohibitions may need to be considered in the event of a critical shortage, such as the 40-50 percent reduction program.

During a water shortage each agency will respond by implementing specific measures identified in their respective Water Shortage Contingency Plans. Bear Valley CSD, the City, and Golden Hills CSD, all have implemented resolutions associated with mandatory cutbacks. Stallion Springs CSD has submitted a Water Shortage Contingency Plan within the RUWMP for their Board's consideration. Those will be specifically identified in the Agency Chapters that follow, within this RUWMP. Example resolutions include the following:

- There shall be no washing of sidewalks, walkways, buildings, walls, patios, driveways, parking areas or other paved surfaces, or walls, except to eliminate conditions dangerous to public health or safety or when required as surface preparation for application of architectural coating or painting.
- Washing of motor vehicles, trailers, boats and other types of equipment shall be done only with a hand held bucket or a hose equipped with a positive shut off nozzle for quick rinses. Washing may also be done with reclaimed wastewater or by a commercial car wash using a recycled system.
- No water shall be used to clean, fill or maintain levels in ornamental fountains, ponds, lakes or other similar aesthetic structures unless such water is part of a recycling system.
- All water users shall promptly repair all leaks from indoor and outdoor plumbing fixtures.
- No lawn, landscape or other turf area shall be watered more than once every other day. No water users shall cause or allow the water to run off landscape areas into adjoining streets, sidewalks, or other paved areas due to incorrectly directed or maintained sprinklers or excessive watering.
- Alternate day irrigation of landscaping. There shall be no runoff as a result of irrigation.

2.7.7 Revenue and Expenditure Impacts/Measures to Overcome Impacts

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that addresses the financial impacts from reduced water sales.

Law

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.

(g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier....

(g) An analysis of the impacts of each of the proposed measures to overcome those [revenue and expenditure] impacts, such as the development of reserves and rate adjustments.

The majority of operating costs for most water agencies are fixed rather than a function of the amount of water sold. As a result, when significant conservation programs are undertaken, a budget deficit is likely to occur.

Although all the RUWMP participants operating budgets and required revenue stream are unique, it is anticipated that the same impact would result in the implementation of their Water Shortage Contingency Plans.

2.7.8 Actions Taken During a Catastrophic Event

The UWMPA requires that an UWMP include an urban water shortage contingency analysis that addresses a catastrophic interruption in water supply.

Law

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier...

(c) 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.

During declared shortages, or when a shortage declaration appears imminent, the General Manager/City Manager of each agency will activate a water shortage response team. The team may include: water, fire, planning, health, and emergency personnel. Each agency serving potable water is also required to develop an Emergency Action Plan as part of their state mandated Vulnerability Assessments to address terrorist threats. Per the Federal Department of Homeland Security, these plans are confidential and are not to be disclosed to the public. Other actions and procedures to follow during catastrophic events will be implemented as part of each agency's existing emergency response plans.

2.7.9 Reduction Measuring Mechanism

The UWMP analysis identifies a mechanism to measure the actual water reductions.

Law

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier...

(i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

The five agencies have a diversified mix within their water systems, mostly supplied by groundwater wells and recharged surface water. Each of the five agencies measures the amount of water entering the distribution system with flow measurement devices installed at each well. There are also flow meters on all connections to measure the amount of water used. These devices will be used to measure agency-wide reductions in water use.

2.7.10 Water Shortage Contingency Plan for Tehachapi-Cummings County Water District

TCCWD is the wholesale water agency for the other four agencies participating in the Urban Water Management Plan and provides SWP water to these agencies through a conjunctive use program. The TCCWD Water Shortage Contingency plan is provided in Appendix E.

2.8 Recycled Water

The UWMPA requires that the UWMP include information on water recycling and potential uses for recycled water.

Law**10633**

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. To the extent practicable, the preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
- (b) A description of the recycled water currently being used in the supplier's service area, including but not limited to, the type, place and quantity of use.
- (c) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse determination with regard to the technical and economic feasibility of serving those uses, groundwater recharge, and other appropriate uses.
- (d) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years.
- (e) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
- (f) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems and to promote re-circulating uses.

2.8.1 Wastewater Treatment and Recycling Descriptions

Several of the agencies own and operate their respective wastewater treatment and recycling facilities. The California Department of Corrections and Rehabilitation is presently upgrading its WWTP to a tertiary treatment plant. All effluent water is under contract to be purchased by TCCWD. Within Golden Hills CSD wastewater facilities are primarily individual septic systems which are the responsibility of the respective property owners. GHSC, a private company, operates a community sewer system and wastewater facility for a portion of Golden Hills as determined by the California Public Utilities Commission.

2.8.2 Potential Opportunities for Connection to other Agencies' Proposed Reclaimed Water Systems

It is not economically feasible for the participating agencies to connect to other agencies outside of the GTA because of distance. As a result, opportunities to expand recycled water use by exploring connecting to other agencies outside of the GTA have not been further explored.

Table 2-44 presents a list of the participating agencies and their role in recycled water development.

Table 2-44: (DWR Table 32) Participating Agencies

Participating Agencies	Role in Plan Development
Water Agencies Tehachapi-Cummings	Take delivery of treated effluent from CCI and distribute for Agricultural and for M&I use. Will replace groundwater and imported water.
Wastewater Agencies City of Tehachapi	Produces treated effluent which is mainly used for crop irrigation.
Golden Hills Sanitation Co WWTP (Tehachapi Basin)	Produces effluent
Stallion Springs WWTP	Produces effluent
Bear Valley CSD	Produces treated effluent and delivers to Bear Valley Springs Association for golf course irrigation
Groundwater Agencies None	
Planning Agencies City of Tehachapi	The City (as distinct from its water enterprise fund) will need to impliment use of recycled water in the parks.
Other California Correctional Institution	Developing water recycling plant with anticipated reliable effluent of 900 AFY.

2.8.3 Recycled Water Currently Being Used

Each of the agencies current and future use of treated wastewater is unique to their respective service areas and depends on the effluent treatment level obtained at the various facilities. Table 2-45 summarizes current and future recycled water demands of each of the entities.

Table 2-45: (DWR Table 33 Wastewater Collected and Treated (AFY))

	Treatment Level	2010	2015	2020	2025	2030	2035	2040
CCI WWTP								
Landscape - Stallion Springs Golf Course	Tertiary	-	300	300	300	300	300	300
Agriculture (off-setting groundwater in Cummings Basin)	Tertiary	-	600	600	600	600	600	600
Evaporation and percolation	Tertiary	900	-	-	-	-	-	-
City of Tehachapi WWTP ¹								
Evaporation and percolation	Secondary	364	379	372	411	453	500	553
Land Application (alfalfa with grazing)	Secondary	604	629	618	682	753	831	918
Golden Hills Sanitation Co WWTP ²								
Evaporation and percolation (Tom Sawyer Lake)	Tertiary	30	32	33	33	33	33	33
Bear Valley WWTP ³								
Landscape - Bear Valley Golf Course	Tertiary	35	35	35	35	35	35	35
Discharge to surface water	Tertiary	75	75	75	75	75	75	75
Stallion Springs WWTP ⁴								
Discharge to surface water	Secondary	40	40	40	40	40	40	40
Total		2,048	2,090	2,073	2,176	2,289	2,415	2,553

¹ Email from City on 9Dec10 provided 2008 effluent. Future years projections based on change in water use and in population.
² Fugro 2009A. Projected after 2025 without increase. Tertiary Treatment. Effluent delivered to Tom Sawyer Lake. Plant is owned and operated by Golden Hills Sanitation Company. <http://goldenhillssanitation.com/id26.html>.
³ Treated wastewater from Bear Valley CSD is used for either irrigation or released into an ephemeral creek bed (Sycamore Creek). The current discharge is approximately 35 AFY to irrigation and 75 AFY to the creek). As per Bear Valley CSD.
⁴ Data from 1995 to 2008 from General Manager's report. Trend has been decreasing effluent. Use 2008 figure for projection. Treated effluent is discharged into Chanac Creek.

Table 2-46: (DWR Table 35a) Recycled Water Uses (AF)

Type of Use	Treatment Level	2010
Tertiary Treated		
Agriculture	Tertiary	-
Landscape	Tertiary	35
Total		35

Table 2-47: (DWR Table 37) Recycled Water Use – 2005 Projections Compared with 2010 Projected (AFY)

Type of Use	2005 Projection for 2010	2010 Projected
Landscape ¹	No projections available	35
Agriculture ²		-

¹ Bear Valley CSD in 2005. Add CCI in 2010.
² City of Tehachapi in 2010. Add CCI in 2010.

2.8.4 Recycling Plan and Potential Customers

Potential customers have been identified primarily as parks within the GTA. Recycled water use for this application is anticipated to be 1,100 AF (Table 2-48, 2-49).

Table 2-48: (DWR Table 35b) Projected Future Use of Recycled Water in Service Area

Type of Use	Treatment Level	2010	2015	2020	2025	2030	2035	2040
Landscape (parks in Tehachapi) ¹	Tertiary	-	-	200	200	200	200	200
Landscape - Stallion Springs Golf Course (From CCI WWPT)	Tertiary	-	300	300	300	300	300	300
Agriculture (off-setting groundwater in Cummings Basin) (From CCI WWTP)	Tertiary	-	600	600	600	600	600	600

¹ Tehachapi anticipates upgrading their treatment plant to tertiary treatment before 2015. Loan applications have been made with the State Water Resources Control Board's State Revolving Fund. Authorization of \$18 million is included in the draft 2010-11 Water Resources Development Act to double the plants capacity and upgrade to tertiary treatment. Anticipated customers are predominately parks (West Park and Central Park). Anticipated useage is 200 AF. Tehachapi Wastewater Treatment Plant Expansion Project

Table 2-49: (DWR Table 36) Projected Future Use of Recycled Water in Service Area (AFY)

Type of Use		2010	2015	2020	2025	2030	2035	2040
Tertiary Treated								
Landscape	Tertiary	-	900	1,100	1,100	1,100	1,100	1,100
Total		-	900	1,100	1,100	1,100	1,100	1,100

2.8.5 Encourage Recycled Water Use

Proposed actions and methods for encouraging recycled water have been practiced. However, official resolutions have not been adopted.

Table 2-50: (DWR Table 38) Methods to Encourage Recycled Water Use (AFY)

Actions	Acre-Feet of Use Projected to Result From This Action					
	2015	2020	2025	2030	2035	2040
Upgrading of City of Tehachapi WWTP (see table 35b)	0	200	200	200	200	200
Total	0	200	200	200	200	200

2.9 Desalination

The UWMPA requires that the UWMP address the opportunities for development of desalinated water, including ocean water, brackish water and groundwater.

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

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

2.9.1 Seawater Desalination

Because the agencies are not located in a coastal zone, it is not practical nor economically feasible to implement a seawater desalination program. As a result, desalination as a supply is not included within this UWMP's planning horizon.

At this point in time, the District has determined that desalination is not a cost-effective solution for water supply needs due to the local project and water resource opportunities that are currently available at a lower cost.

If in the future current supplies are inadequate, the agencies may chose to explore developing an exchange with another entity that has access to seawater, as well as water sources from the SWP. The TCCWD could pay for desalination in exchange for the SWP supplies.

As is described in the California Water Plan, there are several management options which are emphasized (Table 2-51). The total potential yield for desalination is minimal as compared to the implementation of other strategies. For the GTA, this supports the determination that desalination is not cost-effective and does not provide sufficient potential yield to be a viable supply for the region.

Table 2-51: California Water Plan Management Strategies

Management Options	Potential Yield (maf)
Urban Water Conservation	2.0 - 2.3
Agricultural Water Conservation	0.3 - 0.6
Water Recycling	1.5
Groundwater Desalination	0.29
Total Potential	4.09 - 4.89

2.9.2 Brackish Groundwater

The groundwater that underlies the agencies is not brackish in nature and does not require desalination.

2.10 Water Use Reduction Plan (GPCD Baseline and Targets for 2015 and 2020)

The Water Conservation Act of 2009 (Act) was incorporated into Division 6 of the California Water Code, commencing with Section 10608 of Part 2.22. The Act identifies methodologies, water use targets and reporting requirements which apply to urban retail water suppliers. The law specifically calls for developing seven methodologies and a set of criteria for adjusting daily per capita water use at the time that compliance is required (2015 and 2020 compliance years). The Water Code (Section 10608.20 and 10608.28) allows water suppliers the choice of either complying individually or regionally by mutual agreement.

Law**10608.12**

(b) "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 water supplier that meets at least 10 percent of its 2008 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 period ending no earlier than December 31, 2007, and no later than December 31, 2010.

All five of the participating agencies have agreed to set the baseline and conservation targets as a regional alliance. They have also agreed to define their base daily per capita water use pursuant to WC 10608.12(b)(3). The five calendar years ending December 31, 2007 will be used to determine the baseline gpcd for the regional alliance.

Baseline water use for the regional alliance is 191 gpcd as shown in Table 2-52. This is more than the Tulare Lake hydrologic region target of 188 gpcd. Since the lower of these two numbers must be used to calculate the water conservation target, the 2020 target for the regional alliance is 179 gpcd ($188 \times .95$). The 2015 interim target is 185 gpcd, the midpoint between 191 and 179 gpcd.

Since the baseline gpcd for the regional alliance is already so low, they are not subject to the 20 percent water conservation requirement. WC 10608.20(b)(3) sets a water conservation goal of 95 percent of the hydrologic region's target. WC 10608.22 states that all water agencies subject to the law must achieve at least a 5 percent reduction in gpcd water use unless the agency's water use is already less than 100 gpcd.

There is a difference between Bear Valley CSD's total water demand and the 20x2020 water conservation figures in that a portion of the overall water demand for Bear Valley CSD is not reported as part of the gpcd under the 20x2020 requirements. Per DWR, only water into the distribution system is considered for the 20x2020 program. Bear Valley CSD has several non-potable wells that pump directly into recreational lakes. This "lake-fill" water is included in Bear Valley CSD's total water demand figures, but excluded from the gpcd calculation as per direction received from DWR.

For individual agencies, baseline water use ranges from 242 gpcd on the high side (City of Tehachapi) to 149 gpcd on the low end (Golden Hills CSD). Conservation targets for each agency are discussed within the individual agency sections. The Water Conservation Bill of 2009 permits water agencies to comply with the law by meeting their water conservation goal as a regional alliance. It also permits individual agencies to comply with the law by achieving their separate conservation goal should the regional alliance goal not be met.

Since TCCWD is a wholesale agency in regards to urban water supply, it supplies less than 3,000 AFY and all of the people residing in the four retail urban suppliers' service areas also reside within TCCWD, the regional alliance figures will be used for TCCWD's baseline and conservation targets. TCCWD will not have a separate agency baseline and conservation target.

Table 2-52: Water Use Reduction Targets

Regional Alliance						
Base Years	Service Area Population¹	Annual Water Production (AF) to System	Daily Per Capita Water Use	5-year Average Daily Per Capita Water Use	10-year Average Daily Per Capita Water Use	Regional GPCD Targets²
2000	19,746	4,210	190			
2001	20,059	4,334	193			
2002	20,476	4,614	201			2015
2003	20,942	4,423	189			185.2
2004	21,877	4,828	197			
2005	22,534	4,547	180			2020
2006	23,850	5,002	187			179.0
2007	24,442	5,290	193	191.3		
2008	24,797	5,181	187	188.8		
2009	24,988	4,971	178	184.9	189.5	
2010	24,989	4,436	158	180.5	186.3	

¹ Population figures for 2000 and 2010 are U.S. Census data. For Bear Valley 2001-2009 population is based on the number of active residential water accounts beginning with 2.16 persons per active account as of the 2000 census and progressing to 2.21 persons per active account as of the 2010 census. For Golden Hills 2001-2009 population is estimated as 3.12 persons per water connection per 2010 census. For Stallion Springs 2001-2009 population is estimated as 2.1 persons per water connection per 2000 and 2010 census.

² 2020 Regional Alliance Target is calculated as 95% of the Tulare Regional goal of 188 gpcd ($188 \times .95 = 179$).

2.11 Adoption and Implementation of RUWMP

The five agencies involved in developing this RUWMP prepared the initial draft of its RUWMP in 2009/2010. The final plan was adopted by their respective Board of Directors as described in each agency's section. TCCWD adopted the plan on June 29, 2011 and submitted to the California DWR within 30 days of Board approval. The Adopted 2010 RUWMP was also filed with the California State Library, County of Kern, and the respective cities within TCCWD's Service Area.

Attached to the cover letter addressed to the DWR, and as Appendix A, of this RUWMP are Resolutions of Plan Adoption pertaining to the five agencies. This plan includes all information necessary to meet the requirements of CWC Division 6, Part 2.6 (Urban Water Management Planning, 2005 and 2010).

TCCWD is exempt from submitting an UWMP, this exemption is based on TCCWD providing untreated water for recharge that is then accessed by the retail providers. TCCWD is submitting this regional plan to serve as a coordination effort with its local retail agencies so that the Regional Alliance has a better understanding of the reliability of its supplies for future IRWMP efforts.

3.0 Bear Valley Community Services District

3.1 Service Area

The UWMPA requires that the RUWMP include a description of the water purveyor's service area and various aspects of the area served including climate, population, and other demographic factors.

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:
(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. 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 and shall be in five-year increments to 20 years or as far as data is available.

3.1.1 Description of the District

The Bear Valley CSD was organized May 4, 1970 under provisions of the California Community Services District Law (Section 61000 et seq. of the Government Code of the State of California) to provide and acquire municipal facilities for the 25,000 acres known as Bear Valley Springs. Bear Valley is comprised of a grassland valley at an elevation of approximately 4,000 feet, surrounded by mountains rising over 6,900 feet. Approximately 8,500 acres are set aside for wilderness and greenbelt areas.

The Bear Valley CSD is governed by a five-member board of directors. Bear Valley CSD produces and distributes water for domestic and commercial use within the area of Bear Valley Springs. The production quantity is limited by the collective safe yield of the Bear Valley aquifer and production is supplemented by participation in conjunctive use programs with TCCWD, in the Cummings Basin. Bear Valley CSD supplies both water and wastewater services to residents within its service area.

The service area boundary for Bear Valley CSD is illustrated in Section 2, Figure 2-1.

3.1.2 Location

Bear Valley Springs is part of the GTA located eleven miles west of the City in the Tehachapi Mountains of southeastern Kern County. The GTA lies along California Highway 58 between the San Joaquin Valley and the Mojave Desert and is about 36 miles east of Bakersfield, California. The area is known for its four seasons, rural communities, electricity generating wind turbines, and its proximity to Edwards Air Force Base.

3.1.3 Demographics

In July 2010, Bear Valley CSD serviced a population of 5,172. While the rest of the GTA compares with a population of 36,300. Currently, there are 3,734 assessable parcels, 2,874 water service connections, and 468 sewer service connections, 3,734 households, and 1,329 families residing. The population density was 101.9 people per square mile. In 2010, there were 2,147 housing units at an average density of 51.7 per square mile.

3.1.4 Land Use

Land use is described in Section 2.1.4. Bear valley CSD is a rural residential area which includes a golf course and various amenities for its residents. There is some disparity between the total assessable parcels in Bear Valley and the developed properties due to the fact that while some parcels remain undeveloped still other parcels have been combined and several parcels represent only one residential property.



5,311 acres of the mountainous grassland area of common ground in Bear Valley is under livestock lease and there are no other agricultural or industrial interests in Bear Valley proper. Bear Valley CSD does lease agricultural land under its ownership that lies in the Cummings Valley Basin. Ownership of this land is tied to the ownership of groundwater wells used to transfer purchased SWP water resources through groundwater replenishment to the Bear Valley CSD drinking water system.

3.1.5 Climate

Climate variations within Bear Valley CSD are discussed in Section 2.1.5.

3.1.6 Historical and Projected Population

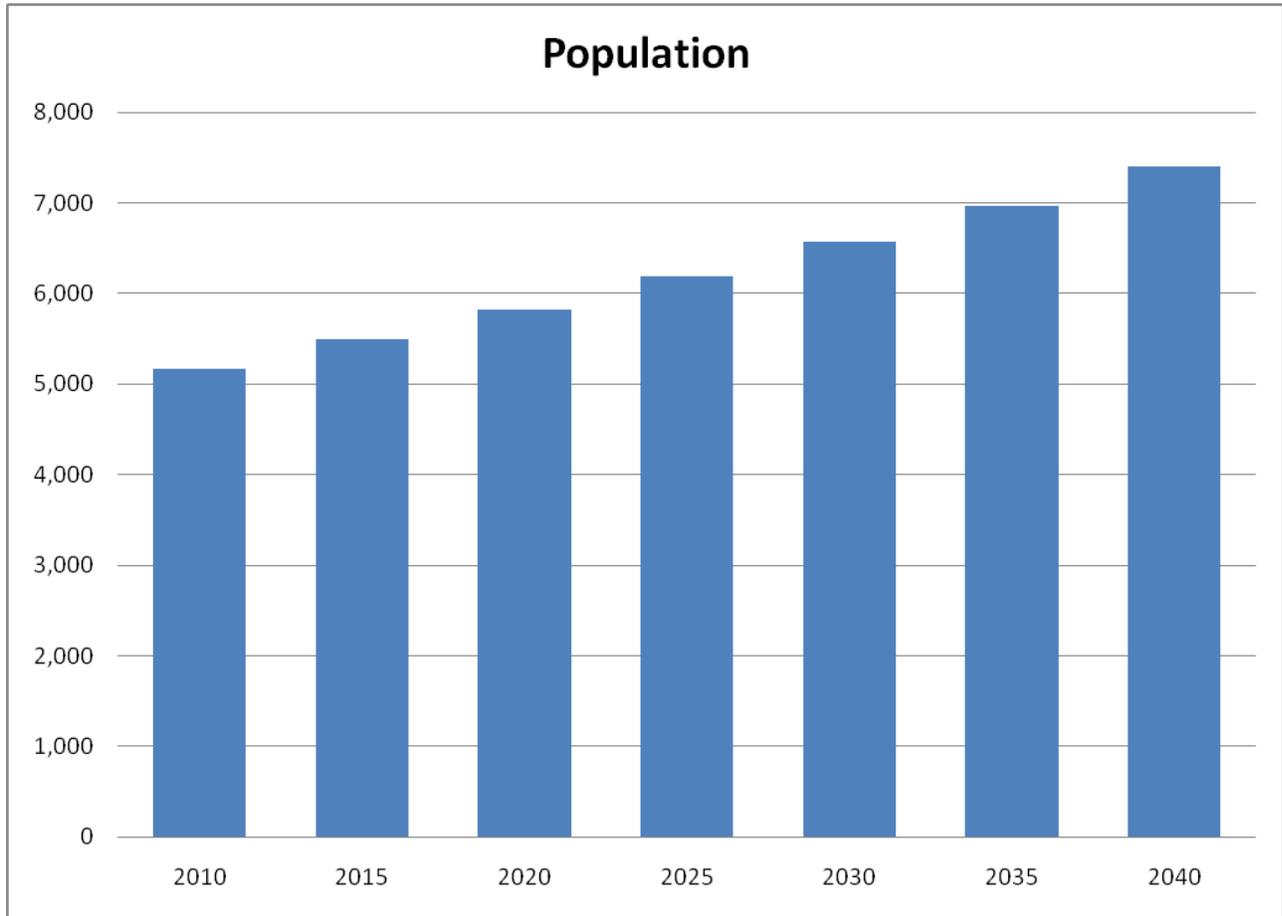
Table 3-1 illustrates the population projections for Bear Valley CSD as provided by Bear Valley CSD. Figure 3-1 graphically presents the projections of population. As a check, the GTA population projections were compared to projections provided by the Kern COG for the Greater Tehachapi RSA and by the Kern County Planning Department. From 2010 through 2035, the Kern COG projections are within 1.7 percent of the TCCWD projections. Kern COG does not include a 2040 projection. The Bear Valley CSD projections are used in this investigation. As of January 2010, Kern County Planning anticipates using between 1.5 percent and 2.0 percent rate of growth for the current GTASP effort. The projections in Table 3-1 average a 1.2 percent annual population growth.

Table 3-1: (DWR Table 2) Population of Bear Valley CSD Service Area

	2010	2015	2020	2025	2030	2035	2040
Bear Valley CSD¹	5,172	5,490	5,827	6,185	6,566	6,969	7,397

¹ Bear Valley CSD population per 2010 census. Projection at 1.2%/year with a cap of 8,000.

Figure 3-1: Bear Valley CSD Service Area Population Projections



3.2 Water Supply

The UWMPA requires that the RUWMP include a description of the agency’s existing and future water supply sources for the next 20 years. The description of water supplies must include detailed information on the groundwater basin such as water rights, determination if the basin is in overdraft, adjudication decree (if applicable) and other information from the groundwater management plan (if available).

Law**10631**

A plan shall be adopted in accordance with this chapter and shall do all of the following:

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five –year increments (to 20 years or as far as data is available), (a). 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:

(b) (1) A copy of any groundwater management plan adopted by the urban water supplier....

(b) (2) A description of any groundwater basin or basins from which the urban supplier pumps groundwater. For those basins for which a court or board has adjudicated the rights to pump groundwater. For basins that have not been adjudicated, information as to whether or the department has identified the basin or basins as overdrafted....

The sources of water supply to Bear Valley CSD Service Area are imported water from the SWP (which is recharged in Cummings Basin for Bear Valley CSD) and groundwater from the Bear Valley groundwater basin.

3.2.1 Local Watersheds

The sources of local surface water supply to Bear Valley CSD service area is runoff from the Bear Valley watershed only. This water resource is usable for recharge, landscape irrigation and recreation only.

3.2.2 Existing Groundwater Sources**3.2.2.1 Groundwater Basins**

Bear Valley CSD receives groundwater from two basins, Bear Valley and Cummings Valley through conjunctive use of SWP water.

Bear Valley Basin:

Bear Valley Basin is managed by the sole pumper in the basin, Bear Valley CSD. Water within this basin is produced by shallow alluvial wells as well as deeper hard-rock wells in the underlying and surrounding mostly granitic structures. The Bear Valley Basin is not identified with a basin number in DWR Bulletin 118.

Bear Valley CSD, has its own Groundwater Management Plan pursuant to AB 3030 for the Bear Valley Basin. The Cummings Valley Basin is an adjudicated basin and therefore no groundwater management plan is required.

Bear Valley Basin is located entirely within the limits of Bear Valley Springs. Thus, Bear Valley CSD is in complete control of pumping from the Basin.

Use of Bear Valley Basin

While the Bear Valley Basin is quite small and responds quickly to precipitation, the production of the basin is limited by the productivity of its hydrology. Bear Valley CSD's Groundwater Management Plan estimates that the safe yield of their alluvial wells is 200 AFY and their hard-rock wells is 400 AFY for a total safe yield of 600 AFY.

This water is Bear Valley CSD's least expensive supply and is pumped preferentially. Some groundwater in the basin, from wells of producing water with substandard qualities, is pumped to retention ponds for irrigation.

Water Quality in Bear Valley Basin

Groundwater in Bear Valley Basin is of good quality with few issues. There are two wells unused for drinking water due to high nitrates and two deeper hard rock wells unused for drinking water due to high radioactivity issues. All drinking water wells meet California Department of Public Health (CDPH) requirements.

Cummings Valley Basin:

The Cummings Valley Basin surface is generally the Cummings Valley floor, bordered on the south by the Tehachapi Mountains, on the north by the Sierra Nevada, with low-lying ridges connecting these two ranges on the east and west sides of the basin. The Cummings Basin is generally elongated in a northeasterly manner, approximately six miles at the longest point and four miles at the widest point.

Inflow of surface and subsurface water from the surrounding watershed including Cummings Creek replenishes the basin. Surface water from Chanac Creek draining a portion of the Brite Valley also flows into the Cummings Groundwater Basin. The annual safe yield of the basin was established in the Judgment, California Superior Court, Kern County, Case No. 97209, of the Cummings basin to be 4,090 AFY⁶.

Use of Cummings Basin Groundwater

While Cummings Basin is adjudicated, the adjudication did not include implementation of a physical solution. Thus, while a safe yield was established, there is no restriction on pumping for use within the basin (overlying use). The groundwater cannot be exported from the basin. The CCI and various private entities including one water company, Fairview Water Company, LLC; farms and residences pump from the basin for overlying use. A small private water company, Fairview Water Company, LLC, operates in the northwest corner of the basin.

Bear Valley CSD purchases imported SWP water from TCCWD. TCCWD delivers this water to direct recharge in the basin. Bear Valley CSD produces this water from its wells located in Cummings Basin and exports it to the Bear Valley basin.

⁶ Report of Tehachapi Cummings County Water District as Water Master for Calendar Year 2008 – 34th Annual Water Master Report for Cummings Basin

TCCWD also makes direct deliveries to agricultural users overlying the basin. See Section 2.2.2.3 for a complete discussion of Cummings Valley water issues.

Bear Valley CSD's groundwater supply is obtained through 28 production wells 6 of which are located in the Cummings Basin. Approximately 50 percent of the water used by Bear Valley CSD is from the Cummings Basin, with the remainder being taken from the Bear Valley Springs aquifer. Any significant growth in water usage in Bear Valley will have to come from Cummings Valley sources.

Other Pumpers

Other users of the Cummings Basin groundwater supplies, include agricultural and M&I users such as the CCI. The CCI pumps 565 AFY as an overlying owner in Cummings Basin. Any amounts greater than this are purchased from TCCWD through the conjunctive use program, similar to Bear Valley CSD and Stallion Springs CSD. CCI consumes 900 to 1,000 AFY.

Water Quality Issues in the Cummings Basin

Groundwater quality characterization in the Cummings Basin is predominately of the calcium-bicarbonate type (Stetson 1969). The average EC of groundwater is 530 μ mhos/cm and a range of 470-640 based on data from seven wells. The average TDS is 344 mg/L. With respect to impairments there are some existing issues related to high levels of nitrates. Currently, one of Bear Valley CSD's wells in Cummings Basin is off-line due to high levels of nitrates. Perchlorate contamination in Cummings Basin is actively and successfully managed without loss of water supply. Active monitoring and mitigation programs for MTBE and perchlorate in surface soils are in place to monitor and mitigate against potential future water quality impacts. Bear Valley CSD's wells in Cummings Basin have never had any detectable levels of either MTBE or perchlorate.

3.2.3 Adjudication

California does not have a statewide program to manage groundwater or a mandatory State groundwater management statute. Groundwater management in California is a local responsibility accomplished under the authority of the CWC and a number of court decisions.

The need for imported water to supplement the Tehachapi area's dwindling groundwater supply was foreseen in 1947. Bear Valley CSD draws from one of these adjudicated basins, the Cummings Groundwater Basin. The Cummings Groundwater Basin is adjudicated under California Superior Court Order, as described in Section 2.

3.2.3.1 Cummings Groundwater Basin

The adjudication is further described in Section 2.2.3.2.

3.2.4 Surface Water

3.2.4.1 Imported SWP Water

SWP water is recharged in Cummings Basin for Bear Valley. Imported water supplies, water quality, and uses of this imported water for the Bear Valley CSD are discussed in Section 2. SWP is the only source for imported water in the GTA. The main transport structure of the SWP is the California Aqueduct, which conveys water from Northern California to Southern California. This facility is managed by the DWR. The aqueduct is an artificial concrete-lined water transport channel that is 444 miles in length.

Uses of Imported Water

Deliveries to Bear Valley CSD are accomplished via the Cummings groundwater basin. That is, the imported water is recharged into a basin or drainage channel and then pumped out by the agency.

3.2.4.2 Current Supply Capacity

Standby production is required for system reliability. Under normal operating conditions, it is possible that many of Bear Valley CSD's smaller wells can be rotated out of service during MDD conditions due to equipment malfunctions, servicing, or for water quality concerns, without imposing shortages. Bear Valley CSD owns and operates 28 wells, 43 storage tanks, and 110 miles of delivery pipe, is monitored and maintained by the CSD's Water Department. The system provides operational flexibility in times of outages.

3.2.4.3 Future Supply Capacity

The future sources of supply for Bear Valley CSD will continue to be groundwater well production and imported surface water supplies. Additional conjunctive use programs, water transfers and other programs are currently being investigated by the Kern County IRWMP Group of which Bear Valley is a participant. See Section 2.2.7.2 for a complete list of potential programs and projects that would potentially contribute to conservation or new water supplies.

3.2.5 Desalination

The UWMPA requires that the UWMP address the opportunities for development of desalinated water, including ocean water, brackish water and groundwater. Desalination opportunities for Bear Valley CSD and the other participants in this RUWMP have been discussed in Section 2.2.8 for the GTA.

3.3 Reliability of Supply

The UWMPA requires that the UWMP address the reliability of the agency's water supplies. This includes supplies that are vulnerable to seasonal or climatic changes. In addition, an

analysis must be included to address supply availability in a single dry year and in multiple dry years.

Law

<p>10631 A plan shall be adopted in accordance with this chapter and shall do all of the following: (c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortages, to the extent practicable. For any water source that may not be available at the consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to replace that source with alternative source of supply or water demand management Provide data for each of the following: (1) An average water year, (2) A single dry water year, and (3) multiple dry years.</p> <p>10632 The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier. (b) An estimate of the minimum water supply available during each of the next three-years based on the driest three-year historic sequence for the agency's water supply.</p>
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Water supply reliability in the event of drought, either a single year or multiple years, creates a situation in which Bear Valley CSD reliance upon SWP supplies purchased from TCCWD increases. The reliability of SWP water is discussed in Section 2.3.1.

3.3.1 Reliability of Groundwater

Reliability of groundwater supply to the region depends on part on several factors, including:

- Reliability of water from the source (i.e. existing wells); and
- Useable groundwater in storage due to artificial recharge.

DWR’s criterion for groundwater reliability is defined as groundwater supplies are capable of meeting projected demands 90 percent of the time for an average water year, single dry year, and multiple dry year conditions.

Bear Valley CSD’s projected groundwater production is shown in Table 3-2.

Table 3-2: (DWR Table 7) Bear Valley CSD Projected Groundwater Production Excluding Recharged Imported Water (AFY)

(Does not include SWP water delivered via the Groundwater Basin)¹ (AFY)							
	2010	2015	2020	2025	2030	2035	2040
Cummings Groundwater Basin, Natural Safe Yield	22	22	22	22	22	22	22
Bear Valley Basin (Bear Valley CSD)	600	600	600	600	600	600	600
Total Groundwater Pumping - Bear Valley CSD	622						

¹ This table presumes that all Allowed Pumping Allocation (Tehachapi Basin) and Natural Safe Yield (Cummings and Brite) will be pumped each year and SWP water will be used as supplemental water. Natural safe yield in the Cummings Basin is pumped for use by Cummings Valley Elementary School.

3.3.1.1 Reliability of Groundwater from Cummings Basin

A groundwater study of Cummings Basin (Fugro 2004) reviewed the impact of a number of scenarios.

One of the Scenarios (#2) in that investigation analyzed the impact of a five-year drought, replicating the rain fall of 1959 through 1963 combined with ongoing pumping. Groundwater levels did decline significantly and the changes extended over the entire 21-year model period. That said, groundwater extraction quantities were sustained during the modeled five year drought.

Based on Fugro’s analysis, it is reasonable to assume that groundwater pumping quantities in the Cummings Basin could be sustained during a 3-year drought.

Table 2-10 summarizes and compares the groundwater availability by comparing use in 2005 through 2010 to allowed pumping allocation for the adjudicated basins.

3.3.2 Reliability of Recycled Water

Bear Valley CSD provides wastewater treatment at its facility on Lower Valley Road. All residents and amenities inside the Lower Valley Road loop (golf course area) are hooked into this sewer system. Effluent water from this treatment plant is used on a nine-hole golf course from late spring to late fall. Effluent that does not go to the golf course is discharged down Sycamore Creek Alternative uses of this resource are currently under investigation.

3.3.3 Transfer and Exchange Opportunities

Transfer and exchange opportunities exist for imported water, but are negligible for groundwater. Discussion of these opportunities is in section 2.3.1.4.

3.3.4 Summary of Reliability of All Supplies

Table 3-3 summarizes the current and planned water supplies for Bear Valley and illustrates the reliability of these supplies in five year increments through 2040.

Table 3-3: (DWR Table 4) Current and Planned Water Supplies (AFY)

	2010	2015	2020	2025	2030	2035	2040
Bear Valley CSD							
State Water Project water recharged in Cummings Basin for Bear Valley	356	721	723	795	871	952	1038
Cummings Basin pumped for overlying use ¹	22	22	22	22	22	22	22
Bear Valley Basin, potable and non-potable ²	600	600	600	600	600	600	600
Bear Valley CSD	956	1321	1323	1395	1471	1552	1638
Recycled Water (current and projected use)							
Bear Valley WWTP (Used for golf course irrigation) ³	35	35	35	35	35	35	35
Desalination							
Other	0	0	0	0	0	0	0
Total	991	1356	1358	1430	1506	1587	1673

¹ Cummings Basin groundwater produced for overlying use is for Cummings Valley Elementary School.

² Bear Valley Basin projection provided by Clint Stewart based on operations experience.

³ WWTP effluent is used for golf course irrigation. Treated effluent beyond that needed for irrigation is discharged to Sycamore Creek and leaves Tehachapi-Cummings CWD Service Area to the west.

Bear Valley CSD uses groundwater as a primary source which is then supplemented by SWP water, as necessary. Table 3-4 projects future SWP supplies to Bear Valley CSD to match demand.

3.4 Water Use – Past, Current and Future

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

(b) (3) 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 shall be based on information that is reasonably available, including but not limited to, historic records.

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

- A) Single-family residential: B) Multifamily residential, 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, and I) Agricultural.
- B) The water use projections shall be in the same 5-year increments to 20 years or as far as data is available.

3.4.1 Past, Current and Projected Water Deliveries

Table 3-4 (DWR Table 12) and Figure 3-2 show the past, current and projected water deliveries by Bear valley CSD by Water Use Sector. The data for 2005 and 2010 reflects actual deliveries. The rest of the years are based on a combination of projected population increases and demand reduction targets for 2015 and 2020 as described in Subsection 3.10.

Table 3-4: (DWR Table 12) Past, Current and Projected Water Deliveries (AF)

Water Use Sector	2005	2010	2015	2020	2025	2030	2035	2040
Bear Valley CSD¹								
Residential	869	732	982	984	1,045	1,109	1,177	1,249
Commercial	56	38	51	51	54	58	61	65
Bear Valley CSD (use by Bear Valley CSD)	8	6	8	8	9	9	10	10
Other Uses	6	6	8	8	9	9	10	10
System Losses	79	87	117	117	124	132	140	148
Total Potable Demand	1,018	869	1,166	1,168	1,240	1,316	1,397	1,483
Lake Fill	162	87	155	155	155	155	155	155
Deliveries	1,180	956	1,321	1,323	1,395	1,471	1,552	1,638

¹ Bear Valley System losses projected as 10 % of potable deliveries. Lake Fill projections based on long-term average.

² If 2010 GPCD had been the same as the Agency Baseline GPCD, year 2010 deliveries would have been 1,277 acre-feet (956 acre-feet * (200.3 GPCD/150.0 GPCD))

Figure 3-2: Water Deliveries by Water Use Sector for Bear Valley CSD

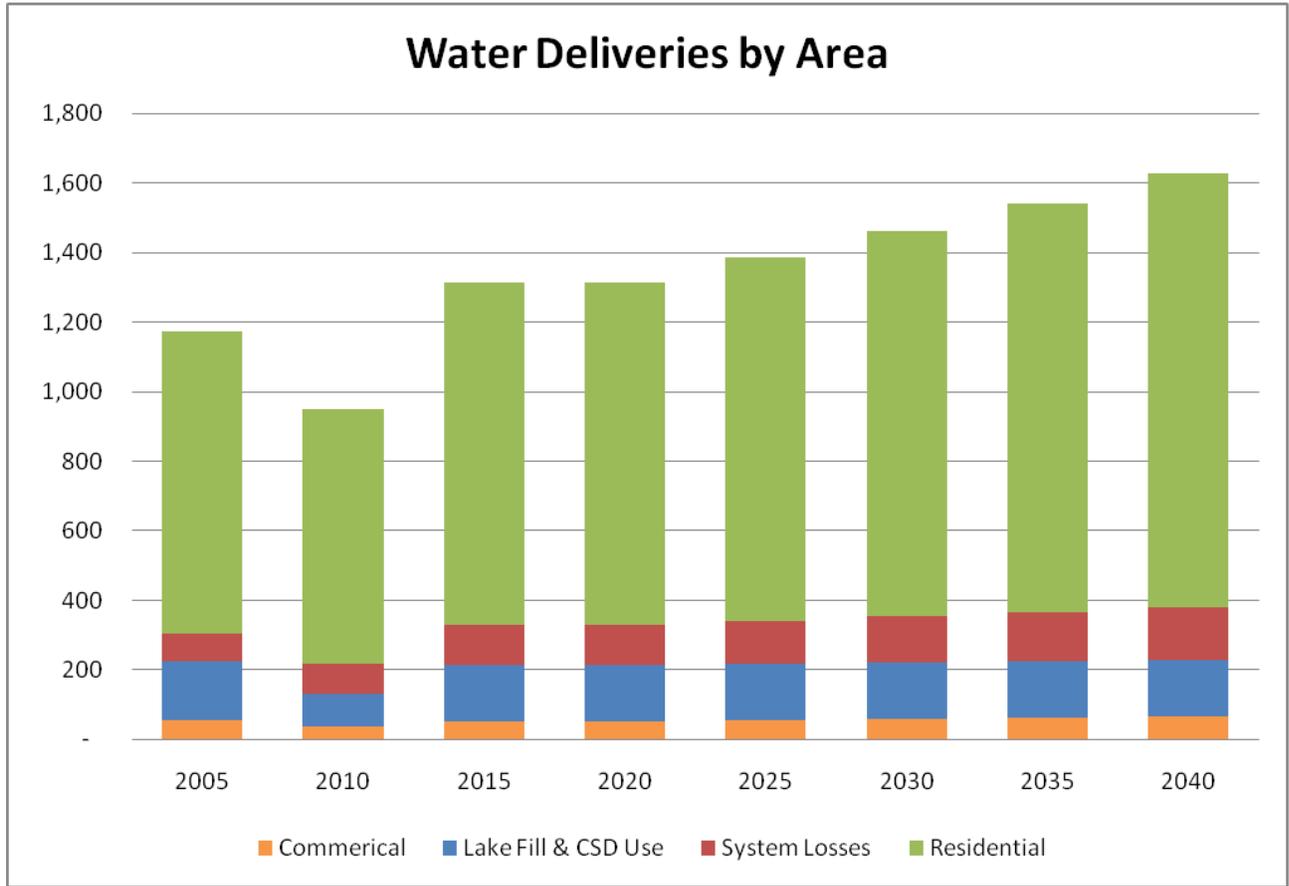


Table 3-5 contains further details describing groundwater pumping by Bear Valley CSD for the past 6-years, 2005 to 2010.

Table 3-5: (DWR Table 6) Historical Pumping by Bear Valley CSD (includes pumping of SWP water recharged in basins) (AF)

	2005	2006	2007	2008	2009	2010
Pumping by Participating Retailers (includes pumping of SWP water recharged in basins)						
Bear Valley CSD¹						
SWP water recharged in Cummings Basin for Bear Valley	652	673	743	698	530	425
Cummings Basin pumped for overlying use	22	20	22	21	22	22
Bear Valley Basin, potable	344	396	349	383	450	422
Bear Valley Basin for Lake Fill	162	132	142	152	181	87
Bear Valley CSD	1,180	1,221	1,256	1,254	1,183	956

¹ Most Bear Valley CSD pumping from Cummings Basin is for use outside of Cummings Basin. SWP water is recharged in Cummings Basin to replace this water. Overlying use in the Cummings Basin is for use at Cummings Valley Elementary School. Bear Valley CSD is the only overlying pumper for Bear Valley Basin.

3.4.2 Sales to Other Agencies

Bear Valley CSD does not sell imported water to other agencies.

3.4.3 Additional Water Uses and Losses

Bear Valley CSD has no water use other than described in this plan and water loss is well monitored and remains less than 10 percent of production.

3.5 Supply and Demand Comparison

The supply and demand comparison is discussed in Section 2.5.

Law

10635

(a) Every urban water supplier shall include, as part of this 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 suppliers 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 the state, or local agency population projections within the service area of the urban water supplier.

(b) 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.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

3.6 Demand Management Measures

The UWMPA identifies fourteen DMMs for urban water suppliers to address. These measures are derived from the original BMPs established in the UWMPA and the 1991 MOU regarding Urban Water Conservation in California, which formed the CUWCC.

Law**10631**

(f) Provide a description of the suppliers' water demand management measures. This description shall include all of the following:

- 2) A description of each water demand management measures that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following.....
 - a. Water survey programs for single-family residential and multi-family residential customers
 - b. Residential plumbing retrofit
 - c. System water audits, leak detection
 - d. Metering with commodity rates for all new connections and retrofit of existing connections
 - e. Large landscape conservation programs and incentives
 - f. High-efficiency washing machine rebate programs
 - g. Public information programs
 - h. High school education programs
 - i. Conservation programs for commercial, industrial, and institutional accounts
 - j. Wholesale agency programs
 - k. Conservation pricing
 - l. Water conservation coordinator
 - m. Water waste prohibitions
 - n. Residential ultra-low-flush toilet replacement programs

Of the five agencies involved in this RUWMP, only Bear Valley CSD is a signatory of the MOU and therefore a member of the CUWCC. To fulfill requirements set forth in the UWMPA regarding DMMs, Bear Valley CSD has included its annual report as submitted to the CUWCC (Appendix D).

The agencies do realize the importance of the BMPs, emphasized by the CUWCC, to ensure a reliable future water supply. 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.

Bear Valley CSD has not previously developed an UWMP, as they were not required to submit a plan (each retail entity delivers less than 3,000 AFY and/or has less than 3,000 service connections). Bear Valley CSD does however have conservation measures already in place to improve efficiency of water use. In addition, all of these agencies are located in Kern County. Elements of the Kern County Water Code (Kern County Code, Title 14) are also implemented at each of the agencies. Water Resource Ordinances, Rules and Regulations implementing the required BMPs are described in the following section.

Table 3-6 summarizes the DMMs being implemented at Bear Valley CSD.

Table 3-6: Demand Management Measures – Specific to Bear Valley CSD

Demand Management Measure (DMM)	Bear Valley CSD		
	Implemented	Planning to Implement	Not Applicable
DMM 1: Water Survey Program	✓		
DMM 2: Residential Plumbing	✓		
DMM 3: Water System Audit	✓		
DMM 4: Metering with Commodity Rates	✓		
DMM 5: Landscape Irrigation Programs	✓		
DMM 6: Washing Machine Rebate Program	✓		
DMM 7: Public Information	✓		
DMM 8: School Education	✓		
DMM 9: Commercial, Industrial, and Institutional Programs			✓
DMM 10: Wholesale Agency Programs			✓
DMM 11: Conservation Pricing	✓		
DMM 12: Water Conservation Coordinator	✓		
DMM 13: Water Waste Prohibition	✓		
DMM 14: Ultra Low Flush Toilet Replacement	✓		

3.6.1 Water Resource Ordinances, Rules, and Regulations

3.6.1.1 Kern County

See 2.6.1.1 for a discussion of Kern County's involvement.

3.6.1.2 Bear Valley Community Services District

Bear Valley CSD establishes, by Ordinance of the Board of Directors, Water Service Policies and terms for water service extension. Bear Valley CSD has control of all groundwater pumping within Bear Valley Basin. It also controls groundwater pumping within the adjudicated Cummings Basin for Bear Valley CSD-owned land. Tenants on the land overlying the Cummings Basin are prohibited by their lease with Bear Valley CSD from applying any groundwater produced from the Cummings Basin on their land. Bear Valley CSD has adopted an extensive Water Conservation policy.

3.6.2 Demand Management Measures

DWR has assigned an enhanced terminology to the BMPs. Accordingly, this chapter will refer to them as DMMs.

DMM 1 – Water Survey Programs for Single Family and Multi-Family Residential Customers

This program consists of offering self-administered water audits to residential customers. Audit components include reviewing water usage history with the customer, identifying leaks inside and outside, and recommending improvements.

Bear Valley CSD has implemented a water survey program which targets both single and multi-family residential customers. Surveys involve indoor checks for leaks-including toilets, faucets and meter checks, and showerhead and toilet flow rates. Outdoor surveys include checks on irrigation systems, timers, development of irrigation schedules, and inquire about outreach to customers such as information packets.

DMM 2 – Residential Plumbing Retrofit

This program consists of installing physical devices to reduce the amount of water used by and/or to limit the amount of water which can be served to its customers.

Bear Valley CSD implements this DMM.

DMM 3 – System Water Audits, Leak Detection, and Repair

Bear Valley pumping and water sales are closely monitored as are water losses through testing, water breaks and repairs. Water loss is calculated and reported regularly. Customer water usage is also recorded and monitored in order to identify anomalies in sales and usage that might be attributable to leakage or waste.

DMM 4 – Metering with Commodity Rates

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

Bear Valley CSD has all new service connections being billed volumetrically through meters so that they can implement a commodity rate structure.

DMM 5 – Large Landscape Conservation Programs

Water usage budgets have been established for all large landscape irrigation users and this information is communicated to the customers.

DMM 6 – High Efficiency Washing Machine Rebate Programs

This program generally provides a financial incentive (rebate offer) to qualifying customers who install a high efficiency washing machine in their home.

Bear Valley CSD has issued HEW machine rebates. In 2008, the number of financial incentives for the higher HEW water factor category (greater than 6.0) was 25, for a total of \$1,250. HEW incentives in the lower HEW water factor category (less than or equal to 6.0) was 13, for a total of \$650. The total number of incentives was 38, for a grand total of \$1,900.

DMM 7 – Public Information System

This program consists of distributing information to the public through a variety of methods including brochures, radio and television, school presentations and videos, and web sites.

Bear Valley CSD also sponsored public informational events. In 2008, a total of 20 events occurred within their service area. These events included bill inserts, newsletters, and brochures. Bear Valley CSD has also coordinated with other government agencies and public interest

groups to ensure that water conservation messages were disseminated throughout the community.

DMM 8 – School Education

This DMM requires water suppliers to implement a school education program that includes providing educational materials and instructional assistance.

For this DMM, the agencies rely on the KCWA for the dissemination of water conservation information to the local schools. For over 20 years KCWA has educated local students about Kern County’s (local and state) water supplies and the importance of water and its conservation. Each year, thousands of students in kindergarten through twelfth grade learn about water treatment, water supply, groundwater and how water is used to grow food and fiber.

KCWA’s Water Education Program is designed to support classroom curriculum and align with the current California Content Standards. KCWA implements local school programs free of charge to all public and private schools in Kern County. These include:

- **Project WET** – KCWA is proud to be a facilitator of Project WET. Project WET is environmental education that promotes the awareness, appreciation, knowledge, and stewardship of water resources. Each year, KCWA holds a free Project WET workshop and practicum for Kern County first through twelfth grade teachers.
- **Grades K-6** – KCWA’s kindergarten through sixth grade program has been designed as a comprehensive approach to water education. The program focuses on active learning to engage students at all learning levels.
 - **Assembly Programs** – KCWA is pleased to offer assemblies and materials free of charge for use in Kern County classrooms.
 - **Incredible Journey Lesson** – This 60-minute “Project WET” activity is conducted by KCWA staff in the fifth grade classroom.
 - **Video Lessons** – As part of KCWA’s commitment to further students’ knowledge about local water, schools that book an assembly will receive three water education videos and coordinating lesson plans.
 - **Poster Contest** – Each year KCWA sponsors a poster contest for Kern County students in the first through sixth grades. The contest gives young artists the opportunity to express the role they can play in water conservation.
 - **WebQuests** – WebQuests are designed specifically for students in the third and fifth grades. Using the internet, students are able to explore the world of water.
- **Grades 7-12 (Water Science Units)** – KCWA offers two science units for the seventh through twelfth grades to help students fully understand the complexities of water and water conservation.

- **Scholarship** – After Jim Costa left the California State Senate in 2002, KCWA honored him by instituting a scholarship program for students in a course of study related to water resources.

DMM 9 – Conservation Programs for Commercial, Industrial and Institutional Programs

Bear Valley CSD has not implemented, and currently has no plans to implement, this DMM. Bear Valley CSD has minimal commercial and no industrial water users.

DMM 10 – Wholesale Agency Assistance

This DMM applies to wholesale agencies and defines a wholesaler’s role in terms of financial, technical, and programmatic assistance to its retail agencies implementing DMMs.

Bear Valley CSD has not implemented, and currently has no plans to implement, this DMM, as they are not a wholesale agency.

DMM 11 – Conservation Pricing

Bear Valley CSD has a tiered billing structure designed to promote water savings. The total water bill includes a base rate, determined by elevation and a tiered unit rate that increases with water usage therefore promoting water conservation.

DMM 12 – Conservation Coordinator

Bear Valley CSD has designated the Assistant General Manager as Conservation Coordinator

DMM 13 – Water Waste Prohibition

Bear Valley CSD establishes by Resolution of the Board of Directors, water service policies and terms for water service extension. Water rights dedication is not required by the Bear Valley CSD (which is not consistent with the Cummings Basin Judgment). The Bear Valley CSD Board has adopted an extensive Water Conservation Program or policy. Bear Valley CSD has an extensive code, adopted by ordinance of their Board, including a title for water service. That title includes prohibition of water waste and a complete policy on emergency water shortage actions. The complete code can be accessed at www.bvcsd.com.

DMM 14 – Residential Ultra-Low Flush Toilet Replacement Program

State legislation requires the installation of efficient plumbing in new construction, and effective 1994 require that only ULFT be sold in California. Subsequently, home constructed within the GTA since 1994 have ULFTs.

Bear Valley CSD offers a \$75 rebate per ULFT for houses built before 1992.

3.7 Water Shortage Contingency Plans

3.7.1 Stages of Action

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that includes a draft water shortage contingency resolution or ordinance.

Law**10632**

The plan 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.

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

3.7.1.1 History of Water Shortage and Conservation Resolutions

The State of California experienced a five year drought condition from 1987 to 1992. Subsequently, some of the participating agencies board of directors approved and adopted several resolutions and conservation measures for voluntary and mandatory conservation.

Bear Valley Community Services District

Bear Valley CSD establishes by Resolution of the Board of Directors, Water Service Policies and terms for water service extension. Bear Valley CSD has an extensive code, adopted by ordinance of their Board, including a title for water service, Water Service Ordinance 09-230, Title 7, Water Use and Service. That title includes a prohibition of water waste and a complete policy on emergency water shortage actions per Ordinance 06-221. The complete code can be accessed at www.bvcsd.com.

3.7.2 Water Shortage Stages and Reductions

Water agencies relying solely on surface water, are more likely to experience a water shortage than those agencies relying primarily on groundwater.

Bear Valley CSD has a portfolio of diversified resources, as described in Section 3.2- Water Supply. These resources include groundwater, local surface water, imported surface water, and recycled water supplies. Although this mix of resources provides a level of safeguard against water shortages and reductions, Bear Valley CSD has developed a three-staged rationing plan that will be initiated during a declared water shortage. The rationing plan is dependent on the cause, severity and anticipated duration of the water supply shortage.

3.7.3 Water Reduction Stage Triggering Mechanisms

Emergency response stage actions become effective when the Board of Directors declares that the agency 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 has the authority to implement and authorize a reduction or moratorium in new connections. Agency-specific actions can be found in Appendix E.

3.7.4 Administration of Water Shortage Program

The administration of a water shortage contingency program as described in this section would involve coordination among a number of local agencies. An individual at each of the agencies would be identified as the Program Manager and be the primary coordinator of water shortage activities. The General Manager is authorized and directed to do all things necessary and appropriate to disseminate information regarding adoption of water shortage regulations, etc. In addition, Bear Valley would participate in any formal regional or team effort as described in section 2.7.4

3.7.5 Water Shortage Contingency Ordinance/Resolution

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that includes a draft water shortage contingency resolution or ordinance.

Law

10632

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

(h) A draft water shortage contingency resolution or ordinance.

3.7.6 Prohibitions, Penalties and Consumption Reduction Methods

The UWMPA requires that the UWMP includes an urban water shortage contingency analysis that addresses methods to reduce consumption.

Law

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.....

(d) 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.

(e) 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 the area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

(f) Penalties or charges for excessive use, where applicable.

3.7.6.1 Mandatory Prohibitions on Water Wasting

Mandatory compliance measures enacted during a water shortage are more severe than voluntary measures, produce greater savings, and are less costly to the agency. The principal drawback to these measures is the customer resentment because the measures are not perceived as equitable. Therefore, such measures need to be accompanied by a good public relations campaign.

Mandatory measures may include:

- Ordinances making water waste illegal,
- Ordinances controlling landscape irrigation,
- Ordinances restricting non-irrigation outdoor water uses,
- Prohibitions on new connections or the incorporation of new areas,
- Rationing.

Prohibitions on new development may conflict with other policies and needs. However, if existing customers are called upon to make sacrifices during a drought period, they may feel that the agencies should concentrate on fulfilling current obligations rather than taking on new customers. Such prohibitions may need to be considered in the event of a critical shortage, such as the 40-50 percent reduction program.

Bear Valley CSD policy is taken from Bear Valley Ordinance Code 7-1-7 (B) Water Waste. No customer shall knowingly permit water leaks or waste of water. Where water is wastefully or neglectfully 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.

3.7.7 Revenue and Expenditure Impacts/Measures to Overcome Impacts

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that addresses the financial impacts from reduced water sales.

Law

<p>10632 The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier. (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier... (g) [An analysis of the impacts of each of the proposed measures to overcome those [revenue and expenditure] impacts, such as the development of reserves and rate adjustments.</p>
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The majority of operating costs for most water agencies are fixed rather than a function of the amount of water sold. As a result, when significant conservation programs are undertaken, a budget deficit is likely to occur.

Bear Valley CSD addresses this issue by Ordinance Code 7-4-10: 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.

3.7.8 Actions Taken During a Catastrophic Event

The UWMPA requires that an UWMP include an urban water shortage contingency analysis that addresses a catastrophic interruption in water supply.

Law

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier...

(c) 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.

During declared shortages, or when a shortage declaration appears imminent, the General

Manager/City Manager of each agency/city will activate a water shortage response team. The team may include: water, fire, planning, health, and emergency personnel. Other actions and procedures to follow during catastrophic events will be developed.

3.7.9 Reduction Measuring Mechanism

The UWMP identifies a mechanism to measure the actual water reductions.

Law

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier...

(i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

The five agencies have a diversified mix within their water systems, mostly supplied by groundwater wells and recharged surface water. Each of the five agencies measures the amount of water entering the distribution system with flow measurement devices installed on each well. There are also flow meters on all connections to measure the amount of water used. These devices will be used to measure agency-wide reductions in water use.

3.7.10 Water Shortage Contingency Plan for Bear Valley Community Services District

The Bear Valley CSD Water Shortage Contingency Plan is provided in Appendix E.

3.7.11 Estimate of Minimum Supply Next 3 Years

Over the past two decades Bear Valley CSD 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, Bear Valley CSD 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.

Table 3-7: (DWR Table 24) Three-year Estimated Minimum Water Supply during next three years (AFY)

Source	Year 1	Year 2	Year 3	Normal
Cummings Basin Service Area				
Bear Valley CSD¹				
Cummings Basin Natural Safe Yield	22	22	22	22
SWP				
Current Year Supply	356	356	356	356
Previously banked in Cummings Basin by Tehachapi-Cummings CWD	0	0	0	0
Bear Valley Basin	600	600	600	600
Bear Valley CSD¹	956	956	956	956

¹ Presumes that the highest priority for Imported Water deliveries are Bear Valley CSD and Stallion Springs CSD as they are urban users that need the water (Golden Hills CSD and City of Tehachapi has adequate stored water for a drought). Natural safe yield in the Cummings Basin is produced for use by Cummings Valley Elementary School.

3.8 Recycled Water

The UWMPA requires that the UWMP include information on water recycling and potential uses for recycled water.

Law

<p>10633</p> <p>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. To the extent practicable, the preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies and shall include all of the following:</p> <p>(a) A description of the wastewater collection and treatment systems in the supplier’s service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.</p> <p>(b) A description of the recycled water currently being used in the supplier’s service area, including but not limited to, the type, place and quantity of use.</p> <p>(c) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse determination with regard to the technical and economic feasibility of serving those uses, groundwater recharge, and other appropriate uses, and a</p> <p>(d) The projected use of recycled water within the supplier’s service area at the end of 5, 10, 15, and 20 years.</p> <p>(e) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.</p> <p>(f) A plan for optimizing the use of recycled water in the supplier’s service area, including actions to facilitate the installation of dual distribution systems and to promote re-circulating uses.</p>
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3.8.1 Wastewater Treatment and Recycling Descriptions

Bear Valley CSD owns and operates a wastewater treatment and recycling facility. Bear Valley CSD owns and operates a wastewater collection, treatment, and disposal system, and provides sewerage service to about 1,000 residents in the unincorporated community of Bear Valley Springs. The WWTF is on an approximately 5-acre property owned by the District in Section 9, T32S, R31E, Mount Diablo Baseline and Meridian (MDB&M), about 15 miles west of Tehachapi.

Treated municipal wastewater is discharged to Sycamore Creek (latitude 35° 9' 55" North and longitude 118° 39' 24") and used to irrigate the 70-acre Bear Valley Oak Tree Country Club golf course in Sections 4 and 9, T32S, R31E, MDB&M.

On August 8, 1996 the Central Valley RWQCB adopted Waste Discharge Regulations, Order No. 96-190, a National Pollutant Discharge Elimination System (NPDES) permit, for a monthly average discharge of 0.25 million gallons per day (MGD) to Sycamore Creek. The Order also covers the recycling of effluent water on the "Use Area", an unrestricted access golf course. In July, 2001, Bear Valley CSD applied to renew its NPDES permit to discharge waste to Sycamore Creek.

The WWTF is a 0.25-MGD-capacity tertiary treatment system consisting of a bar screen, an oxidation ditch, a secondary clarifier, a chlorinator and contact chamber, two continuous backwash sand filters (used alternately), and a final chlorine contact chamber (no chlorine added at this unit). The Discharger stores effluent in a lined, 240,000-gallon-capacity storage pond before discharging to Sycamore Creek or recycling on the Use Area. The WWTF has a standby generator and a laboratory. Sludge is dried in six concrete lined sludge drying beds. Dried sludge is disposed of off-site for agriculture purposes. Screenings are disposed of off-site in the Tehachapi Class III Landfill regulated by Lahontan Regional Board.

The discharge flow has increased slightly over the years, from a monthly daily average of 0.060 to the current 0.083 MGD.

CDPH, which has primary responsibility for protecting public health, has established statewide criteria in Title 22, California Code of Regulations, Division 4, Chapter 3, Section 60301 et seq. (Title 22) for the use of recycled water, and has developed guidelines for specific uses.

Revisions of the water recycling criteria in Title 22 became effective on December 2000. The revised Title 22 expands the range of allowable uses of recycled water, establishes criteria for these uses, and clarifies some of the ambiguity contained in the previous regulations. The 1988 Memorandum of Agreement between CDPH and the SWRCB on the use of recycled water establishes basic principles relative to the agencies and the regional boards. In addition, the Memorandum of Agreement allocates primary areas of responsibility and authority between

agencies, and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to the use of recycled water in California.

Section 60304 of Title 22 requires that wastewater used to irrigate unrestricted access to golf courses be disinfected tertiary recycled water. Section 60301.230 of Title 22 establishes disinfection process criteria for disinfected tertiary recycled water.

Bear Valley CSD owns the land encompassing the Use Area, which includes a horseshoe shaped golf course, surrounded by private residences, with boundaries adjacent to the sprinkler irrigated areas. Bear Valley Springs Association manages the Use Area. The Use Area is irrigated with effluent only at night while the golf course is closed.

Since the Use Area is operated as an unrestricted access golf course, the current WWTF treatment process includes tertiary filtration and disinfection. However, the treatment process bypasses coagulation. Section 60304(a) of Title 22 allows tertiary treatment without coagulation provided that the filter effluent turbidity does not exceed 2 Nephelometric Turbidity Units (NTU); the turbidity of the influent to the filters is continuously measured and does not exceed 5 NTU for more than 15 minutes. This Order includes these requirements to ensure that the treatment process meets the Title 22 requirements.

Title 22 requires Bear Valley CSD comply with general requirements of design for the WWTF, including alarm devices, reliability of power supply, and reliability of treatment processes, as indicated in Articles 8 and 10. The WWTF has a standby generator capable of operating the entire WWTF and the raw wastewater lift station immediately upstream of the WWTF for 24 hours. The Discharger also has standby equipment for immediate replacement in case of emergency (i.e., oxidation drive and motor and tertiary influent pump). The Discharger alternates use of the WWTF's two tertiary filters, so one is available for standby.

The WWTF effluent has an average total nitrogen concentration of 15.5 mg/L (based on three samples). Using an average of 40 percent of the total effluent being discharged to the 70-acre Use Area, or 10.2 million gallons per year ($0.070 \text{ MGD} \times 356 \text{ days/year} \times 0.40$), the total nitrogen in effluent applied to the Use Area is 1,320 lbs/year. This amount results in a nitrogen loading of 19 lbs/acre/year. Using a annual nitrogen uptake rate of 200 lbs/acre/year for turf grass, the nitrogen loading from applied effluent is much less than the nitrogen uptake rate. The hydraulic loading is 0.45 AF/acre/year. Both loadings assume uniform distribution of recycled water over the entire Use Area.

The WWTF, the discharge point, and Use Area lie within the Tulare Lake Basin, specifically the Tejon Creek Hydrologic Area (HA 556.20) in the Grapevine Hydrologic Unit (HU 556) as depicted in the interagency hydrologic map prepared by DWR in August 1986. The nearest surface waterway is the Sycamore Creek, an ephemeral stream, which flows adjacent to the WWTF and through the Use Area. Sycamore Creek flows into and terminates in the valley floor

in the Arvin-Wheeler Ridge Hydrological Area (HA 557.30) in the South Valley Hydrologic Unit (HU 557).

Upstream of the WWTF, Sycamore Creek is dammed and forms the Four Island Lake, which is in the center of the Use Area. Water in the lake is used to supplement recycled water to irrigate the Use Area. Sycamore Creek flows past the WWTF only when flow in the stream fills Four Island Lake and crests the dam. Aerial topography indicates Sycamore Creek flows at a slope of about 1 foot per 250 feet towards the west at the discharge point. The stream exits Bear Valley about one-half mile downstream of the WWTF at an elevation of 4,020 feet and drops to an elevation of 700 feet in about six miles. Sycamore Creek downstream of the discharge point can be characterized as having a rocky streambed in steep and rough terrain, isolated, inaccessible by road, difficult to walk along, and has no nearby habitation. The lower reach of Sycamore Creek is flat where it terminates and discharges to the lower San Joaquin Valley floor.

3.8.2 Potential Opportunities for Connection to other Agencies Proposed Reclaimed Water Systems

It is not economically feasible for the participating agencies to connect to other agencies outside of the GTA as a result of distance. As a result, opportunities to expand recycled water use by exploring connections to other agencies outside of the GTA have not been further explored. Below is a list of the participating agencies and their role in recycled water development.

Table 3-8: (DWR Table 32) Participating Agencies

Participating Agencies	Role in Plan Development
Water Agencies Tehachapi-Cummings	Take delivery of treated effluent from CCI and distribute for Agricultural and for M&I use. Will replace groundwater and imported water.
Wastewater Agencies City of Tehachapi	Produces treated effluent which is mainly used for crop irrigation.
Golden Hills Sanitation Co WWTP (Tehachapi Basin)	Produces effluent
Stallion Springs WWTP	Produces effluent
Bear Valley CSD	Produces treated effluent and delivers to Bear Valley Springs Association for golf course irrigation
Groundwater Agencies None	
Planning Agencies City of Tehachapi	The City (as distinct from its water enterprise fund) will need to impliment use of recycled water in the parks.
Other California Correctional Institution	Developing water recycling plant with anticipated reliable effluent of 900 AFY.

3.8.3 Recycled Water Currently Being Used

Bear Valley CSD’s current and future use of treated wastewater is unique to its respective service area and depends on the effluent treatment level obtained at the various facilities. Table 3-7 summarizes current and future recycled water demands of each of the agencies.

Table 3-9: (DWR Table 33) Wastewater Collected and Treated (AFY)

	Treatment Level	2010	2015	2020	2025	2030	2035	2040
Bear Valley WWTP¹								
Landscape - Bear Valley Golf Course	Tertiary	35	35	35	35	35	35	35
Discharge to surface water	Tertiary	75	75	75	75	75	75	75
Total		110						

¹ Treated wastewater from Bear Valley CSD is used for either irrigation or released into an ephemeral creek bed (Sycamore Creek). The current discharge is approximately 35 AFY to irrigation and 75 AFY to the creek. As per Bear Valley CSD.

3.8.4 Recycling Plan and Potential Customers

All of the recycled water produced during the irrigation season (typically April through October) is applied on the Oak Tree Country Club golf course, approximately 35 AFY. Bear Valley CSD’s NPDES permit requires that effluent from the WWTP be discharged to Sycamore Creek

during the remainder of the year. (Table 3-8) There is no potential for increases in use of recycled water.

3.8.5 Encourage Recycled Water Use

Proposed actions and methods for encouraging recycled water have been practiced. The facilities lease between Bear Valley CSD (owners of Oak Tree Country Club golf course) and the Bear Valley Springs Association (tenant and manager of OTCC golf course) requires the BVSA to fully utilize recycled water during the irrigation season.

3.9 Desalination

The UWMPA requires that the UWMP address the opportunities for development of desalinated water, including ocean water, brackish water and groundwater. Desalination of sea water and brackish groundwater is discussed in Section 2.9.

There is no brackish water or sea water within the GTA thus this component is not applicable

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

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

3.10 Water Use Reduction Plan (GPCD Baseline and Targets for 2015 and 2020)

The Act of 2009 was incorporated into Division 6 of the California Water Code, commencing with Section 10608 of Part 2.22. The Act identifies methodologies, water use targets and reporting requirements which apply to urban retail water suppliers. The law specifically calls for developing seven methodologies and a set of criteria for adjusting daily per capita water use at the time that compliance is required (2015 and 2020 compliance years). The Water Code (Section 10608.20 and 10608.28) allows water suppliers the choice of either complying individually or regionally by mutual agreement.

Law**10608.12**

(b) "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 water supplier that meets at least 10 percent of its 2008 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 period ending no earlier than December 31, 2007, and no later than December 31, 2010.

Bear Valley CSD has agreed to set the baseline and conservation targets as a regional alliance. They have also agreed to define their base daily per capita water use pursuant to WC 10608.12(b)(3). The five calendar years ending December 31, 2007 will be used to determine the baseline gpcd for the regional alliance. The five calendar years ending December 31, 2007 will be used to determine the baseline gpcd for Bear Valley CSD as an individual agency.

As discussed in 2.10, baseline water use for the regional alliance is 191 gpcd. This is more than the Tulare Lake hydrologic region target of 188 gpcd. Since the lower of these two numbers must be used to calculate the water conservation target, the 2020 target for the regional alliance is 179 gpcd ($188 \times .95$). The 2015 interim target is 185 gpcd, the midpoint between 191 and 179 gpcd.

Since the baseline gpcd for the regional alliance is already so low, they are not subject to the 20 percent water conservation requirement. WC 10608.20(b)(3) sets a water conservation goal of 95 percent of the hydrologic region's target. WC 10608.22 states that all water agencies subject to the law must achieve at least a 5 percent reduction in gpcd water use unless the agency's water use is already less than 100 gpcd.

There is a difference between Bear Valley CSD's total water demand and the 20x2020 water conservation figures in that a portion of the overall water demand for Bear Valley CSD is not reported as part of the gpcd under the 20x2020 requirements. Per DWR, only water into the distribution system is considered for the 20x2020 program. Bear Valley CSD has several non-potable wells that pump directly into recreational lakes. This "lake-fill" water is included in Bear Valley CSD's total water demand figures, but excluded from the gpcd calculation as per direction received from DWR.

For Bear Valley CSD as an individual agency, its baseline water use is 200 gpcd as shown in Table 3-10. Since this figure is more than the Tulare Lake hydrologic region target, the hydrologic region target will be used as the baseline against which a 5 percent reduction target is calculated. Bear Valley CSD's 2020 target is 179 gpcd ($188 \times .95$). Its 2015 interim target is 190 gpcd, the midpoint between 200 and 179 gpcd. Bear Valley CSD intends to comply with the

law through the regional alliance, but understands that it can also comply by achieving its separate conservation goal should the regional alliance goal not be met.

Table 3-10: GPCD Baseline and Targets

Base Years	Service Area Population ¹	Annual Water Production (AF) to System ²	Daily Per Capita Water Use	5-year Average Daily Per Capita Water Use	10-year Average Daily Per Capita Water Use	GPCD Targets ³
2000	4,232	1,055	223			
2001	4,430	1,107	223			
2002	4,631	1,123	216			2015
2003	4,789	990	185			189.7
2004	4,992	1,123	201			
2005	5,071	1,018	179			2020
2006	5,184	1,089	188			179.0
2007	5,281	1,114	188	200.3		
2008	5,254	1,102	187	188.6		
2009	5,285	1,002	169	182.3	195.9	
2010	5,172	869	150	176.9	188.7	

¹ Population figures for 2000 and 2010 are U.S. Census data. For 2001-2009 population is based on the number of active residential water accounts beginning with 2.16 persons per active account as of the 2000 census and progressing to 2.21 persons per active account as of the 2010 census.

² Excludes water pumped directly from wells to lakes for recreational use.

³ 2020 Regional Alliance Target is calculated as 95% of the Tulare Regional goal of 188 gpcd ($188 \times .95 = 179$).

Bear Valley CSD's population was determined by comparing 2000 and 2010 census data with the number of active residential water accounts in those same years, which showed that there were 2.16 persons per active residential water account in 2000 and progresses to 2.21 persons per active residential water account in 2010. Using a smoothed progression of 2.16 to 2.21 persons per active residential water account, Bear Valley CSD estimated its population figures for 2001-2009. For 2000 and 2010, U.S. Census data were used.

3.11 Adoption and Implementation of UWMP

The five agencies involved in developing this RUWMP prepared the initial draft of its UWMP in 2009/2010. The final plan was adopted by Bear Valley CSD's Board of Directors on June 22, 2011 and submitted to the DWR within 30 days of Board approval. The Adopted 2010 RUWMP was also filed with the California State Library, County of Kern, and the respective cities within TCCWD's Service Area.

Attached to the cover letter addressed to the DWR, and as Appendix A, of this RUWMP are Resolutions of Plan Adoption pertaining to the five agencies. This plan includes all information necessary to meet the requirements of CWC Division 6, Part 2.6 (Urban Water Management Planning, 2005 and 2010).

Bear Valley CSD is voluntarily submitting this RUWMP and identifying an Interim 2015 and 2020 Water Conservation Targets. Bear Valley CSD is not yet required to adopt an UWMP nor are they required to comply with the aforementioned conservation targets. However, doing so is an effort to proactively demonstrate its commitment to conservation. To date, Bear Valley CSD currently meets both 2015 and 2020 targets without the implementation of any new water conservation measures. This is based on the regional standard that Bear Valley CSD and the managers of the four other retail agencies have mutually agreed to set as the measurement basis.

4.0 City of Tehachapi

4.1 Service Area

The UWMPA requires that the RUWMP include a description of the water purveyor's service area and various aspects of the area served including climate, population, and other demographic factors.

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:
(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. 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 and shall be in five-year increments to 20 years or as far as data is available.

4.1.1 Description of the City of Tehachapi

The City was incorporated in 1909, and is located in the Tehachapi Mountains between Bakersfield and Mojave in Kern County, California. Tehachapi is located 35 miles east-southeast of Bakersfield at an elevation of 4,000 feet.

The City provides urban water supplies to its respective community. The City serves a population 8,673 and maintains 2,965 water service connections. The City also provides wastewater collection and treatment within its service area.

The City operates five pressure zones. Monthly water quality (bacteriological) testing is conducted in all active zones as well as in all storage tanks and wells. Of the seven wells operated by the City, one is equipped with a stationary fixed generator. The City also has a portable generator that can be moved to several sites. The City's wells are located throughout the City limits, which allows for multiple routing options in the event of a catastrophic line rupture.

The service area boundary for the City is illustrated in Section 2, Figure 2-1.

4.1.2 Location

The City is located in southeastern Kern County along California Highway 58 between the San Joaquin Valley and the Mojave Desert. The Greater Tehachapi region is known for its four seasons, rural communities, Tehachapi Loop, electricity generating wind turbines, and proximity to Edwards Air Force Base. The GTA is located in the Tehachapi Mountains between

Bakersfield and Mojave in Kern County, California. Tehachapi is located 35 miles (56 km) east-southeast of Bakersfield at an elevation of 4,000 feet.

4.1.3 Demographics

In July 2010, the City serviced a population of 8,673. Currently, there are 2,965 water service connections, and 2,850 sewer service connections.

4.1.4 Land Use

Land Use is described in Section 2.1.4. The lands within the City are primarily residential, commercial, light industrial, schools and parks.

4.1.5 Climate

Climate variations within City are discussed in Section 2.1.5.

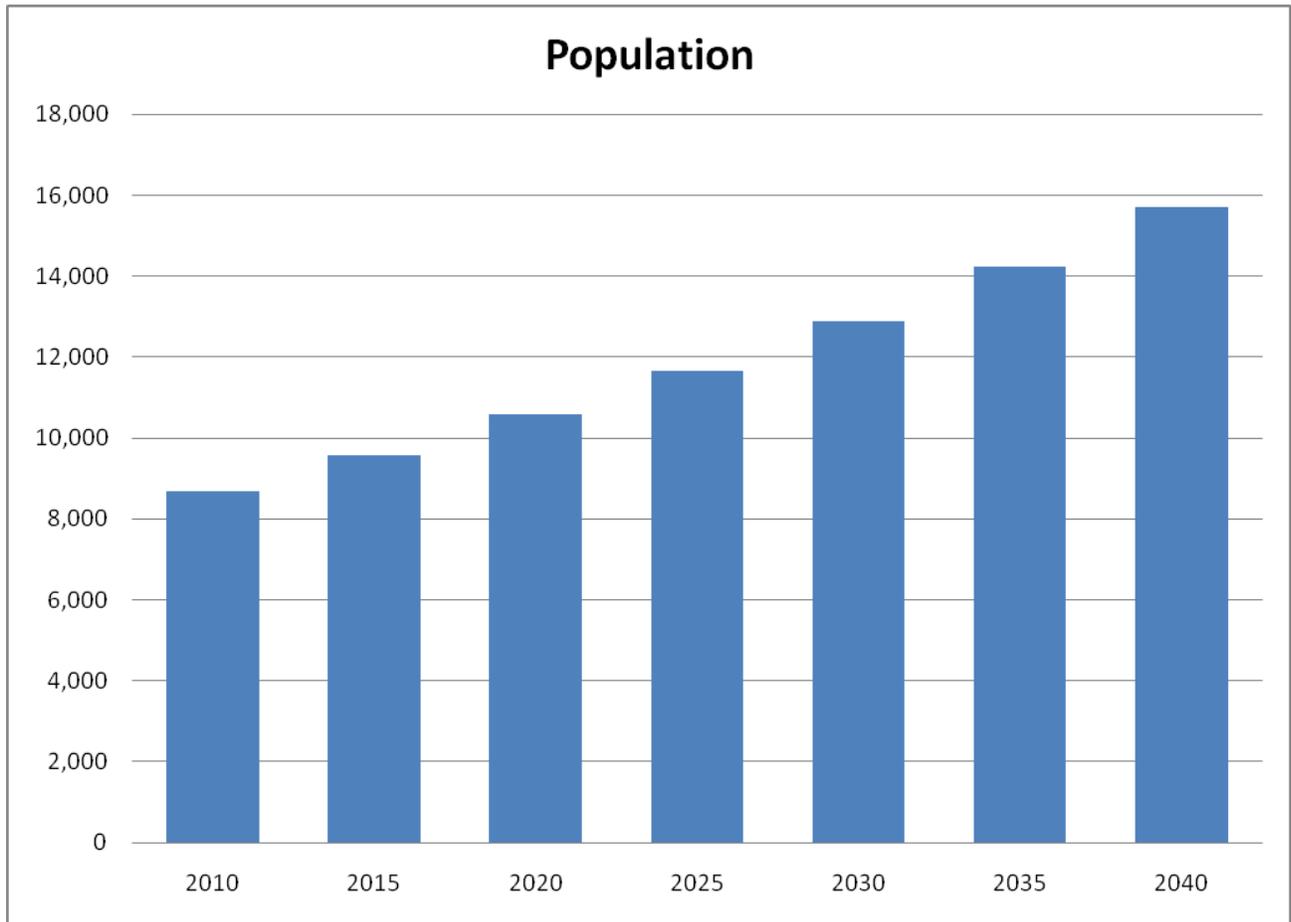
4.1.6 Historical and Projected Population

Table 4-1 illustrates the population projections for the City, as provided by the City. As a check, the GTA population projections were compared to projections provided by the Kern COG for the Greater Tehachapi RSA and by the Kern County Planning Department. From 2010 through 2035, the Kern COG projections are within 1.7 percent of the TCCWD projections. Kern COG does not include a 2040 projection. The TCCWD projections are used in this investigation. As of January 2010, Kern County Planning anticipates using between 1.5 percent and 2.0 percent rate of growth for the current GTASP effort. The projections shown in Table 4-1 and Figure 4-1 average a 2.0 percent annual population growth over the 30-year period.

Table 4-1: (DWR Table 2) Population of City of Tehachapi Service Area

	2010	2015	2020	2025	2030	2035	2040
City of Tehachapi¹	8,673	9,576	10,572	11,673	12,888	14,229	15,710

¹ City of Tehachapi population per 2010 census. Projection at 2.0%/year.

Figure 4-1: Population Projections

4.2 Water Supply

The UWMPA requires that the RUWMP include a description of the agency's existing and future water supply sources for the next 20 years. The description of water supplies must include detailed information on the groundwater basin such as water rights, determination if the basin is in overdraft, adjudication decree (if applicable) and other information from the groundwater management plan (if available).

Law**10631**

A plan shall be adopted in accordance with this chapter and shall do all of the following:

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five –year increments (to 20 years or as far as data is available), (a). 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:

(b) (1) A copy of any groundwater management plan adopted by the urban water supplier....

(b) (2) A description of any groundwater basin or basins from which the urban supplier pumps groundwater. For those basins for which a court or board has adjudicated the rights to pump groundwater. For basins that have not been adjudicated, information as to whether or the department has identified the basin or basins as overdrafted....

The sources of water supply to the City Service Area are imported water from the SWP, groundwater from the Tehachapi groundwater basin and wastewater effluent.

4.2.1 Local Watersheds

The source of local surface water supply to the City’s Service Area is from local runoff from the Tehachapi watershed.

4.2.1.1 Tehachapi Watershed

The Tehachapi Watershed contains 50.6 square miles or 32,420 acres. Elevations within the watershed range from 3,800 feet to 7,960 feet above sea level.

The drainages within the watershed include Brite Creek, Water Canyon Creek, Antelope Creek, and Blackburn Creek. Tehachapi Creek receives flows from Water Canyon and drainages to the north, and flows westward from Tehachapi Valley. Both Antelope and Blackburn Canyon Creek watershed drainages are now controlled by flood control reservoirs and channels which facilitate improved water conservation and recharge.

4.2.2 Existing Groundwater Sources**4.2.2.1 Groundwater Basin**

The Tehachapi Basin is relatively flat at an altitude of approximately 4,000 feet.

The Tehachapi groundwater basin (See Figure 2-1) is bounded by the Tehachapi Mountains to the south and the Sierra Nevada Mountains to the north. The primary water-bearing units are the Pleistocene to Recent alluvial fans around the margins of the basins deposited by creeks draining the Tehachapi Mountains and the Sierra Nevada, and flood plain deposits in the centers of the basins (Dibble and Warne, 1970). The sediments are cobbles, gravels, sands, silts, and clays with the coarser materials in the alluvial fans and the finer sediments in the floodplains. In 1966, lawsuits were filed in Superior Court for the groundwater basin that serves the City Service Area. Today, TCCWD serves as the watermaster for this basin.

4.2.2.2 Tehachapi Basin

The Tehachapi Basin is discussed in Section 2.2.2.2.

Use of Tehachapi Basin Groundwater

Groundwater is pumped from the Tehachapi Basin by M&I and agricultural users in accordance with the adjudication. In addition, there is a well established process, via TCCWD, for allowing temporary and permanent transfers of allowed pumping allocations to occur.

The City pumps all of its allowed pumping allocation and currently leases additional allowed pumping allocation amounts. In addition the City purchases imported water from TCCWD for recharge in the Tehachapi Basin. The City owns this imported water as soon as it is delivered to the Basin. Thus, the City is able to purchase water in advance of their needs. This flexibility enhances the ability of the entire region to meet the challenges presented by the varying supply of the SWP.

Water Quality Issues in the Tehachapi Basin

Considerable uncertainty exists in the quantification of historical and future nitrate inputs to Tehachapi Basin. Groundwater nitrate measurements are available only from a small number of wells that have been sampled since the early to mid 1990s. During recent construction of a nitrate transport model, it was concluded that insufficient historical nitrogen loading and groundwater nitrate monitoring data existed to adequately develop the model. A groundwater nitrate monitoring program has been proposed for the Tehachapi Basin (Fugro 2009A).

Potential sources of nitrate included effluent from the City wastewater treatment plant (WWTP), effluent from the GHSC's wastewater plant, wastewater discharge from septic tanks, existing nitrates in the soils beneath the City's former wastewater lagoon, and nitrates from agricultural and domestic fertilizer applications. Active monitoring and mitigation measures for Methyl *tert*-Butyl Ether (MTBE) are also in place.

4.2.3 Adjudication

California does not have a statewide program to manage groundwater or a mandatory State groundwater management statute. Groundwater management in California is a local responsibility accomplished under the authority of the CWC and a number of court decisions.

The need for imported water to supplement the Tehachapi area's dwindling groundwater supply was foreseen in 1947. The City draws from one of these adjudicated basins, the Tehachapi Groundwater Basin. The Tehachapi Groundwater Basin is adjudicated under California Superior Court Order, as described in Section 2.

4.2.3.1 Tehachapi Basin

The adjudication is further described in Section 2.2.3.1

4.2.4 Surface Water

The SWP is the only source for imported water in the GTA. SWP is discussed in more detail in Section 2.2.4

4.2.5 Groundwater Modeling Study

The groundwater modeling study is discussed in Section 2.2.5.

4.2.6 Sources of Recharge and Discharge

The sources of recharge and discharge for the City and Tehachapi Basin are discussed in Section 2.2.6.

4.2.7 Water Supply Projections

In determining the adequacy of the water supply facilities, the source must be large enough to meet the varying water demand conditions, as well as provide sufficient water during potential emergencies such as power outages and natural disasters.

4.2.7.1 Current Supply Capacity

Standby production is required for system reliability. Under normal operating conditions, it is possible that some of the City's smaller wells can be rotated out of service during MDD conditions due to equipment malfunctions, servicing, or for water quality concerns, without imposing shortages. The City also has an emergency intertie connection with Golden Hills CSD. This intertie connection allows water to travel from the Golden Hills CSD water system to the City's water system and also can be sent from the City's water system to Golden Hills CSD should an emergency condition arise in their water system.

4.2.7.2 Future Supply Capacity

The future sources of supply for City will continue to be groundwater well production and imported surface water supplies. Additional conjunctive use programs, water transfers and other programs will continue to be pursued.

4.2.8 Desalination

The UWMPA requires that the UWMP address the opportunities for development of desalinated water, including ocean water, brackish water and groundwater. Desalination opportunities for the City have been discussed in Section 2.2.8 for the GTA.

Law**10631**

A plan shall be adopted in accordance with this chapter and shall do all of the following:

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

4.3 Reliability of Supply

SWP supplies for the City are brought into the area through TCCWD. Therefore, the discussion of the reliability of these supplies is referenced (Section 2.3.1).

Law**10631**

A plan shall be adopted in accordance with this chapter and shall do all of the following:

- (c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortages, to the extent practicable. For any water source that may not be available at the consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to replace that source with alternative source of supply or water demand management Provide data for each of the following: (1) An average water year, (2) A single dry water year, and (3) multiple dry years.

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.

- (b) An estimate of the minimum water supply available during each of the next three-years based on the driest three-year historic sequence for the agency's water supply.

4.3.1 Reliability of Groundwater

Reliability of groundwater supply to the region depends on part on several factors, including:

- Reliability of water from the source (i.e. existing wells); and
- Useable groundwater in storage due to artificial recharge.

DWR's criterion for groundwater reliability is defined as groundwater supplies are capable of meeting projected demands 90 percent of the time for an average water year, single dry year, and multiple dry year conditions.

Table 4-2 provides projections of groundwater production through 2040.

Table 4-2: (DWR Table 7) City of Tehachapi Projected Groundwater Production Excluding Recharged Imported Water (AFY)

(Does not include SWP water delivered via the Groundwater Basin)¹ (AFY)							
	2010	2015	2020	2025	2030	2035	2040
Tehachapi Groundwater Basin, Allowed Pumping Allocation	2,022	2,022	2,022	2,022	2,022	2,022	2,022
Total Groundwater Pumping - City of Tehachapi	2,022	2,022	2,022	2,022	2,022	2,022	2,022

¹ This table presumes that all Allowed Pumping Allocation (Tehachapi Basin) and Natural Safe Yield (Cummings and Brite) will be pumped each year and SWP water will be used as supplemental water.

4.3.1.1 Reliability of Groundwater from Tehachapi Basin

Tehachapi Basin is managed under adjudication and pumping is kept within the basin’s safe yield. An investigation in 2009 (Fugro, 2009) found that with continued operation of the existing conjunctive use programs (delivery of SWP water to the area), the basin would operate satisfactorily through 2023 (beyond 2023 was not evaluated) with a maximum annual SWP delivery need of 3,300 AF. Fugro’s report indicates that development of an additional recharge basin would be beneficial for groundwater levels in the Tehachapi Basin.

Based on Fugro’s analysis, it is reasonable to assume that groundwater pumping quantities in the Tehachapi Basin could be maintained during a 3-year drought.

Table 2-10 summarizes and compares the groundwater availability by comparing use in 2005 through 2010 to allowed pumping allocation for the adjudicated basins.

4.3.2 Reliability of Recycled Water

In 2008, the City WWTP produced approximately 940 AF of secondary treated effluent. The effluent is owned by the City. The majority is used for irrigation of alfalfa and pasture. The remainder is lost to evaporation in the agricultural spreading of the effluent or is lost in the sludge dewatering process. Storage exists to allow storing effluent during the winter for later use. None is discharged to surface waters.

4.3.3 Transfer and Exchange Opportunities

Transfer and exchange opportunities exist for imported water as well as native groundwater. Currently the City and Golden Hills CSD have been entering into annual agreements for the transfer of Tehachapi Basin base water rights. Also, TCCWD can pump its return flow, or banked water, and deliver it to any basin for beneficial use. These opportunities are discussed in Section 2.3.1.4.

4.3.4 Summary of Reliability of All Supplies

The City uses native groundwater as a primary source which is then supplemented by SWP water, as necessary. Table 4-3 projects future SWP supplies to the City to match demand. Refer to Chapter 2 for further data.

Table 4-3: (DWR Table 4) Current and Planned Water Supplies (AFY)

	2010	2015	2020	2025	2030	2035	2040
City of Tehachapi							
State Water Project	0	18	0	389	619	873	1,153
Tehachapi Basin Allowed Pumping Allocation ¹	1,822	1,822	1,822	1,822	1,822	1,822	1,822
Tehachapi Basin Leased Allowed Pumping Allocation ¹	200	200	200	0	0	0	0
City of Tehachapi	2,022	2,040	2,022	2,211	2,441	2,695	2,975
Recycled Water (current and projected use)	0	0	0	0	0	0	0
Desalination	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total	2,022	2,040	2,022	2,211	2,441	2,695	2,975

¹ Tehachapi Basin is adjudicated. As of 2010, Golden Hills CSD leases 800 AF of allowed pumping allocation from Lehigh Southwest Cement Company and 38 AF from the Hospital District. In turn, Golden Hills CSD leased 200 AF to the city of Tehachapi and 35 AF to CalWater. These leases are presumed to expire in 2024 for purposes of this projection. In 2010, this groundwater supply exceeds demand by a negligible amount (see Table 12 for demand).

4.4 Water Use – Past, Current and Future

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

(b) (3) 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 shall be based on information that is reasonably available, including but not limited to, historic records.

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

- C) Single-family residential; B) Multifamily residential; 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; and I) Agricultural.
- D) The water use projections shall be in the same 5-year increments to 20 years or as far as data is available.

4.4.1 Past, Current and Projected Water Deliveries

Table 4-4 (DWR Table 12) and Figure 4-2 show the past, current and projected water deliveries by City by Water Use Sector. The data for 2005 and 2010 reflects actual deliveries. The rest of the years are based on a combination of projected population increases and demand reduction targets for 2015 and 2020 as described in Subsection 4.10.

Table 4-4: (DWR Table 12) Past, Current and Planned Water Deliveries (AFY)

Water Use Sector	2005	2010	2015	2020	2025	2030	2035	2040
City of Tehachapi¹								
Metered Deliveries	1,563	1,810	1,886	1,851	2,043	2,256	2,491	2,750
Total Potable Demand	1,563	1,810	1,886	1,851	2,043	2,256	2,491	2,750
System Losses	270	148	154	151	167	184	204	225
Deliveries	1,833	1,958	2,040	2,002	2,211	2,441	2,695	2,975

¹ City of Tehachapi does not differentiate between customer type.

If 2010 GPCD had been the same as the Agency Baseline GPCD, year 2010 deliveries would have been 2,253 acre-feet (1,958 acre-feet * (143.6 GPCD/124.8 GPCD))

Figure 4-2: Water Deliveries by Water Use Sector (AF)

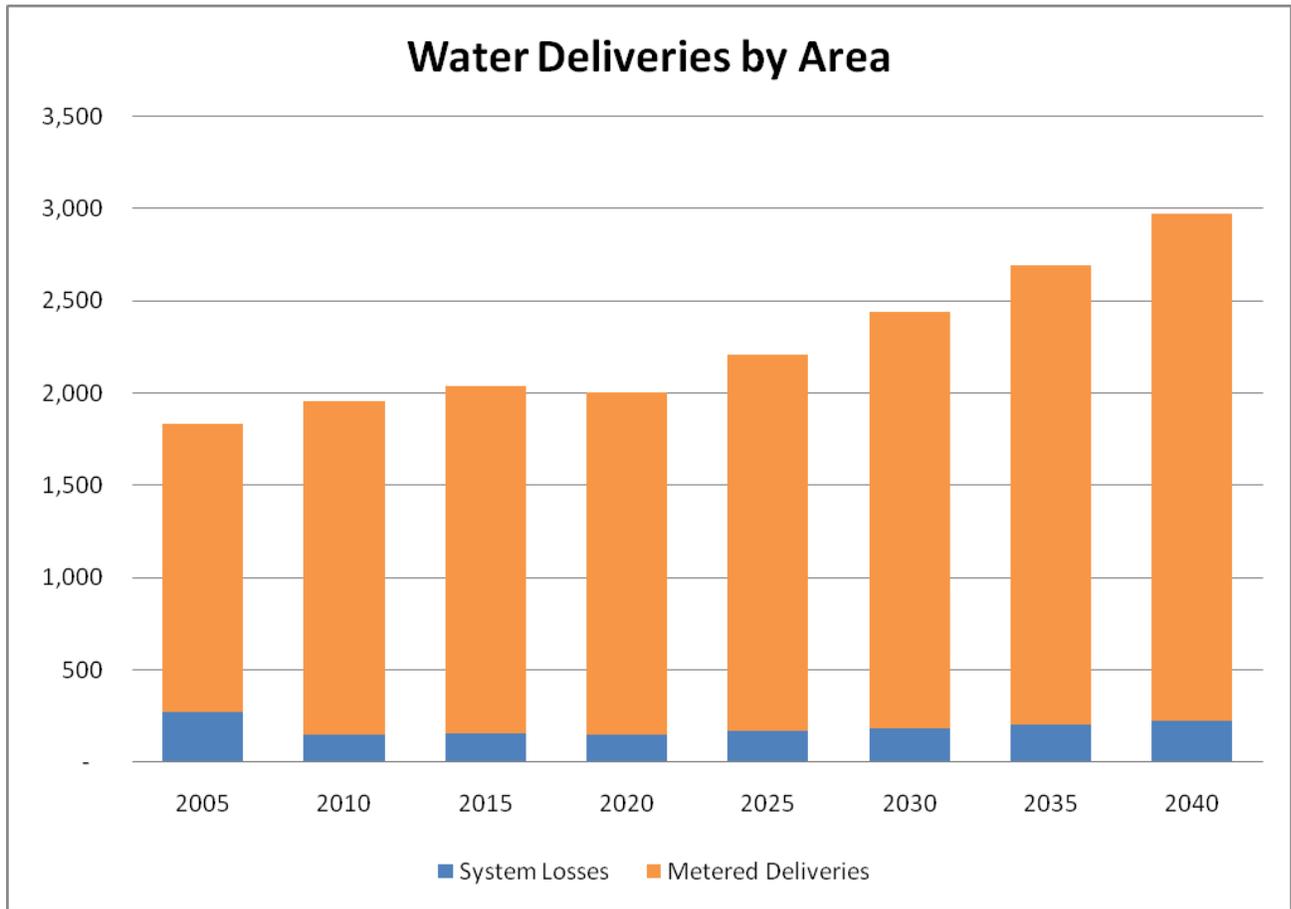


Table 4-5 summarizes and compares the groundwater availability by comparing use in 2005 through 2010 to allowed pumping allocation for the adjudicated basins.

Table 4-5: (DWR Table 6) Historical Pumping by City of Tehachapi (includes pumping of SWP water recharged in basins).

	2005	2006	2007	2008	2009	2010
Pumping by Participating Retailers (includes pumping of SWP water recharged in basins)						
City of Tehachapi¹						
SWP water recharged in Tehachapi Basin for City of Tehachapi	0	248	444	6	119	0
Tehachapi Basin Allowed Pumping Allocation	1,835	1,822	1,822	2,172	2,012	1,958
City of Tehachapi	1,835	2,070	2,266	2,178	2,131	1,958

4.4.2 Sales to Other Agencies

No sales are made to other agencies.

4.4.3 Additional Water Uses and Losses

The City places SWP water into storage when supply and financial resources are available. The goal for the area is that the combination of local groundwater and imported water stored in the groundwater basins can meet the areas demand for five years. The following projections of water use presume that the City places water into storage at a rate to accomplish this goal over a period of five years.

Table 4-6: (DWR Table 14) Additional Water Uses and Losses (AF)

Water Use	2010	2015	2020	2025	2030	2035	2040
Groundwater Storage (by owner of stored water)¹							
City of Tehachapi							
Goal for total storage (5 years of demand in excess of Allowed Pumping Allocation)	1,000	1,090	1,000	1,943	3,093	4,363	5,765
Storage at beginning of year	666	1,090	1,000	1,943	3,093	4,363	5,765
Imported water added to storage to reach goal in 5 years.	85	(18)	189	230	254	280	0
Imported water added to storage during this year	85	(18)	189	230	254	280	0

¹ There is a goal of storing an amount of SWP water in Tehachapi Basin equal to 5 years of demand in excess of the demand that can be met by the Allowed Pumping Allocation. The goals for the Total Storage are derived from DWR Tables 12 and 6, Allowed Pumping Allocation. Storage at beginning of 2010 (666 AF for the City of Tehachapi) per fax dated March 28, 2011.

4.5 Supply and Demand Comparison

The City relies on SWP supplies provided by TCCWD for groundwater replenishment for a portion of demand. The discussion of supply and demand comparison for the region is found in Section 2.5.

Law

<p>10635</p> <p>(a) Every urban water supplier shall include, as part of this 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 suppliers 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 the state, or local agency population projections within the service area of the urban water supplier.</p> <p>(b) 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.</p> <p>(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.</p> <p>(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.</p>

4.6 Demand Management Measures

The UWMPA identifies fourteen DMMs for urban water suppliers to address. These measures are derived from the original BMPs established in the UWMPA and the 1991 MOU.

Law**10631**

(f) Provide a description of the suppliers' water demand management measures. This description shall include all of the following:

- 3) A description of each water demand management measures that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following.....
 - a. Water survey programs for single-family residential and multi-family residential customers
 - b. Residential plumbing retrofit
 - c. System water audits, leak detection
 - d. Metering with commodity rates for all new connections and retrofit of existing connections
 - e. Large landscape conservation programs and incentives
 - f. High-efficiency washing machine rebate programs
 - g. Public information programs
 - h. High school education programs
 - i. Conservation programs for commercial, industrial, and institutional accounts
 - j. Wholesale agency programs
 - k. Conservation pricing
 - l. Water conservation coordinator
 - m. Water waste prohibitions
 - n. Residential ultra-low-flush toilet replacement programs

In 1991, a MOU regarding Urban Water Conservation in California formed the CUWCC. The City is not a signatory of the MOU and therefore not a member of the CUWCC.

The City of Tehachapi realizes the importance of the BMPs, emphasized by the CUWCC, to ensure a reliable future water supply. The City is committed to implementing water conservation strategies and water recycling programs to maximize sustainability in meeting future water needs for its customers.

The City has not previously developed an UWMP, as they were not required to submit a plan (the City delivers less than 3,000 AFY and has less than 3,000 service connections). The City does however have conservation measures already in place to improve efficiency of water use. Water Resource Ordinances, Rules and Regulations implementing the required BMPs are described in the following section.

Table 4-7 summarizes the DMMs being implemented at the City.

Table 4-7: (DWR Table 16) Demand Management Measures – Specific to the City of Tehachapi

Demand Management Measure (DMM)	City of Tehachapi		
	Implemented	Planning to Implement	Not Applicable
DMM 1: Water Survey Program	✓		
DMM 2: Residential Plumbing		✓	
DMM 3: Water System Audit	✓		
DMM 4: Metering with Commodity Rates	✓		
DMM 5: Landscape Irrigation Programs		✓	
DMM 6: Washing Machine Rebate Program	✓		
DMM 7: Public Information	✓		
DMM 8: School Education	✓		
DMM 9: Commercial, Industrial, and Institutional Programs	✓		
DMM 10: Wholesale Agency Programs			✓
DMM 11: Conservation Pricing	✓		
DMM 12: Water Conservation Coordinator		✓	
DMM 13: Water Waste Prohibition	✓		
DMM 14: Ultra Low Flush Toilet Replacement		✓	

4.6.1 Water Resource Ordinances, Rules, and Regulations

4.6.1.1 Kern County

See 2.6.1.1 for a discussion of Kern County's involvement.

4.6.1.2 City of Tehachapi

The City has not adopted an UWMP. It does, however, have an extensive Water Code and special Municipal Ordinances for administering the water utility and new developments. Specific Municipal Ordinances, which are highlighted below, require dedication of water rights for all new developments and the establishment of an extensive water conservation plan.

Ordinance 07-09-694, October 10, 2007 –

Requires developers seeking a zone change or conditional use permit to convey water rights to the City to serve its development or Subdivision. The ordinance provides an alternative method of banking a 20-year supply in the ground.

Ordinance 01-02-656, February 20, 2001 –

Requires compliance with Water Conservation Goals and Irrigation of Landscaping.

Ordinance 98-04-638, July 6, 1998 –

Establishes Two Water Zones for Conservation Pricing. Zone A and Zone B for the purpose of billing separate water uses formulas. Zone A property with water rights and Zone B is property without water rights.

Ordinance 90-14-576, September 17, 1990 –

Establishes the Water Conservation Program.

Ordinance 90-03-566, March 5, 1990 –
Establishes the Cross Connection Control Program.

4.6.2 Demand Management Measures

DWR has assigned an enhanced terminology to the BMPs. Accordingly, this chapter will refer to them as DMMs.

DMM 1 – Water Survey Programs for Single Family and Multi-Family Residential Customers

This program consists of offering water audits to residential customers. Audit components include reviewing water usage history with the customer, identifying leaks inside and outside, and recommending improvements.

The City has implemented a water survey program for residential accounts. Survey components include usage history, indoor/outdoor checks of leaking fixtures and irrigation components, outreach and education of proper irrigation practices, automated meter reading (AMR) leak detection, and informational materials.

DMM 2 – Residential Plumbing Retrofit

This program consists of installing physical devices to reduce the amount of water used and to limit the amount of water, which can be used to limit the amount of water, which can be served to its customers.

The City is planning to implement a residential plumbing retrofit program should funding become available.

DMM 3 – System Water Audits, Leak Detection, and Repair

A water audit is a process of accounting for water use throughout a water system in order to quantify the unaccounted for water. Unaccounted for water is the difference between metered production and metered usage on a system-wide basis.

The City currently has a system in which Leaky Meter Reports are available on their website to facilitate the reporting of leaks, and serves to support an overall system water audit. This internet-based system facilitates the immediate response to leak repairs and helps in achieving the no waste policy implemented by the City.

The City currently performs water system audits by way of production and metering reports, AMR leak detection, ground microphone and correlating practices and proper installation and repair procedures.

DMM 4 – Metering with Commodity Rates

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

At this time, the City has approximately 2,965 metered service connections. Of those, approximately 2,200 meters have been converted to AMR metering technology. The City uses a base-rate-plus-consumption billing schedule. The City has an increasing block rate structure for its water volume charges for all customer classes.

DMM 5 – Large Landscape Conservation Programs

This DMM calls for agencies to commence assigning reference ETo-based water budgets to accounts with dedicated irrigation meters and provide water-use audits to accounts with mixed-use meters.

The City plans to implement a Large Landscape Conservation Program with water budgeting for dedicated irrigation meters as well as auditing for mixed use meters. This program will be in compliance with AB 1881.

DMM 6 – High Efficiency Washing Machine Rebate Programs

This program generally provides a financial incentive (rebate offer) to qualifying customers who install a HEW machine in their home.

The City plans to implement this program should funding become available.

DMM 7 – Public Information System

This program consists of distributing information to the public through a variety of methods including brochures, radio and television, school presentations and videos, and web sites.

The City currently implements this DMM in a variety of ways. A Water Report is available to customers on the internet. The Water Report serves as a method of transferring information to the public regarding current water usage and identifies water use efficiency practices that can be utilized by the public to increase overall efficiency. Another method of implementing this DMM is through the publication of the City’s Newsletter, “The Crossing.” The letter is disseminated to City residents and posted on the web page. The newsletter is used to open the lines of communication, provide monthly updates, and has reminders and suggestions to residents on various water savings related issues, including and not limited to public events/workshops with a water savings focus.

DMM 8 – School Education

This DMM requires water suppliers to implement a school education program that includes providing educational materials and instructional assistance.

For this DMM, the agencies rely on the KCWA for the dissemination of water conservation information to the local schools. For over 20 years KCWA has educated local students about Kern County’s (local and state) water supplies and the importance of water and its conservation.

Each year, thousands of students in kindergarten through twelfth grade learn about water treatment, water supply, groundwater and how water is used to grow food and fiber.

KCWA's Water Education Program is designed to support classroom curriculum and align with the current California Content Standards. KCWA implements local school programs free of charge to all public and private schools in Kern County. These include:

Project WET – KCWA is proud to be a facilitator of Project WET. Project WET is environmental education that promotes the awareness, appreciation, knowledge, and stewardship of water resources. Each year, KCWA holds a free Project WET workshop and practicum for Kern County first through twelfth grade teachers.

- **Grades K-6** – KCWA's kindergarten through sixth grade program has been designed as a comprehensive approach to water education. The program focuses on active learning to engage students at all learning levels.
 - **Assembly Programs** – KCWA is pleased to offer assemblies and materials free of charge for use in Kern County classrooms.
 - **Incredible Journey Lesson** – This 60-minute "Project WET" activity is conducted by KCWA staff in the fifth grade classroom.
 - **Video Lessons** – As part of KCWA's commitment to further students' knowledge about local water, schools that book an assembly will receive three water education videos and coordinating lesson plans.
 - **Poster Contest** – Each year KCWA sponsors a poster contest for Kern County students in the first through sixth grades. The contest gives young artists the opportunity to express the role they can play in water conservation.
 - **WebQuests** – WebQuests are designed specifically for students in the third and fifth grades. Using the internet, students are able to explore the world of water.
- **Grades 7-12 (Water Science Units)** – KCWA offers two science units for the seventh through twelfth grades to help students fully understand the complexities of water and water conservation.
- **Scholarship** – After Jim Costa left the California State Senate in 2002, KCWA honored him by instituting a scholarship program for students in a course of study related to water resources.

DMM 9 – Conservation Programs for Commercial, Industrial and Institutional Programs

The City implements this DMM through the implementation of a Retrofit of Existing Commercial Uses Program that is part of the Water Conservation Program. All nonresidential water users within the City, including existing hotels, motels, other commercial and industrial uses, that undergo expansion or remodeling or any improvements that require any permit issued by the building department, shall retrofit all shower and washbasin faucet plumbing fixtures which are installed, but which do not meet low water-use plumbing fixture standards, with shower heads with a maximum flow capacity of two-and-one-half gallons per minute (gpm), and

washbasin faucets with aerators which limit the flow rate to a maximum of two-and-one-half gpm. Further, all toilets which exceed three-and-four-tenths gallons per flush shall be retrofitted with toilet water-use reduction devices capable of reducing flow by at least one gallon per flush.

The City administrator defers the retrofit requirement of this section for any plumbing fixture for which present technology is not available to cause the required flow reduction, such as in flushometer-style toilet fixtures, or where retrofitting is not otherwise feasible. When feasible, retrofit is implemented at the time technology becomes available.

DMM 10 – Wholesale Agency Programs

This DMM applies to wholesale agencies and defines a wholesaler’s role in terms of financial, technical, and programmatic assistance to its retail agencies implementing DMMs.

The City has not implemented, and currently has no plans to implement, this DMM, as they do not currently have any wholesale accounts.

DMM 11 – Conservation Pricing

The City has a tiered billing structure designed to promote water savings. The total water bill includes a base rate and a tiered unit rate that varies with water usage.

DMM 12 – Conservation Coordinator

At this time, the City has no designated Water Conservation Coordinator, but plans to utilize a Water Conservation Coordinator through a shared multi-agency arrangement. A project for a shared multi-agency coordinator has been included in the IRWMP to which the five participating agencies are parties.

DMM 13 – Water Waste Prohibition

The City has water wasting prohibitions set in their Municipal Code (Section 13.20.020).

Ordinance 07-09-694, October 10, 2007 –

Requires developers seeking a zone change or conditional use permit to convey water rights to the City to serve its development or subdivision.

Ordinance 01-02-656, February 20, 2001 –

Requires compliance with Water Conservation Goals and Irrigation for Landscaping.

Ordinance 98-04-638, July 6, 1998 –

Establishes Two Water Zones: Zone A and Zone B for the purpose of billing.

The City does not have a water shortage contingency plan in place.

DMM 14 – Residential Ultra-Low Flush Toilet Replacement Program

State legislation requires the installation of efficient plumbing in new construction, and effective 1994 require that only ULFT be sold in California. Subsequently, home constructed within the GTA since 1994 have ULFTs.

The City plans to implement a ULFT replacement program should funding for such a program become available.

4.7 Water Shortage Contingency Plans

4.7.1 Stages of Action

The UWMPA requires that the UWMP include an urban water shortage contingency plan that addresses specific issues.

Law

10632

The plan 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.

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

4.7.1.1 History of Water Shortage and Conservation Resolutions

The State of California experienced a five year drought condition from 1987 to 1992. Subsequently, some of the participating agencies board of directors approved and adopted several resolutions and conservation measures for voluntary and mandatory conservation. Water resources ordinances, rules, regulations and policies that are in place to further assist in water conservation are being implemented by various agencies as described below:

Kern County

Kern County has an extensive Water Code (Kern County Code, Title 14) which governs water resources and water utility service. The Code is directly applicable to the GTA and the City.

Most notable in the Water Code is Kern County Ordinance No. G-6502. This ordinance regulates the transport or transfer of native groundwater outside of Kern County and its watersheds. This also regulates transport or transfer through joint use, of capacity in, and sales to, owners or operators of water conveyance facilities.

City of Tehachapi

The City has not adopted an UWMP; it does have an extensive Water Code and special Municipal Water Ordinances for administering the water utility and new developments.

Ordinance 07-09-694, October 10, 2007 –

Requires developers seeking a zone change or conditional use permit to convey water rights to the City to serve its development or Subdivision.

Ordinance 01-02-656, February 20, 2001 –

Requires compliance with Water Conservation Goals and Irrigation for Landscaping.

Ordinance 98-04-638, July 6, 1998 –

Establishes Two Water Zones: Zone A and Zone B for the purpose of billing.

4.7.2 Water Shortage Stages and Reductions

Water agencies relying solely on surface water, are more likely to experience a water shortage than those agencies relying primarily on groundwater.

The City has a portfolio of diversified resources, as described in Section 4.3- Water Supply. These resources include groundwater, local surface water, imported surface water, and recycled water supplies.

4.7.3 Water Reduction Stage Triggering Mechanisms

Emergency response stage actions become effective when the City Council declares that an agency 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 respective General Manager/City Manager would have the authority to implement and authorize a reduction or moratorium in new connections. Triggering situations include, but are not limited to:

- Major power outages during peak pumping times (longer than 24 hours)
- Multiple source (well) failures
- Catastrophic line or storage failures.

4.7.4 Administration of Water Shortage Program

The administration of a water shortage contingency program as described in this section would involve coordination among a number of local agencies. An individual at each of the agencies would be identified as the Program Manager and be the primary coordinator of water shortage activities. An appropriate organizational structure for a water shortage management team would be determined based on the actual situation. Specific individuals would be designated to fill the identified roles. It would most likely be unnecessary to hire additional staff or outside contractors to implement the program.

The major elements to be considered in administrating and implementing the program include:

- Identifying agency staff members to fill the key roles on the water shortage management team. It is anticipated that the General Manager/City Manager for each agency would designate appropriate individuals.
- Intensifying the public information program to provide comprehensive information on the water shortage as necessary actions that must be undertaken by each agency and the public. The scope of the public information program can be developed by reviewing published references, especially those published by DWR, and researching

successful aspects of the current programs conducted by neighboring water agencies. A public information hotline may be advisable to answer any question regarding the program.

- Monitoring program effectiveness. Ongoing monitoring will be needed to track supply availability and actual water user reductions. The procedure will allow each of the agencies to continuously re-evaluate the situation and make informal decisions as to whether another reduction level is needed.
- Coordination with other agencies. Since TCCWD services multiple agencies, it is critical to have on-going coordination efforts amongst the agencies and have a specific contact person who will be aware of conservation developments.
- Addressing new development proposals. During periods of severe water shortage, it may be necessary to impose additional requirements on new developments to reduce new demands or temporarily curtail new hook-ups.
- Adjusting water rates. Revenues from water sales should be reviewed periodically to determine whether an increase in rates might be needed to cover revenue shortfalls due to the decrease in demand.

It is required that the water shortage contingency plan undergo a formal public review process including a public hearing. A thorough public review process will help minimize future objections when mandatory prohibitions are in place.

4.7.5 Water Shortage Contingency Ordinance/Resolution

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that includes a draft water shortage contingency resolution or ordinance.

Law

10632

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

- (h) A draft water shortage contingency resolution or ordinance.

4.7.6 Prohibitions, Penalties and Consumption Reduction Methods

The UWMPA requires that the UWMP includes an urban water shortage contingency analysis that addresses methods to reduce consumption.

Law**10632**

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.....

- (d)** 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.
- (e)** 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 the area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.
- (f)** Penalties or charges for excessive use, where applicable.

4.7.6.1 Mandatory Prohibitions on Water Wasting

Mandatory compliance measures enacted during a water shortage are more severe than voluntary measures, produce greater savings, and are less costly to the agency. The principal drawback to these measures is the customer resentment because the measures are not perceived as equitable. Therefore, such measures need to be accompanied by a good public relations campaign.

Mandatory measures may include:

- Ordinances making water waste illegal,
- Ordinances controlling landscape irrigation,
- Ordinances restricting non-irrigation outdoor water uses,
- Prohibitions on new connections or the incorporation of new areas,
- Rationing.

Prohibitions on new development may conflict with other policies and needs. However, if existing customers are called upon to make sacrifices during a drought period, they may feel that the agencies should concentrate on fulfilling current obligations rather than taking on new customers. Such prohibitions may need to be considered in the event of a critical shortage, such as the 40-50 percent reduction program.

During a water shortage event a Stage 1 Water Shortage Emergency may be declared. Related to a Stage 1 shortage:

- There shall be no washing of sidewalks, walkways, buildings, walls, patios, driveways, parking areas or other paved surfaces, or walls, except to eliminate conditions dangerous to public health or safety or when required as surface preparation for application of architectural coating or painting.
- Washing of motor vehicles, trailers, boats and other types of equipment shall be done only with a hand held bucket or a hose equipped with a positive shut off nozzle for quick rinses. Washing may also be done with reclaimed wastewater or by a commercial car wash using a recycled system.

- No water shall be used to clean, fill or maintain levels in ornamental fountains, ponds, lakes or other similar aesthetic structures unless such water is part of a recycling system.
- All water users shall promptly repair all leaks from indoor and outdoor plumbing fixtures.
- No lawn, landscape or other turf area shall be watered more than once every other day nor during the hours between 8:00 PM and 6:00 AM. No water users shall cause or allow the water to run off landscape areas into adjoining streets, sidewalks, or other paved areas due to incorrectly directed or maintained sprinklers or excessive watering.
- Alternate day irrigation of landscaping. There shall be no runoff as a result of irrigation.

4.7.7 Revenue and Expenditure Impacts/Measures to Overcome Impacts

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that addresses the financial impacts from reduced water sales.

Law

10632 The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.

(g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier...

(g) [An analysis of the impacts of each of the proposed measures to overcome those [revenue and expenditure] impacts, such as the development of reserves and rate adjustments.

The majority of operating costs for most water agencies are fixed rather than a function of the amount of water sold. As a result, when significant conservation programs are undertaken, a budget deficit is likely to occur.

The City does not have a plan to increase water rates during a water shortage event. It is assumed that financial impacts from reduced revenues during such an event will be made up by reserves and that the City Council will adopt appropriate rates for water service after the event is over.

4.7.8 Actions Taken During a Catastrophic Event

The UWMPA requires that an UWMP include an urban water shortage contingency analysis that addresses a catastrophic interruption in water supply.

Law**10632**

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier...

(c) 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.

During declared shortages, or when a shortage declaration appears imminent, the General

Manager/City Manager of each agency/city will activate a water shortage response team. The team may include: water, fire, planning, health, and emergency personnel. Other actions and procedures to follow during catastrophic events will be developed.

4.7.9 Reduction Measuring Mechanism

The UWMP analysis that identifies a mechanism to measure the actual water reductions.

Law**10632**

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier...

(i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

The five agencies have a diversified mix within their water systems, mostly supplied by groundwater wells and recharged surface water. Each of the five agencies measures the amount of water entering the distribution system with flow measurement devices installed on each well and at the each water treatment plant. There are also flow meters on all connections to measure the amount of water used. These devices will be used to measure agency-wide reductions in water use.

4.7.10 Water Shortage Contingency Plan for the City of Tehachapi

Currently the City is developing a Water Shortage Contingency Plan. This plan will address water shortage situations which include shortages of 10 to 50 percent. This plan is split into three “Stages of Action.” Listed below are those stages.

Stages of Action

The water shortage regulations include three stages of implementation. Actions in each stage would be undertaken by the City and/or its residents. When staff determines that a water supply condition warrants activating a water alert or stage change, the City Manager will approve and notify the City Council. 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 residents are given opportunities to voluntarily reduce consumption in Stage I. If these efforts are not sufficient, the 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 specifics of these stages are discussed in latter sections of this plan.

The State of California requires that an urban water shortage contingency plan include up to a 50 percent 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 percent and this goal would probably only achieved with strict enforcement and significant voluntary reductions.

Catastrophic Supply Interruption Plan

The City 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 Alert Condition (10% Reduction)

During a Stage I Alert Condition, City residents are asked to put voluntary water conservation practices to use to ensure that water is not wasted. All water withdrawn from City facilities shall be put to reasonable beneficial use. Water conservation measures include, but are not limited to:

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. Immediate repair of any and all observable leaks of water on residents premises
4. Use of a broom or blower to clean driveways and/or paved or hard surfaces.
5. Use of water for washing down driveways and/or 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.
11. Local restaurants and eateries serving water only upon request

Stage II Alert Condition (30% Reduction)

A Stage II Water Alert Condition shall apply when it is apparent that the City's production or supply facilities cannot meet customer demand even with a 10 percent reduction from normal demands or Stage I Alert Condition measures. During a Stage II Alert Condition all measures in a Stage I Alert condition shall apply. In addition, the City Manager may implement the following restrictions on water use:

1. Odd/Even irrigation scheduling. Mondays, Wednesdays, and Fridays: addresses ending in odd numbers. Tuesdays, Thursdays and Saturdays: addresses ending in even numbers. Irrigation of any type is prohibited on Sundays. The only exception shall be areas irrigated with non-potable water.
2. No hosing down of non-landscaped areas.
3. Construction water shall be prohibited during a Stage II Alert Condition.
4. 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.
5. The use of water in ornamental fountains shall only be permitted if the water is recirculated.
6. The introduction of water into swimming pools, wading pools and spas shall be prohibited.
7. 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. Watering of any park site, greenbelt or open area will be performed between 10:00 PM and 6:00 AM. Any run-off shall be prohibited.
8. Other restrictions may be imposed if deemed necessary by the City manager and/or City Council.

Stage III Alert Condition (50% Reduction)

A Stage III Alert Condition shall apply when it is apparent that even with a 30 percent reduction from normal demands or Stages I and II measures, that the City's production and /or supply facilities cannot meet customer demand. During a Stage III Alert Condition, all measures in Stages I and II shall apply. In addition, the City Manager may implement the following restrictions on water use:

1. No irrigating of lawns. Plants and bushes may be water 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. No washing of motor or recreational vehicles, except at a car wash facility.

4. 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 City experiences a facility malfunction or supply interruption during high water use periods, Stage I, II, or III restrictions may be implemented at once.

In the event of a prolonged Stage III Alert Condition, which may include drought conditions, the City Council shall have the authority to take any other action available to insure that the City’s water supply is not jeopardized.

4.7.11 Estimate of Minimum Supply Next 3 Years

Historically, the City 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 can be somewhat significant. As a result, the City 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 supply shortages during the next three years.

Table 4-8: (DWR Table 24) Three-year Estimated Minimum Water Supply during next three years (AFY)

Source	Year 1	Year 2	Year 3	Normal
Tehachapi Basin Service Area				
City of Tehachapi Minimum Supply¹				
Tehachapi Basin owned Allowed Pumping Allocation	1,822	1,822	1,822	1,822
Tehachapi Basin leased Allowed Pumping Allocation	200	200	200	200
Imported Water				
Current Year Supply	0	0	0	0
Recovery of water previously banked in Tehachapi Basin	133	133	133	133
City of Tehachapi Minimum Supply¹	2,155	2,155	2,155	2,155

¹ Presumes that City of Tehachapi would recover 20% of the water in storage at the beginning of each year. Presumes that City of Tehachapi would forgo SWP water as its supply is adequate without new imports.

4.8 Recycled Water

The UWMPA requires that the UWMP include information on water recycling and potential uses for recycled water.

Law**10633**

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. To the extent practicable, the preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
- (b) A description of the recycled water currently being used in the supplier's service area, including but not limited to, the type, place and quantity of use.
- (c) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse determination with regard to the technical and economic feasibility of serving those uses, groundwater recharge, and other appropriate uses, and a
- (d) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years.
- (e) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
- (f) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems and to promote re-circulating uses.

4.8.1 Wastewater Treatment and Recycling Descriptions

The City owns and operates a wastewater treatment and recycling facility. The City submitted a Report of Waste Discharge to the State of California on September, 19, 1991 for an increase in the flow and for interim changes and improvements in the method of treatment and disposal of its wastewater.

The City operates an existing WWTP that provides sewerage service to about 8,190 residents plus local businesses. The existing WWTP operated by the City utilizes an activated sludge/secondary treatment operation. The WWTP consists of some head works screening and grinding followed by a lift by two pumps that lift the influent into the oxidation ditch. In the oxidation ditch the biological action occurs by breaking down wastes and then discharging the water to the clarifier for settling action. Sludge and heavies are settled to the bottom of the clarifier in this process and a portion of the sludge is sent back to the oxidation ditch for the health of that process, while the other (waste) sludge is sent to the drying beds for dewatering. The treated effluent from the clarifier is sent through pond numbers 5, 8 and 13, reaching the pump station whereby the treated effluent is pumped to the winter storage area or "borrow pit." During the reclamation season, the water is pumped from the borrow pit as well as pond #13 to the 140-acre reclamation site located on the north side of the Tehachapi Municipal Airport. On this site the City spreads the treated effluent for an alfalfa growing and grazing operation (April 1 – September 30).

The 140-acre land application area is adjacent to the Tehachapi Kern County Airport No. 4, about 125 feet from the main runway. A residential tract is about 500 feet east of the

reclamations area. Soils at the reclamation area are classified as sandy silts, silty sands, and clays, with permeability varying from 9×10^{-9} to 6×10^{-6} cm/sec.

The City also owns a 500 AF storage reservoir. The reservoir is about 2½ miles southeast of the existing WWTF and is surrounded by predominantly agricultural land. The reservoir is about 30 feet deep and has a bottom surface area of 10 acres. The City has built a 10-foot high berm across the reservoir to divide it into two cells with a combined storage capacity of 500 AF. Based on three borings conducted in 1990, soils beneath the reservoir were classified as clayey silt and silty clay with low permeability.

The Central Valley RWQCB adopted a Water Quality Control Plan for the Tulare Lake Basin, which contains water quality objectives for all waters of the Basin. These requirements were implemented in the Basin Plan. The Basin Plan states that the minimum treatment level for WWTFs that discharge more than 1.0 MGD is secondary treatment, which is defined in the Basin Plan as 80 percent removal of BODs (Biochemical Oxygen Demands) and suspended solids, for reduction to 40 mg/l, whichever is more restrictive. The discharge from the existing WWTP is predominately domestic wastes, with some light industrial discharges, and is governed by Waste Discharge Requirements Order No. 92-047.

4.8.2 Potential Opportunities for Connection to other Agencies Proposed Reclaimed Water Systems

While there is great interest in the idea of utilizing recycled water for beneficial reuse, the infrastructure is not yet in place to move recycled water over a great distance to reach other agencies. This is due to the fact of limited infrastructure, lack of municipal sewer systems and public and private ownership of existing facilities.

Table 4-9: (DWR Table 32) Participating Agencies

Participating Agencies	Role in Plan Development
Water Agencies Tehachapi-Cummings	Take delivery of treated effluent from CCI and distribute for Agricultural and for M&I use. Will replace groundwater and imported water.
Wastewater Agencies City of Tehachapi	Produces treated effluent which is mainly used for crop irrigation.
Golden Hills Sanitation Co WWTP (Tehachapi Basin)	Produces effluent
Stallion Springs WWTP	Produces effluent
Bear Valley CSD	Produces treated effluent and delivers to Bear Valley Springs Association for golf course irrigation
Groundwater Agencies None	
Planning Agencies City of Tehachapi	The City (as distinct from its water enterprise fund) will need to impliment use of recycled water in the parks.
Other California Correctional Institution	Developing water recycling plant with anticipated reliable effluent of 900 AFY.

4.8.3 Recycled Water Currently Being Used

The City’s current and future use of treated wastewater is unique to its service area and depends on the effluent treatment level obtained at the WWTP. Table 4.8 summarizes current and future recycled water demands of the City.

Table 4-10: (DWR Table 33) Wastewater Collected and Treated (AFY)

	Treatment Level	2010	2015	2020	2025	2030	2035	2040
City of Tehachapi WWTP ¹								
Evaporation and percolation	Secondary	364	379	372	411	453	500	553
Land Application (alfalfa with grazing)	Secondary	604	629	618	682	753	831	918
Total		968	1,008	989	1,092	1,206	1,332	1,470

¹ Email from City on 9 Dec 10 provided 2008 effluent. Future years projections based on change in w ater use and in population.

4.8.4 Recycling Plan and Potential Customers

Potential customers have been identified primarily as parks within the GTA. Specifically, the City anticipates upgrading their treatment plant to tertiary treatment before 2015. Anticipated customers include West Park and Central Park, within the City boundaries. Recycled water use for this application is anticipated to be 200 AF.

Table 4-11: (DWR Table 35b) Projected Future Use of Recycled Water in Service Area

Type of Use	Treatment Level	2010	2015	2020	2025	2030	2035	2040
Landscape (parks in Tehachapi) ¹	Tertiary	-	-	200	200	200	200	200

¹ Tehachapi anticipates upgrading their treatment plant to tertiary treatment before 2015. Loan applications have been made with the State Water Resources Control Board's State Revolving Fund. Authorization of \$18 million is included in the draft 2010-11 Water Resources Development Act to double the plants capacity and upgrade to tertiary treatment. Antipated customers are predominately parks (West Park and Central Park). Anticipated useage is 200 AF. Tehachapi Wastewater Treatment Plant Expansion Project

4.8.5 Encourage Recycled Water Use

Proposed actions and methods for encouraging recycled water have been practiced. However, official resolutions have not been adopted. Efforts to encourage recycled water have resulted in planning a future expansion of the City’s WWTP.

4.9 Desalination

The UWMPA requires that the UWMP address the opportunities for development of desalinated water, including ocean water, brackish water and groundwater. Desalination of sea water and brackish groundwater is discussed in Section 2.9.

There is no brackish water or sea water within the GTA thus this component is not applicable.

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

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

4.10 Water Use Reduction Plan (GPCD Baseline and Targets for 2015 and 2020)

The Act of 2009 was incorporated into Division 6 of the California Water Code, commencing with Section 10608 of Part 2.22. The Act identifies methodologies, water use targets and reporting requirements which apply to urban retail water suppliers. The law specifically calls for developing seven methodologies and a set of criteria for adjusting daily per capita water use at the time that compliance is required (2015 and 2020 compliance years). The Water Code (Section 10608.20 and 10608.28) allows water suppliers the choice of either complying individually or regionally by mutual agreement.

Law**10608.12**

(b) "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 water supplier that meets at least 10 percent of its 2008 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 period ending no earlier than December 31, 2007, and no later than December 31, 2010.

The City has agreed to set the baseline and conservation targets as a regional alliance. They have also agreed to define their base daily per capita water use pursuant to WC 10608.12(b)(3). The five calendar years ending December 31, 2007 will be used to determine the baseline gpcd for the regional alliance. The five calendar years ending December 31, 2008 will be used to determine the baseline gpcd for the City as an individual agency.

As discussed in 2.10, baseline water use for the regional alliance is 191 gpcd. This is more than the Tulare Lake hydrologic region target of 188 gpcd. Since the lower of these two numbers must be used to calculate the water conservation target, the 2020 target for the regional alliance is 179 gpcd ($188 \times .95$). The 2015 interim target is 185 gpcd, the midpoint between 191 and 179 gpcd.

Since the baseline gpcd for the regional alliance is already so low, they are not subject to the 20 percent water conservation requirement. WC 10608.20(b)(3) sets a water conservation goal of 95 percent of the hydrologic region's target. WC 10608.22 states that all water agencies subject to the law must achieve at least a 5 percent reduction in gpcd water use unless the agency's water use is already less than 100 gpcd.

For the City as an individual agency, its baseline water use is 242 gpcd as shown in Table 4-12. A 20 percent conservation target from this baseline is 194 gpcd, which is more than the Tulare Lake hydrologic region target of 188; therefore, the Tulare Lake hydrologic region target does not come into play. The City's 2020 target as an individual agency is 194 gpcd ($242 \times .8$). Its 2015 interim target is 218 gpcd, the midpoint between 242 and 194 gpcd. The City intends to comply with the law through the regional alliance, but understands that it can also comply by achieving its separate conservation goal should the regional alliance goal not be met.

Table 4-12: GPCD Baseline and Targets

City of Tehachapi

Base Years	Service Area Population ¹	Annual Water Production (AF) to System	Daily Per Capita Water Use	5-year Average Daily Per Capita Water Use	10-year Average Daily Per Capita Water Use	GPCD Targets ²
2000	6,558	1,671	227			
2001	6,629	1,657	223			
2002	6,724	1,833	243			2015
2003	6,820	1,787	234			217.9
2004	7,006	1,946	248			
2005	7,130	1,835	230			2020
2006	7,607	2,070	243			193.7
2007	7,909	2,266	256	238.0		
2008	8,299	2,178	234	242.1		
2009	8,597	2,131	221	236.8	236.0	
2010	8,673	1,958	202	230.9	233.4	

¹ Population figures for 2000 and 2010 are U.S. Census data. For 2001-2009 population is provided by the California Department of Finance. Figures excludes CCI's inmate population (5,741 for 2010).

² 2020 Regional Alliance Target is calculated as 95% of the Tulare Regional goal of 188 gpcd.

The City used the 2000 and 2010 U.S. Census for its population data for those years. For the intervening years of 2001-2009, the estimates published by the California Department of Finance were used.

4.11 Adoption and Implementation of UWMP

The five agencies involved in developing this RUWMP prepared the initial draft of its Urban Water Management Plan in 2009/2010. The final plan was adopted by the City of Tehachapi Board of Directors on June 20, 2011 and submitted to the DWR within 30 days of Board approval. The Adopted 2010 RUWMP was also filed with the California State Library, County of Kern, and the respective cities within TCCWD's Service Area.

Attached to the cover letter addressed to the DWR, and as Appendix A, of this RUWMP are Resolutions of Plan Adoption pertaining to the five agencies. This plan includes all information necessary to meet the requirements of California Water Code Division 6, Part 2.6 (Urban Water Management Planning, 2005 and 2010).

The City is voluntarily submitting this RUWMP and identifying an Interim 2015 and 2020 Water Conservation Targets. The City is not yet required to adopt an UWMP nor are they required to comply with the aforementioned conservation targets. However, doing so is an effort to proactively demonstrate its commitment to conservation. To date, the City currently meets both 2015 and 2020 targets without the implementation of any new water conservation measures. This is based on the regional standard that City and the managers of the four other retail agencies have mutually agreed to set as the measurement basis.

5.0 Golden Hills Community Services District

5.1 Service Area

The UWMPA requires that the RUWMP include a description of the water purveyor's service area and various aspects of the area served including climate, population, and other demographic factors.

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:
(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. 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 and shall be in five-year increments to 20 years or as far as data is available.

5.1.1 Description of the District

Golden Hills CSD is a retail water agency, located west of the City of Tehachapi. Golden Hills CSD began in 1966 and is governed by a five member Board. Golden Hills CSD encompasses approximately 5,400 acres consisting of approximately 4,000 parcels ranging in size from ¼-acre to over 20 acres.

Golden Hills CSD's retail customers receive water directly from groundwater pumped from the adjudicated Tehachapi Basin. The Golden Hills CSD's water production is limited to its Allowable Pumping Allocation in accordance with the adjudication, and the adjudicated pumping allocations associated with water rights leased by Golden Hills CSD. Golden Hills CSD's groundwater wells draw groundwater predominately from the Tehachapi Basin. Golden Hills CSD supplements their Tehachapi Basin allowed pumping allocation with water purchased from TCCWD. Golden Hills CSD has a goal of purchasing enough supplemental supply in advance and storing it in Tehachapi Basin to assure adequate supplies are maintained in the Tehachapi -Basin to meet at least their five-year demand.

The service area boundary for Golden Hills CSD is illustrated in Section 2, Figure 2-1.

5.1.2 Location

Golden Hills CSD is located in southeastern Kern County along California Highway 58 between the San Joaquin Valley and the Mojave Desert. Golden Hills CSD is located in the Tehachapi Mountains between Bakersfield and Mojave in Kern County, California. Golden Hills CSD is located 35 miles (56 km) east-southeast of Bakersfield at an elevation of 3,700-4,250 feet.

5.1.3 Demographics

In April 2010, Golden Hills CSD served a population of 8,656 per the 2010 Census. There are approximately 4,000 assessable parcels, 2,777 water service connections, and the GHSC serves 287 sewer service connections within Golden Hills CSD.

5.1.4 Land Use

Land use is described in Section 2.1.4.

5.1.5 Climate

Climate variations within Golden Hills CSD are discussed in Section 2.1.5.

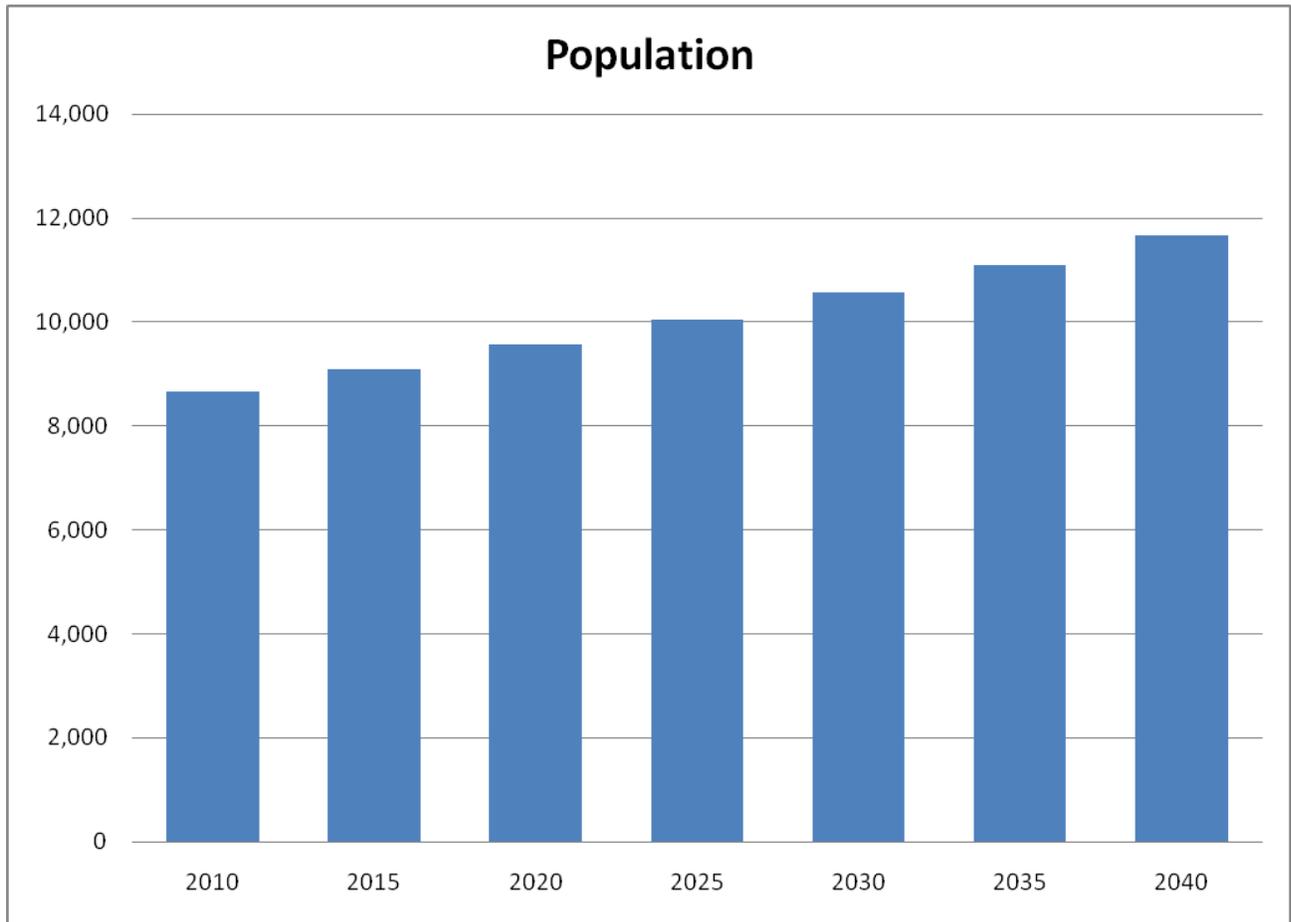
5.1.6 Historical and Projected Population

Table 5.1 illustrates the population projection for Golden Hills CSD as provided by Golden Hills CSD. As of January 2010, Kern County Planning anticipates using between 1.5 percent and 2.0 percent rate of growth for the current GTASP effort. The projections in Table 5-1 average a 1 percent per year population growth over the 30-year period.

Table 5-1: (DWR Table 2) Population of Golden Hills CSD Service Area

	2010	2015	2020	2025	2030	2035	2040
Golden Hills CSD¹	8,656	9,098	9,562	10,049	10,562	11,101	11,667

¹ Golden Hills CSD 2010 population per 2010 census. Projection at 1.0%/year.

Figure 5-1: Population Projections for Golden Hills CSD

5.2 Water Supply

The UWMPA requires that the RUWMP include a description of the agency's existing and future water supply sources for the next 20 years. The description of water supplies must include detailed information on the groundwater basin such as water rights, determination if the basin is in overdraft, adjudication decree (if applicable) and other information from the groundwater management plan (if available).

Law**10631**

A plan shall be adopted in accordance with this chapter and shall do all of the following:

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five –year increments (to 20 years or as far as data is available), (a). 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:

(b) (1) A copy of any groundwater management plan adopted by the urban water supplier....

(b) (2) A description of any groundwater basin or basins from which the urban supplier pumps groundwater. For those basins for which a court or board has adjudicated the rights to pump groundwater. For basins that have not been adjudicated, information as to whether or the department has identified the basin or basins as overdrafted...

The sources of water supply to the Golden Hills CSD Service Area are imported water from the SWP and groundwater from the Tehachapi groundwater basin, and wastewater effluent.

5.2.1 Local Watersheds

The source of water supply to the Golden Hills CSD Service Area is from the Tehachapi watershed.

5.2.1.1 Tehachapi Watershed

The Tehachapi Watershed contains 50.6 square miles or 32,420 acres. Elevations within the watershed range from 3,800 feet to 7,960 feet above sea level.

The drainages within the watershed include Brite Creek, Water Canyon Creek, Antelope Creek, and Blackburn Creek. Tehachapi Creek receives flows from Water Canyon and drainages to the north, and flows westward from Tehachapi Valley. Both Antelope and Blackburn Canyon Creek watershed drainages are now controlled by flood control reservoirs and channels which facilitate improved water conservation and recharge.

5.2.2 Existing Groundwater Sources**5.2.2.1 Groundwater Basin**

The Tehachapi basin is relatively flat at an altitude of approximately 4,000 feet.

The Tehachapi groundwater basin (See Figure 2-1) is bounded by the Tehachapi Mountains to the south and the Sierra Nevada Mountains to the north. The primary water-bearing units are the Pleistocene to Recent alluvial fans around the margins of the basins deposited by creeks draining the Tehachapi Mountains and the Sierra Nevada, and flood plain deposits in the centers of the basins (Dibble and Warne, 1970). The sediments are cobbles, gravels, sands, silts, and clays with the coarser materials in the alluvial fans and the finer sediments in the floodplains. In 1966, lawsuits were filed in Superior Court for this groundwater basin that serves the Golden Hills CSD Service Area. Today, TCCWD serves as the watermaster for the basin.

5.2.2.2 Tehachapi Basin

The Tehachapi Basin is discussed in Section 2.2.2.2.

Use of Tehachapi Basin Groundwater

Groundwater is pumped from the Tehachapi Basin by M&I and agricultural users in accordance with the adjudication. In addition, there is a well established process, via TCCWD, for allowing temporary and permanent transfers of allowed pumping allocations occur.

Golden Hills CSD pumps most of its allowed pumping allocation and leases additional allowed pumping allocation amounts. Golden Hills CSD also purchases imported water from TCCWD for recharge in the basin in support of their conjunctive use programs.

Water Quality Issues in the Tehachapi Basin

Considerable uncertainty exists in the quantification of historical and future nitrate inputs to Tehachapi Basin. Groundwater nitrate measurements are available only from a small number of wells that have been sampled since the early to mid 1990s. During recent construction of a nitrate transport model, it was concluded that insufficient historical nitrogen loading and groundwater nitrate monitoring data existed to adequately develop the model. A groundwater nitrate monitoring program has been proposed for the Tehachapi Basin (Fugro 2009A).

Potential sources of nitrate included effluent from the City WWTP, effluent from the GHSC's wastewater plant, wastewater discharge from septic tanks, existing nitrates in the soils beneath the City's former wastewater lagoon, and nitrates from agricultural and domestic fertilizer applications. Active monitoring and mitigation measures for MTBE are also in place within the Tehachapi Basin.

5.2.3 Adjudication

California does not have a statewide program to manage groundwater or a mandatory State groundwater management statute. Groundwater management in California is a local responsibility accomplished under the authority of the CWC and a number of court decisions.

The need for imported water to supplement the Tehachapi area's dwindling groundwater supply was foreseen in early 1947. Golden Hills CSD draws from one of these adjudicated basins: the Tehachapi Groundwater Basin. The Tehachapi Groundwater Basin is adjudicated under California Superior Court Order.

5.2.3.1 Tehachapi Basin

The adjudication is further described in Section 2.3.2.2.

5.2.4 Surface Water

SWP is the only source for imported water in the GTA. SWP is discussed in detail in Section 2.2.4.

Discussion of the groundwater modeling study is found in Section 2.2.5.

5.2.5 Sources of Recharge and Discharge

Groundwater recharge occurs from stream recharge, deep percolation of precipitation, treated sewage effluent, applied agricultural and municipal water, and septic tank leach fields. Deep percolation from stream runoff is the primary source of recharge. Due to arid conditions, groundwater recharge by precipitation is sporadic. Most recharge from precipitation occurs near the mountain fronts and from long duration storms. Treated water from GHSC's WWTP is transferred to a pond, Tom Sawyer Lake, for disposal, where it evaporates. This is contrary to GHSC's permits, which require that the effluent be reclaimed by spray irrigation of the now-defunct Golden Hills Golf Course and stored in Tom Sawyer Lake only temporarily. It is estimated that greater than 50 percent of the water delivered to a home goes to outside irrigation of lawns/trees. It is estimated that 20 percent of this municipal irrigation water percolates back into the aquifer (Law Environmental 1991).

5.2.6 Water Supply Projections

In determining the adequacy of the water supply facilities, the source must be large enough to meet the varying water demand conditions, as well as provide sufficient water during potential emergencies such as power outages and natural disasters.

5.2.6.1 Current Supply Capacity

In accordance with industry standard practices and the CDPH criteria for "Adequate Source Capacity" on water supply, the source should be sized to serve at least the MDD.

Standby production is required for system reliability. Under normal operating conditions, it is possible that many of the agency's smaller wells can be rotated out of service during MDD conditions due to equipment malfunctions, servicing, or for water quality concerns, without imposing shortages. However, larger wells, such as the Iriart and Morris Park wells for Golden Hills CSD, cannot be rotated out without imposing shortages. CDPH criterion recommends calculating the ability to meet MDD conditions with the capacity of the largest well out of service.

5.2.6.2 Future Supply Capacity

The future sources of supply for Golden Hills CSD will continue to be groundwater well production and imported surface water supplies. Additional conjunctive use programs, water transfers and other programs will continue to be pursued.

5.2.7 Desalination

The UWMPA requires that the UWMP address the opportunities for development of desalinated water, including ocean water, brackish water and groundwater. Desalination opportunities for Golden Hills CSD have been discussed in Section 2.2.8 for the GTA.

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

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

5.3 Reliability of Supply

The UWMPA requires that the UWMP address the reliability of the agency's water supplies. This includes supplies that are vulnerable to seasonal or climatic changes. In addition, an analysis must be included to address supply availability in a single dry year and in multiple dry years.

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

- (c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortages, to the extent practicable. For any water source that may not be available at the consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to replace that source with alternative source of supply or water demand management Provide data for each of the following: (1) An average water year, (2) A single dry water year, and (3) multiple dry years.

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.

- (b) An estimate of the minimum water supply available during each of the next three-years based on the driest three-year historic sequence for the agency's water supply.

Water supply reliability in the event of drought, either a single year or multiple years, creates a situation in which Golden Hills CSD is reliant upon SWP supplies purchased from TCCWD. The reliability is discussed in 2.3.1.

5.3.1 Reliability of Groundwater

Reliability of groundwater supply to the region depends on part on several factors, including:

- Reliability of water from the source (i.e., existing wells); and
- Useable groundwater in storage due to artificial recharge.

Table 5-2 provides projections of groundwater production through 2040.

Table 5-2: (DWR Table 7) Golden Hills CSD Projected Groundwater Production Excluding Recharged Imported Water (AFY)

(Does not include SWP water delivered via the Groundwater Basin) ¹ (AFY)							
	2010	2015	2020	2025	2030	2035	2040
Tehachapi Groundwater Basin, Allowed Pumping Allocation	1,469	1,469	1,469	866	866	866	866
Total Groundwater Pumping - Golden Hills CSD	1,469	1,469	1,469	866	866	866	866

¹ This table presumes that all Allowed Pumping Allocation (Tehachapi Basin) and Natural Safe Yield (Cummings and Brite) will be pumped each year and SWP water will be used as supplemental water.

5.3.1.1 Reliability of Groundwater from Tehachapi Basin

Tehachapi Basin is managed under an adjudication and pumping is kept within the basin’s safe yield. An investigation in 2009 (Fugro, 2009) found that with continued operation of the existing conjunctive use programs (delivery of SWP water to the area), the basin would operate satisfactorily through 2023 (beyond 2023 was not evaluated) with a maximum annual SWP delivery need of 3,300 AF. Fugro also found that, “Optimal benefits to groundwater storage from the conjunctive use program may require the development of other artificial recharge areas in addition to the Antelope Basin and the China Hill area.”

Based on Fugro’s analysis, it is reasonable to assume that groundwater pumping quantities in the Tehachapi Basin could be maintained during a 3-year drought throughout the 30-year planning period.

Table 2-10 summarizes and compares the groundwater availability by comparing use in 2005 through 2010 to allowed pumping allocation for the adjudicated basins.

5.3.2 Reliability of Recycled Water

The GHSC (a privately-owned corporation, not affiliated with the Golden Hills CSD) discharges approximately 30 AFY of tertiary effluent into Tom Sawyer Lake (Fugro 2009A, Table 5) (data from Provost & Pritchard Consulting Group). Effluent disposal into the Lake is not in conformance with the GHSC’s current Waste Discharge Order and Wastewater Reclamation Requirements as issued by the Central Valley RWQCB, as it is not applied to the now-defunct Golden Hills Golf Course and all of the effluent remains in Tom Sawyer Lake. A long-term reclamation plan is pending.

Total septic system wastewater discharges from individual on-site systems in Golden Hills CSD Service Area were projected to be 571.4 AFY in 2009 (Fugro 2009A).

5.3.3 Transfer and Exchange Opportunities

Transfer and exchange opportunities exist for imported water, but are negligible for groundwater. TCCWD can pump its return flow, or banked water, and deliver it to any basin for beneficial use. These opportunities are addressed in Section 2.3.1.4.

5.3.4 Summary of Reliability of Water Supplies

Golden Hills CSD uses groundwater as a primary source which is then supplemented by SWP water, as necessary. Table 5-3 summarizes the current and planned water supplies for Golden Hills CSD and illustrates the reliability of these supplies in five year increments through 2040.

Table 5-3: (DWR Table 4) Current and Planned Water Supplies (AFY)

	2010	2015	2020	2025	2030	2035	2040
Golden Hills CSD							
State Water Project	0	0	0	670	749	831	917
Tehachapi Basin Allowed Pumping Allocation ¹	866	866	866	866	866	866	866
Tehachapi Basin Leased Allowed Pumping Allocation ¹	603	603	603	0	0	0	0
Golden Hills CSD	1,469	1,469	1,469	1,536	1,615	1,697	1,783
Recycled Water (current and projected use)	0	0	0	0	0	0	0
Desalination	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total	1,469	1,469	1,469	1,536	1,615	1,697	1,783

¹ Tehachapi Basin is adjudicated. As of 2010, Golden Hills CSD leases 800 AF of allowed pumping allocation from Lehigh South west Cement Company and 38 AF from the Hospital District. In turn, Golden Hills CSD leased 200 AF to the city of Tehachapi and 35 AF to CalWater. These leases are presumed to expire in 2024 for purposes of this projection. In 2010, this groundwater supply exceeds demand by a negligible amount (see Table 12 for demand).

5.4 Water Use – Past, Current and Future

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

(b) (3) 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 shall be based on information that is reasonably available, including but not limited to, historic records.

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

- E) Single-family residential: B) Multifamily residential, 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, and I) Agricultural.
- F) The water use projections shall be in the same 5-year increments to 20 years or as far as data is available.

5.4.1 Past, Current and Projected Water Deliveries

Table 5-4 (DWR Table 12) and Figure 5-2 show the past, current and projected water deliveries by Golden hills CSD by Water Use Sector. The data for 2005 and 2010 reflects actual deliveries. The rest of the years are based on a combination of projected population increases and demand reduction targets for 2015 and 2020 as described in Subsection 5.10.

Table 5-4: (DWR Table 12) Past, Current and Planned Water Deliveries (AFY)

Water Use Sector	2005	2010	2015	2020	2025	2030	2035	2040
Golden Hills CSD¹								
Water Sales	1,191	1,137	1,341	1,373	1,443	1,517	1,594	1,676
System Losses	104	73	86	88	93	97	102	108
Golden Hills CSD	1,295	1,210	1,427	1,462	1,536	1,615	1,697	1,783

¹ Golden Hills 2010 System Losses estimated at 8%. Future System Losses estimated at 5%.
 If 2010 GPCD had been the same as the Agency Baseline GPCD, year 2010 deliveries would have been 1,392 acre-feet (1210 acre-feet * (143.6 GPCD/124.8 GPCD))

Figure 5-2: Water Deliveries for Golden Hills

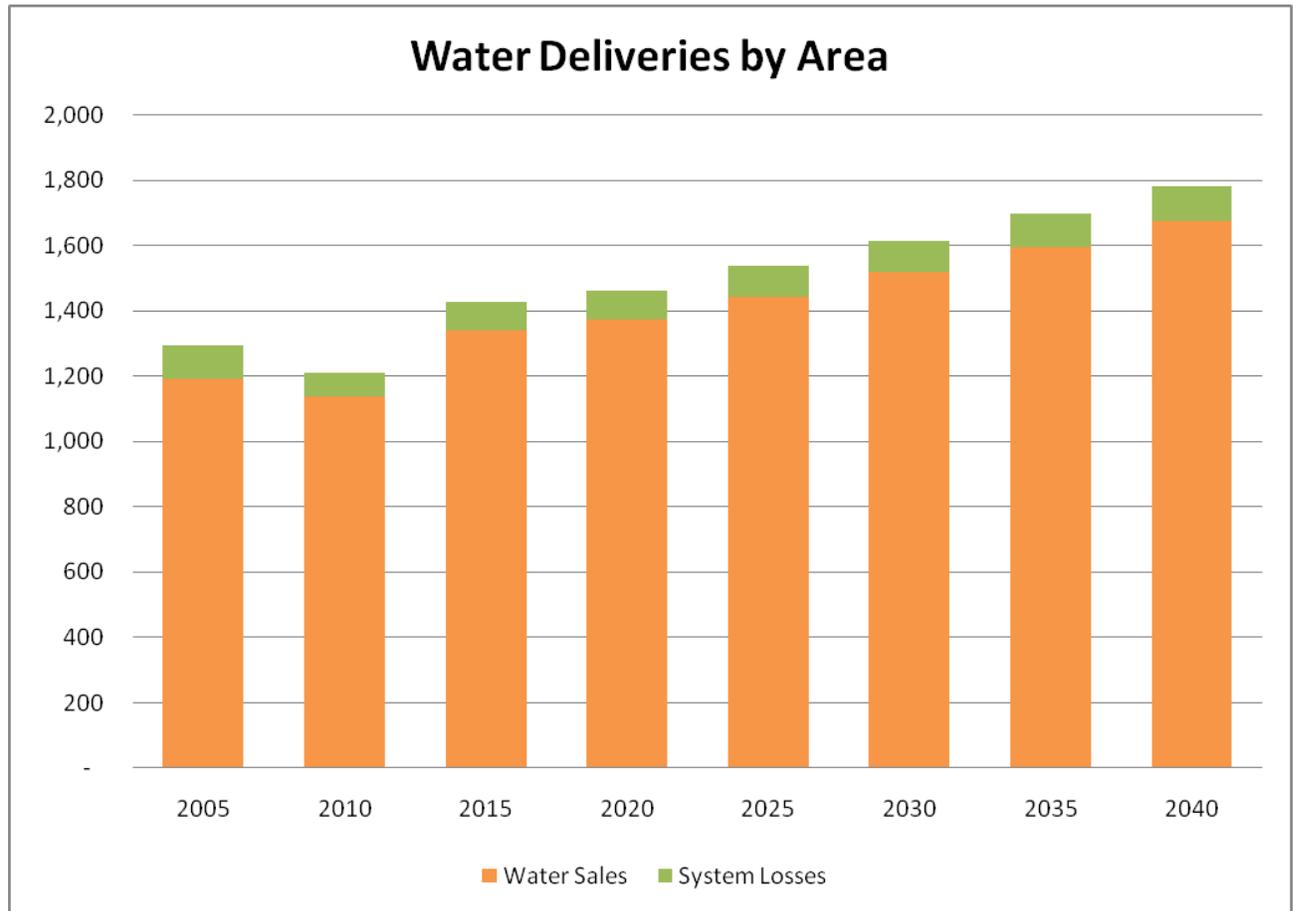


Table 5-5 summarizes historical pumping by participating agency/retailer for the past 6 years, 2005 to 2010.

Table 5-5: (DWR Table 6) Historical Pumping by Participating Retailers (includes pumping of SWP water recharged in basins.

	2005	2006	2007	2008	2009	2010
Golden Hills CSD¹						
Tehachapi Basin Allowed Pumping Allocation including leases	0	0	0	0	0	0
Tehachapi Basin (SWP water recharged in Tehachapi Basin for Golden Hills)	1,295	1,393	1,443	1,437	1,368	1,210
Golden Hills CSD	1,295	1,393	1,443	1,437	1,368	1,210

¹ At start of 2010, Golden Hill CSD had 675 AF of carryover in storage. Carryover can be accumulated for two years.

5.4.2 Sales to Other Agencies

Golden Hills does not sell SWP to other entities.

5.4.3 Additional Water Uses and Losses

Golden Hills CSD places SWP water into storage when supply and financial resources are available. Golden Hills CSD is considering a goal of storing sufficient SWP water in the groundwater so that a combination of local groundwater and imported water stored in the groundwater basins can meet the area’s demand for at least a five-year dry cycle. The calculation in Table 5-6 assumes that the Golden Hills CSD places water into storage at a rate to accomplish this presumed goal over a period of five years.

Table 5-6: (DWR Table 14) Past, Current and Planned Water Deliveries (AFY)

Water Use	2010	2015	2020	2025	2030	2035	2040
Groundwater Storage (by owner of stored water)¹							
Golden Hills CSD							
Goal for total storage (5 years of demand in excess of Allowed Pumping Allocation)	3,015	3,015	3,015	3,351	3,743	4,154	4,587
Storage at beginning of year	2,172	3,015	3,015	3,351	3,743	4,154	4,587
Imported water added to storage to reach goal in 5 years.	169	0	67	78	82	87	0
Imported water added to storage during this year	169	0	67	78	82	87	0

¹ There is a goal of storing an amount of SWP water in Tehachapi Basin equal to 5 years of demand in excess of the demand that can be met by the Allowed Pumping Allocation. The goals for the Total Storage are derived from DWR Tables 12 and 6, Allowed Pumping Allocation. Storage at beginning of 2010 (2,172 AF for Golden Hills CSD) per fax dated March 28, 2011.

It should be noted that during the period 2007-2010, the Golden Hills CSD was able to fund the replacement of their existing flow meters with new flow meters equipped with AMRs. The AMR system allows data to be collected with a receiver while driving by the water service connection. A software system produces graphs for each connection and makes it easy to identify connections that have possible leaks or spikes in water use. The system includes both conventional flow meters and the AMR. This effort has allowed the Golden Hills CSD to identify leaks that can be repaired, increase customers’ awareness of their water usage, and account for unmetered losses. Overall system losses have reduced from over 7 percent to less than 5 percent.

5.5 Supply and Demand Comparison

Golden Hills CSD requires SWP supplies to meet its demand in times of drought. Therefore, reference is made to section 2.5 for discussion of supply and demand.

Law

10635

(a) Every urban water supplier shall include, as part of this 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 suppliers 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 the state, or local agency population projections within the service area of the urban water supplier.

(b) 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.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

5.6 Demand Management Measures

The UWMPA identifies fourteen DMMs for urban water suppliers to address. These measures are derived from the original BMPs established in the UWMPA and the 1991 MOU.

Law

10631

(f) Provide a description of the suppliers' water demand management measures. This description shall include all of the following:

- 4) A description of each water demand management measures that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following.....
 - a. Water survey programs for single-family residential and multi-family residential customers
 - b. Residential plumbing retrofit
 - c. System water audits, leak detection
 - d. Metering with commodity rates for all new connections and retrofit of existing connections
 - e. Large landscape conservation programs and incentives
 - f. High-efficiency washing machine rebate programs
 - g. Public information programs
 - h. High school education programs
 - i. Conservation programs for commercial, industrial, and institutional accounts
 - j. Wholesale agency programs
 - k. Conservation pricing
 - l. Water conservation coordinator
 - m. Water waste prohibitions
 - n. Residential ultra-low-flush toilet replacement programs

In 1991, a MOU regarding Urban Water Conservation in California formed the CUWCC. Golden Hills CSD is not a signatory of the MOU and therefore not a member of the CUWCC.

The Golden Hills CSD realizes the importance of the BMPs, emphasized by the CUWCC, to ensure a reliable future water supply. Golden Hills CSD is committed to implementing water conservation strategies and water recycling programs to provide sustainability in meeting future water needs for their customers.

Golden Hills CSD has not previously developed an UWMP, as they were not, nor are they currently, required to submit a plan (each retail entity delivers less than 3,000 AFY and/or has less than 3,000 service connections). Golden Hills CSD does want to continue to be proactive in water conservation and has voluntarily implemented water conservation measures to improve efficiency of water use. Elements of the Kern County Water Code are also implemented within Golden Hills CSD. Water resource Ordinances, Rules and Regulations implementing the required BMPs are described in the following section.

Table 5-7 summarizes the DMMs being implemented at Golden Hills CSD.

Table 5-7: Demand Management Measures – Specific to Golden Hills CSD

Demand Management Measure (DMM)	Golden Hills CSD		
	Implemented	Planning to Implement	Not Applicable
DMM 1: Water Survey Program	✓		
DMM 2: Residential Plumbing		✓	
DMM 3: Water System Audit	✓		
DMM 4: Metering with Commodity Rates	✓		
DMM 5: Landscape Irrigation Programs	✓		
DMM 6: Washing Machine Rebate Program		✓	
DMM 7: Public Information	✓		
DMM 8: School Education	✓		
DMM 9: Commercial, Industrial, and Institutional Programs	✓		
DMM 10: Wholesale Agency Programs			✓
DMM 11: Conservation Pricing	✓		
DMM 12: Water Conservation Coordinator	✓		
DMM 13: Water Waste Prohibition	✓		
DMM 14: Ultra Low Flush Toilet Replacement		✓	

5.6.1 Water Resource Ordinances, Rules, and Regulations

5.6.1.1 Kern County

Kern County has an extensive Water Code (Kern County Code, Title 14) which governs water resources and water utility service. (Appendix A) The Code is directly applicable to the GTA and predominately applicable to the City of Tehachapi. Most notable in the Code is the County's prohibition of native groundwater export from the County.

The Kern County Board of Supervisors adopted Ordinance No. G-6502 which adds Subsection 19.102.190(K) to Chapter 19.102 of the Kern County Code and adds Chapter 19.118 to the Kern County Code. These additions to the Kern County Code regulate the transportation or transfer of native groundwater outside of Kern County and its watersheds, including transportation or transfer through joint water conveyance facilities, and/or sales to owners of water conveyance facilities.

5.6.1.2 Golden Hills Community Services District

Golden Hills CSD establishes, by Resolution of the Board of Directors, water service policies and terms for water service extension. The Golden Hills CSD Board adopted Water Shortage Regulations in July 1993 by Resolution 745. Per the Golden Hills CSD annexation guidelines, water rights, water supply or equivalent must be provided by the developer or owner.

5.6.2 Demand Management Measures

DWR has assigned an enhanced terminology to the BMPs. Accordingly, this chapter will refer to them as DMMs.

DMM 1 – Water Survey Programs for Single Family and Multi-Family Residential Customers

This program consists of offering water audits to residential customers. Audit components include reviewing water usage history with the customer, identifying leaks inside and outside, and recommending improvements.

Golden Hills CSD has been fully metered since it first delivered water, over 40 years ago. During the last two years, Golden Hills CSD replaced their existing service meters with new meters and an AMR system which includes an automated intermittent and continuous leak detection program. Monthly customers are notified by mail of potential leaks within their property. As a result of the leak notification and upon request by the customer, a representative from Golden Hills CSD will meet with the customer to aid them locating the leak(s) and identifying applicable water conservation measures. Also, the annual water quality report is mailed to all customers. In the report specific water conservation tactics are described for customer consideration and implementation.

Implementation Schedule

- On-going leak detection notification and customer education (2009-2011)
- A specific water survey program for Single Family and Multi-family customers will be implemented in 2012

Estimated Annual Budget: \$2,000

DMM 2 – Residential Plumbing Retrofit

This program consists of installing physical devices to reduce the amount of water used and to limit the amount of water, which can be used to limit the amount of water, which can be served to its customers.

As mentioned in DMM 1, Golden Hills CSD has been fully metered since it first delivered water, over 40 years ago; most homes have been constructed using low flow fixtures as required by the Uniform Plumbing Code. Golden Hills CSD currently does not provide fixtures or aerators for customers, but may consider limited implementation in the future dependent upon fiscal constraints.

Implementation Schedule

- Golden Hills CSD may consider providing low-flow shower heads and faucet aerators to residential customers in the future dependent upon financial constraints.

Estimated Annual Budget: \$300

DMM 3 – System Water Audits, Leak Detection, and Repair

A water audit is a process of accounting for water use throughout a water system in order to quantify the unaccounted for water. Unaccounted for water is the difference between metered production and metered usage on a system-wide basis.

As previously mentioned, Golden Hills CSD has been fully metered since it first delivered water, over 40 years ago; during that time, each production well has been equipped with a functioning master meter. Every month a comparison between metered consumption and well production is conducted. Also, the meter program is operated using an AMR system and detects on-site leaks. If a leak is detected during the monthly meter reading process, customers are promptly notified. Therefore, system water audits, leak detection, and repairs are conducted monthly. On average, losses since completion of the AMR system have been reduced into a range from 2 to 6 percent.

Implementation Schedule

- On-going, monthly

Estimated Annual Budget: \$1,000

DMM 4 – Metering with Commodity Rates

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

All Golden Hills CSD customer groups are metered. All new customers are required to be metered.

Customer Type	Metered	Unmetered	Total Accounts
Single/Multi-Family Residential	2700	0	2700
Commercial/Institutional	70	0	70
Industrial	5	0	5
Landscape Irrigation	2	0	2
Total	2777	0	2777

Implementation Schedule

- On-going

Estimated Annual Budget:

Private development pays for new meter installation. Annual on-going meter maintenance and replacement covered in monthly water billing.

DMM 5 – Large Landscape Conservation Programs

This DMM calls for agencies to commence assigning reference ETo-based water budgets to accounts with dedicated irrigation meters and provide water-use audits to accounts with mixed-use meters.

Golden Hills CSD has a landscape conservation demonstration garden at their headquarters which demonstrates Large Landscape Conservation Program. Golden Hills CSD will be fully implementing AB 1881 for new landscaping projects. Golden Hills CSD has an active water-wise demonstration garden for customers to tour and obtain ideas for efficient landscaping. In the next five years Golden Hills CSD will consider providing an incentive program similar to **Cash for Grass** to reduce turf irrigation.

Implementation Schedule

- On-going - AB 1881 & Xeriscape Demonstration Garden
- Consider Cash for Grass or similar incentive program

Estimated Annual Budget: \$2,000

DMM 6 – High Efficiency Washing Machine Rebate Programs

This program generally provides a financial incentive (rebate offer) to qualifying customers who install a HEW machine in their home.

Golden Hills CSD does not have a HEW Machine Rebate Program. When funds become available from outside sources, Golden Hills CSD will consider implementing a program. However, customers are currently encouraged to take advantage of the SCE rebate program.

Implementation Schedule

- Washing Machine Rebate – Future
- Southern California Edison – Currently, customers are encouraged to participate in SCE’s Rebate Program

Estimated Annual Budget: *None*

DMM 7 – Public Information System

This program consists of distributing information to the public through a variety of methods including brochures, radio and television, school presentations and videos, and web sites.

Golden Hills CSD’s public information program is conducted using Golden Hills CSD personnel. Several multi-media campaigns are conducted on an on-going basis including: a dedicated water conservation link on Golden Hills CSD’s web page, a conservation section in the consumer confidence (annual water quality) report, monthly leak notifications as appropriate, a speakers bureau, water-wise/xeriscape demonstration garden, water conservation flyers, and periodic newspaper articles on water conservation.

Implementation Schedule

- On-going – public education program

Estimated Annual Budget: *\$1,000*

DMM 8 – School Education

This DMM requires water suppliers to implement a school education program that includes providing educational materials and instructional assistance.

Golden Hills CSD’s provides guest speakers for school education through their speakers bureau. Upon request staff will provide on-site water education, information and conservation concepts to students. In the future Golden Hills CSD’s is considering joining forces with the Community Clean Sweep Program to provide a proactive water education program.

Implementation Schedule

- On-going – school education program

Estimated Annual Budget: *\$2,700*

DMM 9 – Conservation Programs for Commercial, Industrial and Institutional Programs

Golden Hills CSD’s commercial, industrial and institutional (CII) accounts are all metered and Golden Hills CSD does not proactively conduct on-going or periodic water use surveys for these customers. However, the CII customers are notified if the AMR system detects evidence of a

leak. Also, if a CII customer calls Golden Hills CSD's office, staff will respond and provide water conservation ideas, tips and educational materials.

Implementation Schedule

- On-going – public education program

Estimated Annual Budget: \$500

DMM 10 – Wholesale Agency Programs

This DMM applies to wholesale agencies and defines a wholesaler's role in terms of financial, technical, and programmatic assistance to its retail agencies implementing DMMs.

Golden Hills CSD functions as a retail water purveyor and does not wholesale water.

Implementation Schedule: *Not applicable to Golden Hills CSD*

Estimated Annual Budget: *Not applicable to Golden Hills CSD*

DMM 11 – Conservation Pricing

All Golden Hills CSD customers are metered; the rate schedule is listed below.

- Water Rates approved on September 4, 2008
 - Monthly Base Rate – **\$19.90**
 - Residential – Each additional unit (1-5) – **\$1.24**
 - Residential – Each additional unit (6& over) – **\$2.48**
 - Commercial – Each additional unit (1-5) – **\$1.32**
 - Commercial – Each additional unit (6& over) – **\$2.65**
- Water Banking Reimbursement Fee approved on January 21, 2010
 - Residential/Commercial – Each unit – **\$0.23**

RESIDENTIAL USAGE UNITS	BILL AMT \$ per month	RESIDENTIAL USAGE UNITS	BILL AMT \$ per month	RESIDENTIAL USAGE UNITS	BILL AMT \$ per month
1	21.37	26	84.16	51	151.91
2	22.84	27	86.87	52	154.62
3	24.31	28	89.58	53	157.33
4	25.78	29	92.29	54	160.04
5	27.25	30	95.00	55	162.75
6	29.96	31	97.71	56	165.46
7	32.67	32	100.42	57	168.17
8	35.38	33	103.13	58	170.88
9	38.09	34	105.84	59	173.59

RESIDENTIAL USAGE UNITS	BILL AMT \$ per month	RESIDENTIAL USAGE UNITS	BILL AMT \$ per month	RESIDENTIAL USAGE UNITS	BILL AMT \$ per month
10	40.80	35	108.55	60	176.30
11	43.51	36	111.26	61	179.01
12	46.22	37	113.97	62	181.72
13	48.93	38	116.68	63	184.43
14	51.64	39	119.39	64	187.14
15	54.35	40	122.10	65	189.85
16	57.06	41	124.81	66	192.56
17	59.77	42	127.52	67	195.27
18	62.48	43	130.23	68	197.98
19	65.19	44	132.94	69	200.69
20	67.90	45	135.65	70	203.40
21	70.61	46	138.36	75	216.95
22	73.32	47	141.07	100	284.70
23	76.03	48	143.78	125	352.45
24	78.74	49	146.49	150	420.20
25	81.45	50	149.20	200	555.70

- Note: Each "unit" of water is 100 cubic feet (748 gallons)

DMM 12 – Conservation Coordinator

The Golden Hills CSD operates with minimal staffing, therefore the Golden Hills CSD's General Manager or his/her designee acts as the Water Conservation Coordinator.

Implementation Schedule: On-going

Estimated Annual Budget: To Be Determined

DMM 13 – Water Waste Prohibition

The Golden Hills CSD uses an AMR system to detect on-site leaks. Every month, if the system detects a leak, a mailer is sent to the applicable customer(s). Golden Hills CSD has an illegal Water Connection/Theft policy that results in a fine of \$2,500. The Golden Hills CSD's current water usage per capita is 146 gpcd. The Golden Hills CSD does not have on-going water restrictions, however if per-capita usage increases, the Golden Hills CSD will impose water use restrictions to avoid a measureable increase in the per capita consumption.

Implementation Schedule

- Implement as needed. The Golden Hills CSD's Water Shortage Contingency Plan will be implemented according to the UWMP.

Estimated Annual Budget: To Be Determined

DMM 14 – Residential Ultra-Low Flush Toilet Replacement Program

State legislation requires the installation of efficient plumbing in new construction, and effective 1992 require that only ULFT be sold in California. Subsequently, home constructed within the GTA since 1992 have ULFTs.

Approximately 70 percent of the homes and commercial buildings within Golden Hills CSD were built after 1992 and were required to install low flow fixtures. It is unknown how many of the homes and commercial buildings constructed prior to 1992 have since converted to low flow fixtures. However, the Golden Hills CSD will consider developing a rebate program for ULFTs within the next 5 years.

Implementation Schedule

- Consider implementing by 2015

Estimated Annual Budget: To Be Determined

5.7 Water Shortage Contingency Plans

5.7.1 Stages of Action

The UWMPA requires that the UWMP include an urban water shortage contingency plan that addresses specific issues.

Law

10632

The plan 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.

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

5.7.1.1 History of Water Shortage and Conservation Resolutions

The State of California experienced a five-year drought from 1987 to 1992. Subsequently, some of the participating agencies board of directors approved and adopted several resolutions and conservation measures for voluntary and mandatory conservation. Water resources ordinances, rules, regulations and policies that are in place to further assist in water conservation are being implemented by various agencies as described below:

Kern County

Kern County has an extensive Water Code (Kern County Code, Title 14) which governs water resources and water utility service. The Code is directly applicable to the GTA and applicable to the Golden Hills CSD.

Most notable in the Water Code is Kern County Ordinance No. G-6502. This ordinance regulates the transport or transfer of native groundwater outside of Kern County and its watersheds. This also regulates transport or transfer through joint use, of capacity in, and sales to, owners or operators of water conveyance facilities.

Golden Hills Community Services District

Golden Hills CSD established, by Resolution of the Board of Directors, water service policies and terms for water service extension. The Golden Hills CSD Board established a formal Water Conservation Program in July 1993 (Resolution 745). Per the Golden Hills CSD annexation guidelines, water rights, water supply, or equivalent must be provided by the developer or owner.

5.7.2 Water Shortage Stages and Reductions

Water agencies relying solely on surface water, are more likely to experience a water shortage than those agencies relying primarily on groundwater.

Golden Hills CSD has a portfolio of diversified resources, as described in Section 5.2- Water Supply. These resources include groundwater, local surface water, imported surface water, and recycled water supplies. Although this mix of resources provides a level of safeguard against water shortages and reductions, Golden Hills CSD has developed a three-staged rationing plan that will be initiated during a declared water shortage. The rationing plan is dependent on the cause, severity and anticipated duration of the water supply shortage. Golden Hills CSD’s water shortage stages, reduction objectives, and rate structure are shown in Table 5-8 below.

Table 5-8: (DWR Table 23 and 26-30 combined) Golden Hills CSD Water Shortage Stages and Reduction Objectives

Water Shortage Stages and Reduction Objectives			
2010 Greater Tehachapi Regional Urban Water Management Plan			
Stage	Description	Reduction Objective	Impact on Rate Structure
1	Minor Shortage Potential - Water Alert	10 - 20 % reduction in deliveries	No Impact
2	Moderate Shortage Potential - Water Alert	20 - 35% reduction in deliveries	15% rate increase
3	Critical Shortage Potential - Water Alert	> 35 % reduction in deliveries	25 % rate increase
* Water Shortage Regulation Specific to Golden Hills Community Services District			

Golden Hills CSD is planning to amend Stage 3 to include up to 50 percent reduction in supply, as required by the UWMPA. Agency-specific Water Shortage Contingency Plans can be found in Appendix E.

5.7.3 Water Reduction Stage Triggering Mechanisms

Emergency response stage actions become effective when the Board of Directors of the Golden Hills CSD declares that the Golden Hills CSD 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 has the authority to implement and authorize a reduction or moratorium in new connections.

Additionally, TCCWD has developed an overall water reduction strategy for the three basins that is described in sections 2.7.3 and 2.7.4 of this RUWMP.

5.7.4 Administration of Water Shortage Program

The administration of a water shortage contingency program as described in this section would involve coordination among a number of local agencies. An individual at each of the agencies would be identified as the Program Manager and be the primary coordinator of water shortage activities. In the case of Golden Hills CSD, the General Manager is authorized and directed to do all things necessary and appropriate to disseminate information regarding adoption of water shortage regulations, etc.

An appropriate organizational structure for a water shortage management team would be determined based on the actual situation. Specific individuals would be designated to fill the identified roles. It would most likely be unnecessary to hire additional staff or outside contractors to implement the program for Golden Hills CSD.

The major elements to be considered in administrating and implementing the program include:

- Identifying Golden Hills CSD staff members to fill the key roles on the water shortage management team. It is anticipated that the General Manager for Golden Hills CSD would designate appropriate individuals.
- Intensifying the public information program to provide comprehensive information on the water shortage as necessary actions that must be undertaken by Golden Hills CSD and the public. The scope of the public information program can be developed by reviewing published references, especially those published by DWR, and researching successful aspects of the current programs conducted by neighboring water agencies. A public information hotline may be advisable to answer any question regarding the program.
- Monitoring program effectiveness. Ongoing monitoring will be needed to track supply availability and actual water user reductions. The procedure will allow Golden Hills CSD to continuously re-evaluate the situation and make informal decisions as to whether another reduction level is needed.
- Coordination with other agencies. Since TCCWD services multiple agencies, it is critical to have on-going coordination efforts amongst the five local water agencies and have a specific contact person who will be aware of conservation developments.

- Addressing new development proposals. During periods of severe water shortage, it may be necessary to impose additional requirements on new developments to reduce new demands or temporarily curtail new hook-ups.
- Adjusting water rates. Revenues from water sales should be reviewed periodically by Golden Hills CSD to determine whether an adjustment in rate schedules might be needed to cover revenue shortfalls due to the decrease in demand.

It is required that the water shortage contingency plan undergo a formal public review process including a public hearing. A thorough public review process will help minimize future objections when mandatory prohibitions are in place.

5.7.5 Water Shortage Contingency Ordinance/Resolution

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that includes a draft water shortage contingency resolution or ordinance.

Law

10632

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

- (h)** A draft water shortage contingency resolution or ordinance.

Golden Hills CSD has adopted its Water Shortage Regulations (Resolution 745) in July 1993 and on July 12, 2007, enacted Ordinance 30, which among other water service rules and regulations, recognized the board's authority . A copy of the adopting ordinance is included in Appendix C.

5.7.6 Prohibitions, Penalties and Consumption Reduction Methods

The UWMPA requires that the UWMP includes an urban water shortage contingency analysis that addresses methods to reduce consumption.

Law

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.....

- (d)** 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.
- (e)** 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 the area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.
- (f)** Penalties or charges for excessive use, where applicable.

5.7.6.1 Mandatory Prohibitions on Water Wasting

Mandatory compliance measures enacted during a water shortage are more severe than voluntary measures, produce greater savings, and are less costly to the agency. The principal drawback to these measures is the customer resentment because the measures are not perceived as equitable. Therefore, such measures need to be accompanied by a good public relations campaign.

Mandatory measures may include:

- Ordinances making water waste illegal,
- Ordinances controlling landscape irrigation,
- Ordinances restricting non-irrigation outdoor water uses,
- Prohibitions on new connections or the incorporation of new areas,
- Rationing.

Prohibitions on new development may conflict with other policies and needs. However, if existing customers are called upon to make sacrifices during a drought period, they may feel that the agencies should concentrate on fulfilling current obligations rather than taking on new customers. Such prohibitions may need to be considered in the event of a critical shortage, such as the 40-50 percent reduction program.

During a water shortage the existing Golden Hills CSD and/or Resolution 745-Ordinance 30 is implemented. Resolution 745 becomes mandatory when a Stage 1 Water Shortage Emergency is declared. Related to a Stage 1 shortage, the resolution states:

- There shall be no washing of sidewalks, walkways, buildings, walls, patios, driveways, parking areas or other paved surfaces, or walls, except to eliminate conditions dangerous to public health or safety or when required as surface preparation for application of architectural coating or painting.
- Washing of motor vehicles, trailers, boats and other types of equipment shall be done only with a hand held bucket or a hose equipped with a positive shut off nozzle for quick rinses. Washing may also be done with reclaimed wastewater or by a commercial car wash using a recycled system.
- No water shall be used to clean, fill or maintain levels in ornamental fountains, ponds, lakes or other similar aesthetic structures unless such water is part of a recycling system.
- All water users shall promptly repair all leaks from indoor and outdoor plumbing fixtures.
- No lawn, landscape or other turf area shall be watered more than once every other day nor during the hours between 8:00 PM and 6:00 AM. No water users shall cause or allow the water to run off landscape areas into adjoining streets, sidewalks, or other paved areas due to incorrectly directed or maintained sprinklers or excessive watering.

- Alternate day irrigation of landscaping. There shall be no runoff as a result of irrigation.

5.7.6.2 Excessive Use Penalties

Golden Hills CSD customers found wasting or misusing water shall receive the following actions as specified in their Water Shortage Contingency Plans.

Stage II Water Alert

The Golden Hills CSD's General Manager shall have the authority to impose the following surcharges to the account holder or his/her tenant.

- First violation within twelve months: Issuance of a written warning; no surcharge.
- Second violation within twelve months: \$50.00 surcharge on the next billing cycle.
- Third Violation within twelve months: \$100.00 surcharge on the next billing cycle, plus a possible flow restriction device at the discretion of the General Manager or shutoff of service at the discretion of the Board.

Stage III Water Alert

- First violation within twelve months: Issuance of a written warning; no surcharge.
- Second violation within twelve months: \$100.00 surcharge on the next billing cycle.
- Third Violation within twelve months: \$200.00 surcharge on the next billing cycle, plus a possible flow restriction device at the discretion of the General Manager or shutoff of service at the discretion of the Board.

Review Process

A customer that has been assessed a penalty for violating or exceeding the water use allocation will have the right to a review of the penalty by the General Manager. Specific to Golden Hills CSD, any property owner that has been issued a warning or accrued surcharges for violation of any of the restrictions imposed by the Golden Hills CSD may petition the Board of Directors.

5.7.7 Revenue and Expenditure Impacts/Measures to Overcome Impacts

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that addresses the financial impacts from reduced water sales.

Law**10632**

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.

(g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier....

(g) [An analysis of the impacts of each of the proposed measures to overcome those [revenue and expenditure] impacts, such as the development of reserves and rate adjustments.

The majority of operating costs for most water agencies are fixed rather than a function of the amount of water sold. As a result, when significant conservation programs are undertaken, a budget deficit is likely to occur.

In the case of Golden Hills CSD, annual revenue from water sales is approximately \$1,700,000. The impact to Golden Hills CSD's budget as a function of reduced deliveries results in a decrease to approximately \$1,100,000 at a 50 percent reduced water delivery if there were no changes in water rates during periods of shortage.

The Golden Hills CSD, however, can offset this decrease in revenue by implementing a rate schedule, as specified in its Water Shortage Contingency Plan. Revenue stabilization can almost be sustained up to about the 40 percent reduction in deliveries scenario. The Golden Hills CSD is exploring the expansion of its rate structure to address impacts associated with a 50 percent reduction in deliveries situation.

5.7.8 Actions Taken During a Catastrophic Event

The UWMPA requires that an UWMP include an urban water shortage contingency analysis that addresses a catastrophic interruption in water supply.

Law**10632**

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier...

(c) 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.

During declared shortages, or when a shortage declaration appears imminent, the General

Manager of Golden Hills CSD will activate a water shortage contingency plan that has been previously adopted by the Golden Hills CSD and is presented below.

5.7.9 Reduction Measuring Mechanism

The UWMP analysis that identifies a mechanism to measure the actual water reductions.

Law

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier...

(i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

The Golden Hills CSD's water supply is a conjunctive use system supplied by groundwater wells and recharged surface water. Golden Hills CSD measures the amount of water entering the distribution system with flow measurement devices installed on each well and as discussed previously, there are also flow meters on all connections to measure the amount of water used by each customer. These devices have been, and will continue to be, used to measure district-wide reductions in water use.

5.7.10 Water Shortage Contingency Plan for Golden Hills Community Services District

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 percent reduction in the SWP supply will have much impact in any single year. The Golden Hills CSD Water Shortage Contingency Plan is provided in Appendix E.

5.7.11 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 5-9: (DWR Table 24) Minimum Three Year Supply

Source	Year 1	Year 2	Year 3	Normal
Tehachapi Basin Service Area				
Golden Hill CSD Supply¹				
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	0	0	0	0
Recovery of water previously banked in Tehachapi Basin	434	434	434	434
Golden Hill CSD Supply¹	1,903	1,903	1,903	1,903

¹ Presumes that Golden Hills CSD would recover 20% of the water in storage at the beginning of each year. Presumes that Golden Hills CSD would forgo SWP water as its supply is adequate without new imports.

5.8 Recycled Water

The UWMPA requires that the UWMP include information on water recycling and potential uses for recycled water.

Law

10633

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. To the extent practicable, the preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier’s service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
- (b) A description of the recycled water currently being used in the supplier’s service area, including but not limited to, the type, place and quantity of use.
- (c) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse determination with regard to the technical and economic feasibility of serving those uses, groundwater recharge, and other appropriate uses, and a
- (d) The projected use of recycled water within the supplier’s service area at the end of 5, 10, 15, and 20 years.
- (e) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
- (f) A plan for optimizing the use of recycled water in the supplier’s service area, including actions to facilitate the installation of dual distribution systems and to promote re-circulating uses.

5.8.1 Wastewater Treatment and Recycling Descriptions

GHSC owns and operates the wastewater treatment and recycling facility. Golden Hills CSD and the GHSC collectively submitted a Report of Waste Discharge to the Central Valley RWQCB for the treatment and disposal of 0.2 MGD of domestic wastewater for a design population of about 2,000, although the treatment facilities were designed and constructed for 0.1 MGD

The tertiary treatment facilities is located on a portion of Section 7 T32S, R33E, MDB&M on 0.5 acres of land belonging to the GHSC, approximately 2 miles west of the City. The plant consists of an extended aeration package treatment plant, chlorination facilities, a multimedia pressure filter, approximately 2,500 feet of 6-inch force main leading to Tom Sawyer Lake (capacity approximately 110 AF).

Reclamation of treated effluent was initially permitted by Wastewater Reclamation Requirements issued by the RWQCB to be accomplished by spray irrigation on the front nine fairways of the Golden Hills Country Club golf course. Unfortunately, the golf course has been closed since the mid-90s and the privately-owned facility has since been operating outside of its permitted use.

In 2001, Golden Hills CSD dedicated the treatment site property to the GHSC. At that time, Golden Hills CSD revoked its name from the RWQCB Waste Discharge Requirements [permit] and terminated any contractual relationships with the GHSC.

5.8.2 Potential Opportunities for Connection to other Agencies Proposed Reclaimed Water Systems

It is not economically feasible for the participating agencies to connect to other agencies outside of the GTA because of distance. As a result, opportunities to expand recycled water use by exploring connections to other agencies outside of the GTA have not been further explored. Potential opportunities include GHSC connecting to City; Effluent from GHSC WWTP on-site systems connecting to Golden Hills CSD or the City with the GTA. Below is a list of the participating agencies and their role in recycled water development.

Table 5-10: Participating Entity

Participating Entity	Role in Plan Development
Golden Hills Sanitation Co WWTP (Tehachapi Basin)	Produces effluent

5.8.3 Recycled Water Currently Being Used

Golden Hills CSD’s current and future use of treated wastewater is unique to its service area and depends on the effluent treatment level obtained at the various facilities. Table 5-11 summarizes current and future recycled water demands of each of the agencies.

Table 5-11: (DWR Table 33) Wastewater Collected and Treated (AFY)

	Treatment Level	2010	2015	2020	2025	2030	2035	2040
Golden Hills Sanitation Co WWTP ¹								
Evaporation and percolation (Tom Sawyer Lake)	Tertiary	30	32	33	33	33	33	33
Total		30	32	33	33	33	33	33

¹ Fugro 2009A. Projected after 2025 without increase. Tertiary Treatment. Effluent delivered to Tom Sawyer Lake. Plant is owned and operated by Golden Hills Sanitation Company. <http://goldenhillssanitation.com/id26.html>.

5.8.4 Recycling Plan and Potential Customers

Since community sewer service is provided by a private company in the Golden Hills CSD Service Area, Golden Hills CSD has no authority to expand the use of recycled water; therefore, there are no projected recycled water customers.

5.8.5 Encourage Recycled Water Use

GHSC is an investor-owned utility regulated by the California Public Utilities Commission. Golden Hills CSD has no regulatory authority over GHSC, nor does Golden Hills CSD own or operate any parks, schools or golf courses where recycled water could be put to beneficial use. Golden Hills CSD will cooperate with GHSC to the extent it is able to recycle water in Golden Hills within the current regulatory framework.

5.9 Desalination

The UWMPA requires that the UWMP address the opportunities for development of desalinated water, including ocean water, brackish water and groundwater. Desalination of sea water and brackish groundwater is discussed in Section 2.9.

There is no brackish water or sea water within the GTA thus this component is not applicable.

Law

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 A plan shall be adopted in accordance with this chapter and shall do all of the following:
 (i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish groundwater, and groundwater as a long-term supply.

5.10 Water Use Reduction Plan (GPCD Baseline and Targets for 2015 and 2020)

The Act of 2009 was incorporated into Division 6 of the California Water Code, commencing with Section 10608 of Part 2.22. The Act identifies methodologies, water use targets and reporting requirements which apply to urban retail water suppliers. The law specifically calls for developing seven methodologies and a set of criteria for adjusting daily per capita water use at the time that compliance is required (2015 and 2020 compliance years). The Water Code

(Section 10608.20 and 10608.28) allows water suppliers the choice of either complying individually or regionally by mutual agreement.

Law

10608.12

(b) "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 water supplier that meets at least 10 percent of its 2008 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 period ending no earlier than December 31, 2007, and no later than December 31, 2010.

Golden Hills CSD has agreed to set the baseline and conservation targets as a regional alliance. They have also agreed to define their base daily per capita water use pursuant to WC 10608.12(b)(3). The five calendar years ending December 31, 2007 will be used to determine the baseline gpcd for the regional alliance. The five calendar years ending December 31, 2009 will be used to determine the baseline gpcd for Golden Hills CSD's individual agency goals.

As discussed in 2.10, baseline water use for the regional alliance is 191 gpcd. This is more than the Tulare Lake hydrologic region target of 188 gpcd. Since the lower of these two numbers must be used to calculate the water conservation target, the 2020 target for the regional alliance is 179 gpcd ($188 \times .95 = 179$). The 2015 interim target is 185 gpcd, the midpoint between 191 and 179 gpcd.

Since the baseline gpcd for the regional alliance is already so low, they are not subject to the 20 percent water conservation requirement. WC 10608.20(b)(3) sets a water conservation goal of 95 percent of the hydrologic region's target. WC 10608.22 states that all water agencies subject to the law must achieve at least a 5 percent reduction in gpcd water use unless the agency's water use is already less than 100 gpcd.

For Golden Hills CSD as an individual agency, its baseline water use is 144 gpcd as shown in Table 5-12. Since this figure is less than the Tulare Lake hydrologic region target, it will be used as the baseline against which a 5 percent reduction target is calculated. Golden Hills CSD's 2020 target is 136 gpcd ($144 \times .95$). Its 2015 interim target is 140 gpcd, the midpoint between 144 and 136 gpcd. Golden Hills CSD intends to comply with the law through the regional alliance, but understands that it can also comply by achieving its separate conservation goal should the regional alliance goal not be met.

Table 5-12: GPCD Baseline and Targets

Golden Hills CSD

Base Years	Service Area Population ¹	Annual Water Production (AF) to System	Daily Per Capita Water Use	5-year Average Daily Per Capita Water Use	10-year Average Daily Per Capita Water Use	GPCD Targets ²
2000	7,434	1,174	141			
2001	7,505	1,240	148			
2002	7,576	1,324	156			2015
2003	7,647	1,323	154			140.1
2004	7,872	1,374	156			
2005	8,059	1,295	143			2020
2006	8,642	1,393	144			136.5
2007	8,795	1,443	146	148.6		
2008	8,880	1,437	144	146.8		
2009	8,727	1,368	140	143.6	147.3	
2010	8,656	1,210	125	140.5	145.7	

¹ Population figures for 2000 and 2010 are U.S. Census data. For 2001-2009 population is estimated as 3.12 persons per water connection (2010 census ratio).

² 2020 Regional Alliance Target is calculated as 95% of the Tulare Regional goal of 188 gpcd.

Golden Hills CSD’s historical populations were determined by comparing 2000 and 2010 census data with the number of water accounts in those same years, which showed that there were 3.12 persons per water account in the Golden Hills CSD . Using the same ratio of 3.12 persons per water account and a 1 percent average annual growth rate, Golden Hills CSD estimated the population figures shown above.

5.11 Adoption and Implementation of UWMP

The five agencies involved in developing this RUWMP prepared the initial draft of its UWMP in 2009/2010. The final plan was adopted by Golden Hills CSD’s Board of Directors on June 16, 2011 and submitted to the DWR within 30 days of Board approval. The Adopted 2010 RUWMP was also filed with the California State Library, County of Kern, and the respective cities within TCCWD’s Service Area.

Attached to the cover letter addressed to the DWR, and as Appendix A, of this RUWMP are Resolutions of Plan Adoption pertaining to the five agencies. This plan includes all information necessary to meet the requirements of California Water Code Division 6, Part 2.6 (Urban Water Management Planning, 2005 and 2010).

In addition to all required elements of the RUWMP, Golden Hills CSD is voluntarily identifying an Interim 2015 and 2020 Water Conservation Targets. Golden Hills CSD is not yet required to adopt an UWMP nor are they required to comply with the aforementioned conservation targets. However, doing so is an effort to proactively demonstrate its commitment to conservation. To

date, Golden Hills CSD currently meets both 2015 and 2020 targets without the implementation of any new water conservation measures. This is based on the regional standard that Golden Hills CSD and the managers of the four other retail agencies have mutually agreed to set as the measurement basis.

6.0 Stallion Springs Community Services District

6.1 Service Area

The UWMPA requires that the RUWMP include a description of the water purveyor's service area and various aspects of the area served including climate, population, and other demographic factors.

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:
(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. 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 and shall be in five-year increments to 20 years or as far as data is available.

6.1.1 Description of the District

Stallion Springs CSD was originally created and recognized in 1970 as the Tehachapi Mountain CSD, but ultimately became known as Stallion Springs CSD. The District is operated under the direction of a publicly elected five member Board of Directors.

There are approximately 2,510 lots in Stallion Springs CSD's Service Area. The District serves a population of 2,488 and maintains 1,175 water service connections and 325 sewer service connections. The Stallion Springs CSD produces as much water as is beneficially used on properties or service areas which overlie the surface area of the Cummings Valley groundwater basin, which is a mix of alluvium and fractured granite. The Stallion Springs CSD also participates in conjunctive use programs by TCCWD in the Cummings Basin.

The service area boundary for Stallion Springs CSD is illustrated in Section 2, Figure 2-1.

6.1.2 Location

Stallion Springs is a community within the Greater Tehachapi region, situated in southeastern Kern County along California Highway 58 between the San Joaquin Valley and the Mojave Desert. Stallion Springs lies west of the city of Tehachapi, southwest of the Cummings Basin.

The GTA is known for its four seasons, rural communities, Tehachapi Loop, electricity generating wind turbines, and proximity to Edwards Air Force Base. The GTA is located in the Tehachapi Mountains between Bakersfield and Mojave in Kern County, California. Tehachapi is located 35 miles (56 km) east-southeast of Bakersfield at an elevation of 3,970 feet.

6.1.3 Demographics

In July 2010, Stallion Springs CSD serviced a population of 2,488. Currently, there are 2,510 assessable parcels, 1,175 water service connections, and 325 sewer service connections.

6.1.4 Land Use

Stallion Springs relies on the GTASP, updated in 2010 with regard to land use planning. The GTASP addresses the unique property and quality of life characteristics defining the region. The County's Land Use, Open Space and Conservation Elements address the physical and environmental constraints as they exist in the area.

Land use within the region is primarily agriculture, a major industry throughout Kern County. The County's GTSP states that agriculture has been, and will continue to be, vital to the economy of the area. The GTA is known for fruit orchards, cattle ranching, sod farming, and organic farming. Current crops (including organically grown crops) include apples, peaches, pears, carrots, lettuce, broccoli, onions, sugar beets, lilacs, grapes (winery), oats, and turf sod.

Historically, the total crop acreage has been as large as 3,000 acres of which turf sod was more than half of the total acreage in Cummings Valley. In 2011, the ratio will change as two large sod growers have ceased operations. The impact of this departure will be significant on water availability for Cummings Basin water users. There are also horse/cattle operations as well as an Ostrich Ranch.

Commercial land, within the Stallion Springs community, is limited in nature and scope. Small retail venues, a private golf course (open to the public) an extreme sports camp and government buildings (Administrative, Recreational and Fire Station) round out the community's commercial offerings.

The GTASP (Water Supply & Sewer Availability) was approved by The Kern County Board of Supervisors in December of 2010.

6.1.5 Climate

Climate variations within Stallion Springs CSD are discussed in Section 2.1.5.

6.1.6 Historical and Projected Population

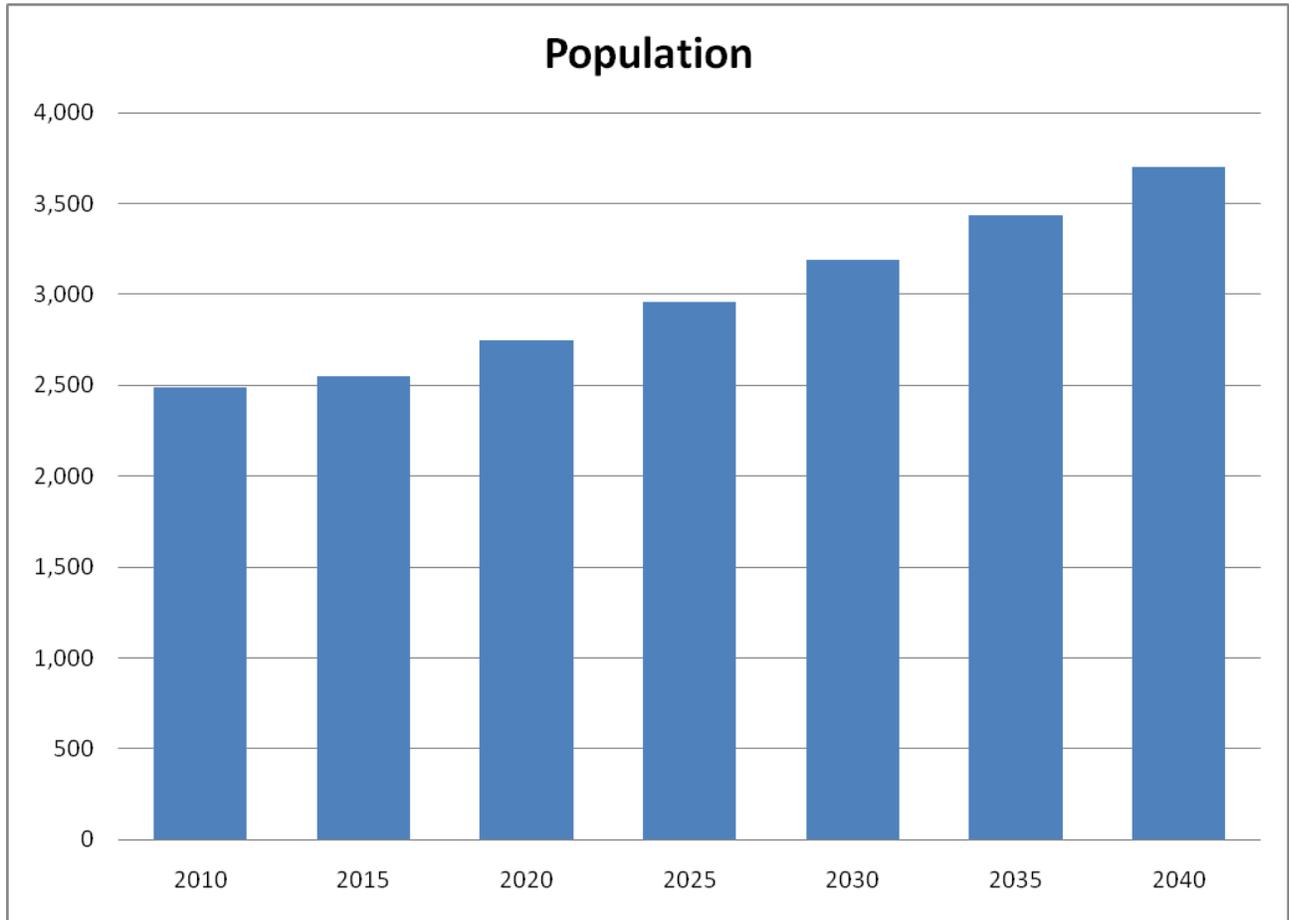
Table 6-1 illustrates the population projections for Stallion Springs CSD as provided by Stallion Springs CSD. As of January 2010, Kern County Planning anticipates using between 1.5 percent and 2.0 percent rate of growth for the current GTASP effort. The projections in Table 6-1 utilize a 0.5 percent annual increase until 2015 and a 1.5 percent annual population growth over the remainder of the 30-year period. A lower growth forecast is used for the near-term due to the current housing depression and complete lack of any building activity.

Table 6-1: (DWR Table 2) Population of Stallion Springs CSD Service Area

	2010	2015	2020	2025	2030	2035	2040
Stallion Springs CSD¹	2,488	2,551	2,748	2,960	3,189	3,436	3,701

¹ Stallion Springs 2010 population per 2010 census. Projection at 0.5%/year until 2015, then at 1.5% after 2015.

Figure 6-1: Population Projections for Stallion Springs CSD



6.2 Water Supply

The UWMPA requires that the RUWMP include a description of the agency’s existing and future water supply sources for the next 20 years. The description of water supplies must include detailed information on the groundwater basin such as water rights, determination if the basin is in overdraft, adjudication decree (if applicable) and other information from the groundwater management plan (if available).

Law**10631**

A plan shall be adopted in accordance with this chapter and shall do all of the following:

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five –year increments (to 20 years or as far as data is available), (a). 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:

(b) (1) A copy of any groundwater management plan adopted by the urban water supplier....

(b) (2) A description of any groundwater basin or basins from which the urban supplier pumps groundwater. For those basins for which a court or board has adjudicated the rights to pump groundwater. For basins that have not been adjudicated, information as to whether or the department has identified the basin or basins as overdrafted....

Water supply sources for the Stallion Springs CSD Service Area are a combination of imported water from the SWP (recharged into Cummings Basin for Stallion Springs CSD use), groundwater from the Cummings basin, and groundwater from outside the adjudicated basin (within the Stallion Springs’ community).

6.2.1 Local Watershed

The source of local surface water supply to Stallion Springs CSD Service Area is the Cummings Basin watershed.

6.2.1.1 Cummings Basin Watershed

The Cummings Basin is bounded on the North by the Sierra Nevada and on the South by the Tehachapi Mountains.

Alluvium in the Cummings Valley is represented by alluvial fan and floodplain material deposited by Cummings Creek to the south, Chanac Creek to the east, and intermittent streams to the north. The alluvium is derived predominantly from granitic rock and a smaller metamorphic rock source along the basin’s east margin. The depth to basement increases from approximately 50 feet in the southern valley to 450 feet at the northeastern boundary of the valley floor (Michael 1962).

**6.2.2 Existing Groundwater Sources****6.2.2.1 Cummings Valley Basin**

The Cummings Valley Basin surface is generally the Cummings Valley floor, bordered on the south by the Tehachapi Mountains, on the north by the Sierra Nevada, with low-lying ridges connecting these two ranges on the east and west sides of the basin. The Cummings Basin is

generally elongated in a northeasterly manner, approximately six miles at the longest point and four miles at the widest point.

Inflow of surface and subsurface water from the surrounding watershed including Cummings Creek replenishes the basin. Surface water from Chanac Creek draining a portion of the Brite Valley also flows into the Cummings Groundwater Basin. The annual safe yield of the basin was established in the Judgment, California Superior Court, Kern County, Case No. 97209, of the Cummings basin to be 4,090 AFY⁷.

Use of Cummings Basin Groundwater

While Cummings Basin is adjudicated, the adjudication did not include implementation of a physical solution. Thus, while a safe yield was established, there is no restriction on pumping for use within the basin (overlying use). The groundwater cannot be exported from the basin. The CCI, and various private entities, farms and residences pump from the basin for overlying use. A small private water company, Fairview Water Company, LLC, operates in the northwest corner of the basin.

Stallion Springs CSD purchases imported water from TCCWD. TCCWD delivers this water to direct recharge in the basin. Stallion Springs CSD produces this water from wells located in Cummings Basin and exports it to the portions of their service area lying outside of the basin.

TCCWD also makes direct deliveries to agricultural users overlying the basin. These deliveries are made with the intent of accomplishing in-lieu recharge. Prior to 2008, TCCWD was able to make these deliveries for less than the cost of pumping groundwater, and the basin was kept in balance. Since then, agricultural users have been able to produce groundwater for less than the cost of purchasing imported water.

As a result of the variances in reliability of SWP water to growers which prevents farmers from efficiently developing their Farming Plans, the Cummings Basin is now in overdraft. Extractions have exceeded the safe yield and hydrographs of key wells showed that the water table is dropping and has been doing so for the past ten years. Agricultural users are pumping groundwater because groundwater is less expensive than imported SWP water. The basin is increasingly being used for M&I customers through a conjunctive use program. Spreading losses in this program had not been recognized over the years. This has also contributed to the depletion of the basin.

Water levels in the central portion of the basin have dropped about 50 feet in the past ten years (some of this may be due to localized cones of depression). In October of 2009, TCCWD estimated that groundwater production in 2009 would be 4,406 AF, exceeding the adjudicated safe yield of 4,090 AF. (Tehachapi-Cummings 2009B)

⁷ Report of Tehachapi Cummings County Water District as Water Master for Calendar Year 2008 – 34th Annual Water Master Report for Cummings Basin

TCCWD anticipates the development and implementation of a program to correct this overdraft. A key to the anticipated program is a new rate structure providing incentive for agricultural users to use imported water rather than groundwater, and providing adequate income from M&I customers to finance the replacement of spreading losses. It is anticipated that additional work on the existing groundwater model will be initiated during fiscal year 2010-2011. The remainder of this investigation is predicated on this program being implemented and correcting the overdraft. Preliminary Groundwater Model findings estimate that spreading losses at Cummings Pond average 4.8 percent which is rounded up to 6 percent based on the expectation that losses would be higher as more water is recharged to meet greater demands. The basin is recharged with imported water (SWP) at two locations:

Chanac Creek Recharge Site: A 10,057-foot stretch of Chanac Creek that spills into a 20-acre percolation pond at the north east end of the Basin. Based on analysis of one-year's operations, recharge losses were determined to be 1.68 percent plus additional potential losses via stream seepage. (Fugro 2009B)

Cummings Pond Recharge Site: A 14.3-acre site located in the south-central region of the Basin. During the 2009 water year about 445 AF of imported water was recharged into this site. Based on analysis of one-year's operations, recharge losses were determined to be 13.18 percent. (Fugro 2009B)

Stallion Springs Community Services District

Stallion Springs CSD's groundwater supply is obtained through seven production wells: four wells are located in the Cummings Basin and three wells within the Stallion Springs' community, outside of the adjudicated Cummings Basin. Approximately 50 to 60 percent of this groundwater supply is exported from Cummings Basin. Stallion Springs CSD purchases imported water from TCCWD to replace this water.

Water Quality Issues in the Cummings Basin

Groundwater quality characterization in the Cummings Basin is predominately of the calcium-bicarbonate type (Stetson 1969). The average EC of groundwater is 530 $\mu\text{mhos/cm}$ and a range of 470-640 $\mu\text{mhos/cm}$ based on data from seven wells. The average TDS is 344 mg/L. With respect to impairments there are some existing issues related to high levels of nitrates. Perchlorate contamination in Cummings Basin is actively and successfully managed without loss of water supply. Active monitoring and mitigation programs for MTBE and perchlorate in surface soils are in place to monitor and mitigate potential future water quality impacts.

6.2.3 Adjudication

California does not have a statewide program to manage groundwater or a mandatory State groundwater management statute. Groundwater management in California is a local responsibility accomplished under the authority of the CWC and a number of court decisions.

The need for imported water to supplement the Tehachapi area's dwindling groundwater supply was foreseen in early 1947. Stallion Springs CSD draws from one of these adjudicated basins, the Cummings Groundwater Basin. The Cummings Groundwater Basin is adjudicated under California Superior Court Order, as described in Section 2.

6.2.3.1 Cummings Groundwater Basin

The adjudication is further described in Section 2.3.2.2.

6.2.4 Surface Water

SWP is the only source for imported water in the GTA. SWP is discussed in detail in Section 2.2.4.

6.2.5 Groundwater Modeling Study

The groundwater modeling study is discussed in Section 2.2.5

6.2.6 Sources of Recharge and Discharge

Groundwater recharge occurs from stream recharge, deep percolation of precipitation, treated sewage effluent, applied agricultural and municipal water, and septic tank leach fields. Deep percolation from stream runoff is the primary source of recharge. Due to arid conditions, groundwater recharge by precipitation is sporadic. Most recharge from precipitation occurs near the mountain fronts and from long duration storms. Treated water from the Stallion Springs CSD WWTF is discharged into Chanac Creek and is regulated by an NPDES permit.

6.2.7 Water Supply Projections

In determining the adequacy of the water supply facilities, the source must be large enough to meet the varying water demand conditions, as well as provide sufficient water during potential emergencies such as power outages and natural disasters.

6.2.7.1 Current Supply Capacity

Standby production is required for system reliability. Under normal operating conditions, it is possible for Stallion Springs CSD's wells to be rotated out of service during MDD conditions. The rotation may be due to equipment malfunctions, servicing, or for water quality concerns. The rotation is accomplished without imposing shortages.

The District has secured an additional emergency connection, to a high quality well within the Cummings Basin, for use during high usage times of year. This backup source has provided a necessary safety net for water provision to residents of the area.

6.2.7.2 Future Supply Capacity

The future sources of supply for Stallion Springs CSD will continue to be groundwater well production and imported surface water supplies. Additional conjunctive use programs, water transfers and other programs will continue to be pursued. Larger production wells within the Cummings Valley will continue to be the primary water supply source in the foreseeable future. Stallion Springs will persist in aggressively investigating opportunities to acquire or construct higher producing, high quality potable water.

6.2.8 Desalination

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

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

There is no brackish water or sea water within the GTA thus this component is not applicable.

6.3 Reliability of Supply

The UWMPA requires that the UWMP address the reliability of the agency's water supplies. This includes supplies that are vulnerable to seasonal or climatic changes. In addition, an analysis must be included to address supply availability in a single dry year and in multiple dry years.

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

- (c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortages, to the extent practicable. For any water source that may not be available at the consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to replace that source with alternative source of supply or water demand management Provide data for each of the following: (1) An average water year, (2) A single dry water year, and (3) multiple dry years.

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.

- (b) An estimate of the minimum water supply available during each of the next three-years based on the driest three-year historic sequence for the agency's water supply.

SWP supply reliability is discussed in Section 2.3.1.

6.3.1 Reliability of Groundwater

Reliability of groundwater supply to the region depends on part on several factors, including:

- Reliability of water from the source (i.e., existing wells); and
- Useable groundwater in storage due to artificial recharge.

DWR’s criterion for groundwater reliability is defined as groundwater supplies are capable of meeting projected demands 90 percent of the time for an average water year, single dry year, and multiple dry year conditions.

Table 6-2 provides projections of groundwater production through 2040.

Table 6-2: (DWR Table 7) Stallion Springs CSD Projected Groundwater Production Excluding Recharged Imported Water (AFY)

(Does not include SWP water delivered via the Groundwater Basin)¹ (AFY)							
	2010	2015	2020	2025	2030	2035	2040
Cummings Groundwater Basin, Natural Safe Yield	160	196	206	222	239	257	277
Total Groundwater Pumping - Stallion Springs CSD	160	196	206	222	239	257	277

¹ This table presumes that all Allowed Pumping Allocation (Tehachapi Basin) and Natural Safe Yield (Cummings and Brite) will be pumped each year and SWP water will be used as supplemental water.

6.3.1.1 Reliability of Groundwater from Cummings Basin

A groundwater study of Cummings Basin (Fugro 2004) reviewed the impact of a number of scenarios.

One of the Scenarios (#2) analyzed the impact of a five-year drought, replicating the rain fall of 1959 through 1963 combined with ongoing pumping. Groundwater levels did decline significantly and the changes extended over the entire 21-year model period. That said, groundwater extraction quantities were sustained during the modeled five year drought.

Based on Fugro’s analysis, it is reasonable to assume that groundwater pumping quantities in the Cummings Basin could be sustained during a 3-year drought.

Table 2-10 summarizes and compares the groundwater availability by comparing use from 2005 through 2010 with allowed pumping allocation for the adjudicated basins.

6.3.2 Reliability of Recycled Water

In the Cummings Basin, TCCWD recently entered into an agreement to purchase tertiary treated (Title 22) recycled water effluent from the CCI. Today, the CCI has secondary wastewater treatment with land application under a Waste Discharge Order and Wastewater Reclamation Requirements issued by the Central Valley RWQCB.

TCCWD entered into an agreement with CCI in December 2006, to purchase tertiary treated, disinfected effluent from CCI’s upgraded WWTP for a term of 25 years from completion of the upgraded plant. The contract calls for delivery of between 1,000 and 1,200 AF of effluent annually to be available to TCCWD for recycling. Due to conservation efforts within CCI, it is anticipated that the available water will be 1,000 AFY.

TCCWD is constructing a pipeline to deliver a portion of the CCI effluent to Horse Thief Country Club, located in Stallion Springs. To that end, a contract has been executed to deliver 300 AF to the Country Club where it would replace 300 AF of SWP water. The remaining 700 AF is available for agriculture where it would replace groundwater pumping. The District promotes the availability of this water to potential users.

Stallion Springs WWTF serves 325 connections. Treated effluent is discharged into Chanac Creek. Historic discharges have been on the order of 34 to 50 AFY.

6.3.3 Transfer and Exchange Opportunities

Transfer and exchange opportunities exist for imported water, but are negligible for groundwater. TCCWD can pump its return flow, or banked water, and deliver it to any basin for beneficial use. These opportunities are discussed in Section 2.3.1.4.

6.3.4 Summary of Reliability of Water Supplies

Table 6-3 summarizes the current and planned water supplies for Stallion Springs CSD and illustrates the reliability of these supplies in five year increments through 2040. With respect to water resources, Stallion Springs CSD, uses groundwater as a primary source which is then supplemented by SWP water, as necessary. Table 6-3 projects future SWP supplies to Stallion Springs CSD to match demand.

Of the SWP water applied within Tehachapi and Cummings Basins for agricultural use, 15 percent is considered return flow, which recharges the basins. TCCWD is credited with that recharged water and can sell it for beneficial use anywhere within the GTA. TCCWD has determined that approximately 90 percent of the SWP water is expected to be applied within these basins in future years. TCCWD retains the right to produce this water. (90% * 15% = 13.5%). TCCWD anticipates producing this water during droughts, years of low SWP allocations, or when the cost of natural gas causes the importation of SWP water to be cost-prohibitive.

Table 6-3: (DWR Table 4) Current and Planned Water Supplies (AFY)

	2010	2015	2020	2025	2030	2035	2040
Stallion Springs CSD							
State Water Project water recharged in Cummings Basin for Stallion Springs CSD	260	294	309	332	358	386	416
Cummings Basin pumped for overlying use	139	196	206	222	239	257	277
Stallion Springs CSD	399	490	514	554	597	643	693
Recycled Water (current and projected use)	0	0	0	0	0	0	0
Desalination	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total	399	490	514	554	597	643	693

6.4 Water Use – Past, Current and Future

Law

10631

A plan shall be adopted in accordance with this chapter and shall do all of the following:

(b) (3) 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 shall be based on information that is reasonably available, including but not limited to, historic records.

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

G) Single-family residential; B) Multifamily residential; 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; and I) Agricultural.

H) The water use projections shall be in the same 5-year increments to 20 years or as far as data is available.

6.4.1 Past, Current and Projected Water Deliveries

Table 6-4 (DWR Table 12) and Figure 6-2 show the past, current and projected water deliveries by Stallion Springs CSD by Water Use Sector. The data for 2005 and 2010 reflects actual deliveries. The rest of the years are based on a combination of projected population increases and demand reduction targets for 2015 and 2020 as described in Subsection 6.10.

Table 6-4: (DWR Table 12) Past, Current and Planned Water Deliveries (AFY)

Water Use Sector	2005	2010	2015	2020	2025	2030	2035	2040
Cummings Basin Service Area (incl deliveries of Bear Valley Basin water)								
Stallion Springs CSD¹								
Residential	330	330	405	426	458	494	532	573
Commercial	41	41	50	53	57	61	66	71
Subtotal	371	371	456	478	515	555	598	644
System Losses (7%)	28	28	34	36	39	42	45	48
Stallion Springs CSD¹	399	399	490	514	554	597	643	693

¹ Stallion Springs CSD split between System Losses, Commercial and Residential is estimated.

If 2010 GPCD had been the same as the Agency Baseline GPCD, year 2010 deliveries would have been 490 acre-feet (399 acre-feet * (175.8 GPCD/143.2 GPCD))

Figure 6-2: Water Deliveries for Stallion Springs CSD (AF)

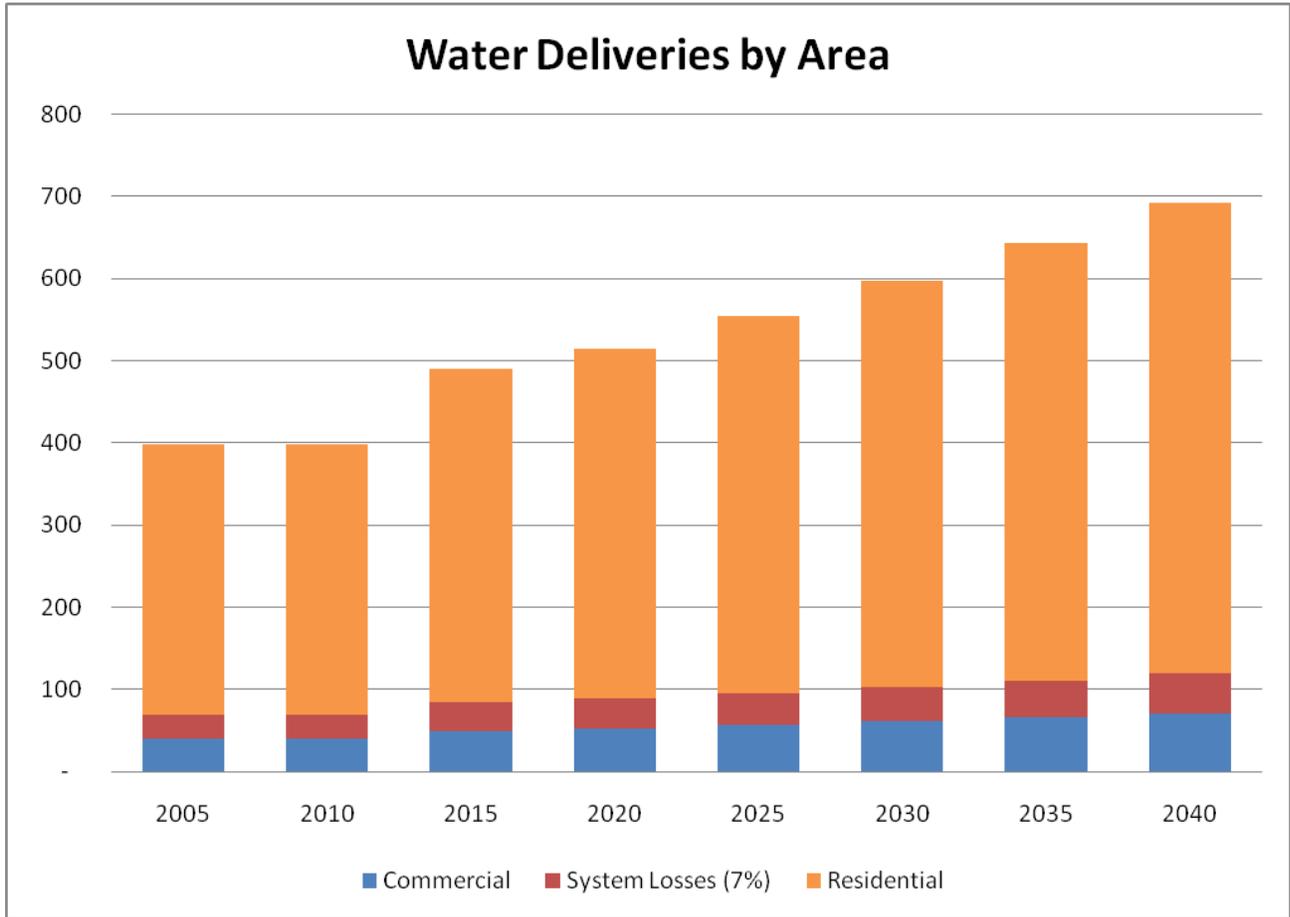


Table 6-5 summarizes historical pumping by participating agency/retailer for the past six years, 2005 to 2010.

Table 6-5: (DWR Table 6) Historical Pumping by Participating Retailers (includes pumping of SWP water recharged in basins)

	2005	2006	2007	2008	2009	2010
Pumping by Participating Retailers (includes pumping of SWP water recharged in basins)						
Stallion Springs CSD						
SWP water recharged in Cummings Basin for Stallion Springs CSD	233	276	289	284	281	260
Cumming Basin pumping for overlying use	166	174	178	180	189	139
Stallion Springs CSD	399	450	467	464	470	399

6.4.2 Sales to Other Agencies

Stallion Springs CSD does not sell SWP to other entities.

6.4.3 Additional Water Uses and Losses

Currently, Stallion Springs CSD is a water purveyor to residential and commercial entities within the Stallion Springs community only. Future water provision may extend outside the District boundaries to additional end users.

Estimated water loss, water pumped vs. water sold, is around 7 percent.

6.5 Supply and Demand Comparison

During single year of multi year drought, Stallion Springs CSD is reliant on SWP supplies provided by TCCWD. This discussion is in Section 2.5.

Law

10635

(a) Every urban water supplier shall include, as part of this 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 suppliers 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 the state, or local agency population projections within the service area of the urban water supplier.

(b) 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.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

6.6 Demand Management Measures

The UWMPA identifies fourteen DMMs for urban water suppliers to address. These measures are derived from the original BMPs established in the UWMPA and the 1991 MOU.

Law**10631**

(f) Provide a description of the suppliers' water demand management measures. This description shall include all of the following:

- 5) A description of each water demand management measures that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following.....
 - a. Water survey programs for single-family residential and multi-family residential customers
 - b. Residential plumbing retrofit
 - c. System water audits, leak detection
 - d. Metering with commodity rates for all new connections and retrofit of existing connections
 - e. Large landscape conservation programs and incentives
 - f. High-efficiency washing machine rebate programs
 - g. Public information programs
 - h. High school education programs
 - i. Conservation programs for commercial, industrial, and institutional accounts
 - j. Wholesale agency programs
 - k. Conservation pricing
 - l. Water conservation coordinator
 - m. Water waste prohibitions
 - n. Residential ultra-low-flush toilet replacement programs

In 1991, a MOU regarding Urban Water Conservation in California formed the CUWCC. Of the five agencies involved in this RUWMP, only Bear Valley CSD is a signatory of the MOU and therefore a member of the CUWCC.

Participating agencies do realize the importance of the BMPs, emphasized by the CUWCC, to ensure a reliable future water supply. 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.

Stallion Springs CSD had not previously developed an UWMP, as they were not required to submit a plan. (A retail entity delivering less than 3,000 AFY and/or has less than 3,000 service connections is not required to submit a plan).

However, Stallion Springs CSD does have conservation measures already in place to improve efficiency of water use. In addition, all of these agencies are located in Kern County. Elements of the Kern County Water Code described below are also implemented at each of the agencies. Water Resource Ordinances, Rules and Regulations implementing the required BMPs are described in the following section.

Stallion Springs CSD will join with the other water purveyors in the Greater Tehachapi Community to form a Water Conservation Coalition. This coalition will seek to effectively carry out the measures relevant to the communities.

Table 6-6 summarizes the DMMs being implemented at Stallion Springs CSD.

Table 6-6: (DWR Table 16) Demand Management Measures – Specific to Stallion Springs

Demand Management Measure (DMM)	Stallion Springs CSD		
	Implemented	Planning to Implement	Not Applicable
DMM 1: Water Survey Program	✓		
DMM 2: Residential Plumbing		✓	
DMM 3: Water System Audit	✓		
DMM 4: Metering with Commodity Rates	✓		
DMM 5: Landscape Irrigation Programs		✓	
DMM 6: Washing Machine Rebate Program		✓	
DMM 7: Public Information	✓		
DMM 8: School Education	✓		
DMM 9: Commercial, Industrial, and Institutional Programs		✓	
DMM 10: Wholesale Agency Programs			✓
DMM 11: Conservation Pricing	✓		
DMM 12: Water Conservation Coordinator		✓	
DMM 13: Water Waste Prohibition	✓		
DMM 14: Ultra Low Flush Toilet Replacement		✓	

6.6.1 Water Resource Ordinances, Rules, and Regulations

6.6.1.1 Kern County

Kern County has an extensive Water Code (Kern County Code, Title 14) which governs water resources and water utility service. (Appendix A) The Code is directly applicable to the GTA and predominately applicable to the City. Most notable in the Code is the County’s prohibition of native groundwater export from the County.

The Kern County Board of Supervisors adopted Ordinance No. G-6502 which adds Subsection 19.102.190(K) to Chapter 19.102 of the Kern County Code, and adds Chapter 19.118 to the Kern County Code. These additions to the Kern County Code regulate the transportation or transfer of native groundwater outside of Kern County and its watersheds, including transportation or transfer through joint water conveyance facilities, and/or sales to owners of water conveyance facilities.

6.6.1.2 Stallion Springs Community Services District

Similarly, by action of the Board of Directors, Stallion Springs CSD adopts Ordinances which govern water utility service. Stallion Springs CSD has control of all groundwater pumping within the adjudicated Cummings Basin for Stallion Springs CSD-owned land. Tenants on the land overlying the Cummings Basin are prohibited by their lease with Stallion Springs CSD from applying any groundwater produced from the Cummings Basin on their land. Stallion Springs CSD recently implemented a program whereby they have requested each of their customers located within the Cummings Basin to execute a recordable document assigning Stallion Springs CSD to manage their overlying water rights. While Stallion Springs CSD does not have a formal Water Conservation Plan, wasting water is prohibited by ordinance.

6.6.2 Demand Management Measures

DWR has assigned an enhanced terminology to the BMPs. Accordingly, this chapter will refer to them as DMMs.

DMM 1 – Water Survey Programs for Single Family and Multi-Family Residential Customers

Stallion Springs CSD operates a fully metered water system. Each customer (residential and commercial) is metered and billed on a bi-monthly basis. At the time of meter reading, field personnel check for high/unusual water usage. When such use is identified, the meter reader notifies the office of a possible leak/problem. The District then contacts the customer to inform them of a possible leak on the property. Customers may request Stallion Springs CSD staff to assist with locating the leak or the location of the high usage.

Implementation Schedule

- On-going leak detection notification and customer education.
- Beginning in 2011, water conservation tips will be noted in the “The Bridge”, a quarterly informational publication distributed to Stallion Springs’ residents.
- Beginning in January 2011, water conservation tips and ideas can be found on the District’s website www.mysscsd.com.
- Estimated annual budget: \$800.00

DMM 2 – Residential Plumbing Retrofit

As mentioned in DMM 1, Stallion Springs CSD’s customers have been metered since the time of construction. Many homes and commercial properties have installed low flow fixtures as required by the Uniform Plumbing Code. Currently, the District does not provide fixtures or aerators for customers. This option may be a future budgeted item.

Implementation Schedule

- Stallion Springs CSD will consider providing low-flow shower heads and faucet aerators to residential customers in the future.
- Estimated Annual Budget: \$500.00

DMM 3 – System Water Audits, Leak Detection, and Repair

The Stallion Springs CSD currently operates 7 water wells – all of which are metered and read on a daily basis. On a bi-monthly basis, the District collects information tallying the total amount of water sold and the total water production of the water wells. This information provides the data for staff to identify the average water loss throughout the system. District field personnel are equipped with the necessary equipment to locate and repair leaks in a timely manner – reducing future water loss.

Implementation Schedule

- Current, on-going, monthly
- Estimated Annual Budget: This cost is built into the District’s budget for maintenance and repair.

DMM 4 – Metering with Commodity Rates

All Stallion Springs CSD customer groups are metered. All new customers are required to be metered.

Customer Type	Metered	Unmetered	Total Accounts
Single/Multi-Family Residential	1150	0	1150
Commercial/Institutional	28	0	28
Total	1178	0	1178

Implementation Schedule

- On-going
- Estimated Annual Budget: Private development pays for new meter installation.
- Annual on-going meter maintenance and replacement covered in monthly water billing.

DMM 5 – Large Landscape Conservation Programs

Currently, Stallion Springs CSD does not have a Large Landscape Conservation Program. That said, the District is an avid supporter of recycled water use in such situations. The first victory in this arena was the 300 AFY recycled water agreement between Horse Thief Country Club, TCCWD and CCI. The replacement of potable water with recycled water, for the golf course landscaping, is an excellent use of this recycled resource.

While the community does not have many large landscape venues, in the decade ahead Stallion Springs CSD will consider providing an incentive program similar to the **Cash for Grass** program to reduce turf irrigation on both public and private areas.

Implementation Schedule:

- Consider Cash for Grass or similar incentive program (Future)
- Estimated Annual Budget: Unknown

DMM 6 – High Efficiency Washing Machine Rebate Programs

Currently, Stallion Springs CSD does not have a HEW Machine Rebate Program. However, customers are currently encouraged to take advantage of the Southern California Edison Rebate program. The District would join other Greater Tehachapi water purveyors in providing such an opportunity to local residents.

Implementation Schedule

- Washing Machine Rebate - Future
- SCE customers are encouraged to participate – ongoing.
- Estimated Annual Budget: Unknown.

DMM 7 – Public Information System

Currently, Stallion Springs CSD’s public information program is conducted using Stallion Springs CSD personnel. Several multi-media campaigns are conducted on an on-going basis including:

- Public Informational Meetings (POA)
- A variety of water conservation print materials;
- A dedicated water conservation link on Stallion Springs CSD’s web page;
- A conservation section in the consumer confidence (annual water quality) report;
- Monthly leak notifications as appropriate.

Increased public information outreach will be implemented through the Water Coalition.

Implementation Schedule

- On-going – public education program
- Estimated Annual Budget: \$350.00 (Current) will increase in years ahead.

DMM 8 – School Education

Currently, Stallion Springs CSD relies on the KCWA for the dissemination of water conservation information to local schools. Each year, thousands of students in kindergarten through twelfth grade learn about water treatment, water supply, groundwater and how water is used to grow food and fiber.

KCWA’s Water Education Program is designed to support classroom curriculum and align with the current California Content Standards. KCWA implements local school programs free of charge to all public and private schools in Kern County. These include:

Project WET – KCWA is proud to be a facilitator of Project WET. Project WET is environmental education that promotes the awareness, appreciation, knowledge, and stewardship of water resources. Each year, KCWA holds a free Project WET workshop and practicum for Kern County first through twelfth grade teachers.

Grades K-6 – KCWA’s kindergarten through sixth grade program has been designed as a comprehensive approach to water education. The program focuses on active learning to engage students at all learning levels.

- **Assembly Programs** – KCWA is pleased to offer assemblies and materials free of charge for use in Kern County classrooms.
- **Incredible Journey Lesson** – This 60-minute “Project WET” activity is conducted by KCWA staff in the fifth grade classroom.
- **Video Lessons** – As part of KCWA’s commitment to further students’ knowledge about local water, schools that book an assembly will receive three water education videos and coordinating lesson plans.

- **Poster Contest** – Each year KCWA sponsors a poster contest for Kern County students in the first through sixth grades. The contest gives young artists the opportunity to express the role they can play in water conservation.
- **WebQuests** – WebQuests are designed specifically for students in the third and fifth grades. Using the internet, students are able to explore the world of water.

Grades 7-12 (Water Science Units) – KCWA offers two science units for the seventh through twelfth grades to help students fully understand the complexities of water and water conservation.

Scholarship – After Jim Costa left the California State Senate in 2002, KCWA honored him by instituting a scholarship program for students in a course of study related to water resources.

Stallion Springs CSD staff is available to provide water conservation education within the local schools as well. Upon request, staff will provide on-site water education, information and conservation concepts to students.

In the future, Stallion Springs CSD plans to join with other water purveyors, (The Water Coalition) to fund a **customized** elementary school education through the award winning Community Clean Sweep School Environmental Education Program. This option, featuring an interactive puppet show, will be tailored to provide the message of water conservation as it relates to communities within the Greater Tehachapi communities.

Implementation Schedule:

- On-going – school education program
- Estimated Annual Budget: \$500.00 - \$1,200

DMM 9 – Conservation Programs for Commercial, Industrial and Institutional Programs

Stallion Springs CSD’s commercial, industrial and institutional (CII) accounts are all metered. While the District does not proactively conduct on-going or periodic water use surveys for these customers, if a CII customer contacts the Stallion Springs CSD office, staff will respond and provide water conservation ideas, tips and educational materials.

Implementation Schedule:

- On-going – public education program
- Estimated Annual Budget: Unknown

DMM 10 – Wholesale Agency Agencies

This DMM applies to wholesale agencies and defines a wholesaler’s role in terms of financial, technical, and programmatic assistance to its retail agencies implementing DMMs.

Stallion Springs CSD has not implemented, and currently has no plans to implement, this DMM, as they are not a wholesale agency.

DMM 11 – Conservation Pricing

Stallion Springs CSD has a tiered billing structure designed to promote water savings. The total water bill includes a base rate and a tiered unit rate that varies with water usage.

All Stallion Springs CSD customers are metered. Current water rates are available upon request.

DMM 12 – Conservation Coordinator

Stallion Springs CSD is a small water purveyor and operates with minimal staffing, therefore the Stallion Springs CSD's Utilities Manager or his/her designee acts as the Water Conservation Coordinator.

The District fully intends to join with other Tehachapi area water purveyors to fund an official GTA Water Conservation Coordinator through the Water Coalition.

Implementation Schedule:

- On-going
- Estimated Annual Budget: \$2,500

DMM 13 – Water Waste Prohibition

The Board of Directors of Stallion Springs CSD adopts Ordinances which govern water utility service. Stallion Springs CSD uses meter readings to help customers determine if there is water leak within their property. While Stallion Springs CSD does not have a formal Water Conservation Program, wasting water is prohibited by Ordinance.

Currently the Stallion Springs CSD works in conjunction with the Stallion Springs Police Department to enforce California Penal Code Section 498. (Theft of Utilities)

Implementation Schedule:

- Implement as needed
- Estimated Annual Budget: Unknown

DMM 14 – Residential Ultra-Low Flush Toilet Replacement Program

State legislation requires the installation of efficient plumbing in new construction, and effective in 1994, requires that only ULFT be sold in California. Subsequently, home constructed within the GTA since 1994 have ULFTs.

Currently the Stallion Springs CSD is unaware of how many homes have ULFTs. After 1992, all homes were required to install low flow fixtures. It is difficult to determine how many of the homes prior to 1992 have converted their old fixtures to low flow fixtures. The Stallion Springs CSD will consider developing a rebate program for ULFTs within the next five years.

Implementation Schedule:

- Consider implementing by 2015
- Estimated Annual Budget: To Be Determined.

6.7 Water Shortage Contingency Plans

6.7.1 Stages of Action

The UWMPA requires that the UWMP include an urban water shortage contingency plan that addresses specific issues.

Law

10632

The plan 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.

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

6.7.1.1 History of Water Shortage and Conservation Resolutions

The State of California experienced a five year drought between 1987 and 1992. Subsequently, some of the participating agencies board of directors approved and adopted several resolutions and conservation measures for voluntary and mandatory conservation. Water resources ordinances, rules, regulations and policies that are in place to further assist in water conservation are being implemented by various agencies as described below:

Kern County

Kern County has an extensive Water Code (Kern County Code, Title 14) which governs water resources and water utility service. The Code is directly applicable to the GTA and applicable to the Stallion Springs CSD.

Most notable in the Water Code is Kern County Ordinance No. G-6502. This ordinance regulates the transport or transfer of native groundwater outside of Kern County and its watersheds. This also regulates transport or transfer through joint use, of capacity in, and sales to, owners or operators of water conveyance facilities.

Stallion Springs Community Services District

The Board of Directors of the Stallion Spring CSD adopts Ordinances to guide governance of water utility service. While Stallion Springs CSD does not have a formal Water Conservation Program, wasting water is prohibited by Ordinance.

The Stallion Springs CSD Board of Directors understands that that water shortages have occurred in the past and could occur in the future due to increased demand or limited supplies of potable water. These conditions could be caused by drought or curtailment of supply.

The Stallion Springs CSD Board also recognizes that southern California has experienced 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, have caused additional demand increases that can be challenging in times of supply shortages.

The provisions of this chapter respond to long term and short term water shortages by authorizing the Board to select the most appropriate level of conservation measures based on current conditions. The Board shall conduct public meetings to inform water customers of any change in the level of necessary water conservation to meet the limited water supply and measures needed to meet those limitations.

6.7.2 Water Shortage Stages and Reductions

Water agencies relying solely on surface water, are more likely to experience a water shortage than those agencies relying primarily on groundwater.

Stallion Springs CSD primarily relies on groundwater for production. This resource is dependent upon SWP artificial recharge. .

6.7.3 Water Reduction Stage Triggering Mechanisms

Emergency response stage actions become effective when the Stallion Springs CSD Board of Directors of the participating agencies 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.

6.7.4 Administration of Water Shortage Program

The administration of a water shortage contingency program as described in this section would involve coordination among a number of local agencies. An individual at each of the agencies would be identified as the Program Manager and be the primary coordinator of water shortage activities. In the case of Stallion Springs CSD, the General Manager is authorized and directed to do all things necessary and appropriate to disseminate information regarding adoption of water shortage regulations, etc.

An appropriate organizational structure for a water shortage management team would be determined based on the actual situation. Specific individuals would be designated to fill the identified roles. It would most likely be unnecessary to hire additional staff or outside contractors to implement the program.

The major elements to be considered in administrating and implementing the program include:

- Identification of Stallion Springs CSD staff members to fill the key roles on the water shortage management team (WSMT). The Stallion Springs CSD General Manager would designate appropriate individuals to the WSMT.

- Increase public information program to provide comprehensive information on the water shortage. This step will require the identification of the necessary to be taken by each the District and the public. The scope of the public information program can be developed by analyzing the District's desired outcomes, reviewing published references (DWR), and researching successful aspects of programs conducted by neighboring water agencies. A public information hotline may be implemented to answer any question regarding the program.
- Monitoring program effectiveness. Ongoing monitoring will be needed to track supply availability and actual water user reductions. The procedure will allow Stallion Springs CSD to continuously re-evaluate the situation and make informal decisions as to whether another reduction level is needed.
- Coordination with other agencies. Since TCCWD services multiple agencies, it is critical to have on-going coordination efforts amongst the agencies and have a specific contact person who will be aware of conservation developments.
- Address new development proposals. During periods of severe water shortage, it may be necessary to impose additional requirements on new developments to reduce new demands or temporarily curtail new hook-ups.
- Adjusting water rates. Revenues from water sales should be reviewed periodically to determine whether an increase in rates might be needed to cover revenue shortfalls due to the decrease in demand.

It is required that the water shortage contingency plan undergo a formal public review process including a public hearing. A thorough public review process will help minimize future objections when mandatory prohibitions are in place.

6.7.5 Water Shortage Contingency Ordinance/Resolution

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that includes a draft water shortage contingency resolution or ordinance.

Law

10632

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

(h) A draft water shortage contingency resolution or ordinance.

6.7.6 Prohibitions, Penalties and Consumption Reduction Methods

The UWMPA requires that the UWMP includes an urban water shortage contingency analysis that addresses methods to reduce consumption.

Law**10632**

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.....

- (d)** 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.
- (e)** 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 the area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.
- (f)** Penalties or charges for excessive use, where applicable.

6.7.6.1 Mandatory Prohibitions on Water Wasting

Mandatory compliance measures enacted during a water shortage are more severe than voluntary measures, produce greater savings, and are less costly to the agency. The principal drawback to these measures is the customer resentment because the measures are not perceived as equitable. Therefore, such measures need to be accompanied by a good public relations campaign.

Mandatory measures may include:

- Ordinances making water waste illegal,
- Ordinances controlling landscape irrigation,
- Ordinances restricting non-irrigation outdoor water uses,
- Prohibitions on new connections or the incorporation of new areas,
- Rationing.

Prohibitions on new development may conflict with other policies and needs. However, if existing customers are called upon to make sacrifices during a drought period, they may feel that the agencies should concentrate on fulfilling current obligations rather than taking on new customers. Such prohibitions may need to be considered in the event of a critical shortage, such as the 40-50 percent reduction program.

During a water shortage Stallion Springs CSD may implement water conservations measures as follows:

- There shall be no washing of sidewalks, walkways, buildings, walls, patios, driveways, parking areas or other paved surfaces, or walls, except to eliminate conditions dangerous to public health or safety or when required as surface preparation for application of architectural coating or painting.
- Washing of motor vehicles, trailers, boats and other types of equipment shall be done only with a hand held bucket or a hose equipped with a positive shut off nozzle for quick rinses. Washing may also be done with reclaimed wastewater or by a commercial car wash using a recycled system.

- No water shall be used to clean, fill or maintain levels in ornamental fountains, ponds, lakes or other similar aesthetic structures unless such water is part of a recycling system.
- All water users shall promptly repair all leaks from indoor and outdoor plumbing fixtures.
- No lawn, landscape or other turf area shall be watered more than once every other day nor during the hours between 8:00 PM and 6:00 AM. No water users shall cause or allow the water to run off landscape areas into adjoining streets, sidewalks, or other paved areas due to incorrectly directed or maintained sprinklers or excessive watering.
- Alternate day irrigation of landscaping. There shall be no runoff as a result of irrigation.

6.7.7 Revenue and Expenditure Impacts/Measures to Overcome Impacts

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that addresses the financial impacts from reduced water sales.

Law

10632

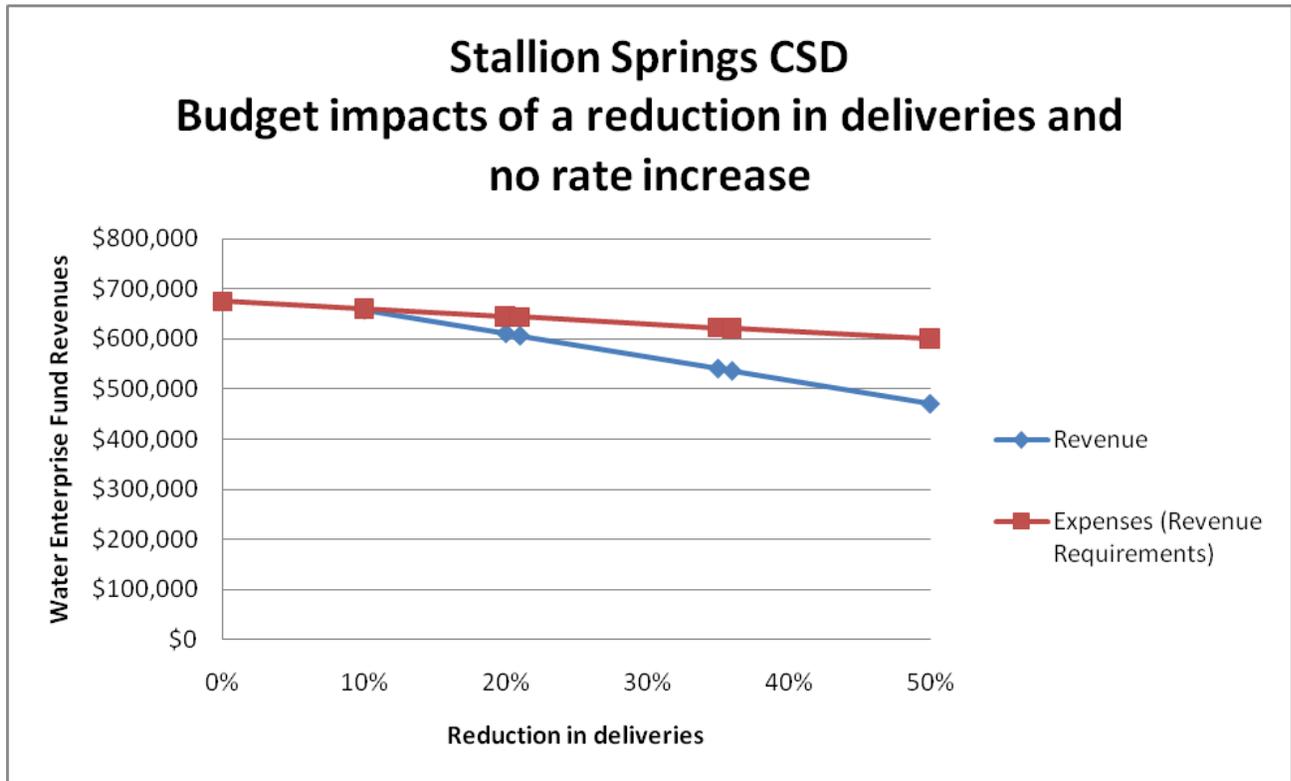
The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier.

(g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier...

(g) [An analysis of the impacts of each of the proposed measures to overcome those [revenue and expenditure] impacts, such as the development of reserves and rate adjustments.

The majority of operating costs for most water agencies are fixed rather than a function of the amount of water sold. As a result, when significant conservation programs are undertaken, a budget deficit is likely to occur. The budget impacts for Stallion Springs CSD are described below. Data for the figures are from DWR Tables 29 and 30 combined, not shown in document.

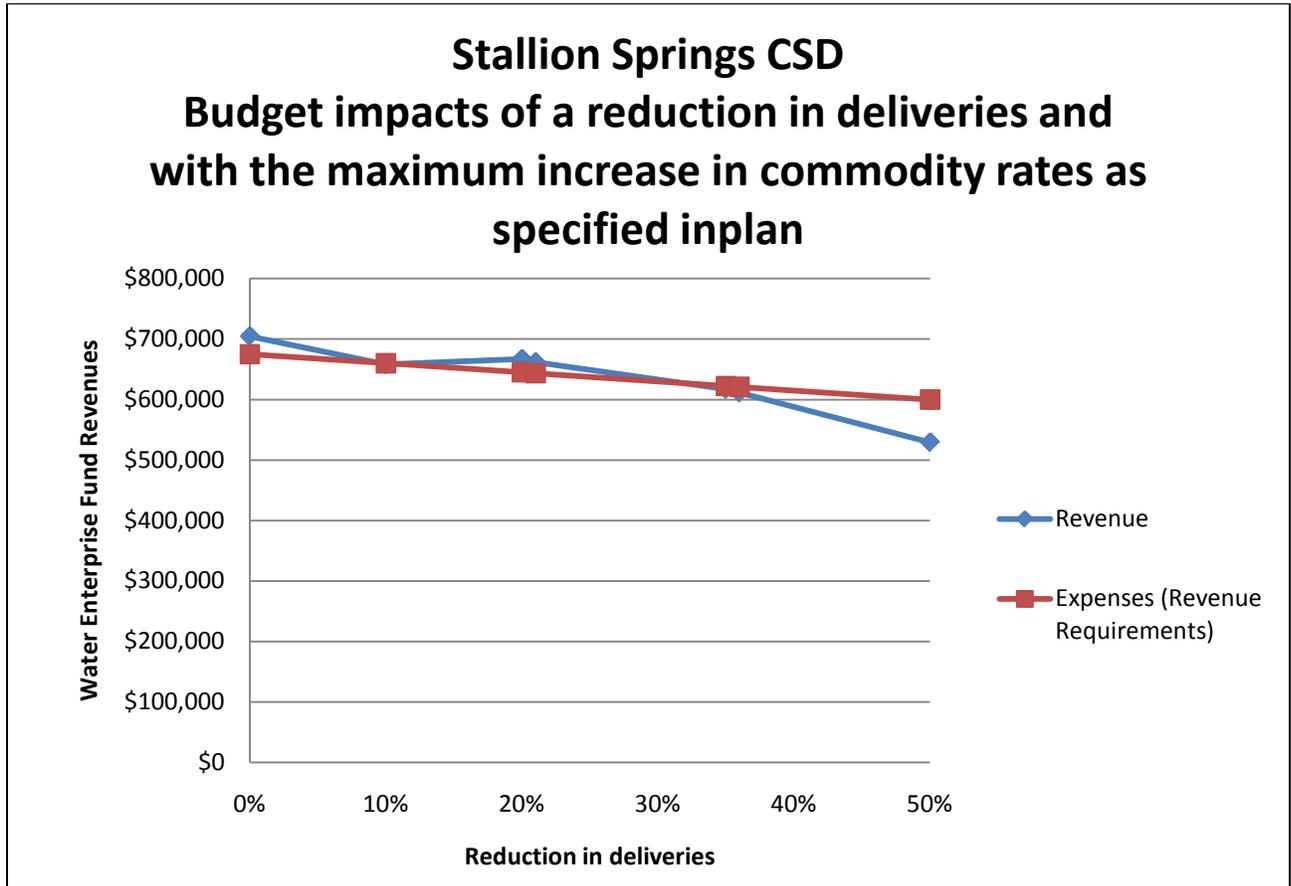
Figure 6-3: **Stallion Springs CSD Budget Impacts Related to Reductions in Deliveries and No Rate Increase**



In the case of the Stallion Springs CSD, annual revenue for water is approximately \$700,000. The impact to the Stallion Springs CSD budget, as a function of reduced deliveries, results in a potential decrease of over \$225,000. The estimate takes into account reductions in delivery scenarios beginning at 10 percent and up to 50 percent.

The Stallion Springs CSD can offset this decrease in revenue by implementing a Stabilization Rate Schedule. To that end, the Stallion Springs CSD will investigate the degree of necessary increase, to account for the decrease in consumption, and recommend the expanded rate structure to the community in order to accommodate up to 50 percent reduction in water deliveries.

Figure 6-4: Stallion Springs CSD Budget Impacts to Reductions in Deliveries and Proportional Rate Increases



6.7.8 Actions Taken During a Catastrophic Event

The UWMPA requires that an UWMP include an urban water shortage contingency analysis that addresses a catastrophic interruption in water supply.

Law

10632

The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier...

(c) 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.

During declared shortages, or when a shortage declaration appears imminent, the General Manager/City Manager of each agency/city will activate a water shortage response team. The team may include: water, fire, planning, health, and emergency personnel. Other actions and procedures to follow during catastrophic events will be developed.

6.7.9 Reduction Measuring Mechanism

The UWMP analysis that identifies a mechanism to measure the actual water reductions.

Law

<p>10632 The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier... (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.</p>
--

In Stallion Springs CSD, field staff will increase meter reading from bi-monthly to monthly. The increase in reading levels would enable the District to tracks water use trends more consistently. The District would also identify traditionally high water users and perform spot checks to ensure compliance.

6.7.10 Water Shortage Contingency Plan for Stallion Springs Community Services District

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that includes a draft water shortage contingency resolution or ordinance. Ordinance 2009-1 is the district’s water shortage contingency ordinance and is included as Appendix E.

6.7.11 Estimate of Minimum Supply Next 3 Years

Historically, Stallion Springs CSD 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 can be somewhat significant. As a result, Stallion Springs CSD 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 supply shortages during the next three years.

Table 6-7: (DWR Table 24) Three-year Estimated Minimum Water Supply during next three years (AFY)

Source	Year 1	Year 2	Year 3	Normal
Cummings Basin Service Area				
Stallion Springs CSD¹				
Cummings Basin Natural Safe Yield	139	139	139	139
SWP				
Current Year Supply	260	260	260	260
Previously banked in Cummings Basin by Tehachapi-Cummings	0	0	0	0
Stallion Springs CSD¹	399	399	399	399

¹ Presumes that the highest priority for Imported Water deliveries are Bear Valley CSD and Stallion Springs CSD as they are urban users that need the water (Golden Hills CSD and City of Tehachapi has adequate stored water for a drought).

6.8 Recycled Water

The UWMPA requires that the UWMP include information on water recycling and potential uses for recycled water.

Law

10633

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. To the extent practicable, the preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
- (b) A description of the recycled water currently being used in the supplier's service area, including but not limited to, the type, place and quantity of use.
- (c) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse determination with regard to the technical and economic feasibility of serving those uses, groundwater recharge, and other appropriate uses, and a
- (d) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years.
- (e) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
- (f) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems and to promote re-circulating uses.

6.8.1 Wastewater Treatment and Recycling Descriptions

Stallions Springs CSD owns and operates a wastewater treatment and recycling facility. Stallion Springs CSD's wastewater collection system was constructed in 1971. Currently it provides service to approximately 325 customers. The treatment plant is a secondary treatment plant regulated by the Central Valley RWQCB. An excellent record of compliance has been maintained and management constantly reviews the operating system so that they are able to keep up with the growth of the community as well as the changes of state and federal regulations.

The original developers of Stallion Springs provided a wastewater collection system for a limited number of lots. Although currently there are 325 improved lots connected to the sewer system the ability exists for another 200 lots to be tied into sewer when homes are built on those designated lots. A list of lots is kept at the District offices that have sewer connection ability. Lots not on the sewer zone list require septic systems.

Sewer connection approval must go through the Stallion Springs CSD, while septic systems must be approved by Kern County.

All wastewater is pumped via a centrally located lift station to two 250,000 gallons per day (gpd) WWTFs located directly behind the District's Solid Waste Transfer Station. The treatment plant is a secondary treatment plant and the visible "pond" is the treated effluent that is to be discharged into Chanac Creek. The wastewater operation is handled by District employees certified by the State of California and regulated by the SWRCB.

The WWTF is on property owned by the District in Section 6, T11N, R16W, SBB&M, about 15 miles southwest of the City of Tehachapi. The District currently operates one of the two 250,000 GPD-capacity oxidation ditch package treatment plants at a time. The plants consist of a bar screen, two oxidation ditches in parallel, a clarifier, a chlorinator and contact chamber, four concrete-lined sludge beds, and a concrete-lined effluent storage pond. The WWTF has a standby generator, standby package treatment plant and laboratory. Dried sludge and screenings are disposed of offsite in the Tehachapi Class III Landfill regulated by Waste Discharge Requirements Order No 01-035, adopted by the Lahontan RWQCB.

October 25, 1996 the Regional Board adopted Waste Discharge Requirements, Order No. 96-261, a NPDES permit that prescribes requirements for an average dry weather discharge flow of 0.10 (MGD) of disinfected secondary treated domestic wastewater to (a) Chanac Creek, a water of the United States, at latitude 35° 04' 52" and longitude 118° 38' 14", and (b) Horse Thief Country Club golf course Fairway No. 3 during summer and early fall and when weather permits spray irrigation.

In 2001, Stallion Springs CSD requested to discharge all of the effluent to Chanac Creek. The Regional Board evaluated the circumstances of the request to discharge all of the effluent to Chanac Creek and found the request to be reasonable based on the following:

The discharge flows have not increased significantly during the past several years, and the Discharger indicates that it does not expect a significant increase in the near future. The Discharger could comply with the setback requirements prescribed by Order 96-261 because it lacks control and authority and the golf course owner will not perform work necessary to achieve compliance (e.g. move sprinklers). While eliminating recycling was not consistent with Regional Board recycling policies, it was reasonable under the circumstances to allow Stallion Springs Community Services District to discharge all effluent to Chanac Creek until such time as development increases in the Discharger's sewerage service area to produce flow that supports a separate water recycling project.

Uniform Guidelines for Wastewater Disinfection from CDPH recommends that where a median coliform most probable number (MPN) of 23/100 mL or 240/100 mL is required, bacteriological samples should be collected at least twice per week. The median total coliform bacteria number should be based on the last seven samples for which the analyses have been completed, according to the Uniform Guidelines. When discharge is to ephemeral streams with limited access or little to no natural flow during all or part of the year, the Uniform Guidelines recommend that effluent not have a median coliform MPN exceeding 23/100 mL. The

circumstances of Chanac Creek reflect this situation and the CDPH Uniform Guidelines are appropriately applied here.

The WWTF is in the Tulare Lake Basin, specifically within the Tejon Creek Hydrologic Area (HA 556.20), as depicted in the interagency hydrologic map prepared by DWR in August 1986. Specifically, the WWTF is at the easterly end of Cummings Valley in the Tehachapi Mountains at an elevation of about 4,000 feet above sea level. The nearest surface waterway is Chanac Creek, which flows immediately adjacent to the WWTF. Chanac Creek is tributary to Tejon Creek, an eastside stream that terminates on the San Joaquin Valley floor in the Arvin-Wheeler Ridge Hydrologic Area (HA 557.30).

The Cummings Valley is characterized by warm, dry summers and cool, wet winters. The area receives an average annual precipitation of about 15 inches and an additional 20-inch average snowfall. The average annual ETo in Tehachapi is about 53 inches, according to information published by DWR.

Chanac Creek is a seasonal stream that originates in the small northwestern portion of Brite Valley and flows through Cummings Valley. It crosses the boundary of the adjudicated Cummings Basin prior to the WWTF discharge point. The reach downstream of the discharge is not accessible for recreational use. Once it exits Cummings Valley, Chanac Creek drops from an elevation of about 3,900 to 1,200 feet above sea level in nine miles where it converges with Tejon Creek. Most of Chanac Creek in this reach has a rocky streambed traversing steep and rough terrain that is inaccessible by road and supports little to no recreational use. The lower reaches of Tejon Creek is relatively flat, has no nearby habitation, but is accessible for recreational use.

Land use downstream from the discharge point is non-accessible open space. Crops grown in the San Joaquin Valley where Tejon Creek terminates, many miles from the WWTF discharge point, include field and truck crops (e.g., cotton, corn, carrots, peppers), grain crops, pasture crops (alfalfa), fruit trees (apricots, peaches/nectarines, cherries, apples), citrus (oranges), and vineyards.

6.8.2 Potential Opportunities for Connection to other Agencies Proposed Reclaimed Water Systems

The potential for Stallion Springs CSD to partner with the CCI recycled water “purple pipe” exists. Currently, the Institution has an agreement to supply the Stallion Springs Golf Course with approximately 300 AF of recycled water per year. The District supports this partnership and will continue to investigate future potential uses for this valuable resource as shown in Table 2-42.

6.8.3 Recycled Water Currently Being Used

Stallions Spring CSD’s current and future use of treated wastewater is unique to its service area and depends on the effluent treatment level obtained at the various facilities. Table 6.8-2 summarizes current and future recycled water demands of each of the agencies.

Table 6-8: (DWR Table 33) Wastewater Collected and Treated (AFY)

	Treatment Level	2010	2015	2020	2025	2030	2035	2040
Stallion Springs WWTP ¹								
Discharge to surface water	Secondary	40	40	40	40	40	40	40
Total		40	40	40	40	40	40	40

¹ Data from 1995 to 2008 from General Manager’s report. Trend has been decreasing effluent. Use 2008 figure for projection. Treated effluent is discharged into Chanac Creek.

6.8.4 Recycling Plan and Potential Customers

There are no plans to upgrade the District’s WWTF to allow the effluent to be put to beneficial use. However, the District will cooperate with CCI for application of its recycled water within the District’s service area.

6.8.5 Encourage Recycled Water Use

Proposed actions and methods for encouraging recycled water have been practiced. Stallion Springs continues to support recycled water use through the newly developed “Purple Pipe”. Built, as a collaborative effort between Tehachapi Cummings County Water District, Horse Thief Golf Course and the CCI, the “purple pipe” delivers tertiary treated water from CCI for non-consumable products. However, official resolutions have not been adopted.

6.9 Desalination

There is no brackish water or sea water within the GTA thus this component is not applicable.

Law

<p>10631 A plan shall be adopted in accordance with this chapter and shall do all of the following: (i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish groundwater, and groundwater as a long-term supply.</p>
--

6.10 GPCD Baseline and Targets for 2015 and 2020

The Act of 2009 was incorporated into Division 6 of the California Water Code, commencing with Section 10608 of Part 2.22. The Act identifies methodologies, water use targets and reporting requirements which apply to urban retail water suppliers. The law specifically calls for developing seven methodologies and a set of criteria for adjusting daily per capita water use at the time that compliance is required (2015 and 2020 compliance years). The Water Code

(Section 10608.20 and 10608.28) allows water suppliers the choice of either complying individually or regionally by mutual agreement.

Law

10608.12

(b) "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 water supplier that meets at least 10 percent of its 2008 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 period ending no earlier than December 31, 2007, and no later than December 31, 2010.

Stallion Springs CSD has agreed to set the baseline and conservation targets as a regional alliance. They have also agreed to define their base daily per capita water use pursuant to WC 10608.12(b)(3). The five calendar years ending December 31, 2007 will be used to determine the baseline gpcd for the regional alliance. The five calendar years ending December 31, 2007 will be used to determine the baseline gpcd for Stallion Springs CSD's individual agency goals.

As discussed in 2.10, baseline water use for the regional alliance is 191 gpcd. This is more than the Tulare Lake hydrologic region target of 188 gpcd. Since the lower of these two numbers must be used to calculate the water conservation target, the 2020 target for the regional alliance is 179 gpcd ($188 \times .95$). The 2015 interim target is 185 gpcd, the midpoint between 191 and 179 gpcd.

Since the baseline gpcd for the regional alliance is already so low, they are not subject to the 20 percent water conservation requirement. WC 10608.20(b)(3) sets a water conservation goal of 95 percent of the hydrologic region's target. WC 10608.22 states that all water agencies subject to the law must achieve at least a 5 percent reduction in gpcd water use unless the agency's water use is already less than 100 gpcd.

For Stallion Springs CSD as an individual agency, its baseline water use is 176 gpcd as shown in Table 6-9. Since this figure is less than the Tulare Lake hydrologic region target, it will be used as the baseline against which a 5 percent reduction target is calculated. Stallion Springs CSD's 2020 target is 167 gpcd ($176 \times .95$). Its 2015 interim target is 171 gpcd, the midpoint between 176 and 167 gpcd. Stallion Springs CSD intends to comply with the law through the regional alliance, but understands that it can also comply by achieving its separate conservation goal should the regional alliance goal not be met.

Table 6-9: GPCD Baseline and Targets

Stallion Springs CSD

Base Years	Service Area Population ¹	Annual Water Production (AF) to System	Daily Per Capita Water Use	5-year Average Daily Per Capita Water Use	10-year Average Daily Per Capita Water Use	GPCD Targets ²
2000	1,522	310	182			
2001	1,495	330	197			
2002	1,545	334	193			2015
2003	1,686	323	171			171.4
2004	2,007	385	171			
2005	2,274	399	157			2020
2006	2,417	450	166			167.1
2007	2,457	467	170	175.8		
2008	2,364	464	175	167.8		
2009	2,379	470	176	168.8	175.8	
2010	2,488	399	143	164.6	172.0	

¹ Population figures for 2000 and 2010 are U.S. Census data. For 2001-2009 population is estimated as 2.1 persons per service connection (2000 & 2010 census ratio).

² 2020 Regional Alliance Target is calculated as 95% of the Tulare Regional goal of 188 gpcd.

Stallion Springs CSD’s population was determined by comparing 2000 and 2010 census data with the number of water accounts in those same years, which showed that there were 2.1 persons per water account in the Stallion Springs CSD. Using the same ratio of 2.1 persons per water account, Stallion Springs CSD estimated the population figures shown above.

6.11 Adoption and Implementation of UWMP

The five agencies involved in developing this RUWMP prepared the initial draft of its UWMP in 2009/2010. The final plan was adopted by Stallion Springs CSD’s Board of Directors on June 21, 2011 and submitted to the DWR within 30 days of Board approval. The Adopted 2010 RUWMP was also filed with the California State Library, County of Kern, and the respective cities within TCCWD’s Service Area.

Attached to the cover letter addressed to the DWR, and as Appendix A, of this RUWMP are Resolutions of Plan Adoption pertaining to the five agencies. This plan includes all information necessary to meet the requirements of CWC Division 6, Part 2.6 (Urban Water Management Planning, 2005).

Stallion Springs CSD is voluntarily submitting this RUWMP and identifying an Interim 2015 and 2020 Water Conservation Targets, as it is well below the threshold pertaining to UWMPA requirements. While Stallion Springs CSD remains well under the threshold for adoption of this RUWMP, the exercise in planning and forecasting has proven invaluable. It is the intent of the

District to officially adopt the UWMP and update/revisit it on annual basis (at the District's Strategic Planning session).

Stallion Springs CSD is not yet required to adopt an UWMP nor are they required to comply with the aforementioned conservation targets. However, doing so is an effort to proactively demonstrate its commitment to conservation. To date, Stallion Springs CSD currently meets both 2015 and 2020 targets without the implementation of any new water conservation measures. This is based on the regional standard that Stallion Springs CSD and the managers of the four other retail agencies have mutually agreed to set as the measurement basis. Nevertheless, some components of the plan will be executed with regard to water conservation measures. This effort is an important exhibition of good water management on behalf of the residents we serve.

7.0 References

- Fugro West and ETIC Engineering (Fugro 2004). Final Report Groundwater Modeling Study for the Cummings Groundwater Basin, Kern County, California. March 2004
- Fugro West (Fugro 2009A). Tehachapi Groundwater Basin Study Final Report. June 2009.
- Fugro West (Fugro 2009B). Calculation of Recharge Losses Cummings Groundwater Basin. November 2009.
- Department of Water Resources (DWR 2008). The State Water Project Reliability Report 2007. August 2008.
- Fugro West. (Fugro 2004). Final Report, Groundwater Modeling Study for the Cummings Groundwater Basin, Kern County, California. March 2004.
- IRM July 2008. Draft Existing Conditions Report, Greater Tehachapi Area Specific Plan – Water Supply & Sewer Availability (IRM 2008).
- Stallion Springs Community Services District (Stallion Springs 2009). Letter from David Aranda to GEI/Bookman-Edmonston. November 16, 2009.
- Tehachapi-Cummings County Water District (Tehachapi-Cummings 2009B). Letter from General Manager to Cummings Valley Groundwater Pumpers. October 29, 2009.
- Tehachapi-Cummings County Water District (Tehachapi-Cummings 2010A). Letter from General Manager to Ad-hoc Water Rate Committee, Subject: Imported water cost-of-service rates. January 27, 2010.
- Beeby, Robert, Timothy Durbin, William Leever, Peter Leffler, Joseph Scalmanini, Mark Wildermuth (Robert Beeby et al 2010). Summary Expert Report Phase 3 – Basin Yield and Overdraft Antelope Valley Area of Adjudication. July, 2010.
- Provost and Pritchard Consulting Group, Water Supply Review for the Golden Hills Community Services District. February 2010.

Appendix A – Plan Adoption

Board Resolutions:

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

Letter Agreement to Form a Regional Alliance

Notice of Public Hearings

Public Workshop Attendance Sheets:

Public Workshop #1 – January 26, 2010
Public Workshop #2 – May 26, 2011

Distribution List for Notice of Intent to Adopt UWMP

Letter of Transmittal of UWMP to DWR

RESOLUTION NO. 05-11

**A RESOLUTION OF THE TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT
ADOPTING THE 2010 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, the Plan shall be periodically reviewed at least once every five years, and that TCCWD shall make any amendments or changes to its plan which are indicated by the review; and

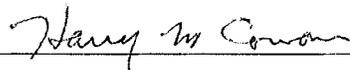
WHEREAS, the Plan must be adopted by July 1, 2011, after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption; and

WHEREAS, TCCWD has therefore, prepared and circulated for public review a draft Regional Urban Water Management Plan, and a properly noticed public hearing regarding said Plan was held by the Board of Directors of TCCWD on May 26, 2011; and

WHEREAS, TCCWD did prepare and shall file said Plan with the California Department of Water Resources by July 31, 2011;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of TCCWD that the 2010 Urban Water Management Plan is hereby adopted and the General Manager is hereby authorized and directed to file the 2010 Urban Water Management Plan with the California Department of Water Resources within 30 days of this date.

Dated: June 29, 2011



Harry M. Cowan, President

Attest:



Lori Bunn, Secretary

SECRETARY'S CERTIFICATE

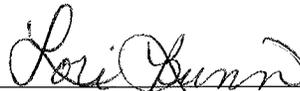
I, LORI BUNN, Secretary to the Board of Directors of Tehachapi-Cummings County Water District do hereby certify the foregoing Resolution was introduced at an adjourned regular meeting of the Board of Directors of said District held on the 29th day of June 2011, by the following vote:

AYES: Cowan, Hadley, Hall, Prel and Schultz

NOES: None

ABSENT: None

ABSTAIN: None

ATTEST: 
Lori Bunn, Secretary

RESOLUTION 11 - 1406

**A RESOLUTION OF THE BOARD OF DIRECTORS
OF BEAR VALLEY COMMUNITY SERVICES DISTRICT
ADOPTING THE 2010 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 Bear Valley Community Services District (Bear Valley CSD) is a retail supplier of water; and

WHEREAS, the Plan shall be periodically reviewed at least once every five years, and that the Bear Valley CSD shall make any amendments or changes to its plan which are indicated by the review; and

WHEREAS, the Plan must be adopted by July 1, 2011, after public review and hearing, and filed with California Department of Water Resources within thirty days of adoption; and

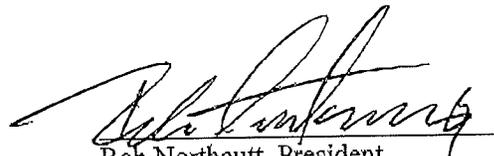
WHEREAS, the Bear Valley CSD has therefore, prepared and circulated for public review a draft Regional Urban Water Management Plan, and a properly noticed public hearing regarding said Plan was held by the Board of Directors of the Bear Valley CSD on June 22, 2011; and

WHEREAS, the Bear Valley CSD did prepare and shall file said Plan with the California Department of Water Resources by July 31, 2011;

NOW, THEREFORE BE IT RESOLVED by the Board of Directors of the Bear Valley Community Services District that the 2010 Urban Water Management Plan is hereby adopted and the General Manager is hereby authorized and directed to file the 2010 Urban Water Management Plan with the California Department of Water Resources within 30 days of this date.

PASSED, APPROVED AND ADOPTED this 22nd day of June 2011 by the following vote:

- AYES: NORTH CUTT, ZANUTTO, MASON, SHEA
- NOES: NONE
- ABSTAIN: NONE
- ABSENT: ROMANO


 Rob Northcutt, President
 Board of Directors

ATTEST:

 Sandra L. Janzer, District Secretary
 Assistant General Manager

RESOLUTION NO. 27-11

**A RESOLUTION OF THE CITY OF TEHACHAPI ADOPTING THE
2010 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 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 Plan must be adopted by July 1, 2011, after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption; and

WHEREAS the City has therefore, prepared and circulated for public review a draft Regional Urban Water Management Plan, and a properly noticed public hearing regarding said Plan was held by the City Council on June 20, 2011, and

WHEREAS the City did prepare and shall file said Plan with the California Department of Water Resources by July 31, 2011;

NOW, THEREFORE, BE IT RESOLVED by the City Council that the 2010 Urban Water Management Plan is hereby adopted and the City Manager is hereby authorized and directed to file the 2010 Urban Water Management Plan with the California Department of Water Resources within 30 days of this date.

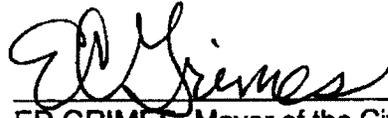
PASSED AND ADOPTED at a special meeting of the City Council of the City of Tehachapi on June 20, 2011 by the following vote:

AYES: COUNCILMEMBERS: Grimes, Smith, Vernon, Wiggins, Reed

NOES: COUNCILMEMBERS: None

ABSTAIN: COUNCILMEMBERS: None

ABSENT: COUNCILMEMBERS: None



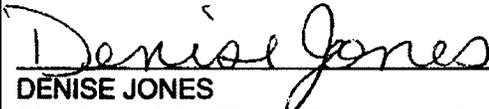
ED GRIMES, Mayor of the City of
Tehachapi, California

ATTEST:



DENISE JONES, 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, 2011.



DENISE JONES
City Clerk of the City of Tehachapi, California

**BEFORE THE BOARD OF DIRECTORS OF
THE GOLDEN HILLS COMMUNITY SERVICES DISTRICT**

RESOLUTION NO. 11-21

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE
GOLDEN HILLS COMMUNITY SERVICES DISTRICT
ADOPTING THE 2010 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, Golden Hills Community Services District (Golden Hills CSD) is a retail supplier of water; and

WHEREAS, Golden Hills CSD, along with Tehachapi-Cummings County Water District (TCCWD) and other retail purveyors within TCCWD, (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 voluntarily adopting this Plan as provided below, Golden Hills CSD does not forgo any of its rights under applicable law; and

WHEREAS, the Act provides such plans are to be periodically reviewed, at least once every five years, and GOLDEN HILLS CSD intends 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, 2011, after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption; and

WHEREAS, GOLDEN HILLS CSD, along with TCCWD and the 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 by the Board of Directors of GOLDEN HILLS CSD on June 16, 2011, and this Board considered any and all comments and objections concerning adoption of said Plan, and

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of GOLDEN HILLS CSD that the 2010 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 2010 Urban Water Management Plan with the California Department of Water Resources within 30 days of this date, and take other actions in furtherance thereof.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of Golden Hills Community Services District on June 16, 2011.

AYES: Cassil, Kennedy, Sargent, Smith, Wyatt

NOES: None

ABSTAIN: None

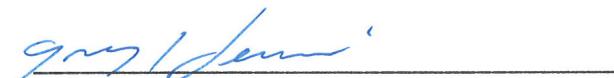
ABSENT: None



President

CERTIFICATION

I, Greg Ferrari, duly appointed and Secretary of Golden Hills Community Services District, do hereby certify that the above is a true and correct copy of a resolution passed and approved by the Board of Directors of Golden Hills Community Services District on the 16th day of June, 2011.



Greg Ferrari, District Secretary

(DISTRICT SEAL)

**BEFORE THE BOARD OF DIRECTORS OF THE
STALLION SPRINGS COMMUNITY SERVICES DISTRICT**

Resolution No. 2011-11

RE: RESOLUTION OF THE STALLION SPRINGS COMMUNITY SERVICES DISTRICT ADOPTING THE 2010 REGIONAL URBAN WATER MANAGEMENT

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, the Stallion Springs Community Services District (Stallion Springs CSD) is a retail supplier of water; and

WHEREAS, the Stallion Springs CSD, along with Tehachapi-Cummings County Water District (TCCWD) and other retail purveyors within TCCWD, voluntarily participated as good stewards of water resources in preparing an Urban Water Management Plan in 2005, and are now participating with the other parties in preparing an update of same. 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 by adopting this Plan as provided below, 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 least once every five years, and the Stallion Springs CSD intends 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, 2011, after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption; and

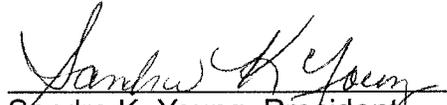
WHEREAS, the Stallion Springs CSD, along with TCCWD and the other affected purveyors have prepared, and circulated for public review, a draft Regional Urban Water Management Plan, and a properly noticed public hearing regarding said Plan was held by the Board of Directors of Stallion Springs CSD on June 21, 2011, and this Board considered any and all comments and objections concerning adoption of said Plan.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stallion Springs Community Services District that the 2010 Regional Urban Water Management Plan is

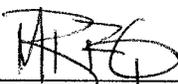
hereby adopted, subject to the matters recited above, and the General Manager is hereby authorized and directed to file the 2010 Urban Water Management Plan with the California Department of Water Resources within 30 days of this date, and take other actions in furtherance thereof.

PASSED, APPROVED AND ADOPTED by the Board of Directors of the Stallion Springs Community Services District this 21st day of June, 2011 on the following roll call vote:

- AYES: Director Gunshinan, Director Mueller, Director Simpson, Chair Young
- NOES:
- ABSENT: Director Burt
- ABSTAIN:


Sandra K. Young, President
Board of Directors

ATTEST:


Mary Beth Garrison, Secretary
Board of Directors

DIRECTORS:
HARRY M. COWAN
DAVID HADLEY
JONATHAN HALL
JEAN PREL
ROBERT R. SCHULTZ

OFFICERS:
HARRY M. COWAN, PRESIDENT
ROBERT R. SCHULTZ, VICE PRESIDENT
JOHN A. MARTIN, GENERAL MANAGER
LORI BUNN, SECRETARY TO THE BOARD

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT

22901 BANDUCCI RD.
POST OFFICE BOX 326
TEHACHAPI, CALIFORNIA 93561
(661) 822-5504 - (661) 325-3733 - FAX (661) 822-5122
E-MAIL: tccwd@tccwd.com

June 27, 2011

Mr. Rick Iger
GEI Consultants
5100 California Avenue, Suite 227
Bakersfield, CA 93301

RE: LETTER AGREEMENT

Dear Rick:

Enclosed please find two fully executed originals of the Letter Agreement for Establishing a Regional Alliance to Comply with SB X7-7, the Water Conservation Act of 2009.

Thank you for your assistance with this project.

Sincerely,



John Martin
General Manager

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 6/21/11
Signature Date

Ed Grimes
Print Name City of Tehachapi

John Martin 6/13/11
Signature Date

JOHN MARTIN
Print Name Tehachapi-Cummings CWD

Rob Northcott 6/21/11
Signature Date

Rob Northcott
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

The Water Availability Preservation Committee consists of five local public agencies within the Greater Tehachapi area in Kern County: Golden Hills Community Services District, Stallion Springs Community Services District, Bear Valley Community Services District, City of Tehachapi, and Tehachapi-Cummings County Water District. Today, the Water Availability Preservation Committee (WAPC) is working to develop a Regional Urban Water Management Plan (RUWMP) to help better manage the regional water needs of the five public agencies within the greater Tehachapi area, in Kern County.

This announcement is to provide notice that a public workshop will be held on January 26, 2010 at 6:30 – 9:00 PM. The workshop will be hosted by Golden Hills Community Service District and held at the:

Golden Hills Community Service District Meeting Room
21415 Reeves Street
Tehachapi, CA

The public workshop will serve to discuss the overarching objective of the RUWMP, progress to date, and will provide an opportunity for the public to make comments on the content of the Plan and provide insight to key regional water supply needs.

Public Meeting Notices

has adult, children's and reference book materials as well as the North American Indian Special Collection. There are 55 magazines, six newspapers and four children's magazines. The library has a great collection of DVDs and CDs. Many of our CDs classical collection were donated by the Tehachapi Community Orchestra. The Tehachapi Branch has seven public

library's support group. They meet on the fourth Monday of the month at the library at 7 p.m. This group maintains the on-going fund-raising through the year. Funds from our Friends support program, refreshments, magazines and newspaper subscriptions and the Rental Book program. The Friends group welcomes

online. All you need is a library card and PIN to access all of this information.

The Tehachapi Branch of the Kern County Library is located in the Tehachapi Crossing Shopping Center close to the intersection of Tehachapi Boulevard and Tucker Road. Call 822-4938 for more information about what is happening at the library.

Public workshop notice

A public workshop will be held Jan. 26 at 6:30 p.m. at the Golden Hills Community Services District Meeting Room to discuss the development of a Regional Urban Water Management Plan.

Goals associated with the plan include protecting surface water resources and increasing the region's

future water reliability by decreasing the demand for imported water supplies.

The workshop will also address protecting groundwater resources from degradation of water quality, increased pumping costs, land subsidence and other detrimental conditions.

The Water Availability

Preservation Committee consists of five agencies in Kern County: Golden Hills Community Services District, Stallion Springs Community Services District, Bear Valley Springs Community Services District, City of Tehachapi and Tehachapi-Cummings County Water District.

Dance into shape

Traditionally, the number one New Year's resolution goal is to lose weight and get in shape. As we begin a new decade, people from around the world will attend Jazzercise classes as part of their plan to get fit. These people will have just as much fun burning off the "holiday calories" as they did enjoying their favorite festive foods.

Each 60-minute Jazzercise class offers a fusion of jazz dance, resistance training, Pilates, yoga, and kickboxing movements set to popular music. As the world's leading dance fitness program, Jazzercise has bene-

fited people of all ages and fitness levels for more than 40 years.

Benefits include increased cardiovascular endurance, strength, and flexibility, as well as an overall "feel good" factor. Founded by fitness pioneer and Jazzercise CEO Judi Sheppard Missett, Jazzercise is more popular than ever with 7,500 instructors teaching more than 32,000 classes weekly in all 50 states and 32 countries.

"Jazzercise offers an intense and fun total body workout," said Tehachapi Jazzercise instructor Chris Duff. "As a result of its

dynamic and varied set structure, many people achieve their New Year's Resolution fitness goals and continue to get fit and have fun with Jazzercise for years to come."

Here in Tehachapi, we offer morning, evening and Saturday classes so that you can establish a regular workout ritual with options to accommodate a busy lifestyle. For more information about Jazzercise classes in Tehachapi, contact TVR-PD at 822-3228. For further information about Jazzercise or to find a class, go to jazzercise.com or call (800) FIT-IS-IT.

Valentine Dance

The Catholic Daughters are sponsoring a Valentine Dance on Sat., Feb. 13, 6:30 - 10:30 p.m. at St. Malachy's Catholic Church, 407 W. E St. Live music will be provided

by Tracy Barnes with the Ginny Phillips Band, Mr. Phillips, Marie Worth and Jerry Mulkins.

Admission is \$10 per person and there will be hors

d'oeuvres and drinks. For more information call 822-3181. Tickets are on sale at the church office.

We're online.
check us out at www.tehachapinews.com

PROOF OF PUBLICATION

(2015.5 C.C.P)

STATE OF CALIFORNIA, }
County of Kern } ss.

I, the undersigned, 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 chief clerk/publisher 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; that the notice, of which the annexed is a printed copy, has been published in regular and entire issue of said newspaper and not in any supplement of thereof on the following dates, to wit:

5/10 5/17

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


(Signature)

Executed on 5/17/11
at Tehachapi, California.

The TEHACHAPI NEWS
P.O. Box 1840 Phone 822-6828
TEHACHAPI, CALIFORNIA 93581

The Water Availability Preservation Committee consists of five local public agencies within the Greater Tehachapi area in Kern County: Golden Hills Community Service District, Stallion Springs Community Service District, Bear Valley Community Service District, City of Tehachapi, and Tehachapi Cummings County Water District. Today, the Water Availability Preservation Committee (WAPC) has developed the Regional Urban Water Management Plan (RUWMP) to help better manage the regional water needs of the five public agencies within the greater Tehachapi area, in Kern County.

This announcement is to provide that a public workshop will be held on Thursday May 26, 2011 at 6:30 PM. The workshop will be hosted by Stallion Springs Community Center and held at the:

Stallion Springs Community Center
27850 Stallion Springs Drive
Tehachapi CA

The public workshop will serve to discuss the RUWMP and will provide an opportunity for the public to make comments of the RUWMP. Copies of RUWMP may be reviewed at each of the participating agencies' offices.

Pub dates: 5/10, 5/17/2011

GREATER TEHACHAPI REGIONAL URBAN WATER MANAGEMENT PLAN

Public Workshop # 1
 January 26, 2010
 6:30 PM - 9:00 PM

Sign-In Sheet

Name	Organization	Address	Phone Number	Email address
BRUCE LOCKWAY		56950 CONUMBIA WAY	861 821-4891	lockway@ Hotmail.com
JON BARRACLOUGH	CCF		822-4402 x3021	JON.BARRACLOUGH@COCOA.CA.GOV
OTERMINUS GIBBY	TURPD	490 W.D-10.373		gopherw@TURPD.org
JON CURRY	COT	115 S. ROBINSON ST.	822-8066	curry@tehachapaper.com
BILL FISHER	GHCSD		822-3064	
JANICE ARMSTRONG	SGTV	PO Box 1894	821-0346	armstronghagen@sbcglobal.net
CRAIG MURPHY	KERN COUNTY PLANNING	2700 W 1 ST RAKERSFIELD CA	822-8939	MURPHY@CO.KERN.CA.US
Ginnie Gregg	resident GHCSD	22800 Retreat	526-9484	ginnie.gmail.com
Tina Forde	Tehachapex news			
Ed Kennedy	Resident			
RAY KLOTH	AFP			RAY.KLOTH@GMAIL.COM
Christ Alderbrook	GHSC	P.O. Box 1468 9358	238-9805	childerbrook@goldenhillssanitary.com
Julia Barraclough	resident	20312 Mini Ct	823-0807	sunwater78@earthlink.net

GREATER TEHACHAPI REGIONAL URBAN WATER MANAGEMENT PLAN

Public Workshop # 1

January 26, 2010

6:30 PM- 9:00 PM

Sign-In Sheet - Continued

Name	Organization	Address	Phone Number	Email address
McAllister, Helen			823-1536	
Gladys Stewart		Mt. Dr.	805.0242	gslewart@KARPE.COM
Mike Sweet	Batesd	BEAR VALLEY SPRINGS ASSOCIATION	822-3064	
KIRK J. WOOLPRIDGE		661 747-2174	KIRK W. BIVSA@BLUEPTE.COM	

**TEHACHAPI REGIONAL URBAN WATER MANAGEMENT PLAN
WORKSHOP**

May 26, 2011

<u>NAME</u>	<u>AGENCY/ENTITY</u>
X Stan Beucham	EAST KERN BUSINESS DEVELOPMENT
Kim Cummings	Prop Owner
Rick Iger	GEI/B-E
Richard Anderson	GEI/B-E
Charles White	Tehachapi Planning Commission
Uma Fords	Fords News Service
X Sonja Wilson X	Tehachapi Planning Commission
Kerry Palmer	Self
James Fisher	Self
Ruth Fisher	Self
Gayle Stewart	SELF -
X Julia Barraclough	resident Golden Hills ^{20312 Mini Ct}
Michelle Vance	County of Kern ^{2nd Dist Rep}
Carole Lawing *17961 Swaps.	SS Resident
WILLIAM NELSON	PUBLIC INTEREST/CONSULTANT
MEL SANTIAGO	Resident - Stallion Springs
Mary Ann Hester	Teh
Gloria Jones	Teh
Bruce Lehman	BUS
Melinda	GHCSJ
DANE BURT	S.S.C.S.D. X

Note: Signing this document is voluntary. All persons may attend the meeting regardless of whether or not a person signs in.

GEI Consultants

JUN 01 2011

RECEIVED-BFL

Golden Hills Sanitation Co., Inc
PO Box 1168
Tehachapi, California 93581
ATTN: Mr. Clint Hilderbrand

Ms. Mary Ann Hester
102 Brentwood Drive
Tehachapi, California 93561

Horse Thief Country Club
28950 Horse Thief Drive
Tehachapi, California 93561
ATTN: Mr. David DePolo - General Manager

Kern County Water Agency
PO Box 58
Bakersfield, California 93301
ATTN: Mr. James Beck

Kern County Water Agency
PO Box 58
Bakersfield, California 93301
ATTN: Mr. Curtis Creel

Ms. Marti Sprinkle
PO Box 667
Tehachapi, California 93581

Tehachapi Valley Recreation & Parks District
PO Box 373
Tehachapi, California 93581

Mr. Kent Turner
PO Box 218
Tehachapi, California 93581

Mr. Glenn Bauman
785 Tucker Road - G243
Tehachapi, California 93561
xngman@bak.rr.com

Ms. G. Stewart
gstewart@bak.rr.com

Mr Harry M. Cowan
520 Merion Way
Tehachapi, California 93561

Mr David R. Hadley
28780 Cumberland Road
Tehachapi, California 93561

Mr Jonathan D. Hall
143 Pepper Drive
Tehachapi, California 93561

Mr. Jean A. Prel
27501 Banducci Road
Tehachapi, California 93561

Bear Valley Springs CSD
28999 South Lower Valley Road
Tehachapi, California 93561
ATTN: Mr John Yeakly - General Manager

Mr Stan Beckham
PO Box 1355
Tehachapi, California 93581

Kubs & Parker
PO Box 2205
Bakersfield, California 93303
ATTN: Mr James R. Parker, Jr
Email to Val & Email & Mail to Jim

Mr William L. Nelson
PO Box 308
Tehachapi, California 93581

Scan & Email
Ms. Julia Barraclough
sunwater72@earthlink.net

Scan & Email
City of Tehachapi
115 South Robinson Street
Tehachapi, California 93561
ATTN: Mr Greg Garrett - General Manager
ggarrett@teahachapicityhall.com

Scan & Email
City of Tehachapi
115 South Robinson Street
Tehachapi, California 93561
ATTN: Mr Jon Curry - Utilities Manager
jcurry@teahachapipipw.com

Scan & Email
Mr Chuck Di Leo
PO Box 1396
Tehachapi, California 93581
mcmlwlewlett@att.net

Scan & Email
Ms. Tina Forde
fordefiles@aol.com

Scan & Email
Golden Hills CSD
PO Box 637
Tehachapi, California 93581
ATTN: Mr Bill Fisher-General Manager
bfisher@bak.rr.com

Scan & Email
Mr. John R. Otto
101 Oak Place
Tehachapi, California 93561
jotto@bak.rr.com

Scan & Email
Mr. Robert R. Schultz
PO Box 1060
Tehachapi, California 93581
ihrvpark@pacbell.net

Scan & Email
Stallion Springs CSD
27800 Stallion Springs Drive
Tehachapi, California 93561
ATTN: Ms. Mary Beth Garrison - General Manager
mgarrison@stallionspringscsd.com

Scan & Email
Ms. Kathy Cassil
68mustconvCA@gmail.com

Scan & Email
Ms. Joan Clark
joanclark1@gmail.com

Scan & Email
Mr. Thomas Crandall
tac@tvwireless.net

Scan & Email
Mr. Bruce Lockway
brlockway@hotmail.com

Scan & Email
Ms. Val Hanners
vhanners@kuhsparserlaw.com

Scan & Email
Mr. Adrian Maaskant
amaaskant@bak.rr.com

Need 13 Voucher Lists
8 → Mailing
3 → Office Staff
1 → Original
1 → Counter Copy



Geotechnical
Environmental
Water Resources
Ecological

July 27, 2011

Department of Water Resources
Statewide Integrated Water Management
Water Use and Efficiency Branch
901 P Street
Sacramento, CA 95814

Attention: Coordinator, Urban Water Management Plans

Re: 2010 Tehachapi Regional Urban Water Management Plan

The Tehachapi-Cummings County Water District has formed a Regional Alliance with Bear Valley Community Services District (CSD), City of Tehachapi, Golden Hills CSD and Stallion Springs CSD, pursuant to the Water Conservation Act of 2009, SB X7-7. The Regional Alliance has created a Regional Urban Water Management Plan for the Greater Tehachapi area. Each entity has adopted the 2010 Tehachapi Regional Urban Water Management Plan (Plan). GEI Consultants, Inc. is submitting the Plan on behalf of the Regional Alliance. In accordance with California Water Code, Section 10644(a), the 2010 Tehachapi Regional Urban Water Management Plan is enclosed. The resolutions adopting the Plan and the letter agreement forming the Regional Alliance are included in Appendix A of the Plan. As instructed, a copy of the Plan will be supplied to State Library, County Library, County of Kern and Kern County Water Agency concurrent to this transmittal. In addition, a copy of the Plan will be made available at the office of each participating agency for public review.

Sincerely,

GEI CONSULTANTS, INC.
Bookman-Edmonston Division

A handwritten signature in blue ink, appearing to read "Richard Iger".

Richard Iger
CC W/Enclosures:
State Library
County of Kern Planning Department
County of Kern Library at Tehachapi
Kern County Water Agency

Appendix B – Groundwater Management Plans/ Judgments

Tehachapi Basin

California Superior Court, Kern County, Case No. 97210, was filed 197

California Superior Court, Kern County, Case No. 97210, Amendment to Judgment

Cummings Groundwater Basin

California Superior Court, Kern County, Case No. 97209, was filed in 1972

Brite Groundwater Basin

California Superior Court, Kern County, Case No. 97211, was filed in 1970

Bear Valley Groundwater Management Plan

Bear Valley CSD Groundwater Management Plan, October 1998

RECORDED

1970-162

WHEN RECORDED RETURN TO: DEC 9 4 02 PM 1970

DEC 9 9 02 AM 1970

MARTIN E. WHELAN, JR. INCORPORATED
Third Floor
7624 So. Painter Ave
Whittier, Ca 90602

VERIFIED CORONER CLERK
KERN COUNTY, CALIF.
BY: [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 P. AUSTIN, GERTRUDE AUSTIN, CHARLES J. AYRES, BAKERSFIELD PRODUCTION CREDIT ASSN., a corporation, BANK OF AMERICA NATIONAL TRUST AND SAVINGS ASSOCIATION, a corporation, ROY T. CLARK, WANDA CLARK, CONSOLIDATED ESCROW COMPANY, a corporation, CONTINENTAL AUXILIARY COMPANY, a corporation, COOK & SONS, INC., a corporation, CORPORATION OF AMERICA, a corporation, EAST KERN ESCROW COMPANY, a corporation, J. J. ERTESEZEK, ALAN FIELDS, MARDELL FIELDS, BENJAMIN GOLDMAN, COURTLANDT D. GROSS, HERITAGE INVESTMENT CORP., a corporation, ELMER F. JURY, MADELEINE A. JURY, KERN COUNTY TITLE COMPANY, a corporation, GEORGE E. LAWRENCE, VIRGINIA B. LAWRENCE, IDONNA LEIVA, JOSEPH LEIVA, HAROLD T. LUTGE, HELEN LUTGE, ROBERT L. MCCARTHY, DOROTHY M. MCCARTHY, NINAN NOSKOFF, JEAN M. A. PELLISSIER, ADRIENNE ROSEN, LEONARD ROSEN, BERNARD SASIA, WINIFRED SASIA, SCHULTZ ENTERPRISES, a corporation, ROBERT SCHULTZ, CYRUS E. STEWART, NAOMI RUTH STEWART, TEHACHAPI GOLDEN ORCHARDS, a partnership, TEHACHAPI MOUNTAIN LAND AND ORCHARD CO., a corporation, ISOBEL TEUSCHER, TRANSAMERICA TITLE INSURANCE COMPANY, a corporation, BARBARA G. Von PLATEN, W. G. Von PLATEN,

Defendants.

Entered 93

NO. 97211

JUDGMENT

The above entitled action duly and regularly came on for

Book 221
Page 163
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 Osborn,
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 defendats 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 extractions
20 of water by a party from the Brite Basin for a beneficial use in
21 any period of five consecutive years after the commencement of
22 overdraft in Brite 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 "Brite Basin" is that certain ground water basin under-
32 lying Brite Basin Area.

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.

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:

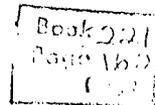
27 NOW THEREFORE, IT IS ORDERED, DECLARED, DECREED AND ADJUDGED
28 AS FOLLOWS:

29 1. Declaration and Determination of Water Rights
30 of Parties*

31 *Headings in this Judgment are for purposes of reference and the
32 language of said headings do not constitute, other than for such
purpose, a portion of this Judgment.

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 Brite Basin for beneficial use in Brite 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 Brite 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 Brite Basin Area any ground water extracted from Brite Basin.
21 No party has any right to export any water diverted from the
22 surface of the Brite Basin Watershed outside of the area of the
23 Brite Basin Watershed. No party has any right to export outside
24 of Brite Basin Area any water diverted from the surface of that
25 area. Except to the extent of surface diversions of water within
26 the Brite Basin Watershed and Brite 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 Brite Basin Watershed or
31 Brite Basin Area.

32 X X X X X



	<u>Name of Party</u>	<u>Base Water Right</u> (in acre-feet)
1		
2		
3	J. J. Erteszek, a.k.a. Jan J. Erteszek*	35
4	Jean M. A. Pellissier*	3
5	Schultz Enterprises, Inc., Robert Schultz	29
6	Courtlandt Devereaux Gross	3
7	Tehachapi Golden Orchards, a general partnership (Successors in interest to Bernard Sasia and Winifred B. Sasia)	305
8	Tehachapi Mountain Land and Orchard Co., a California corporation (Successors in interest to Cook & Sons, Inc.)	235
9		
10		
11		
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 Madeleine A. Jury	3
16	Joseph J. Leiva and Idonna Leiva	3
17	Robert C. Monroe and Mary Alice Monroe (successors in interest to Harold T. Lutge and Helen Lutge)	3
18	Jean M. A. Pellissier	3
19	Bernard Sasia and Winifred B. Sasia	3
20	W. G. Von Platen and Barbara G. Von Platen	3

22 2. Parties Enjoined as to Surface Diversions and
23 Exports

24 Each party listed in the foregoing tabulation under
25 paragraph 1 of this Judgment is enjoined and restrained from
26 hereafter exporting outside of Brite Basin Area any ground water
27 extracted from Brite Basin. Each party to this action is en-
28 joined and restrained from hereafter making any diversions of
29 surface water within Brite Basin Watershed or within Brite Basin
30 Area, except to the extent of diversions having been made by
31 that party or a predecessor in interest during the water year
32 immediately preceding commencement of this action. Each party

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 Brite Basin Watershed any surface water diverted
4 therein, and is further enjoined and restrained from exporting
5 outside of Brite 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 Brite Basin, including a restriction on ground
11 water pumping to quantities which will not exceed the Natural
12 Safe Yield of Brite Basin, now 500 acre-feet; enjoining
13 extractions of ground water from Brite Basin except to the ex-
14 tent of the parties' rights proportional to the Natural Safe
15 Yield of Brite 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 matter shall be within the continuing jurisdiction

1 of the Court.

2 6. New Pumpers

3 Persons who may later be found to be, or later commence,
4 pumping within Brite 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 9, 1970

27
28 Walter DeBorja
Judge of the Superior Court

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"BRITE BASIN AREA"

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., and T. 11 N., R. 15 W., S.E.M., Kern County, California, bounded as follows:

Beginning at the N $\frac{1}{2}$ 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 22, 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 22;

thence Westerly to the NW corner of said SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 22;

thence Northerly to the W $\frac{1}{2}$ corner of said Section 22;

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 W $\frac{1}{2}$ 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 28, 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 28;

thence Southerly to the SE corner of the SW $\frac{1}{2}$ of the SW $\frac{1}{2}$ of said Section 28;

thence Southerly to the SE corner of the W $\frac{1}{2}$ of the NW $\frac{1}{2}$ of Section 33, T. 32 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 $\frac{1}{2}$ of said Section 33;

thence Easterly to the NE corner of said S $\frac{1}{2}$ of the SE $\frac{1}{2}$ of Section 33;

thence Southerly to the SE corner of said Section 33;

thence Westerly 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 $\frac{1}{2}$ of said Section 36;

thence Easterly to the SE corner of said N $\frac{1}{2}$ of the NW $\frac{1}{2}$ 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 $\frac{1}{2}$ of the SE $\frac{1}{2}$ of said Section 36;

thence Southerly to the SW corner of said NE $\frac{1}{2}$ of the SE $\frac{1}{2}$ of Section 36;

thence Easterly to the SE corner of said NE $\frac{1}{2}$ of the SE $\frac{1}{2}$ 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. 15 W., S.B.M.;

thence Easterly to the NW corner of the NE $\frac{1}{2}$ of the SE $\frac{1}{2}$ of said Section 6;

thence Southerly to the SW corner of said NE $\frac{1}{2}$ of the SE $\frac{1}{2}$ of Section 6;

thence Easterly to the SE corner of said NE $\frac{1}{2}$ of the SE $\frac{1}{2}$ 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.B.M.;

thence Northerly to the E $\frac{1}{4}$ 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 $\frac{1}{2}$ 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 $\frac{1}{4}$ corner of Section 31, T. 12 N., R. 15 W., S.B.M.;

thence Northerly to the center $\frac{1}{4}$ 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. 32 S., R. 32 E., M.D.M.;

thence Northerly to the E $\frac{1}{4}$ corner of said Section 27;

thence Easterly to the center $\frac{1}{4}$ corner of said Section 27;

thence Northerly to the N $\frac{1}{4}$ corner of said Section 27, said N $\frac{1}{4}$ corner being the point of beginning of this description.

" BRITE BASIN 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 $\frac{1}{4}$ corner of Section 27, T. 32 S., R. 32 E., M.D.M.;

thence Northerly to the $N\frac{1}{2}$ 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 SW 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 28, 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 $\frac{1}{4}$ corner of Section 12,
 T. 11 N., R. 16 W., S.B.M.;
 thence Easterly to the $E\frac{1}{4}$ 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.B.M.;
 thence Easterly to the $E\frac{1}{4}$ corner of said Section 18;
 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 NE corner of said Section 17;
 thence Northerly to the $E\frac{1}{4}$ corner of Section 8, T. 11 N.,
 R. 15 W., S.B.M.;
 thence Westerly to the center $\frac{1}{2}$ corner of said Section 8;
 thence Northerly to the $N\frac{1}{4}$ corner of said Section 8;
 thence Easterly to the NE corner of said Section 8;
 thence Northerly to the NE corner of Section 5, T. 11 N.,
 R. 15 W., S.B.M.;
 thence Westerly to the NW corner of said Section 5;
 thence Northerly to the $E\frac{1}{4}$ corner of Section 31, T. 12 N.,
 R. 15 W., S.B.M.;
 thence Westerly to the center $\frac{1}{4}$ corner of said Section 31;
 thence Northerly to the $N\frac{1}{4}$ corner of said Section 31;
 thence Northerly to the center $\frac{1}{4}$ corner of Section 35, T. 3
 R. 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 $E\frac{1}{4}$ corner of Section 27, T. 32 S.,
 R. 32 E., M.D.M.;
 thence Westerly to the center $\frac{1}{4}$ corner of said Section 27
 center $\frac{1}{4}$ corner being the point of beginning of this desc

1 (PROOF OF SERVICE BY MAIL -1013a, 2015.5 C.C.P.)

2

3 STATE OF CALIFORNIA)
:ss
4 County of Los Angeles)

5

6 I am a citizen of the United States and a resident of
7 the county aforesaid, I am over the age of eighteen years and
8 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)

9

10 on the defendants and their attorneys of record
11 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:

- 12 CHARLES E. COOK, JR. ESQ. for COOK & Sons, Inc.
Banducci Road Alan Fields
13 Tehachapi, Ca 93561 Mardell Fields
Elmer F. Jury
14 Madeleine A. Jury
Adrienne Rosen
15 Leonard Rosen
Tehachapi Mountain Land
16 and Orchard Co.
Barbara G. Von Platen
17 W. G. Von Platen
- 18 Kenneth Bates, Esq. for Cyrus E. Stewart
DEADRICH, BATES & LUND Naomi Ruth Stewart
19 1122 Truxtun Ave.
Bakersfield, Ca 93301
- 20 Donald G. Kendall, Esq. for Bernard Sasia
21 1614 - 28th Street
Bakersfield, Ca 93301 Winifred Sasia
- 22 Arthur Livingston, Esq. for Schultz Enterprises, a corp.
23 315 So. Beverly Drive
Beverly Hills, Ca 90212 Robert Schultz
- 24 Richard Mednick, Esq. for Irving P. Austin
25 16661 Ventura Blvd.
Encino, Ca 91316 Gertrude Austin
- 26 Courtlandt D. Gross In Pro Per
27 1230 Arrowmink Road
Villanova, Penn. 19085

28

29 I certify under penalty of perjury that the foregoing is
30 true and correct.
Executed on November 19, 1970 at Whittier, California

31

32

THE DOCUMENT TO WHICH THIS CERTIFICATE IS AT-
TACHED IS A FULL, TRUE AND CORRECT COPY OF THE
ORIGINAL ON FILE AND OF RECORD IN MY OFFICE.
DEC 11 1970

Ann M. Pherrin

ATTEST
VERA K. GIBSON County Clerk and Clerk of the Superior
Court of the State of California, in and
for the County of Kern.

ANN M. PHERRIN

BY DEPUTY

Remittitur, Court of Appeal, Fifth Appellate District, State of California, "The above-entitled cause having been fully argued, submitted 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 308-acre feet per year for use 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 (see next page)

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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; PHYLLIS ARMSTRONG; CHESTER ASHFORD; RUBY TERRY ASHFORD; GERTRUDE H. AUSTIN; IRVING P. AUSTIN; MARY BANDUCCI; ROBERT C. BAUMBACH; AUDREY JEAN BENEFIEL; MARCEL BERNATENE; MARGUERITE BERNATENE; BENGUET CALIFORNIA, INC. a corporation; L. C. BURNS; CALIFORNIA CORRECTIONAL INSTITUTION AT TEHACHAPI; DEPARTMENT OF CORRECTIONS OF THE YOUTH AND ADULT CORRECTIONS AGENCY OF THE STATE OF CALIFORNIA; STATE OF CALIFORNIA; YOUTH AND ADULT CORRECTIONS AGENCY OF THE STATE OF CALIFORNIA; DON I. CARROLL; OWEN L. CARTER; VIOLA B. CARTER; CHARLES E. CHRISTOPHER; WINNIE CHRISTOPHER; CORPORATION OF AMERICA, a corporation, 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; NOLA F. ELLSWORTH; REX C. ELLSWORTH; FEDERAL LAND BANK OF BERKELEY, a corporation, as Trustee under deeds of trust; FIREMAN'S LAND INVESTMENT GROUP, a partnership; FIRST AMERICAN TITLE COMPANY, a corporation, as Trustee under deed of trust; JOHN L. GERMON; NELLIE GIUNTINI as Administratrix of

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72 MAR 6 PM 2:40

VERA K. GIBSON, CLERK
KERN COUNTY, CALIF.
BY *[Signature]* DEPUTY

[Handwritten notes]
VERA K. GIBSON, CLERK
KERN COUNTY, CALIF.
DEPUTY

72 MAR 7 PM 6:08

RECORDED

RECORDED

NO. 97209

JUDGMENT

Entered 239

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Page 21
(1)

(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, 1975, Vera K. Gibson, Clerk, Kern County, California, by L. Keeling, Deputy.

- 1 the Estate of ISOLA MARCHETTI;)
- CLYDA F. GUTHRIE; DELMAR W. GUTHRIE;)
- 2 JOHN R. HAYCOX; HERITAGE INVESTMENT)
- CORP., a corporation, as Trustee)
- 3 under deed of trust; MABEL G. HOCKER;)
- EVERETT D. KIEFER; VADA B. KIEFER;)
- 4 KATHLEEN KURLAND; WALLACE R. LA)
- FLAMME; BETTE LAMB aka ELIZABETH)
- 5 LOUISE LAMB; ELIZABETH LAMB as)
- Executrix of the Estate of J. O.)
- 6 LAMB, deceased; HAZEL A. MERRITT;)
- ELSIE METTLER; EUGENE METTLER;)
- 7 METTLER & ARMSTRONG, a co-partnership;)
- WADE D. MIDKIFF; MARY ALICE MONROE;)
- 8 ROBERT C. MONROE; MOUNTAIN VALLEY)
- FARMS, a co-partnership; EVA LUCILLE)
- 9 NYLANDER aka E. L. NYLANDER; RALPH W.)
- NYLANDER; VIRGINIA BAKER PALANCE;)
- 10 WALTER JACK PALANCE; DOROTHY PORTER;)
- WILLIAM PORTER; JEAN PREL; SAN MARINO)
- 11 ESCROW COMPANY, a corporation, as)
- Trustee under deed of trust; BERNARD)
- 12 SASIA; ETHEL E. SCHMIDT; SECURITY)
- FIRST NATIONAL BANK, a corporation,)
- 13 as Trustee under deed of trust; BILLIE)
- JEAN SIEMEN; SHERMAN PAUL SIEMEN;)
- 14 VIRGINIA HUNTER SMITH; H. M. SPRINKLE)
- aka MILO SPRINKLE; W. F. SPRINKLE, JR.;)
- 15 STABEN LAND COMPANY, FRANK PAUL STABEN;)
- JEANNE P. STABEN; WILLIAM PAUL STABEN,)
- 16 JR.; WILLIAM PAUL STABEN, SR.; STERN)
- REALTY COMPANY; TEHACHAPI UNIFIED SCHOOL)
- 17 DISTRICT; TITLE INSURANCE AND TRUST)
- COMPANY, a corporation, as Trustee under)
- 18 deed of trust; WESTERN MUTUAL CORPORA-)
- TION, a corporation, as Trustee under)
- 19 deed of trust; WILSHIRE ESCROW CO., a)
- corporation, as Trustee under deed of)
- 20 trust.)
- 21)

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The above-entitled action duly and regularly came on for trial for argument as to certain legal issues on December 18, 1970, at 9:30 o'clock A.M., in Department 3 of the above-entitled Court, before the Honorable Jay R. Ballantyne, Judge specially assigned, having been duly transferred thereto from Department 1 of said Court; whereupon, after argument on certain legal issues, the case was duly and regularly continued for further trial to March 1, 1971, at 9:30 o'clock A.M., in Department 1 of the above-entitled Court, on which date the same was transferred from said

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(21)

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. WHELAN, JR., INC. and MARTIN E. WHELAN, 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, ^{if any,} 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 -----
32 *Headings in this Judgment are for purposes of reference and the
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.

6	<u>Name of Party</u>	<u>Base Water Right</u> (in acre-feet)
7		
8	Chester Ashford and Ruby Terry Ashford, Mountain Valley Farms	454
9		
10	Robert C. Baumbach	203
11	Audrey Jean Benefiel, Staben Land Company, Frank Paul Staben, Jeanne P. Staben, William Paul Staben, Jr., William Paul Staben, Sr. (each as to an undivided 1/5th interest)	256
12		
13	California Correctional Institution at Tehachapi, Department of Corrections of the Youth and Adult Corrections Agency of the State of California, Youth and Adult Corrections Agency of the State of California, State of California	308
14		
15	Viola B. Carter and Owen L. Carter, joint tenants as to an undivided 25% interest; Mabel G. Hocker, Hazel A. Merritt, Ethel E. Schmidt, each an undivided 25% interest	300
16		
17	Edward J. Cummings and Mildred E. Cummings, Cummings Ranch Corp.	268
18		
19	Nellie Giuntini as Administratrix of the Estate of Isola Marchetti	60
20		
21	Eugene Mettler and Elsie Mettler	503
22		
23	Robert C. Monroe and Mary Alice Monroe (Successor in Interest to Irving P. Austin and Gertrude H. Austin)	435
24		
25	Robert C. Monroe and Mary Alice Monroe (Successor in Interest to Gertrude Stowell and Nellie Stowell)	47
26		
27	Ralph W. Nylander and Eva Lucille Nylander aka E. L. Nylander	145
28		
29	Walter Jack Palance	71
30		
31	Walter Jack Palance (Successor in Interest to Charles E. Christopher and Winnie Christopher)	298
32		

1	William Porter and Dorothy Porter	477
2	Jean Prel	609
3	Virginia Hunter Smith	617
4	H. M. 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, 4,090 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

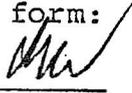
25 Persons who may later be found to be, or later commence,
 26 pumping within Cummings Basin may be added to this Judgment upon
 27 such stipulation with the Watermaster as may be approved by the
 28 Court upon prior thirty (30) days written notice of the date of
 29 hearing to the parties.

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.


MEWjr.

9.



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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 32 East, in Cummings Basin Area.

9 8. Watermaster - Powers, etc.

10 The Plaintiff, TEHACHAPI-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:
 _____ | *MEWjr.*
 C.B. | MEWjr.

10.

J.R.B.

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1 9. Judgment Binding on Successors

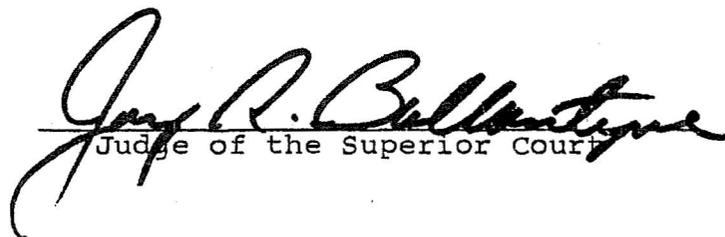
2 This Judgment and the provisions hereof are all applic-
3 able to and binding upon not only the parties hereto but as well
4 upon their respective heirs, executors, administrators, successors,
5 assigns, lessees, licensees and to the agents, employees and
6 attorneys in fact of any such person having actual or construc-
7 tive notice of said Judgment or of this action from the date of
8 its filing. The injunctive provisions herein contained run
9 equally against all such persons.

10 10. Costs

11 No party shall recover its costs herein as against any
12 other party.

13 The Clerk shall enter this judgment forthwith.

14 DATED: Feb. 25, 1972

15
16 
17 Judge of the Superior Court

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(//)

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.M., 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 1 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 N1/4 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:

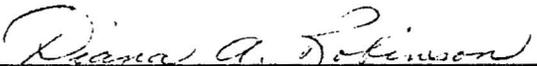
16	Richard Mednick, Esq. 16661 Ventura Blvd. Encino, Ca 91316	King, Eyherabide, Owen & Anspach 1400 Chester Avenue Bakersfield, Ca 93301
17		
18	William Kuhs, Esq. P. O. Box 528 Bakersfield, Ca 93301	A. Arnold Klein, Esq. Ste 1122, 606 So. Olive Street Los Angeles, Ca 90014
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20	C. E. Christopher, Esq. 10953 Explorer Road La Mesa, Ca	Kirtland & Packard 639 South Spring Street Los Angeles, Ca 90014
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22	Donald Holt, Esq. P. O. Box 1578 Ventura, Ca 93301	Lawler, Felix & Hall Attn: Robert Henigson, Esq. 605 W. Olympic Blvd. Los Angeles, Ca 90015
23		
24	Guy C. Hunt, Esq. 506 Union Bank Plaza 201 South Lake Avenue Pasadena, Ca 91101	Litts, Mullin, Perovich & Sullivan 225-A West Elm Lodi, Ca
25		
26		
27	Ralph B. Jordan Kern County Counsel 1415 Truxtun Avenue Bakersfield, Ca 93301	Evelle J. Younger Carol Boronkay Sanford N. Gruskin 600 State Building Los Angeles, Ca 90012
28		
29	Donald G. Kendall, Esq. 1614 - 28th Street Bakersfield, Ca 93301	Robert Patterson, Esq. Siemon & Patterson 1706 Chester Avenue Bakersfield, Ca 93301
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1	James Vizzard, Esq. 1801 Truxtun Avenue Bakersfield, Ca 93301	Mabel G. Hocker 220 E. Duarte Road Arcadia, Ca 91006
2		
3	David Shane, Esq. 6842 Van Nuys Blvd. Van Nuys, Ca 91405	Hazel A. Merritt 220 E. Duarte Road Arcadia, Ca 91006
4		
5	Kenneth Byrum, Esq. 1600 "M" Street Bakersfield, Ca 93301	Viola B. Carter 220 E. Duarte Road Arcadia, Ca 91006
6		
7	Richard Hungate, Esq. 1901 Avenue of the Stars Los Angeles, Ca 90067	Ethel E. Schmidt 220 E. Duarte Road Arcadia, Ca 91006
8		
9	Anderson & Stronge 1308 Chester Avenue Bakersfield, Ca 93301	Jean Prel Star Route, Box 792 Tehachapi, Ca 93561
10		
11		Mary R. Banducci Star Route, Box 803 Tehachapi, Ca 93561
12		
13		

14 I certify under penalty of perjury that the foregoing is true
15 and correct.

16 EXECUTED ON December 29, 1971, at Whittier, California.

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Diana A. Robinson

JUL 22 1975 REC'D

rec'd 7-21-75

COURT OF APPEAL
FIFTH APPELLATE DISTRICT

FILED

JUL 18 1975

KEVIN A. SWANSON, Clerk

By _____ Deputy

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, ^{1/} 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^{2/} upon the basin with an increasing condition of accumulated overdraft, that

^{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^{3/} 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.^{4/}

^{3/} 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.

^{4/} 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.^{5/}

^{5/} 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.^{7/} 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

^{7/} 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: ① the amount of water available, ② the extent of ownership in the basin, ③ the nature of the projected use—④ if for agriculture, the area sought to be irrigated, ⑤ the character of the soil, ⑥ the practicability of irrigation, i.e., the expense thereof, ⑦ the comparative profit of the different crops which could be made of the water on the land—all these and ⑧ 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

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.

Trammor

J.

WE CONCUR:

[Signature]

Acting P.J.

[Signature]

J. *

* Retired judge of the superior court sitting under assignment by the Chairman of the Judicial Council.

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FILED MARCH 22, 1971
RECORDED MARCH 23, 1971
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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 ASHE,)
SAM ASHE, ASHTOWN WATER COMPANY, a corporation;)
BAKERSFIELD 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. BISBEE, BOISE-CASCADE PROPERTIES OF)
DELAWARE, INC., a corporation (formerly known)
as Pacific Cascade Land Company), JOHN SPOOR)
BROOME, HASKELL BRUMMETT, DWANA M. BRUMMETT,)
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, CUS 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. COYNE, 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; NOLA)
ELLSWORTH, REX ELLSWORTH; EQUITABLE TRUST)
4 COMPANY, a corporation, as Trustee under deeds)
of trust; LANCE ESTES, MAUDE M. FARRAR, ALAN M.)
5 FIELDS, MARDELL S. FIELDS; FIRST AMERICAN TITLE)
6 COMPANY, a corporation, as Trustee under deed)
of trust; FIRST WESTERN BANK & TRUST COMPANY,)
7 ROSE B. FORD, W. J. FORD, DOROTHY FOSTER, LEWIS)
FOSTER, JULIA FOTIS, WILLIAM FOTIS, BILLIE J.)
8 FOWLER, EDMOND FOWLER, KENNETH FREDERICK, FRED-)
LITE BLOCKS, INC., a corporation, BETTY LOU)
9 FREEMAN, ROBERT B. FREEMAN, JR., EMIL FRIETAG,)
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 GORDEAN,)
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. HAND, 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 appearing 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. JOHN-)
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 MARIGOLD, LEE MARIGOLD, ANITA)
32 F. MARTIN, C. L. MARTIN, METTLER & ARMSTRONG, a)

1 partnership, BYRON MERCHANT, CHARLES METZLER,)
MARGARET METZLER, MINARET INVESTMENTS, INC.,)
2 a corporation, MOJAVE PUBLIC UTILITY DISTRICT,)
a body corporate and politic, MONOLITH PORT-)
3 LAND CEMENT COMPANY, a corporation, MARY)
ALICE MONROE, ROBERT MONROE, MOTOR CENTER,)
4 a corporation, EARL MURRAY, EMALINE MUSSA,)
IRMA NORIEGA, JOSEPH F. NORIEGA, O. D. ODIN,)
5 RUTH M. ODIN, JEAN B. OHANNESON, JOHN G.)
OHANNESON, FRED S. OKEN, OKEN PROPERTIES,)
6 INC., PACIFIC PROPERTIES FUND, a limited)
partnership, FRED D. PATTERSON, LAVIECE)
7 PATTERSON, AGNES PEARSON, E. H. PEARSON,)
EDITH PETRIE, ROBERT PETRIE, EDNA C. PEY-)
8 TON, HUGH J. PEYTON, SUSAN PHILLIPS, PINE)
CANYON RANCHOS, a partnership, CHARLES)
9 POMEROY, BARBARA L. POMEROY, CHARLES)
POWELL, ELIZABETH POWELL, JOSEPH D.)
10 PRINTUP, ANNE REAVES, LAVONIA REEVES,)
WILLIAM REEVES, JOHN C. REAVES, JR.,)
11 ALICE KNOX REISWIG, R. JAMES REISWIG,)
VIRGINIA RICKETT, WILBUR RICKETT, JEFFERSON)
12 ROBBINS, LILLIAN ROBBINS, WILLIAM ROBINSON)
aka WILLIAM ROBISON, IMOGENE ROBINSON aka)
13 IMOGENE ROBISON, ALBERT ROSEN; ALBERT ROSEN,)
Trustee for the ALBERT ROSEN and RITA ROSEN)
14 TRUST No. 1, for MARTIN E. ROSEN, Trust of)
September 2, 1964; ALBERT ROSEN, Trustee)
15 for the ALBERT ROSEN and RITA ROSEN TRUST)
No. 2, for BRUCE E. ROSEN, Trust of Sep-)
16 tember 2, 1964; ALBERT ROSEN, Trustee for)
the ALBERT ROSEN and RITA ROSEN TRUST No.)
17 3, for SHEILA I. ROSEN, Trust of September)
2, 1964; RITA ROSEN, FRANK RUFF, RUTH)
18 RUFF, MELVIN RUFF, FRANCES RUFF, S. A.)
CAMP GINNING COMPANY, as Trustee under)
19 deed of trust, SVH INVESTMENTS, a cor-)
poration, SAND CANYON PROPERTIES, a part-)
20 nership, ELVIN SANDERS, JUANITA SANDERS,)
HAROLD SCHLOTTHAUER, MADGE Q. SCHLOTTHAUER,)
21 ALBERT SCHMIDT, ETHEL E. SCHMIDT, ERNEST)
SCHNAIDT, HAROLD SCHNAIDT, SCHULTZ ENTER-)
22 PRISES, a corporation, ROBERT SCHULTZ,)
LEON SCHWARTZ; LEON SCHWARTZ, Trustee)
23 for the LEON SCHWARTZ TRUST No. 1; LEON)
SCHWARTZ, Trustee for the LEON SCHWARTZ)
24 TRUST No. 2; CHESTER SCOTT, NOREEN SCOTT,)
FRED SEAMEN; SECURITY FIRST NATIONAL BANK)
25 & TRUST COMPANY, as Trustee under deed of)
Trust; SECURITY TITLE COMPANY, as Trustee)
26 under deeds of trust; ALICE CAZACUS)
SEEGER, SHASTA LANDS, a joint venture,)
27 WILLIAM SHERMAN, ALLAN W. SMALL, WINI-)
FRED SMALL, DESSIE SMITH, EVELYN SMITH,)
28 SOUTHERN PACIFIC TRANSPORTATION COMPANY)
(formerly Southern Pacific Railroad Com-)
29 pany), a corporation, SPENCER CALIFORNIA,)
a corporation, VAUGHN SQUIRES, VIVIAN)
30 SQUIRES, DANIEL C. STEELMAN, PAULETTE C.)
STEELMAN, DANIEL J. STERNAD, EDNA E.)
31 STERNAD, DARRELL STEVENS, LOUISE E.)
STEVENS, GIDEON STREYLE, MARIE STREYLE,)
32 SUBSTANTIAL ESCROW COMPANY, a corporation,)

1 COZETTE SULLIVAN, GRANT SULLIVAN,)
MORTIMER SULLIVAN, SUSAN SULLIVAN,)
2 SUMMIT LIME COMPANY, a corporation,)
G. M. SUMMY, NITA SUMMY, ANN B. SYDNOR,)
3 aka ANN B. SNYDER, WILLIAM D. SYDNOR,)
aka WILLIAM D. SNYDER, TECHNOLOGY)
4 DEVELOPMENT, INC., a corporation,)
TEHACHAPI LUMBER COMPANY, a corpora-)
5 tion, TEHACHAPI MOUNTAIN LAND AND)
ORCHARD CO., a corporation, TEHACHAPI)
6 ORCHARDS, INC., a corporation, TEHA-)
CHAPI PUBLIC CEMETERY DISTRICT, a)
7 political subdivision, TEHACHAPI)
UNIFIED SCHOOL DISTRICT, MANUEL)
8 TERRAZAS, MARIA TERRAZAS; TITLE)
INSURANCE & TRUST COMPANY, as Trustee)
9 under deeds of trust; EDWARD L. TOMPKINS)
HELEN TOMPKINS; TRANSAMERICA TITLE)
10 COMPANY, as Trustee under deeds of)
trust; ENDELVA TROY, VINCENT J. TROY,)
11 TUMBLIN COMPANY, a partnership, MALI)
TUMBLIN aka AMELIA TUMBLIN, C. R.)
12 TUMBLIN; UNITED CALIFORNIA BANK, as)
Trustee under deed of trust; RICHARD)
13 VAN BURKLEE, DICK VANDER MAYDEN, OPAL)
L. VANDER MAYDEN, MURIEL VAN MATRE,)
14 V. A. VAN MATRE, EDWIN J. VAN ZANDT,)
JENNIE B. VAN ZANDT, BARBARA G. VON)
15 PLATEN, W. G. VON PLATEN, JEWELL)
VUKICH, PETE VUKICH, JEROME WARNER,)
16 LAURA WARNER, WASCO DEVELOPMENT COM-)
PANY, a partnership, NORMAN WEINTRAUB,)
17 EMMA WELDEN aka ERMA WELDEN, HOWARD)
WELDEN, WEST TEHACHAPI MUTUAL WATER)
18 COMPANY, a corporation, M. R. WHITE,)
MILDRED WHITE, WHITE OAK KNOLLS WATER)
19 CORPORATION, a corporation, HARRY)
WEITSMA, EDWARD M. WIGGINS, MARY)
20 ELLEN WIGGINS, ALEX WILLIAMSON, DANIEL)
WILLIAMSON, THOMAS WILLIAMSON, ASA Z.)
21 WILSON, ESTHER M. WILSON, LORA M.)
WOODS, ELLIOTT S. WYMAN, ROSALIE J.)
22 WYMAN, LOUISE YEAGER aka LOUISE MON-)
TOT, ILLA YRIBARREN, LOUIS YRIBARREN,)
23 ALBERT ZDENEK, MARILEE ZDENEK.)
24)

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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 "6" 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.

JRB 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 constitut-
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 juris-
15 diction 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 such 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 32 South, Range 33 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)
11	
12 Frank Armstrong, Phyllis Armstrong (Mettler & Armstrong, a partnership, tenant)	177
13	
14 Ashtown Water Company, a corporation	42
15 Leroy Bassler and Margaret Bassler	4
16 J. G. Bisbee	701
17 Christopher C. Brevidore and Ida Brevidore	43
18 Donald R. Burgeis and Betty Jean Burgeis* (Department of Veterans Affairs of the State 19 of California as holder of legal title under 20 Cal Vet loan)	24
21 John O. Christopher and Virginia E. Christopher Harold Schlotthauer and Madge Q. Schlotthauer	27
22	
23 Lewis M. Dye, Sr.*	3
24 Alan M. Fields, Mardell S. Fields, Norman Weintraub, Albert Zdenek and Marilee Zdenek	77
25	
26 Sidney Gilreath and Lorene Gilreath	3
27 Domenicio Girauda, aka Domenicio Girauda*	3
28 Golden Hills Community Services District,** a body corporate and politic	159
29	
30 Frank Goodrick and Moneta M. Goodrick	19
31 Grand Oaks Land Company, a corporation, Grand Oaks Water Company, a corporation	6
32 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	335
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	Elmer 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 Manley 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 Reaves, John C. Reaves, Jr., Virginia Rickett, Wilbur Rickett, C. R. Tumblin, Mali 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.),	98
5	a corporation	
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.	355
11	Hayes, and Gertrude D. Carroll (successors in interest to Kiethley-McPherrin, Inc.)	
12		
13	G. M. Summy and Nita Summy	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. Hellman all as Co-trustees of the S. H.	340
19	Cowell Foundation	
20	West Tehachapi Mutual Water Company, a corporation	3
21	M. R. White and Mildred White*	4
22	Harry Wietsma	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 Brummett and Dwana M. Brummett	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	Domencio Giraudo aka Domenico Giraudo	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 Hemphil and Alice Hemphil, 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 F. 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. Printup	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 Noreen 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 Erma Welden	3
25	M. R. White and Mildred White	3
26	Edward M. Wiggins and Mary Ellen Wiggins	3
27	Lora 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 32 East and Range 33 East, in the Canyon of Brite
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 32 South, Range 34 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 Pumpers.

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 Monolith
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 19 1971, 1971.

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JAY R. BALLANTYNE
Judge of the Superior Court

TEHACHAPI 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 $S\frac{1}{4}$ 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 $\frac{1}{4}$ corner of Section 11, T. 32 S., R. 34 E.,
M.D.M.;

thence Northerly to the center $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 NW 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 29;
thence Northerly to the center $\frac{1}{4}$ corner of said Section 29;
thence Westerly to the NE corner of the West $\frac{1}{2}$ of the SW $\frac{1}{4}$ of said
Section 29;
thence Southerly to the SE corner of said West $\frac{1}{2}$ of the SW $\frac{1}{4}$ of
Section 29;
thence Southerly to the SE corner of the NW $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section
32, T. 31 S., R. 34 E., M.D.M.;
thence Westerly to the SW corner of said NW $\frac{1}{4}$ of the NW $\frac{1}{4}$ of
Section 32;
thence Southerly to the NW corner of the S $\frac{1}{2}$ of the SW $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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.D.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 $\frac{1}{4}$ corner of Section 9, T. 32 S., R. 34 E., M.D.M.;

thence Southerly to the center $\frac{1}{4}$ 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 $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 33;
thence Easterly to the SE corner of said NE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 33;
thence Southerly to the East $\frac{1}{4}$ corner of said Section 33;
thence Easterly to the NE corner of the NW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 34, T. 32 S., R. 34 E., M.D.M.;
thence Southerly to the SE corner of said NW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 34; thence Easterly to the NE corner of the South $\frac{1}{2}$ of the SW $\frac{1}{4}$ of said Section 34;
thence Southerly to the South $\frac{1}{4}$ 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 $\frac{1}{4}$ corner of said Section 33;

thence Northerly to the $N\frac{1}{4}$ 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 $S\frac{1}{4}$ 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 $W\frac{1}{4}$ 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 $S\frac{1}{4}$ 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 $SW\frac{1}{4}$ of said
Section 36;

thence Westerly 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 $\frac{1}{2}$ 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 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 $\frac{1}{2}$ 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 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 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 $\frac{1}{4}$ 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.

TEHACHAPI 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 $\frac{1}{4}$ corner of Section 34, T. 12 N., R. 14 W., S.B.M.;

thence Easterly to the SE corner of the SW $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 35, T. 12 N., R. 14 W., S.B.M.;

thence Northerly to the NE corner of the NW $\frac{1}{4}$ of the NW $\frac{1}{4}$ 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 $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 33, T. 32 S., R. 34 E., M.D.M.;

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 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 $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 21, T. 32 S., R. 34 E., M.D.M.;

thence Northerly to the NE corner of said SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 1900 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 $\frac{1}{4}$ 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 $W\frac{1}{2}$ of the $SW\frac{1}{4}$ of Section 31;
thence Westerly to the $W\frac{1}{4}$ corner of said Section 31;
thence Northerly to the SE corner of the $NE\frac{1}{4}$ of the $NE\frac{1}{4}$ of Section
36, T. 31 S., R. 33 E., M.D.M.;
thence Westerly to the SW corner of said $NE\frac{1}{4}$ of the $NE\frac{1}{4}$ of Section 36;
thence Northerly to the NW corner of said $NE\frac{1}{4}$ of the $NE\frac{1}{4}$ of Section 36;
thence Westerly to the $N\frac{1}{4}$ corner of said Section 36;
thence Northerly to the $N\frac{1}{4}$ 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 $E\frac{1}{4}$ corner of Section 27, T. 31 S., R. 33 E.,
M.D.M.;
thence Westerly to the center $\frac{1}{4}$ corner of said Section 27;
thence Southerly to the $S\frac{1}{4}$ corner of said Section 27;
thence Westerly to the SW corner of said Section 27;
thence Westerly to the $N\frac{1}{4}$ corner of Section 33, T. 31 S., R. 33 E.,
M.D.M.;
thence Southerly to the $S\frac{1}{4}$ 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 $N\frac{1}{4}$ corner of said Section 9;
thence Southerly to the center $\frac{1}{4}$ corner of said Section 9;
thence Westerly to the $W\frac{1}{4}$ corner of said Section 9;
thence Westerly to the center $\frac{1}{4}$ corner of Section 8, T. 32 S.,
R. 33 E., M.D.M.;
thence Southerly to the $S\frac{1}{4}$ corner of said Section 8;
thence Southerly to the center $\frac{1}{4}$ corner of Section 17, T. 32 S.,
R. 33 E., M.D.M.;

thence Westerly to the $W\frac{1}{4}$ corner of said Section 17;
thence Northerly to the NW corner of said Section 17;
thence Westerly to the $S\frac{1}{4}$ corner of Section 7, T. 32 S., R. 33 E.,
M.D.M.;
thence Northerly to the center $\frac{1}{4}$ corner of said Section 7;
thence Westerly to the $W\frac{1}{4}$ corner of said Section 7;
thence Northerly to the NW corner of said Section 7;
thence Northerly to the $E\frac{1}{4}$ corner of Section 1, T. 32 S., R. 32 E.,
M.D.M.;
thence Westerly to the $W\frac{1}{4}$ corner of said Section 1;
thence Westerly to the center $\frac{1}{4}$ corner of Section 2, T. 32 S.,
R. 32 E., M.D.M.;
thence Southerly to the $S\frac{1}{4}$ corner of said Section 2;
thence Westerly to the SW corner of said Section 2;
thence Southerly to the $E\frac{1}{4}$ corner of Section 10, T. 32 S., R. 32 E.,
M.D.M.;
thence Westerly to the center $\frac{1}{4}$ corner of said Section 10;
thence Southerly to the $S\frac{1}{4}$ corner of said Section 10;
thence Southerly to the center $\frac{1}{4}$ corner of Section 15, T. 32 S.,
R. 32 E., M.D.M.;
thence Westerly to the $W\frac{1}{4}$ corner of said Section 15;
thence Southerly to the SW corner of said Section 15;
thence Southerly to the $W\frac{1}{4}$ corner of Section 22, T. 32 S., R. 32 E.,
M.D.M.;
thence Easterly to the center $\frac{1}{4}$ corner of said Section 22;
thence Southerly to the $S\frac{1}{4}$ corner of said Section 22;
thence Southerly to the $S\frac{1}{4}$ corner of Section 27, T. 32 S., R. 32 E.,
M.D.M.;
thence Southerly to the $S\frac{1}{4}$ 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 $\frac{1}{4}$ corner of Section 18, T. 11 N., R. 15 W.,
S.B.M.;

thence Easterly to the E $\frac{1}{4}$ 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 $\frac{1}{4}$ corner of said Section 17;

thence Easterly to the SE corner of said Section 17;

thence Northerly to the E $\frac{1}{4}$ corner of said Section 17;

thence Easterly to the E $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ corner of said Section 18;

thence Northerly to the NE corner of said Section 18;

thence Easterly to the S $\frac{1}{4}$ corner of Section 8, T. 11 N., R. 14 W.,
S.B.M.;

thence Northerly to the center $\frac{1}{4}$ corner of said Section 8;
thence Easterly to the E $\frac{1}{4}$ corner of said Section 8;
thence Northerly to the NE corner of said Section 8;
thence Easterly to the S $\frac{1}{4}$ corner of Section 4, T. 11 N., R. 14 W.,
S.B.M.;
thence Northerly to the center $\frac{1}{4}$ corner of said Section 4;
thence Easterly to the E $\frac{1}{4}$ 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 $\frac{1}{4}$ corner of said Section 34, said $\frac{1}{4}$ corner
being the point of beginning for this description.

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BRITE CREEK CANYON SALVAGE AREA

The area designated Brite Creek Canyon referred to in paragraph 1 of the Judgment commences in the Northwest Quarter of Section 18, Township 32 South, Range 33 East, M.D.B.M and meanders Northeasterly through portions of the South Half of the Southwest Quarter of Section 7, Township 32 South, Range 33 East, M.D.B.M., to the place where Brite Creek Canyon joins Tehachapi Creek near the dividing line between said South Half of said Southwest Quarter and the South Half of the Southeast Quarter of said Section 7. Said canyon ranges in width up to a maximum of not more than 500 feet at its widest point.

(VERIFICATION -- 446, 2015.5 C. C. P.)

STATE OF CALIFORNIA }
COUNTY OF } ss.

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 -- 1013a, 2015.5 C. C. P.)

STATE OF CALIFORNIA }
COUNTY OF LOS ANGELES } ss.

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. PHERRIN

*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
 California Federal Bldg.
 10680 West Pico Blvd.
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 (213) 870-0308

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 Ben Chatoff

VICTOR BEWLEY
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Asa Z. Wilson
 Esther M. Wilson

WILLIAM KUHS
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 Wetteroth & Hitchcock
 1712 - 19th Street
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 (805) 327-8651

Southern Pacific Transportation
 Company (formerly Southern Pacific
 Railroad Company), a corporation

ALBERT M. LEDDY
 Bradley, Wagy, Bunker, Hislop,
 Gibbons and Leddy
 2821 "H" Street
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 (805) 327-5503

Anne Reaves
 John C. Reaves, Jr.
 Virginia Rickett
 Wilbur Rickett
 Tumblin Company, a partnership
 C. R. Tumblin
 Mali Tumblin aka Amelia Tumblin

CONRON, HEARD & JAMES
 Suite 7 Haberfelde Bldg. Arcade
 Bakersfield, Ca 93301
 (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.
 Banducci Road
 Tehachapi, Ca 93561
 (805) 822-4623

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 Mayden
 Opal L. Vander Mayden
 Barbara G. Von Platen
 W. G. Von Platen
 Norman Weintraub
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 Marilee Zdenek

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a political subdivision
(Copy also served on East Kern
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Tehachapi, California, and on
Tehachapi Public Cemetery District
at Old Town Road, Tehachapi, Ca.)

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Wasco Development Company, a
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Eric J. & Margaret Kragenbrink
Ashtown Water Company, a corporation
Sam Ashe
W. J. and Rose B. Ford
Clyde & Allene Beckham
Clinton A. & Evelyn Bush

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FILED NOVEMBER 20, 1973

RECORDED NOVEMBER 20, 1973

BOOK 288, 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,)	NO. 97210
)	AMENDMENT TO JUDGMENT
Plaintiff,)	(Enjoining extractions in
vs.)	excess of specified quantity,
(A) CITY OF TEHACHAPI, a municipal corporation, et al.,)	appointing Watermaster and
Defendants.)	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

KENTH E. WHELAN, JR., INC.
ATTORNEYS AT LAW
2918 S. PAINTER AVE.
POST OFFICE BOX 4189
WHITTIER,
CALIFORNIA 90607

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	51 1/3
24	Weintraub, Albert Zdenek and Marilee Zdenek	
25	Golden Hills Community Services District, a body corporate and politic	106
26	Frank Goodrick and Moneta M. Goodrick	12 2/3
27	Grand Oaks Water Company, a corporation	4
28	Henry B. Hand	26 2/3

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. Summy and Nita Summy	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	Max 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	Lewis M. Dye, Sr.*	3
14	Sidney Gilreath and Lorene Gilreath	3
15	Domenicio Girauda, aka Domenico Girauda*	3
16	Robert W. Karpe and Phyllis J. Karpe*	3
17	Simon Keel and Alice Keel	3
18	A. F. Leiva and Margaret Leiva*	3
19	Allan W. Small and Winifred Small (successors in interest to Wallace K. Love and Gloria D. Love)	3
20		
21	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
22		
23	White Oak Knolls Water Corporation, a corporation	3
24	West Tehachapi Mutual Water Company, a corporation	3
25	Harry Wietsma	3
26	Louise Yeager	3
27		
28	*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 Brummett and Dwana M. Brummett	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	Domencio 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

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 F. Maher (successors in interest to Carl Ledyard and Christine M. 6 Ledyard)	3
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 Vet Loan, First Western Bank and Trust Co., 10 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 Erma 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

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 Exchangor during a particular
15 calendar year and allocated among Exchangees shall be deemed
16 pumped by the Exchangor during that calendar year, to the extent
17 imported water is taken by the Exchangor 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 Exchangor may extract from Tehachapi Basin such additional
4 requirement, but the Exchangor 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 Exchangor 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 ("Exchangors") 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 (i) "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.,
a corporation
28 (3) Jacobsen Orchards, Inc., a
corporation

- 1 (4) Joseph F. Noriega and Irma Noriega
- 2 (5) Tehachapi Orchards, Inc.,
a corporation
- 3 (6) Fred Patterson
- 4 (7) Grant Sullivan and Cozette Sullivan,
- 5 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 Tehachapi 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 Exchangors 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 Exchangor. 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: Exchangors and Exchangees. Each Exchangor, upon being
23 designated as an Exchangor 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 Exchangee 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 Exchangor 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 Exchangor reduces its pumping below its otherwise
13 Allowed Pumping Allocation for the calendar year, such Exchangor
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 Exchangor 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 Exchangor 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 changor" 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 Exchangor 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 Exchangor and Requests by Exchangees. No
19 later than February 1 of each calendar year, commencing with 1974,
20 each Exchangor 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 Exchangor. 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 Exchangor 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 Exchangor is not designated by the Watermaster as an Exchangor 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 Exchangors for Calendar Year. On or
24 prior to March 1 of each calendar year, the Watermaster shall
25 designate those Exchangors who shall serve as Exchangors for
26 that calendar year by written notice to them. In selecting
27 such Exchangors the Watermaster shall attempt to utilize the
28 least number of Exchangors necessary and apply such other

1 criteria as may be relevant. No Exchangor shall be designated
2 as an Exchangor 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 Exchangor 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 Exchangor shall be designated as an
10 Exchangor for a calendar year if the same will result in "undue
11 hardship" (see subparagraph (a)(viii)). If an Exchangor 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(d).

15 (g) Notification of Honoring of Exchange Pool Requests
16 and Allocation of Subscriptions Among Exchangors for Calendar
17 Year. On or before March 1 of each calendar year the Watermaster
18 shall notify each Exchangee of the quantity of Exchange Pool
19 water which it has purchased, and shall notify each Exchangor
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 Exchangor'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 Exchangors 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 Exchangor,
11 for the calendar year of schedule of payments from that Exchangor
12 with respect to its required subscription.

13 (h) Exchange Pool Price to be Paid by Exchangees;
14 Amounts to be Paid by Exchangors 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 Exchangor 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>
20	
21 a) Plaintiff DISTRICT rate	\$ 35.00
22 b) Watermaster administration	
23 assessment (assumed)	<u>1.00</u>
	\$ 36.00
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 Exchangors. Each Exchangor
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 party.

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

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ATTORNEYS AT LAW
7915 S. PAINTER AVE.
POST OFFICE BOX 4159
WHITTIER,
CALIFORNIA 90607

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

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 $N\frac{1}{4}$ 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 $S\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ of said
Section 36;
thence Westerly 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 $S\frac{1}{2}$ 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 $NE\frac{1}{4}$ 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 $E\frac{1}{2}$ 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 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 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 $\frac{1}{4}$ 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.

PARTY DOMESTIC WELLS

PARTY

WELL NUMBER

Lester J. Anderson and Leatta M. Anderson	32S/33E - 30B1
Sam Ashe and Esther Ashe	32S/33E - 22C1
Alverda Bassler and George Bassler	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 Brummett & Dwana M. Brummett	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 - 25N2
Lewis M. 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
Domencio 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

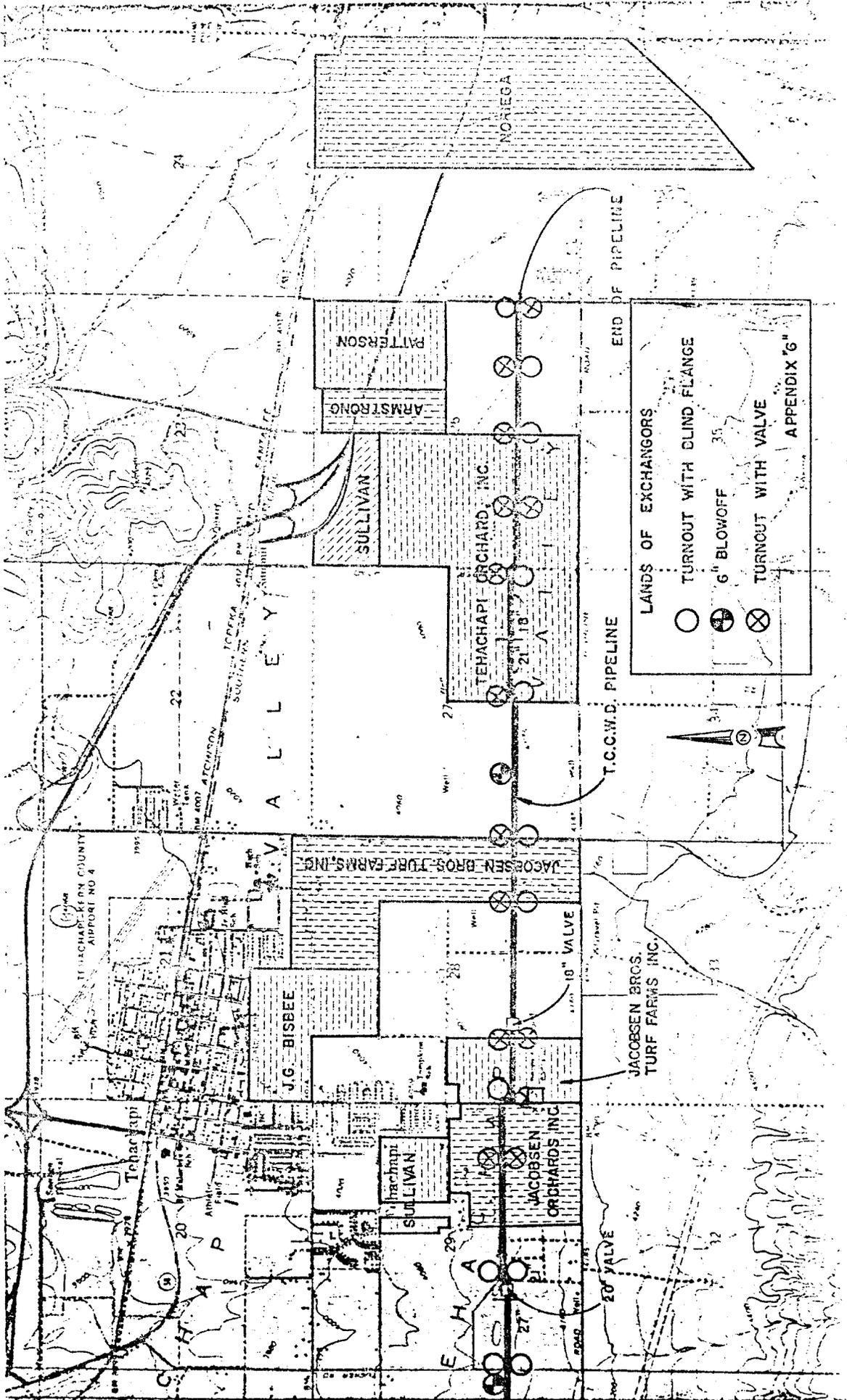
where water rights adjudicated to a particular person in a particular case were developed on two (2) or more parcels if any such transfer of water rights involves only the parcels on which the total water right quantities were developed.

PARTY

WELL NUMBER

Dessie Smith	32S/33E - 29D4
Daniel J. Sternad & Edna E. Sternad	11N/15W - 1J1
Gideon Streyle & Marie Streyle	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 Mayden & Opal Vander Mayden	32S/32E - 12G1
Pete Vukich & Jewell Vukich	32S/32E - 13N1
Jerome Warner & Laura Warner	32S/33E - 30B3
Harold Welden & Enma Welden aka Erma Welden	32S/32E - 26Q2, 26Q4
M. R. White & Mildred White	32S/33E - 20N5
Edward M. Wiggins & Mary Ellen Wiggins	32S/33E - 19R4
Lora M. Wood	32S/32E - 23A1, 23A2

() Well Destroyed



LANDS OF EXCHANGORS

- TURNOUT WITH BLIND FLANGE
- ⊕ 6" BLOWOFF
- ⊗ TURNOUT WITH VALVE

APPENDIX "6"

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.^{/3} 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 uses 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).

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 black ink, appearing to read "John 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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Figure 2 - Annual Groundwater Production

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Figure 5 - Annual Total Water System Production

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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

1. 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 (BVCS D; 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 BVCS D 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, BVCS D 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 ± 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 ½ 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 ± 200 to 250 AFY.

It is likely that the District's alluvial production capability could be increased to ± 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.

7. REFERENCES

- BCI Geonetics, 1988a. Bear Valley Phase I, Progress Report: unpublished consultant report prepared for Bear Valley community Services District.
- BCI Geonetics, 1988b. Ground Water Exploration Program, Final Report, Bear Valley Community Services District: unpublished consultant report prepared for Bear Valley community Services District.
- BCI Geonetics, 1990. Report on Groundwater Resource Development in the Upper Valley for the Bear Valley Community Services District, Bear Valley, California: unpublished consultant report prepared for Bear Valley community Services District.
- Brown, Glenn A., and Associates, 1969. An Investigation of Water Sources in Bear Valley, Calif. and their Development Potential: unpublished consultant report prepared for David A. Dering & Associates Engineers, Monterey Park, California.
- BSK & Associates, 1981. Geophysical Investigation of Bear Valley for Water Resource Development.
- Burbank, D.W., and Whistler, D.P., 1987, Temporally constrained tectonic rotations derived from magnetostratigraphic data: Implications for the initiation of the Garlock fault, California: *Geology*, v. 15, p. 1172-1175.
- Dering, David A., & Associates, 1970. Geologic Map, Bear Valley Ranch. 1:24,000
- Dibblee, T.W., Jr., and Warne, A.H., 1970, Geologic map of the Cummings Mountain Quadrangle, Kern County, California: U.S. Geol. Survey Map I-611, scale 1/62,500 (with text).
- Fugro West, Inc., 1996. Water Supply Management Planning, Phase I Results, Bear Valley Community Services District, Tehachapi, California, unpublished consultant report prepared for Bear Valley Community Services District.
- Fugro West, Inc., 1997. Hydrogeologic Evaluation of the Bear Valley Springs Alluvial Ground Water Basins, unpublished consultant report prepared for Bear Valley Community Services District.
- Krieger & Stewart, 1981. Bear Valley Community Services District, Study of Water Requirements, Sources of Water Supply, and Wells and Pumping Plant Utilization, unpublished consultant report to BVCS D, October 1981.

- Krieger & Stewart, 1987. Portion of General Plan Update Report, Chpt. 2 -- Future Water Demands, Chpt. 3 -- Water Supply, Chpt. 4 -- Distribution System Analysis, reports and updates to BVCSD.
- Krieger & Stewart, 1994. Bear Valley Community Services District, Imported Water Supply, unpublished consultant report to BVCSD, August, 1994.
- Mann, J.F., Jr., 1971, Safe Yield -- Cummings Basin: unpublished consultant report.
- Michael-McCann-Associates, 1962, Geology Ground-Water Survey, Tehachapi Soil Conservation District: unpublished consultant report submitted to the Tehachapi Soil Conservation District.
- Sames, D., Saleeby, J., Ross, D., and Kistler, R., 1983, Cretaceous igneous and metamorphic deformational events of the southern Sierra Nevada, California: Geol. Soc. Am. Abs. W. Prog., v. 15, p. 294-295.
- Stein, R. And Thatcher, W., 1981, Seismic and a seismic deformation associated with the 1952 Kern County, California, earthquake and relationship to the Quaternary history of the White Wolf fault: Jour. Geophy. Res., v. 86, #B6, p. 4913-4928.

BASED ON NUMBERS OF REGISTERED VOTERS

Year	Number of Registered Voters	Average Annual Growth (%/yr)	Delivered Water			Unaccounted for Water AF/yr	Total Water Delivery Requirement AF/yr
			Residential AF/yr	Commercial AF/yr	Irrigation/Lake Fill AF/yr		
1996	2,430	4.0%	656	50	150	103	960
2000	2,770	3.5%	748	57	150	115	1070
2005	3,120	2.5%	842	64	150	127	1190
2010	3,510	2.5%	948	72	150	140	1320
2015	3,860	2.0%	1042	79	150	153	1430
2020	4,050	1.0%	1094	83	150	159	1490
2025	4,260	1.0%	1150	88	150	167	1560
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 AF/yr	Total Water Delivery Requirement AF/yr
			Residential AF/yr	Commercial AF/yr	Irrigation/Lake Fill AF/yr		
1996	5,540	4.5%	665	50	150	104	970
2000	6,420	4.0%	770	58	150	117	1100
2005	7,550	3.5%	906	68	150	135	1260
2010	8,310	2.0%	997	75	150	147	1370
2015	8,930	1.5%	1072	81	150	156	1460
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 AF/yr	Total Water Delivery Requirement AF/yr
			Residential AF/yr	Commercial AF/yr	Irrigation/Lake Fill AF/yr		
1996	1,990	3.2%	637	50	150	100	940
2000	2,240	3.2%	717	56	150	111	1040
2005	2,530	2.6%	810	64	150	123	1150
2010	2,800	2.1%	896	70	150	134	1260
2015	3,070	1.9%	982	77	150	145	1360
2020	3,300	1.5%	1056	83	150	155	1450
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 ₃)	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 ₃)	mg/L	NS	NS	162.7	89.0-220.0
	Hydroxide	mg/L	NS	NS	<0.8	<0.8
	Carbonate (CO ₃)	mg/L	NS	NS	3.0	<2.6-21.0
	Bicarbonate (HCO ₃)	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 ₃)	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	2.0-18.0
	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	<50.01-119.0
	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 tests	Pos. Tests	% pos.	Period
	No. Of Violations		104	1	1	Jan-Dec
			0	1		

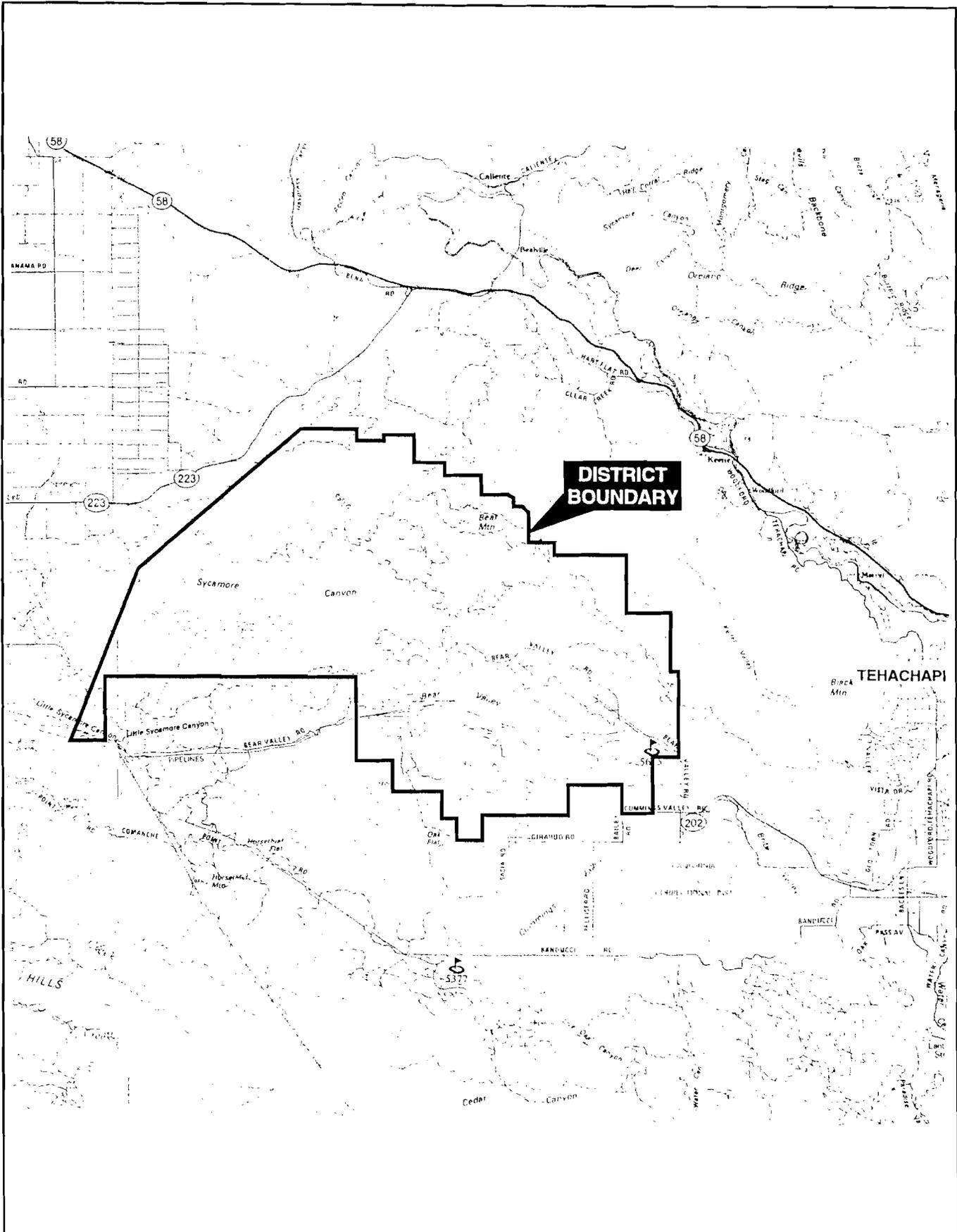
mg/L = Milligrams per liter=parts per million. Ug/L = Micrograms per liter = Parts per billion.
NS = No Standard. < = Less than.

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

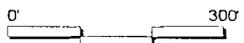


DISTRICT BOUNDARY

TEHACHAPI

DISTRICT BOUNDARY MAP

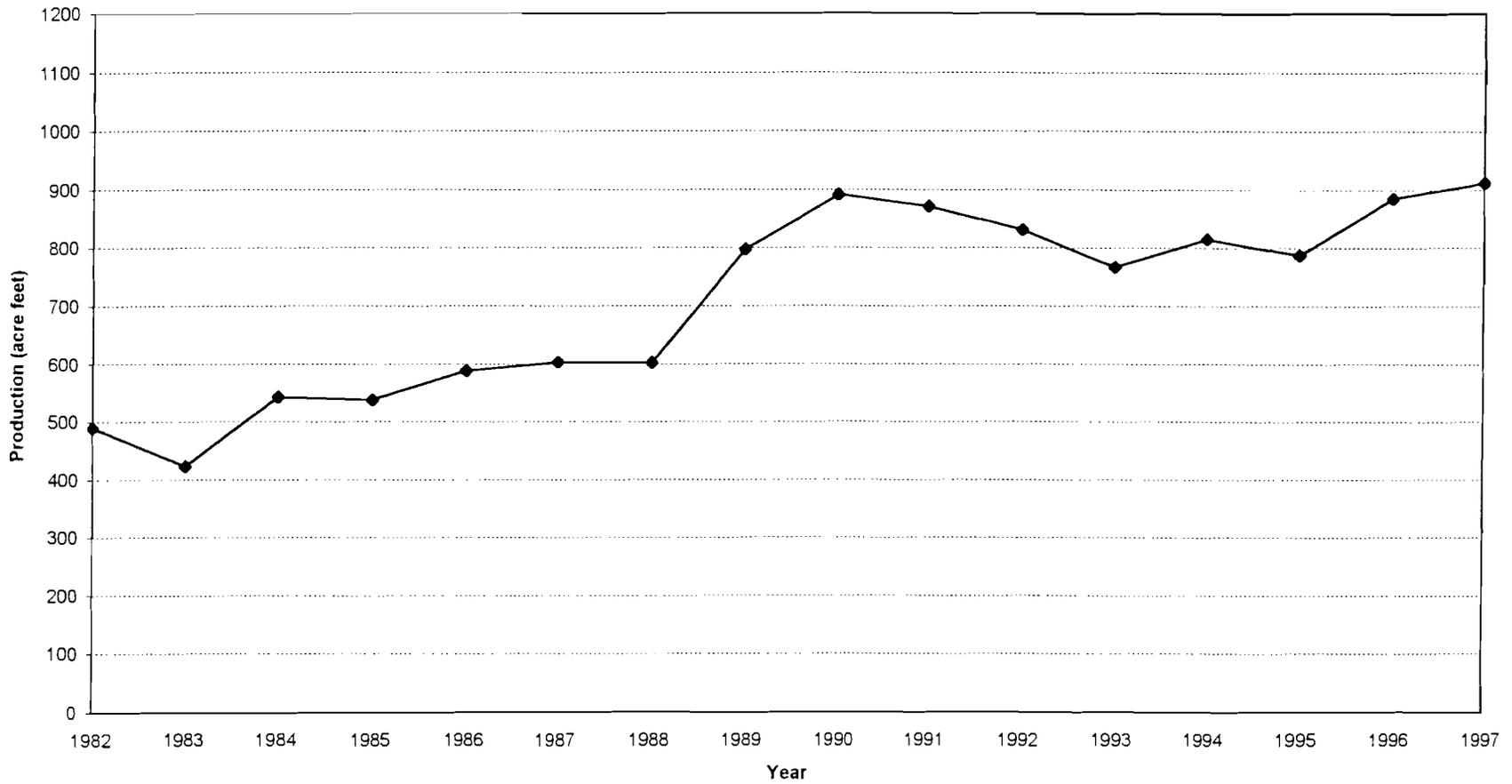
Figure 1



**BEAR VALLEY COMMUNITY SERVICES DISTRICT
GROUNDWATER MANAGEMENT PLAN**

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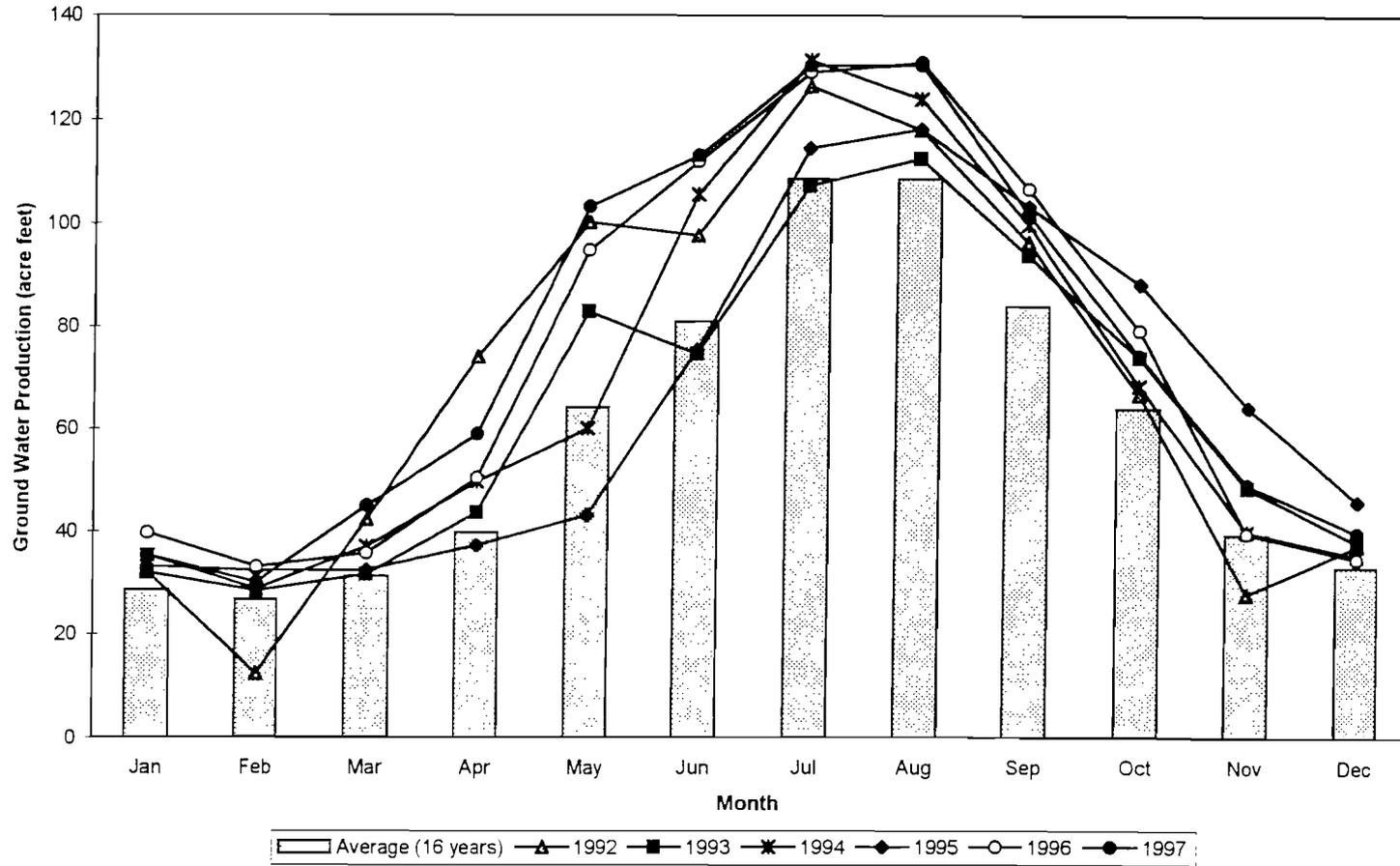




ANNUAL GROUNDWATER PRODUCTION

BEAR VALLEY COMMUNITY SERVICES DISTRICT
GROUNDWATER MANAGEMENT PLAN

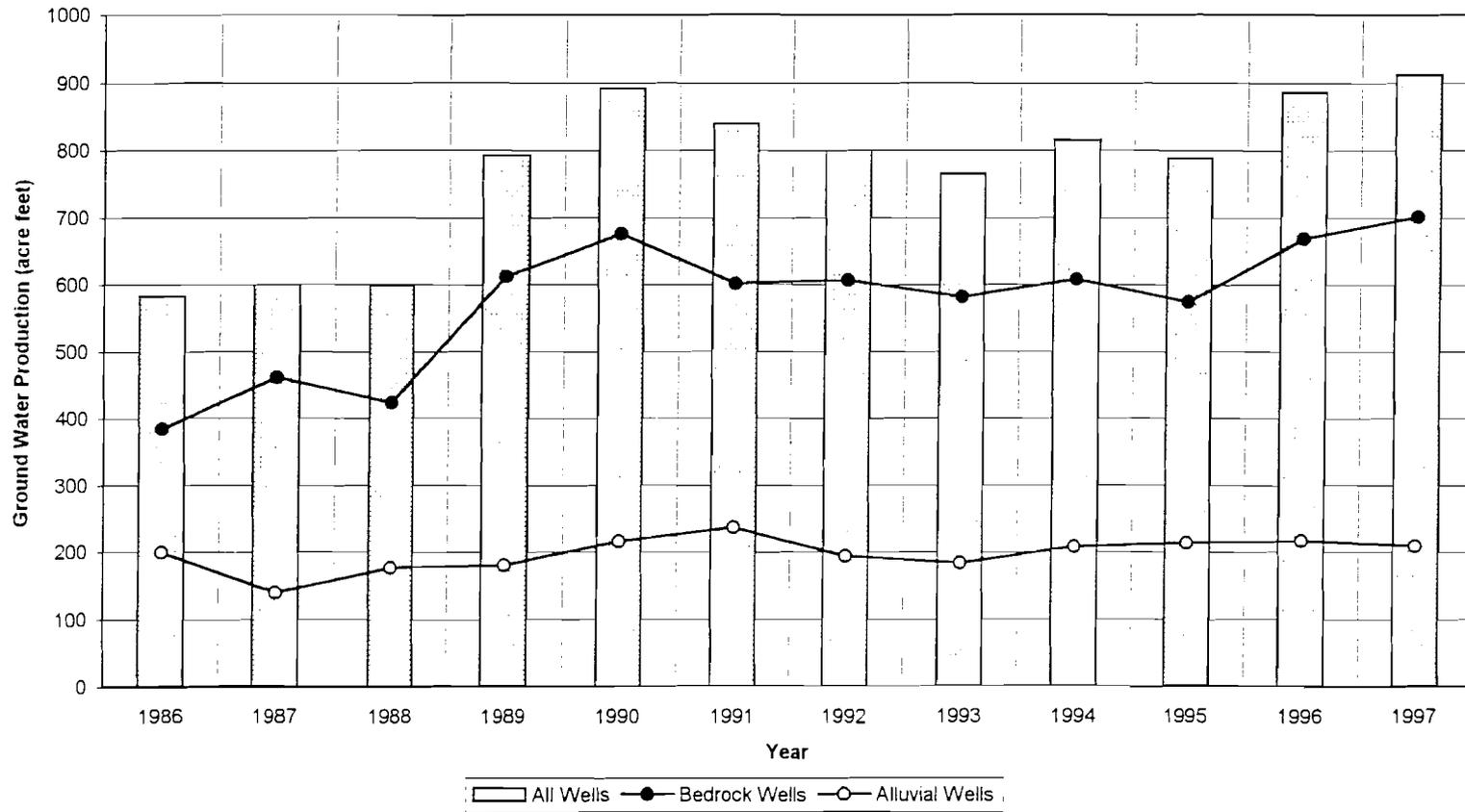
Figure 2



MONTHLY GROUNDWATER PRODUCTION

BEAR VALLEY COMMUNITY SERVICES DISTRICT
GROUNDWATER MANAGEMENT PLAN

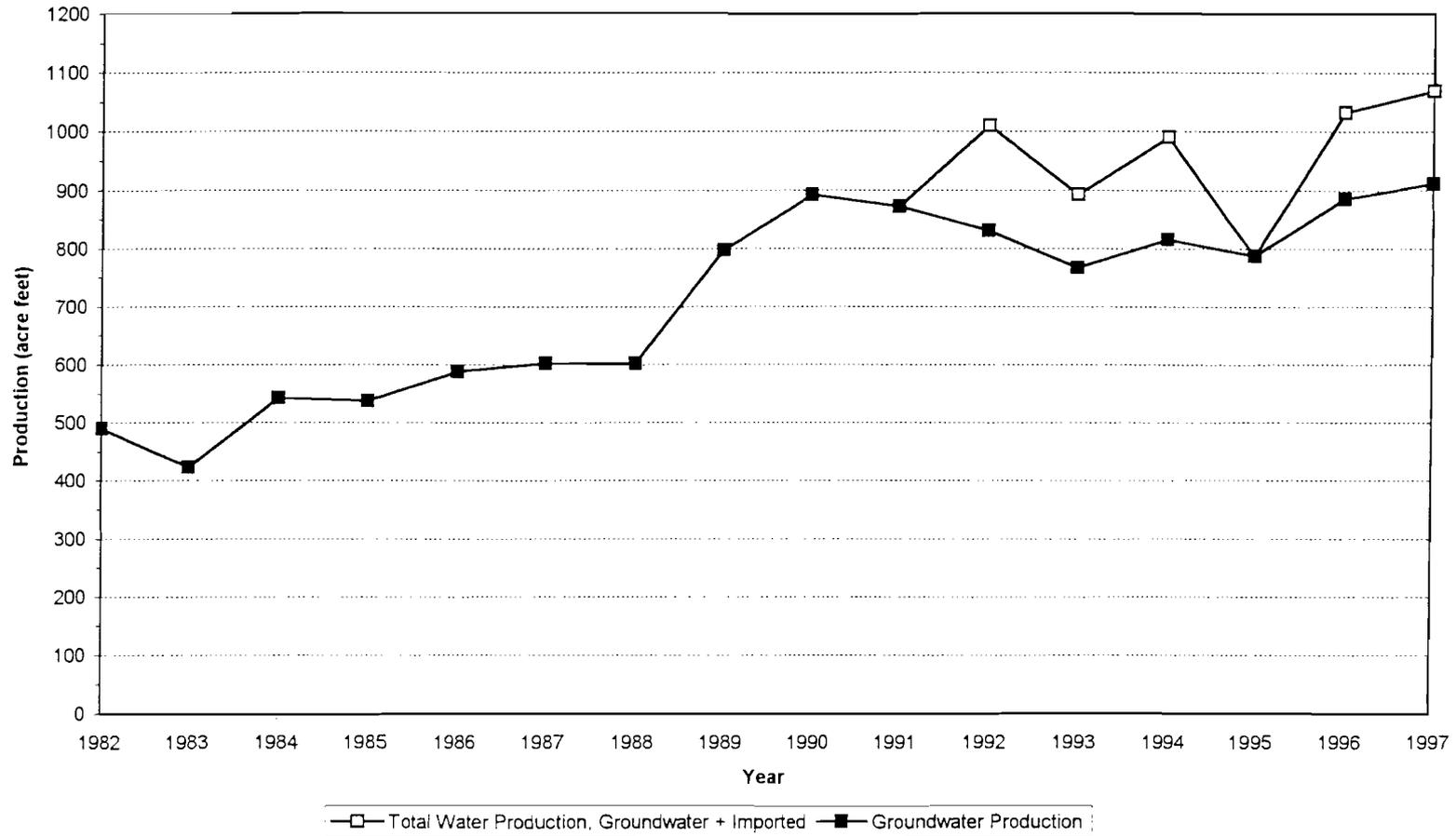
Figure 3



GROUNDWATER PRODUCTION SUMMARY

BEAR VALLEY COMMUNITY SERVICES DISTRICT
GROUNDWATER MANAGEMENT PLAN

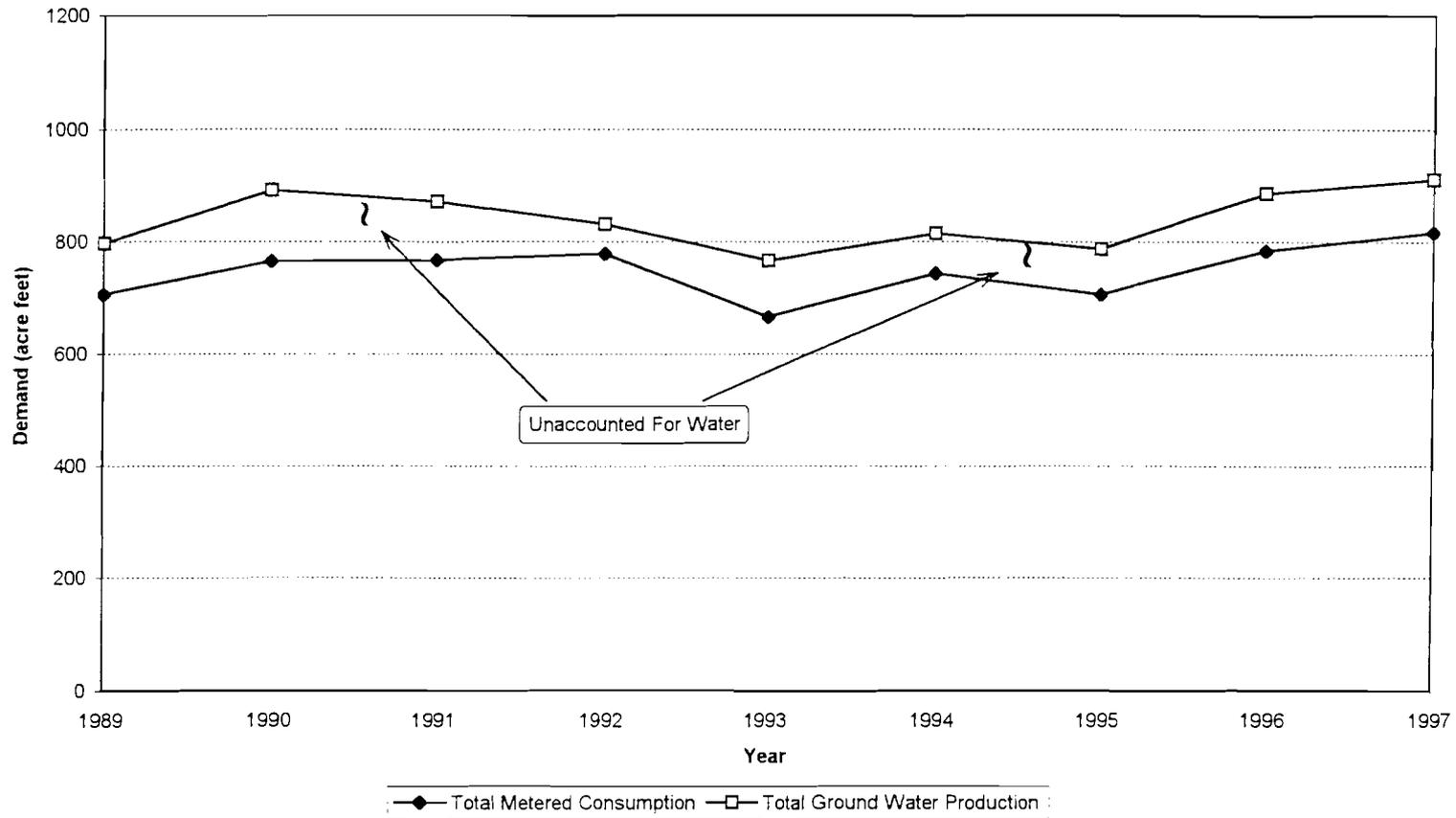
Figure 4



ANNUAL TOTAL WATER SYSTEM PRODUCTION

BEAR VALLEY COMMUNITY SERVICES DISTRICT
GROUNDWATER MANAGEMENT PLAN

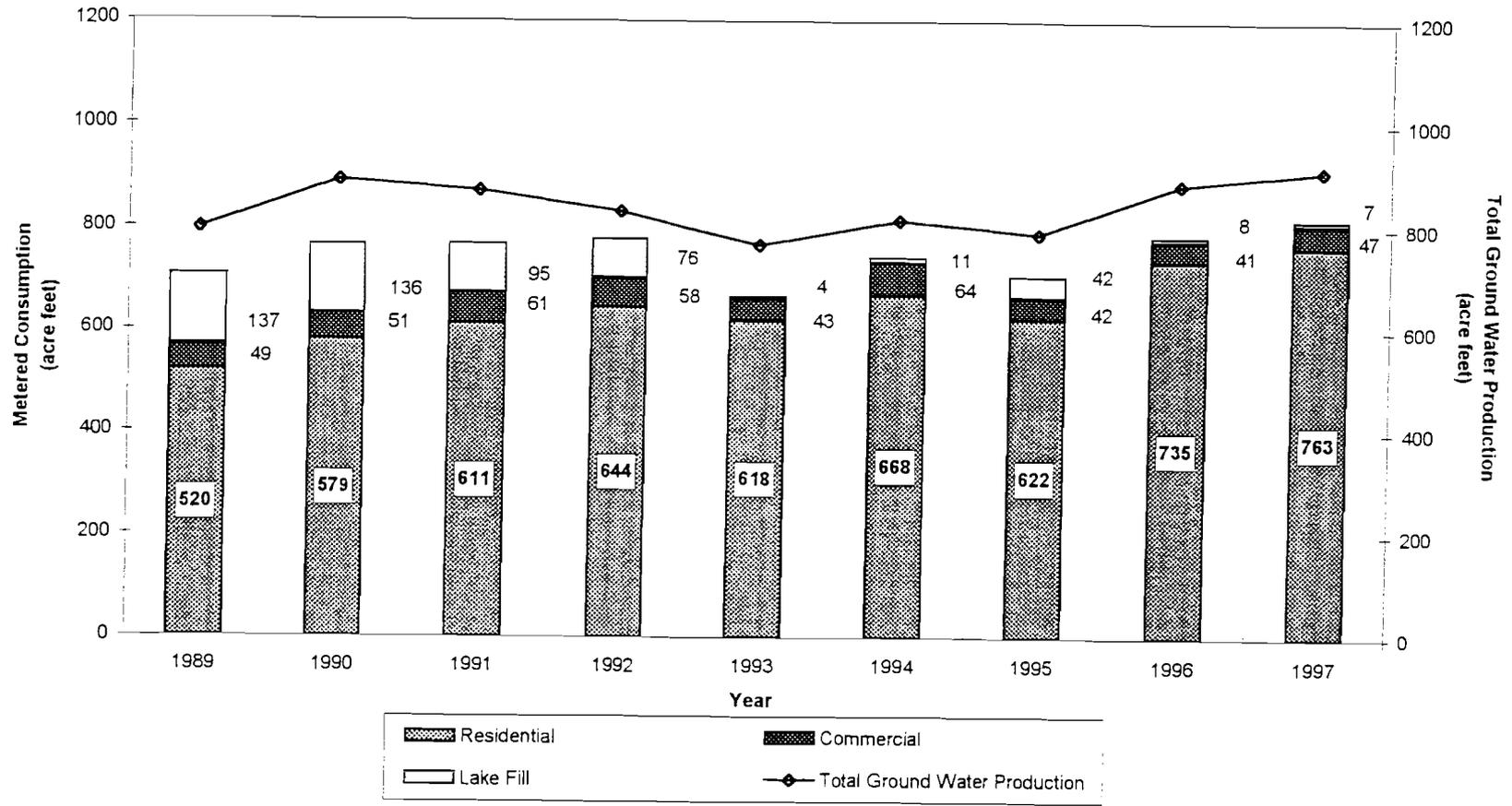
Figure 5



TOTAL WATER CONSUMPTION

BEAR VALLEY COMMUNITY SERVICES DISTRICT
GROUNDWATER MANAGEMENT PLAN

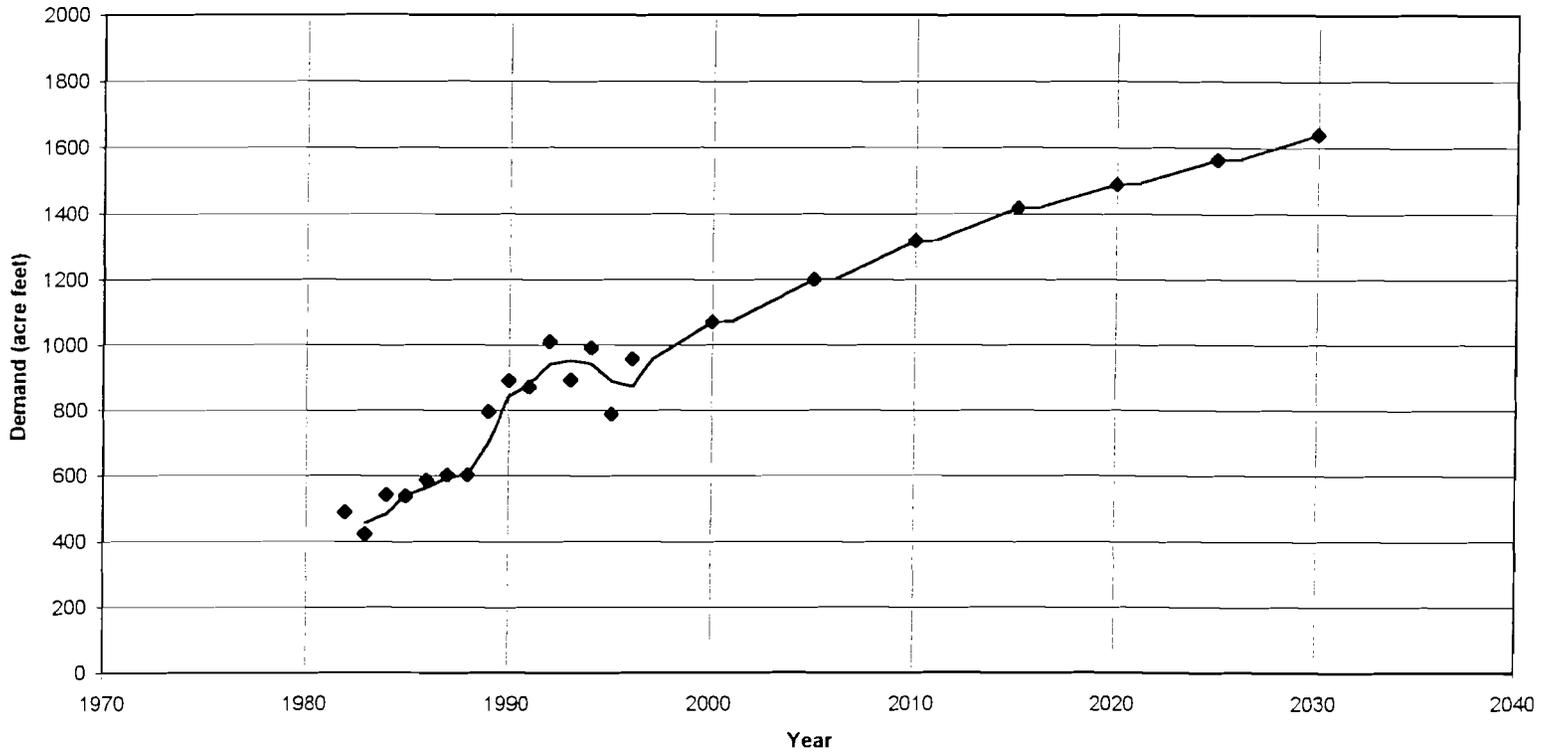
Figure 6



METERED CONSUMPTION vs TOTAL GROUNDWATER PRODUCTION

**BEAR VALLEY COMMUNITY SERVICES DISTRICT
GROUNDWATER MANAGEMENT PLAN**

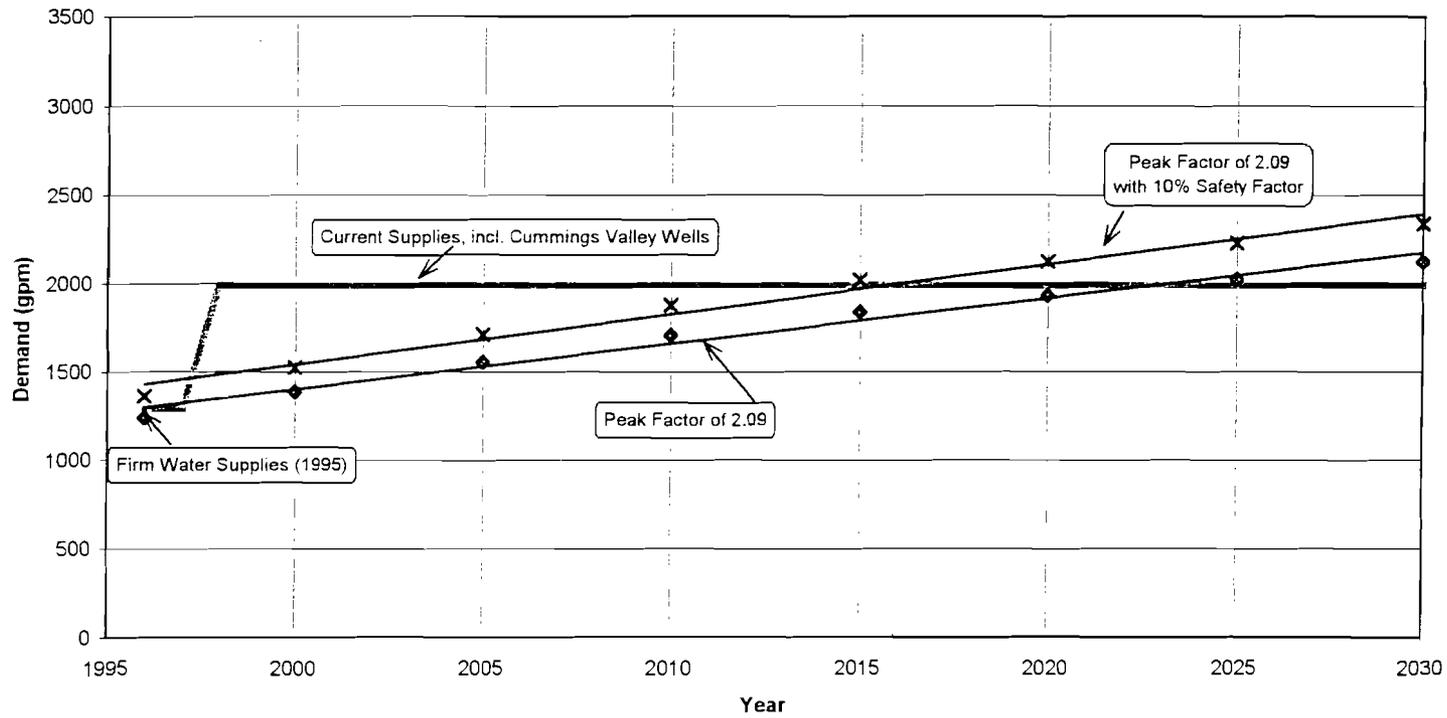
Figure 7



PROJECTED TOTAL WATER DELIVERY DEMAND

BEAR VALLEY COMMUNITY SERVICES DISTRICT
GROUNDWATER MANAGEMENT PLAN

Figure 8



PROJECTED FUTURE PEAK DEMANDS

BEAR VALLEY COMMUNITY SERVICES DISTRICT
GROUNDWATER MANAGEMENT PLAN

Figure 9

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

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 C – Agency Ordinances, Rules, and Regulations

Kern County – Greater Tehachapi Area Specific Plan: Water Resources

Tehachapi-Cummings County Water District –Water Shortage Ordinance

Bear Valley Community Services District – Water Conservation

Golden Hills Community Services District:

Selections from Ordinance No. 30 – Water Shortage Regulations

Resolution No. 745 – Adoption of Water Shortage Regulations

3.3.1 Water Resources

Goals

GOAL COS.1 Ensure that the GTA can accommodate projected future growth and development while maintaining a safe and healthful environment and prosperous economy by guiding development away from hazardous areas, and assuring the provision of adequate public services and infrastructure.

GOAL COS.2 Encourage water conservation to reduce demand for limited water resources and maintain a balance between water supply and water consumption.

Policies

Policy COS.1 The County shall require adherence to any applicable UWMP within the Plan area and participate in 5-year annual updates to the UWMP.

Policy COS.2 Ensure that water quality standards are maintained for existing users and future development and that water-related infrastructure is provided in an efficient and cost effective manner.

Policy COS.3 Support water purveyors in developing plans for responding to droughts and the effects of global climate change, including contingency plans and the sharing of water resources to improve overall water supply reliability for the existing and future needs of the GTA.

Policy COS.4 Encourage the use of low-impact landscaping development techniques, such as the installation of permeable surfaces for hardscape applications. Impervious surfaces such as driveways, streets, and parking lots should be minimized so that land is available to absorb storm water and reduce polluted urban runoff.

Policy COS.5 Require the use of drought- and fire-tolerant landscaping in all development areas.

Policy COS.6 New high-consumptive water uses, such as lakes and golf courses, etc. shall provide evidence of additional verified sources of water other than local groundwater. Other sources may include recycled stormwater or wastewater.

Policy COS.7 Encourage effective groundwater resource management while promoting water conservation and water recycling/reuse in all new development and building design.

- Policy COS.8 Require the use of feasible and practical best management practices (BMPs) to protect surface water and groundwater from the adverse effects of construction activities and post-construction runoff, including stormwater runoff.
- Policy COS.9 Require all discretionary actions submit proof of the availability of a sufficient water supply via connection to an existing CSD or public utility (with the necessary infrastructure to facilitate the delivery of water), annexation to the City of Tehachapi, evidence of available groundwater/well sources, or through the use of contracted banked water or other means as established by this plan.
- Policy COS.10 Implement water conservation as a part of any development proposal and utilize water banking as a tool to provide a safe and reliable water source for future residents.
- Policy COS.11 Discretionary projects shall analyze watershed impacts and reduce impacts from construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces to prevent the degradation of the watershed to the extent such measures are practical.
- Policy COS.12 Encourage drainage designs which retain or detain stormwater run-off to minimize volume and pollutant concentrations.
- Policy COS.13 Minimize the alteration of natural drainage areas. Require development plans to include necessary mitigation to stabilize runoff and silt deposition through utilization of grading and flood-protection ordinances. Conserve areas along rivers and streams to enhance drainage, flood control, recreational, and other beneficial uses while acknowledging existing land use patterns.
- Policy COS.14 Encourage utilization of wastewater treatment facilities which provide for the reuse of wastewater and require the highest possible quality of wastewater treatment to increase the potential use of recycled water for existing and future needs of the GTA.
- Policy COS.15 Encourage retrofitting of existing development and agricultural irrigation with water-conserving devices, such as drip or micro-drip irrigation systems, weather-based irrigation controllers, and water-efficient plumbing fixtures.
- Policy COS.16 The County shall encourage coordination between all water providers and land owners throughout the GTA to develop and maintain a Development Rights Transfer Program which would allow property owners to sell their individual development rights on outlining areas less

suitable for development for the purpose of maintaining an efficient use of existing water supply.

Policy COS.17 The County shall coordinate with City of Tehachapi, Tehachapi-Cummings County Water District and other water purveyors within the GTA to pursue funding to support infrastructure improvements, specifically improvements that would allow for increased pumping of water into the plan area.

Implementation Measures

Implementation 1 The County shall assist local water districts and agencies in developing water conservation strategies that ultimately reduce the demand for peak-hour water supply and wastewater capacity. These may include the development of an Urban Water Management Plan or other water conserving strategies or programs. Policies COS.1, 3, 4, 5, 6, 10, 12, 14

Implementation 2 The County shall encourage and cooperate with the California Corrections Institute (CCI), water suppliers and wastewater treatment providers in the planning, development, and construction of water and wastewater facilities needed to transmit, treat, store, and distribute recycled water supplies. Policies COS.1, 3, 4, 5, 6, 10, 12, 14

Implementation 3 Throughout the development process, the County shall ensure that all new development incorporates construction standards which protect groundwater quality by incorporating comprehensive well construction standards and groundwater protection strategies for any affected watersheds. Policies COS.1, 7, 8, 9, 10, 11, 14

Implementation 4 All discretionary development proposals shall implement a water-wise program that includes all feasible measures to reduce water use and establish a Maximum Applied Water Allowance (MAWA) budget for each lot or home. The MAWA shall be calculated based on standards established by the CSD serving the individual project or on a project-by-project basis as determined by the Kern County Planning and Community Development Department during the discretionary review process. Policies COS.1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 16

Implementation 5 Continue conservation efforts and actively pursue water storage and source alternatives, including dry year water transfer options and use and production of reclaimed water. Policies COS.1, 3, 4, 5, 6, 10, 12, 14

- Implementation 6 All development proposals shall be reviewed to ensure that landscaping is designed to reduce water demand, retain water runoff, decrease flooding, and recharge groundwater. Drought- and fire-tolerant plant materials shall be incorporated in all new development. Policies COS.2, 3, 4, 5, 6
- Implementation 7 All development proposals shall be reviewed to ensure that the plans incorporate permeable surfaces in outdoor landscaping and pedestrian areas unless technical studies and/or engineering studies indicate they are infeasible. Permeable surfaces may include porous asphalt, decomposed granite or other aggregate, landscape materials, or other paving materials that are porous. Policies COS.2, 3, 4, 5, 6
- Implementation 8 All discretionary development proposals shall include the submittal of erosion and sediment control plans. The project shall be designed according to the recommendations of the plan and to prevent increased discharge of sediment at all stages of grading and development. Policies COS.7, 9, 11, 12, 13, 14
- Implementation 9 All development proposals shall incorporate the use of bioswale landscape elements or other natural features to reduce runoff, trap sediment, and increase on-site infiltration, whenever feasible. Policies COS.2, 3, 4, 5, 6
- Implementation 10 All new discretionary development proposals shall incorporate, when feasible, water conservation techniques with the goal of reducing individual water use and limiting outdoor water use. Such techniques include, but are not limited to: use of low-flow plumbing fixtures on new construction, use of high-efficiency irrigation systems for new development and retrofitting of existing development and agricultural irrigation, use of gray water for landscaping, use of reclaimed water resources for reasonable and beneficial use, and use of drought-tolerant vegetation. Policy COS.8
- Implementation 11 The County shall encourage effective groundwater resource management for the long-term benefit of the County through the following:
- a. Promote groundwater recharge activities in various zone districts.
 - b. Support for the development of Urban Water Management Plans and promote Department of Water Resources grant

funding for all water providers.

- c. Support the development of Groundwater Management Plans.
- d. Support the development of future sources of additional surface water and groundwater, including conjunctive use, recycled water, conservation, additional storage of surface water, and groundwater. Policies COS.1, 6, 7, 8, 9, 10, 11

Implementation 12 The County shall encourage existing developments and agricultural irrigation to retrofit existing facilities with water-conserving devices, such as drip or micro-drip irrigation systems, weather-based irrigation controllers, and water-efficient plumbing fixtures. Policy COS.15

Implementation 13 New discretionary development shall require consultation with the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, and the California Department of Fish and Game if potential waters of the U.S. and/or waters of the State, including wetlands, are present on site. Preservation of wetlands shall be the primary consideration; otherwise, mitigation measures pursuant to CEQA shall be implemented. Policies COS.2, 13

Implementation 14 Require a flood hazard study for new discretionary development within floodplain areas as designated by Map Code 2.5 and require the floodplain constraints with all zone changes. New construction located within the flood hazard zones shall conform to the Kern County Flood Hazard Protection Ordinance. Policies COS.12, 13

Implementation 15 Require preparation of a drainage plan to retain drainage on site in accordance with the County Drainage Ordinance as a condition of approval of any land division, conditional use permit (CUP), or site plan review. The drainage plan shall be prepared by the applicant and submitted to the Kern County Floodplain Management Section of the Engineering, Surveying and Permit Services Department for review and approval prior to development. Drainage shall conform to the Kern County Development Standards and the County Grading Ordinance. Policies COS.12, 13

Implementation 16 All discretionary development projects shall be served by adequate water systems via the annexation to the City of Tehachapi or annexation into an existing Community Services

District (CSD) or public utility (including a mutual water company) with adequate capacity. The development shall be required to adhere to the terms of will-serve letter as specified by the City or CSD/public utility, including requirements for the dedication of water rights, purchasing of State Water Project water for banking, installation of additional infrastructure, etc. In the event that a proposed development cannot be annexed into a CSD/public utility or the agency does not have water capacity to support the proposed development, the project proponent shall utilize one of the following options:

Option A: All general plan requests, zone changes and land division shall be limited to a minimum of 20-acre parcel size.

Option B: Development shall be limited to one single-family house and one secondary or additional dwelling unit per existing lot when permitted by the existing base zone district.

Option C: The applicant shall provide information which demonstrates that there are sufficient alternative water resources to serve the proposed project, other than those that would otherwise be provided by a CSD/public utility. This information is to be analyzed during the required CEQA review process and shall include, but is not limited to, each of the following:

1. Submit a Water Supply Assessment which demonstrates that a long-term water supply (for a 20-year timeframe) is available for the proposed project. The water assessment shall include, but not be limited to, the following:
 - a. Source and quantity of historical water use on the site.
 - b. Estimated water consumption of the proposed development and the estimated storage, if any, required to meet the projected need. "Projected need" includes water required for fire protection.
 - c. Recommendations for additional sources of water to address demand shortage. Such measures may include, but are not limited to, development of future sources of additional surface water and groundwater, including water transfers; conjunctive use; reclaimed water; conservation;

additional storage of surface water; and groundwater.

2. Submit a Water Conservation Plan that identifies the specific water conservation practices to be implemented by the project. Implementation includes, but it not limited to the following:
 - a. Use of recycled water for all landscaping.
 - b. Use of drought- and fire-tolerant landscaping in-lieu of traditional sod.
 - c. Establishment of a Water Allocation Budget.
3. Submit evidence the water usage of the proposed project will be offset by the acquisition of land use entitlements from other properties within the GTA or by other means as deemed appropriate by the County. This evidence can take the form of the following:
 - a. Process a Specific Plan Amendment to reduce the development capacity of other properties within the GTA
 - b. Acquisition of land use development rights as obtained through an accepted Development rights Transfer Program. Policies COS.1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

Implementation 17 Any project which disturbs more than 1 gross acres of land, land disposes of waste (including mining waste), utilizes recycled water, proposes to potentially alter a streambed, or discharges fill material to a surface water shall consult with the Regional Water Quality Control Board to assess the need for permits from that Agency. These permits may include, but are not limited to: Clean Water Act (CWA) permits; a National Pollutant Discharge Elimination System (NPDES) General Construction Stormwater Permit, an individual stormwater permit, compliance with Title 27, Waste Discharge Requirements (WDR), Water Reclamation Requirements (WRRs), Water Quality Certification (WQC), etc. Policies COS. 11, 12, 13, 14

3.3.2 Scenic and Natural Resources

Goals

GOAL COS.3 Preserve and protect scenic and natural resources and open space within the GTA.

ORDINANCE 2009-1

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 2009 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 2009 shall be as follows:

- 1. Sales for municipal and industrial uses, whether directly or through the Exchange Pool under the Amendments to Judgment in the Tehachapi Basin case (Kern County Superior Court No. 97210), and other sales to “Exchangors” thereunder.

2. Stock water for animals.
3. Water for existing trees and bushes, of a semi-permanent character which produce, or will produce, items for human consumption, including those not yet in a mature enough state to so produce.
4. Multi-year crops or other crops heretofore planted, including, but not limited to turf grass row crops on the same acreage as planted in 2009.
5. New turf grass plantings and annual row crops on the same acreage as planted in 2009.
6. New plantings of trees and bushes otherwise coming within 3 above.
7. New plantings of turf grass and multi-year crops (new acreage).
8. New plantings of potatoes, carrots and other annual row crops (new acreage).
9. Wheat, barley, oats and other grain or cereal crops.

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.

Sec. 3. The following additional findings are hereby made in support of Section 2 and succeeding sections of this Ordinance:

1. This District as to municipal and industrial water under Category 1 is a wholesaler and it is impractical to distinguish between sub-uses in this category. Municipal and industrial water purchasers pay a higher rate for District water than agricultural users. The amount of District water served through “Exchangors” under said “Amendments to Judgment” for ultimate non-municipal and industrial use is insignificant in quantity, and it is both impracticable, time consuming and costly, involving further Court proceedings to treat said “non-municipal” and domestic uses under any other category.
2. Agricultural uses under Category 3 of Section 2 involve the highest irretrievable investment among agriculture, and those uses in Category 4 of Section 2 involve the next highest irretrievable investment.
3. After Category 4 of Section 2 priority should be given to replanting the same acreage previously planted so as to cause the least economic dislocation to those who have relied on agriculture for their living. However, it is impractical to distinguish between “operators”. Accordingly, Category 5 gives recognition to new plantings of turf grass and annual row crops on the same acreage as planted in 2009.

4. Long-term beneficial use of agricultural water sold by this District will be based on uses for “higher price” crops. Trees and bushes coming within Category 3 of Section 2 should be encouraged in this connection, and for this reason Category 6 of Section 2 is placed next.
5. Planting on new acreage of multi-year crops should be encouraged over new plantings of new crops of potatoes, carrots and other annual row crops, in that multi-year crops provide more stability for local agriculture and tend to provide more continuing economic activity. The same is true of turf grass although not a multi-year crop.
6. Category 9 of Section 2 consists of crops which to a certain extent can be dry-farmed and are also considered to be of the lowest economic benefit, both to the producer and to the economy of the District.

Sec. 4. This District shall not accept any request for water service in Categories 6, 7, 8 or 9 of Section 2 hereof, unless and until it becomes clear that water will be available for some or all requested deliveries. If a limited quantity will clearly be available over and above the anticipated requirements of Categories 1 through 5, that quantity shall first be prorated among Category 6 requests and any remainder among Category 7, 8 and 9 requests in that order. Requests for water service in Categories 2, 3, 4 and 5 shall be accepted subject to possibility of partial or total cut-off on a pro-rata basis if the shortage becomes greater than

presently anticipated. total cut-off of Categories 2, 3, 4 and 5 shall precede Category 1 cut-offs.

Sec. 5. 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. 6. This Ordinance shall be effective and operative immediately upon adoption.

Sec. 7. The General Manager shall forthwith send a copy of this Ordinance to every heretofore or anticipated customer for District water.

Sec 8. 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 18th day of March, 2009.

Harry M. Cowan, President

SECRETARY'S CERTIFICATE

I, JOHN A. MARTIN, Secretary to the Board of Directors of the Tehachapi-Cummings County Water District, do hereby certify that the foregoing Ordinance was introduced at a regular meeting of the Board of Directors of said District, held on the 18th day of March, 2009, and was adopted at that meeting by the following vote:

AYES:

NOES:

ABSENT:

ATTEST: _____
John A. Martin, Secretary
to the Board of Directors

Chapter 4 WATER CONSERVATION

7-4-1: DECLARATION OF POLICY:

7-4-2: FINDINGS:

7-4-3: SCOPE OF CONSERVATION PROGRAM:

7-4-4: WATER SHORTAGE CONDITIONS DESCRIBED:

7-4-5: WATER USE IN LANDSCAPING:

7-4-6: WATER REDUCTION MEASURES:

7-4-7: ENFORCEMENT AUTHORITY:

7-4-8: DURATION OF CONSERVATION LEVELS:

7-4-9: USE OF NONPOTABLE WATER:

7-4-10: WATER RATES AND SURCHARGES:

7-4-11: IMPLEMENTATION OF STAGE ONE, TWO OR THREE CONDITIONS:

7-4-12: RESERVED:

7-4-13: EXCEPTION:

7-4-14: REMEDIES:

7-4-15: NOTICE; APPEAL:

7-4-16: PENALTY:

7-4-1: DECLARATION OF POLICY:

California Water Code section 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 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 section 375 et seq., based on the need to conserve water supplies and to avoid or minimize the effects of any future shortage. (Ord. 09-230, 1-8-2009)

7-4-2: FINDINGS:

- A. Water Shortages: 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. Reduction In Per Capita Water Supply: 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 times of supply shortages. (Ord. 09-230, 1-8-2009)

7-4-3: SCOPE OF CONSERVATION PROGRAM:

The provisions of this chapter 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 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. (Ord. 09-230, 1-8-2009)

7-4-4: 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. (Ord. 09-230, 1-8-2009)

7-4-5: 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 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. (Ord. 09-230, 1-8-2009)

7-4-6: 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 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 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 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 4,000 cubic feet per month) 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. (Ord. 09-230, 1-8-2009)

7-4-7: 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. (Ord. 09-230, 1-8-2009)

7-4-8: 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. (Ord. 09-230, 1-8-2009)

7-4-9: USE OF NONPOTABLE WATER:

Nothing in this chapter shall prohibit or limit the use of nonpotable 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. (Ord. 09-230, 1-8-2009)

7-4-10: 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. (Ord. 09-230, 1-8-2009)

7-4-11: IMPLEMENTATION OF STAGE 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 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 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. (Ord. 09-230, 1-8-2009)

7-4-12: RESERVED:

(Ord. 09-230, 1-8-2009)

7-4-13: EXCEPTION:

Notwithstanding any other provision of this chapter, failure to practice the stage one condition water conservation measures specified in subsection [7-4-6A](#) of this chapter shall not be considered a violation of this chapter. (Ord. 09-230, 1-8-2009)

7-4-14: 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 the district 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 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. 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 the district's routine water billing process. (Ord. 09-230, 1-8-2009)

7-4-15: NOTICE; 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 the district 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, the district 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. (Ord. 09-230, 1-8-2009)

7-4-16: 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 the district shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished according to section [1-4-1](#) of this code. (Ord. 09-230, 1-8-2009)

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

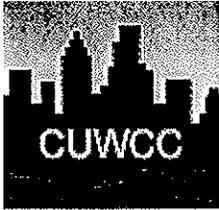
I hereby certify that the foregoing is a true copy of the Resolution of the Board of Directors of GOLDEN HILLS COMMUNITY SERVICES DISTRICT as duly passed and adopted by said Board of Directors on July 6, 1993.


Secretary of the Board of Directors

(SEAL)

Appendix D – California Urban Water Conservation Council Reports

Bear Valley Community Services District



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Accounts & Water Use

Reporting Unit Name: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year: 2007
--	---	----------------------

For Customer Classification Definitions (i.e. Single Family, Multi-Family) click [HERE](#).

What is the reporting year?	Fiscal <input type="text"/>	Month Ending	June <input type="text"/>
-----------------------------	-----------------------------	--------------	---------------------------

A. Service Area Population Information:

1. Total service area population	7349
----------------------------------	------

B. Number of Accounts and Water Deliveries (AF)

	Type	Metered		Unmetered		No. of Accounts
		No. of Accounts	Water Deliveries (AF)	No. of Accounts	Water Deliveries (AF)	
1. Single-Family		2837	960	0	0	2
2. Multi-Family		0	0	0	0	
3. Commercial		32	40	0	0	
4. Industrial		0	0	0	0	
5. Institutional		3	25	0	0	
6. Dedicated Irrigation		5	95	0	0	
7. Recycled Water		1	32	0	0	
8. Other		0	0	0	0	
9. Unaccounted		NA	106	NA	0	
Total		2878	1258	0	0	2
AF Conversion Calculator:		Metered		Unmetered		1

C. Comments

		↑
		↓



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BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers

Reporting Unit: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year: 2007	2006
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For Customer Classification Definitions (i.e. Single Family, Multi-Family) click [HERE](#).

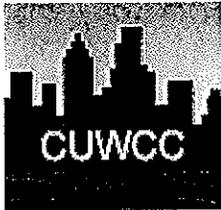
A. Implementation

❖	1. Based on your signed MOU date, 10/14/1993, your Agency STRATEGY DUE DATE is no later than:	10/14/1995
❖	2. Has your agency developed and implemented a targeting/marketing strategy for SINGLE-FAMILY residential water use surveys?	Yes <input checked="" type="radio"/> No <input type="radio"/>
	a. If YES, when was it implemented? (Enter 4-digit year mm/dd/yyyy)	7/1/1998
❖	3. Has your agency developed and implemented a targeting/marketing strategy for MULTI-FAMILY residential water use surveys?	Yes <input type="radio"/> No <input checked="" type="radio"/>
	a. If YES, when was it implemented? (Enter 4-digit year mm/dd/yyyy)	

B. Water Survey Data

Survey Counts	Single Family Accounts	Multi-Family Units	Sing Fam Acco
1. Number of surveys offered:	1	0	
2. Number of surveys completed:	1	0	
Indoor Survey:	SF Accounts	MF Units	SF Acc
❖ 3. Check for leaks, including toilets, faucets and meter checks	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	
❖ 4. Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, if necessary	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	
❖ 5. Check toilet flow rates and offer to install or recommend installation of displacement device or direct customer to ULFT replacement program, as necessary; replace leaking toilet flapper, as necessary	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	
Outdoor Survey:	SF Accounts	MF Units	Acco
❖ 6. Check irrigation system and timers	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	

<input type="checkbox"/>	7. Review or develop customer irrigation schedule	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>
<input type="checkbox"/>	8. Measure landscaped area (Recommended but not required for surveys)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>
<input type="checkbox"/>	9. Measure total irrigable area (Recommended but not required for surveys)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>
<input type="checkbox"/>	10. Which measurement method is typically used (Recommended but not required for surveys)	Image-Based <input type="radio"/> Measuring Tape <input type="radio"/> Odometer Wheel <input type="radio"/> Pacing <input type="radio"/> Other <input checked="" type="radio"/> None <input type="radio"/>	
<input type="checkbox"/>	11. Were customers provided with information packets that included evaluation results and water savings recommendations?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>
<input type="checkbox"/>	12. Have the number of surveys offered and completed, survey results, and survey costs been tracked?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>
<input type="checkbox"/>	a. If yes, in what form are surveys tracked?	Database <input checked="" type="radio"/> Spreadsheet <input type="radio"/> Manual Activity <input type="radio"/> None <input type="radio"/>	
	b. Describe how your agency tracks this information. Date records for survey sent and survey returned are attached to the customer record in our water billing software.		Date records sent and are attached to customer water bill
C. "At Least As Effective As"			
<input type="checkbox"/>	1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	Yes <input type="radio"/> No <input checked="" type="radio"/>	
	a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as." <div style="border: 1px solid black; height: 40px; width: 100%;"></div>		
D. Comments			
	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>		



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BMP 02: Residential Plumbing Retrofit

Reporting Unit: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year: 2007	2006
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A. Implementation

?	1. Is there an enforceable ordinance in effect in your service area requiring replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
?	a. If YES, list local jurisdictions in your service area and code or ordinance in each:		
?	2. Has your agency satisfied the 75% saturation requirement for single-family housing units?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
?	3. Estimated percent of single-family households with low-flow showerheads:	69	%
?	4. Has your agency satisfied the 75% saturation requirement for multi-family housing units?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
?	5. Estimated percent of multi-family households with low-flow showerheads:	100	%
	6.a. If YES to 2 OR 4 above, did your survey methodology fully comply with the requirements of BMP 2?	Yes <input type="radio"/>	No <input type="radio"/>
	6.b. If YES to 2 OR 4 above, please describe how saturation was determined, including the dates and results of any survey research.		There is housing area.

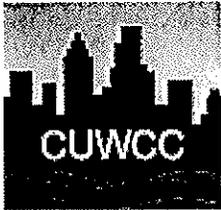
B. Low-Flow Device Distribution Information

?	1. Has your agency developed a targeting/ marketing strategy for distributing low-flow devices?	Yes <input checked="" type="radio"/>	No <input type="radio"/>
	a. If YES, when did your agency begin implementing this strategy? (Use four-digit year, mm/dd/yyyy)	2/1/1995	
	b. Common targeting/ marketing methods.	Direct Mail to Owners <input checked="" type="checkbox"/> Direct Mail to Residents <input checked="" type="checkbox"/> Telemarketing <input type="checkbox"/> Bill Stuffer <input checked="" type="checkbox"/> Bill Messages <input checked="" type="checkbox"/> Door-to-Door <input type="checkbox"/> PSAs <input checked="" type="checkbox"/>	

Di
Dire

			Other <input type="checkbox"/>
	c. Describe your targeting/ marketing strategy. See 1999 response. No changes.		See 1999 changes
<input checked="" type="checkbox"/>	Low-Flow Devices Distributed/ Installed	SF Accounts	MF Units
	2. Number of low-flow showerheads distributed:	2	0
	3. Number of toilet-displacement devices distributed:	2	0
	4. Number of toilet flappers distributed:	2	0
	5. Number of faucet aerators distributed:	3	0
<input checked="" type="checkbox"/>	6. Does your agency track the distribution and cost of low-flow devices?		Yes <input checked="" type="radio"/> No <input type="radio"/>
	a. If YES, in what format are low-flow devices tracked?	Database <input checked="" type="radio"/> Spreadsheet <input type="radio"/> Manual Activity <input type="radio"/> None <input type="radio"/>	
	b. If yes, describe your tracking and distribution system : Records of low-flow devices issued by the district are attached to the customer location record in our water billing software.		Records devices district & customer our water
C. "At Least As Effective As"			
<input checked="" type="checkbox"/>	1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?		Yes <input type="radio"/> No <input checked="" type="radio"/>
	a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."		
D. Comments			
[Empty text area for comments]			

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BMP 03: System Water Audits, Leak Detection and Repair

Reporting Unit: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year: 2007	2006
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A. Implementation

<input type="checkbox"/> 1. Does your agency own or operate a water distribution system?	Yes <input checked="" type="radio"/> No <input type="radio"/>
--	--

**- IF YOU ANSWERED NO TO #1, YOU ARE DONE WITH THE FORM.
- IF YOU ANSWERED YES TO #1, PLEASE ANSWER THE FOLLOWING QUESTIONS.**

<input type="checkbox"/> 2. Has your agency completed a pre-screening system audit for this reporting year?	Yes <input checked="" type="radio"/> No <input type="radio"/>
---	--

<input type="checkbox"/> 3. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production: Unit Conversion Calculator	
--	--

a. Determine metered sales (AF)	1152
---------------------------------	------

b. Determine other system verifiable uses (AF)	0
--	---

c. Determine total supply into the system (AF)	1258
--	------

d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required. <i>(This number will automatically calculate when you Save the Session)</i>	0.92
--	------

<input type="checkbox"/> 4. Does your agency keep necessary data on file to verify the values entered in question 3?	Yes <input checked="" type="radio"/> No <input type="radio"/>
--	--

<input type="checkbox"/> 5. Did your agency complete a full-scale system water audit during this report year?	Yes <input type="radio"/> No <input checked="" type="radio"/>
---	--

<input type="checkbox"/> 6. Does your agency maintain in-house records of audit results or the completed AWWA M36 audit worksheets for the completed audit which could be forwarded to CUWCC?	Yes <input type="radio"/> No <input checked="" type="radio"/>
---	--

<input type="checkbox"/> 7. Does your agency operate a system leak detection program?	Yes <input type="radio"/> No <input checked="" type="radio"/>
---	--

a. If yes, describe the leak detection program:	

B. Survey Data

<input type="checkbox"/> 1. Total number of miles of distribution system line:	100
--	-----

<input type="checkbox"/> 2. Number of miles of distribution system line surveyed:	0
---	---

C. "At Least As Effective As"	
❖	1. Is your agency implementing an "at least as effective as" variant of this BMP? Yes <input type="radio"/> No <input checked="" type="radio"/>
	a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as." <div style="border: 1px solid black; height: 40px; width: 100%;"></div>
D. Comments	
	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>

The following information is being requested for research purposes in the requirements. Although filling in this information is purely voluntary, as the understanding of member water agency distribution systems. This is to calculate your compliance with the present BMP03. Please add comments at the end of the section.

E. Volumes	
	Estimated
❖ 1. Volume of raw water supplied to the system	<input type="text"/>
❖ 2. Volume treated water supplied into the system	<input type="text"/>
❖ 3. Volume of water exported from the system	<input type="text"/>
❖ 4. Volume of billed authorized metered consumption	<input type="text"/>
❖ 5. Volume of billed authorized un-metered consumption	<input type="text"/>
❖ 6. Volume of unbilled authorized metered consumption	<input type="text"/>
❖ 7. Volume of unbilled authorized unmetered consumption	<input type="text"/>
F. Infrastructure and Hydraulics	
❖ 1. Are system input (source or master meter) volumes metered at the entry to the:	Distrib Treat
❖ 2. How frequently are system input volumes tested and calibrated:	

		#
		Estimated
3.	Length of mains	
4.	What % distribution of mains are rigid pipes (metal, ac, concrete)	
5.	Number of service connections	
6.	What % of service connections are rigid pipes (metal)	
7.	Are residential properties fully metered?	
8.	Are non-residential properties fully metered?	
		Estimated
9.	Provide an estimate of customer meter under-registration:	
10.	Average length of customer service line from the main to the point of the meter:	
11.	Average system pressure:	
12.	Range of system pressures:	From
13.	What percentage of the system is fed from gravity feed:	
14.	What percentage of the system is fed by pumping and re-pumping:	
G. Maintenance Questions		
1.	Who is responsible for providing, testing, repairing and replacing customer meters?:	
2.	Does your agency test, repair and replace your meters on a regular timed schedule?	
a.	If yes, does your agency test by meter size or customer category?	Custo
b.	If yes to meter size, please provide the frequency of testing by meter size:	
	Less than or equal to 1"	#
	1.5" to 2"	#
	3" and Larger	#
c.	If yes to customer category, provide the frequency of testing by customer cate	
	SF residential	#
	MF residential	#
	Commercial	#
	Industrial & Institutional	#
3.	Who is responsible for repairs to the customer lateral or	

	customer service line?:	
	4. Who is responsible for service line repairs downstream of the customer meter?:	
	5. Does your agency proactively search for leaks using leak survey techniques or does your utility reactively repair leaks which are called in, or both?	Leak Survey
	6. What is the utility budget breakdown for:	
	Leak Detection	
	Leak Repair	
	Auditing and Water Loss Evaluation	
	Meter Testing	
H. Comments		
	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>	

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Memorandum of Understanding

BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing

Reporting Unit: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year 2007
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A. Implementation

<input type="checkbox"/>	1. Does your agency have any unmetered service connections?	Yes No
	a. If YES, has your agency completed a meter retrofit plan?	Yes No
	b. If YES, number of previously unmetered accounts fitted with meters during report year:	
<input type="checkbox"/>	2. Are all new service connections being metered?	Yes No
<input type="checkbox"/>	3. Are all new service connections being billed volumetrically with meters?	Yes No
<input type="checkbox"/>	4. Has your agency completed and <u>submitted electronically</u> to the Council a written plan, policy or program to test, repair and replace meters?	Yes No

5. Please fill out the following matrix:

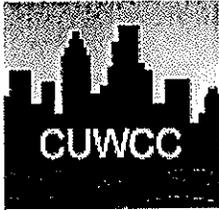
Account Type	Number of Metered Accounts	Number of Metered Accounts Read	Number of Metered Accounts Billed by Volume	Billing Frequency Per Year	Number of Volume Estimates
a. Single Family	2837	2837	2837	12	5
b. Multi-Family	0	0	0	0	0
c. Commercial	32	32	32	12	0
d. Industrial	0	0	0	0	0
e. Institutional	3	3	3	12	0
f. Landscape Irrigation	6	6	6	12	0

B. Feasibility Study

<input type="checkbox"/>	1. Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	Yes No
	a. If YES, when was the feasibility study conducted? (mm/dd/yyyy)	
	b. Describe the feasibility study:	

<input type="checkbox"/>	2. Number of CII accounts with mixed-use meters:	32
<input type="checkbox"/>	3. Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period.	0
C. "At Least As Effective As"		
<input type="checkbox"/>	1. Is your agency implementing an "at least as effective as" variant of this BMP?	Yes No
	a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."	
D. Comments		

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BMP 05: Large Landscape Conservation Programs and Incentives

Reporting Unit: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year: 2007
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A. Water Use Budgets

1. Number of Dedicated Irrigation Meter Accounts:	24
❖ 2. Number of Dedicated Irrigation Meter Accounts with Water Budgets:	12
❖ 3. Budgeted Use for Irrigation Meter Accounts with Water Budgets (AF) during reporting period:	34
❖ 4. Actual Use for Irrigation Meter Accounts with Water Budgets (AF) during reporting period:	37
5. Does your agency provide water use notices to accounts with budgets each billing cycle?	Yes <input type="radio"/> No <input checked="" type="radio"/>

B. Landscape Surveys

❖ 1. Has your agency developed a marketing / targeting strategy for landscape surveys?	Yes <input type="radio"/> No <input checked="" type="radio"/>
a. If YES, when did your agency begin implementing this strategy? (Year must be four digit mm/dd/yyyy)	
b. Description of marketing / targeting strategy:	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>
2. Number of Surveys Offered during reporting period:	0
3. Number of Surveys Completed during reporting period:	0
❖ 4. Indicate which of the following Landscape Elements are part of your survey:	
a. Irrigation System Check	Yes <input type="radio"/> No <input checked="" type="radio"/>
b. Distribution Uniformity Analysis	Yes <input type="radio"/> No <input checked="" type="radio"/>
c. Review / Develop Irrigation Schedules	Yes <input type="radio"/> No <input checked="" type="radio"/>
d. Measure Landscape Area	Yes <input type="radio"/> No <input checked="" type="radio"/>
e. Measure Total Irrigable Area	Yes <input type="radio"/> No <input checked="" type="radio"/>

	f. Provide Customer Report / Information	Yes <input type="radio"/>	No <input checked="" type="radio"/>		
◆	5. Do you track survey offers and results?	Yes <input type="radio"/>	No <input checked="" type="radio"/>		
	6. Does your agency provide follow-up surveys for previously completed surveys?	Yes <input type="radio"/>	No <input checked="" type="radio"/>		
◆	a. If YES, describe below: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>				
C. Other BMP 5 Actions					
◆	1. An agency can provide mixed-use accounts with ETo-based landscape budgets in lieu of a large landscape survey program. Does your agency provide mixed-use accounts with landscape budgets?	Yes <input checked="" type="radio"/>	No <input type="radio"/>		
	2. Number of CII mixed-use accounts with landscape budgets.	4			
	Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period. (From BMP 4 report)	0			
	Total number of change-outs from mixed-use to dedicated irrigation meters since Base Year.	0			
	3. Do you offer landscape irrigation training?	Yes <input type="radio"/>	No <input checked="" type="radio"/>		
◆	4. Does your agency offer financial incentives to improve landscape water use efficiency? If YES, provide the following information for the reporting period:	Yes <input type="radio"/>	No <input checked="" type="radio"/>		
	Type of Financial Incentive:	Budget (Dollars/Year)	Number Awarded to Customers	Total Amount Awarded	Budget (Dollars/Year)
	a. Rebates	0	0	0	
	b. Loans	0	0	0	
	c. Grants	0	0	0	
	5. Do you provide landscape water use efficiency information to new customers and customers changing services?	Yes <input type="radio"/>	No <input checked="" type="radio"/>		
	a. If YES, describe below: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>				
	6. Do you have irrigated landscaping at your facilities?	Yes <input checked="" type="radio"/>	No <input type="radio"/>		

	a. If yes, is it water-efficient?	Yes <input checked="" type="radio"/> No <input type="radio"/>
	b. If yes, does it have dedicated irrigation metering?	Yes <input checked="" type="radio"/> No <input type="radio"/>
<input checked="" type="checkbox"/>	7. Do you provide customer notices at the start of the irrigation season?	Yes <input checked="" type="radio"/> No <input type="radio"/>
<input checked="" type="checkbox"/>	8. Do you provide customer notices at the end of the irrigation season?	Yes <input checked="" type="radio"/> No <input type="radio"/>
D. "At Least As Effective As"		
<input checked="" type="checkbox"/>	1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	Yes <input type="radio"/> No <input checked="" type="radio"/>
	a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as." <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	
E. Comments		
	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>	

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BMP 06: High-Efficiency Washing Machine Rebate Programs

Reporting Unit: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year: 2007
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A. Coverage Goal (Entered in 2005 Report Form)

	Single Family	Multi-Family
1. Number of residential dwelling units in the agency service area.	2,476	0
2. Coverage Goal =	190 Points	

B. Implementation

1. Does your agency offer rebates for residential high-efficiency washers?	Yes <input checked="" type="radio"/> No <input type="radio"/>
--	---

	Total Value of Financial Incentives					TOTAL	POINTS AWARDED
	HEW Water Factor	Number of Financial Incentives Issued	Retail Water Agency	Wholesaler/ Grants (if applicable)	Energy Utility (if applicable)		
2. Greater than 8.5 but not exceeding 9.5 (1 point)		0	\$0	\$0	\$0	\$ 0	0
3. Greater than 6.0 but not exceeding 8.5 (2 points)		18	\$900	\$0	\$0	\$ 900	36
4. Less than or equal to 6.0 (3 points)		12	\$600	\$0	\$0	\$ 600	36
TOTALS:		30	\$ 1,500	\$ 0	\$ 0	\$ 1,500	72

C. Past Credit Points (Entered in 2005 Report Form)

HEW incentives issued before July 1, 2004 = 0 Total Points			
PAST CREDIT TOTALS:	0	\$ 0	0

D. Rebate Program Expenditures

1. Average or Estimated Administration and Overhead	\$40
2. Is the financial incentive offered per HEW at least equal to the	



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BMP 07: Public Information Programs

Reporting Unit: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year: 2007	2006
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A. Implementation

?	1. How is your public information program implemented?		
	a. Wholesaler implements program (none or minimal retailer participation) 1. Which wholesaler(s)? <input style="width: 100%; height: 20px;" type="text"/>	<input type="radio"/>	Re
	b. Wholesaler and retailer both participate in program 1. Which wholesaler(s)? <input style="width: 100%; height: 20px;" type="text"/>	<input type="radio"/>	
	c. Retailer runs program without wholesaler sponsorship	<input checked="" type="radio"/>	
	d. No public information program being implemented	<input type="radio"/>	

- IF YOU CHECKED "1.a.", YOU ARE FINISHED WITH THIS FORM.
 Your wholesaler will report on all program activities.
 - If you checked "1.b." or "1.c.", please answer the following questions for only YOUR agency's program (do not include wholesaler activities):

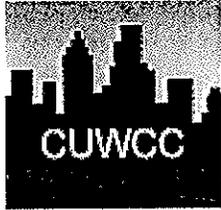
2. Describe the program and how it's organized.	
<input style="width: 95%; height: 95%;" type="text" value="See 1999 response. No changes since then."/>	See 199 changes

3. Indicate which and how many of the following activities are included in your public information program:

Public Information Program Activity in Retail Service Area	Yes/No	Number of Events	Yes
a. Paid Advertising	Yes <input type="radio"/> No <input checked="" type="radio"/>	0	
b. Public Service Announcement	Yes <input type="radio"/> No <input checked="" type="radio"/>	0	
c. Bill Inserts / Newsletters / Brochures	Yes <input checked="" type="radio"/> No <input type="radio"/>	14	
d. Bill showing water usage in comparison to previous year's usage	Yes <input type="radio"/> No <input checked="" type="radio"/>		

	e. Demonstration Gardens	Yes <input checked="" type="radio"/> No <input type="radio"/>	1
	f. Special Events, Media Events	Yes <input type="radio"/> No <input checked="" type="radio"/>	0
	g. Speaker's Bureau	Yes <input type="radio"/> No <input checked="" type="radio"/>	0
	h. Program to coordinate with other government agencies, industry and public interest groups and media	Yes <input checked="" type="radio"/> No <input type="radio"/>	
B. Conservation Information Program Expenditures			
◆	1. Annual Expenditures (Excluding Staffing)		9500
C. "At Least As Effective As"			
◆	1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	Yes <input type="radio"/> No <input checked="" type="radio"/>	
	a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as." <div style="border: 1px solid black; height: 40px; width: 100%;"></div>		
D. Comments			
	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>		

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BMP 08: School Education Programs

Reporting Unit: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year: 2007
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A. Implementation

◆	1. How is your school education program implemented?		
	a. Wholesaler implements program (none or minimal retailer participation) 1. Which wholesaler(s)? <div style="border: 1px solid black; padding: 2px;">Kern County Water Agency</div>	<input checked="" type="radio"/>	
	b. Wholesaler and retailer both participate in program 1. Which wholesaler(s)? <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<input type="radio"/>	
	c. Retailer runs program without wholesaler sponsorship	<input type="radio"/>	
	d. No school education program being implemented	<input type="radio"/>	

◆ - IF YOU CHECKED "1.a.", YOU ARE FINISHED WITH THIS FORM.
 Your wholesaler will report on all program activities.
 - If you checked "1.b." or "1.c.", please answer the following questions for only YOUR agency's program (do not include wholesaler activities):

2. Please provide information on your school programs (by grade level):

Grade	Are grade-appropriate materials distributed?	No. of class presentations	No. of students reached	No. of teachers' workshops	Are g appropriate distrib
Grades K-3rd	Yes <input type="radio"/> No <input type="radio"/>	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	
Grades 4th-6th	Yes <input type="radio"/> No <input type="radio"/>	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	
Grades 7th-8th	Yes <input type="radio"/> No <input type="radio"/>	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	
High School	Yes <input type="radio"/> No <input type="radio"/>	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	

3. Did your Agency's materials meet state education framework requirements?	Yes <input type="radio"/> No <input type="radio"/>
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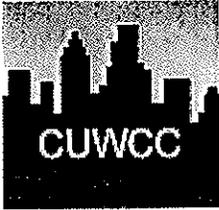
4. When did your Agency begin implementing this program? (Year must be four digit mm/dd/yyyy)	<input style="width: 100%;" type="text"/>
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B. School Education Program Expenditures

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❖	1. Annual Expenditures (Excluding Staffing)		
C. "At Least As Effective As"			
❖	1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	Yes <input type="radio"/> No <input checked="" type="radio"/>	
	<p>a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."</p> <div style="border: 1px solid black; height: 64px; width: 458px; margin-bottom: 5px;"></div>	See year	
D. Comments			
	<div style="border: 1px solid black; height: 64px; width: 458px;"></div>		

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BMP 09: Conservation Programs for CII Accounts

Reporting Unit: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year: 2007
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A. Implementation

?	1. Has your agency identified and ranked COMMERCIAL customers according to use?	Yes <input checked="" type="radio"/> No <input type="radio"/>
?	2. Has your agency identified and ranked INDUSTRIAL customers according to use?	Yes <input checked="" type="radio"/> No <input type="radio"/>
?	3. Has your agency identified and ranked INSTITUTIONAL customers according to use?	Yes <input checked="" type="radio"/> No <input type="radio"/>

Implement ONE or BOTH of the following TWO options:
 • Option A: CII Water Use Survey and Customer Incentives Program
 • Option B: CII Conservation Program Targets
 NOTE: If you choose to implement NEITHER of options A or B, please skip to section D and enter an explanation.

Option A: CII Water Use Survey and Customer Incentives Program

4. Is your agency operating a CII water use survey and customer incentives program for the purpose of complying with BMP 9 under this option? If so, please describe activity during reporting period:	Yes <input checked="" type="radio"/> No <input type="radio"/>
--	--

	Commercial Accounts	Industrial Accounts	Institutional Accounts
a. Number of New Surveys Offered	0	0	0
b. Number of New Surveys Completed	0	0	0
c. Number of Site Follow-ups of Previous Surveys (within 1 yr)	0	0	0
d. Number of Phone Follow-ups of Previous Surveys (within 1 yr)	0	0	0
<input checked="" type="checkbox"/> CII Survey Components	Commercial Accounts	Industrial Accounts	Institutional Accounts
e. Site Visit	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input checked="" type="radio"/> No <input type="radio"/>
f. Evaluation of all water-using	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input checked="" type="radio"/> No <input type="radio"/>

	apparatus and processes			
	g. Customer report identifying recommended efficiency measures, paybacks and agency incentives	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>
<input checked="" type="checkbox"/>	Agency CII Customer Incentives	Budget (\$/Year)	# Awarded to Customers	Total \$ Amount Awarded
	h. Rebates	0	0	0
	i. Loans	0	0	0
	j. Grants	0	0	0
	k. Others	0	0	0
Option B: CII Conservation Program Targets				
<input checked="" type="checkbox"/>	5. Does your agency track CII program interventions and water savings for the purpose of complying with BMP 9 under this option?	Yes <input type="radio"/> No <input checked="" type="radio"/>		
<input checked="" type="checkbox"/>	6. Does your agency document and maintain records on how savings were realized and the method of calculation for estimated savings?	Yes <input type="radio"/> No <input checked="" type="radio"/>		
<input checked="" type="checkbox"/>	7. System Calculated annual savings (AF/yr):			
	CII Programs	Device Installations		
	a. Ultra Low Flush Toilets			
	b. Dual Flush Toilets			
	c. High Efficiency Toilets (1.2 gpf or less)			
	d. High-Efficiency Urinals			
	e. Non-Water Urinals			
	f. Commercial Clothes Washers (coin-op only; not industrial)			
	g. Cooling Tower Controllers			
	h. Food Steamers			
	i. Ice Machines			
	j. Pre-Rinse Spray Valves			
	k. Steam Sterilizer Retrofits			
	l. X-ray Film Processors			
<input checked="" type="checkbox"/>	8. Estimated annual savings (AF/yr) <u>in addition to</u> CII programs listed above:			

a. Site-verified actions taken by agency:		0
<div style="border: 1px solid black; height: 40px; width: 100%;"></div>		
b. Non-site-verified actions taken by agency:		0
<div style="border: 1px solid black; height: 40px; width: 100%;"></div>		
B. Conservation Program Expenditures for CII Accounts		
	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	
C. "At Least As Effective As"		
<input checked="" type="checkbox"/>	1. Is your agency implementing an "at least as effective as" variant of this BMP?	Yes <input type="radio"/> No <input checked="" type="radio"/>
a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."		
<div style="border: 1px solid black; height: 40px; width: 100%;"></div>		
D. Comments		
CII customers accounts for only 5% of total consumption, so we have focused our attention and budget on residential customers.		

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	b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 64953
	c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 810
<input checked="" type="checkbox"/>	6. Dedicated Irrigation (potable)	
	a. Rate Structure	Uniform
	b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 80902
	c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 0
<input checked="" type="checkbox"/>	7. Recycled-Reclaimed	
	a. Rate Structure	Uniform
	b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 26663
	c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 0
<input checked="" type="checkbox"/>	8. Raw	
	a. Rate Structure	Service Not Provided
	b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 0
	c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 0
<input checked="" type="checkbox"/>	9. Other	
	a. Rate Structure	Service Not Provided
	b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 0
	c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 0
B. Implementation Options		
<input checked="" type="checkbox"/>	Select Either Option 1 or Option 2:	
	1. Option 1: Use Annual Revenue As Reported $V/(V+M) \geq 70\%$ V = Total annual revenue from volumetric rates M = Total annual revenue from customer meter/service (fixed) charges	<input checked="" type="radio"/>
	2. Option 2: Use Canadian Water & Wastewater Association Rate Design Model $V/(V+M) \geq V'/(V'+M')$ V = Total annual revenue from volumetric rates M = Total annual revenue from customer meter/service (fixed) charges V' = The uniform volume rate based on the signatory's long-run incremental cost of service M' = The associated meter charge	<input type="radio"/>
	a. If you selected Option 2, has your agency submitted to the Council a completed Canadian Water & Wastewater Association rate design model?	Yes <input type="radio"/> No <input type="radio"/>

c. Total Revenue from Commodity Charges (Volumetric Rates)	\$0
7. Recycled-Reclaimed	
a. Sewer Rate Structure	Service Not Provided
b. Total Annual Revenue	\$0
c. Total Revenue from Commodity Charges (Volumetric Rates)	\$0
D. "At Least As Effective As"	
<input checked="" type="checkbox"/> 1. Is your agency implementing an "at least as effective as" variant of this BMP?	Yes <input type="radio"/> No <input checked="" type="radio"/>
a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as." <div style="border: 1px solid black; height: 100px; width: 100%;"></div>	
E. Comments	
<div style="border: 1px solid black; height: 60px; width: 100%;"></div>	

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BMP 12: Conservation Coordinator			
Reporting Unit: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year: 2007	2006
⚙ A. Implementation			
1. Does your Agency have a conservation coordinator?		Yes <input checked="" type="radio"/>	No <input type="radio"/>
2. Is a coordinator position supplied by another agency with which you cooperate in a regional conservation program ?		Yes <input type="radio"/>	No <input checked="" type="radio"/>
a. Partner agency's name:	<input type="text" value="None"/>	None	
3. If your agency supplies the conservation coordinator:			
a. What percent of this position is dedicated to conservation?	<input type="text" value="10"/> %	10	
b. Coordinator's Name	<input type="text" value="John Martin"/>	John Ma	
c. Coordinator's Title	<input type="text" value="Assistant General Manager"/>	Assistar Manage	
d. Coordinator's Experience and Number of Years	<input type="text" value="12 years, BMP workshop, on the"/>	12 years on-the-ju Conserv certifica	
e. Date Coordinator's position was created (mm/dd/yyyy)	<input type="text" value="1/19/1999"/>	1/19/199	
4. Number of conservation staff (FTEs), including Conservation Coordinator.		<input type="text" value="1"/>	1
B. Conservation Program Expenditures			
⚙ 1. Staffing Expenditures (In-house Only)		<input type="text" value="30000"/>	30000
⚙ 2. BMP Program Implementation Expenditures (Total of all BMPs)		<input type="text" value="9463"/>	9463
C. "At Least As Effective As"			
⚙ 1. Is your agency implementing an "at least as effective as" variant of this BMP?		Yes <input type="radio"/>	No <input checked="" type="radio"/>
a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."		None	
<input style="width: 100%;" type="text" value="none"/>			
D. Comments			
		None	

	none	
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BMP 13: Water Waste Prohibition

Reporting Unit: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year: 2007
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A. Requirements for Documenting BMP Implementation

1. Is a water waste prohibition ordinance in effect in your service area?	Yes <input checked="" type="radio"/> No <input type="radio"/>
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a. If YES, describe the ordinance: <div style="border: 1px solid black; padding: 5px; min-height: 40px;"> General prohibition of wasting water. Additional prohibitions during periods of water shortage. </div>	General Addition: water st
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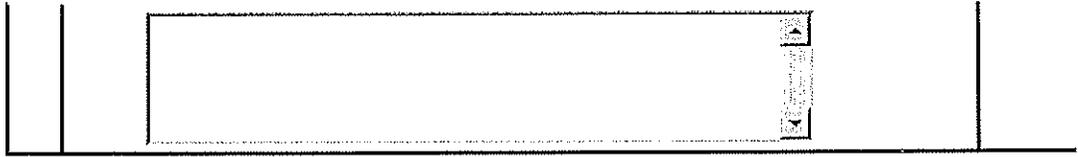
2. Is a copy of the most current ordinance(s) on file with CUWCC?	Yes <input checked="" type="radio"/> No <input type="radio"/>
---	--

a. List local jurisdictions in your service area in the first text box and water waste ordinance citations in each jurisdiction in the second text box: <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 5px; width: 45%;"> Bear Valley CSD </div> <div style="border: 1px solid black; padding: 5px; width: 45%;"> Ordinance 94-106 (District Code Title 7, Chapter 4) </div> </div>	Bear Va
--	---------

B. Implementation

1. Indicate which of the water uses listed below are prohibited by your agency or service area.	
a. Gutter flooding	Yes <input checked="" type="radio"/> No <input type="radio"/>
b. Single-pass cooling systems for new connections	Yes <input type="radio"/> No <input checked="" type="radio"/>
c. Non-recirculating systems in all new conveyor or car wash systems	Yes <input type="radio"/> No <input checked="" type="radio"/>
d. Non-recirculating systems in all new commercial laundry systems	Yes <input type="radio"/> No <input checked="" type="radio"/>
e. Non-recirculating systems in all new decorative fountains	Yes <input type="radio"/>

		No <input checked="" type="radio"/>	
	f. Other, please name <u>Listed in 7-4-6 of District Code on</u>	Yes <input checked="" type="radio"/> No <input type="radio"/>	Listed in District (with CU
	2. Describe measures that prohibit water uses listed above: <u>listed in 7-4-6 of District Code on file with CUWCC.</u>		Listed in CUWCC
<input checked="" type="checkbox"/>	Water Softeners:		
	3. Indicate which of the following measures your agency has supported in developing state law:		
	a. Allow the sale of more efficient, demand-initiated regenerating DIR models.	Yes <input checked="" type="radio"/> No <input type="radio"/>	
	b. Develop minimum appliance efficiency standards that:		
	i.) Increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per pound of common salt used.	Yes <input checked="" type="radio"/> No <input type="radio"/>	
	ii.) Implement an identified maximum number of gallons discharged per gallon of soft water produced.	Yes <input checked="" type="radio"/> No <input type="radio"/>	
	c. Allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply.	Yes <input checked="" type="radio"/> No <input type="radio"/>	
	4. Does your agency include water softener checks in home water audit programs?	Yes <input type="radio"/> No <input checked="" type="radio"/>	
	5. Does your agency include information about DIR and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models?	Yes <input type="radio"/> No <input checked="" type="radio"/>	
	C. "At Least As Effective As"		
<input checked="" type="checkbox"/>	1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	Yes <input type="radio"/> No <input checked="" type="radio"/>	
	a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as." <div style="border: 1px solid black; height: 40px; width: 100%;"></div>		
	D. Comments		



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BMP 14: Residential ULFT Replacement Programs				
Reporting Unit: Bear Valley Community Services District	Submitted to CUWCC 11/26/2008	Year: 2007	2006	
A. Implementation				
Number of Non-Efficient Toilets Replaced With 1.6 gpf Toilets During Report Year				
		Single-Family Accounts	Multi-Family Units	Single Family Accounts
<input type="checkbox"/>	1. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets (1.6 gpf)?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	
	Replacement Method	SF Accounts	MF Units	Single Family Accounts
<input type="checkbox"/>	2. Rebate	25	0	
<input type="checkbox"/>	3. Direct Install	0	0	
<input type="checkbox"/>	4. CBO Distribution	0	0	
<input type="checkbox"/>	5. Other	0	0	
Total		25	0	
Number of Non-Efficient Toilets Replaced With 1.28 gpf High-Efficiency Toilets (HETs) During Report Year				
<input type="checkbox"/>	6. Does your Agency have program(s) for replacing high-water-using toilets with high-efficiency toilets (1.28 gpf)?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	
	Replacement Method	SF Accounts	MF Units	Single Family Accounts
<input type="checkbox"/>	7. Rebate	0	0	
<input type="checkbox"/>	8. Direct Install	0	0	
<input type="checkbox"/>	9. CBO Distribution	0	0	
<input type="checkbox"/>	10. Other	0	0	
Total		0	0	
Number of Non-Efficient Toilets Replaced With 1.2 gpf HETs (Dual-Flush) During Report Year				
<input type="checkbox"/>	11. Does your Agency have program(s) for replacing high-water-using toilets with dual-flush toilets?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	

	Replacement Method	SF Accounts	MF Units	SI Acco
<input type="checkbox"/>	12. Rebate	0	0	
<input type="checkbox"/>	13. Direct Install	0	0	
<input type="checkbox"/>	14. CBO Distribution	0	0	
<input type="checkbox"/>	15. Other	0	0	
	Total	0	0	
<input type="checkbox"/>	16. Describe your agency's ULFT, HET, and/or Dual-Flush Toilet programs for single-family residences.	<div style="border: 1px solid black; padding: 2px;"> \$75 rebate not to exceed full purchase price. </div>		\$75 reb purchas
<input type="checkbox"/>	17. Describe your agency's ULFT, HET, and/or Dual-Flush Toilet programs for multi-family residences.	<div style="border: 1px solid black; padding: 2px;"> none </div>		None
<input type="checkbox"/>	18. Is a toilet retrofit on resale ordinance in effect for your service area?	Yes <input type="radio"/> No <input checked="" type="radio"/>		
<input type="checkbox"/>	19. List local jurisdictions in your service area in the left box and ordinance citations in each jurisdiction in the right box:	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px; width: 45%;"> none </div> <div style="border: 1px solid black; padding: 2px; width: 45%;"> none </div> </div>		None
B. Residential ULFT Program Expenditures				
<input type="checkbox"/>	1. Estimated cost per replacement:	<div style="border: 1px solid black; padding: 2px;"> \$75 </div>		
C. "At Least As Effective As"				
<input type="checkbox"/>	1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	Yes <input type="radio"/> No <input checked="" type="radio"/>		
	a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."			
	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>			
D. Comments				
	There is housing			

	<p>There is no multi-family housing in our service area.</p>	
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Appendix E – Water Shortage Contingency Plans

Tehachapi-Cummings County Water District

Bear Valley Community Services District

City of Tehachapi

Golden Hills Community Services District

Stallion Springs Community Services District

Water Shortage Contingency Plan for Tehachapi-Cummings County Water District

TCCWD is the wholesale water agency for the other four agencies participating in the Urban Water Management Plan and provides State Water Project water to these agencies through a conjunctive use program. TCCWD also provides SWP water to agriculture in the Greater Tehachapi Area. In fact, between one-half and two-thirds of all SWP water imported by TCCWD in a given year is delivered for agriculture.

The UWMP addresses possible interruptions in SWP deliveries in Section 2.3.1.1 of the UWMP. This analysis demonstrates that the GTA can withstand short-term reductions in SWP deliveries. This can be accomplished because TCCWD has an on-going groundwater banking program which can be relied upon during SWP interruptions. Golden Hills CSD and the City of Tehachapi also have active groundwater banking programs.

In addition to the DMMs described in Section 2.6, TCCWD will manage drought events, or SWP interruptions with the following management practices:

1. Import 2,000 AF of carryover water from San Luis Reservoir from the prior year's SWP allocation, or roughly 30% of a normal year's SWP deliveries. TCCWD carried over 1,930 AF from 2009 into 2010 and expects to carryover 3,000 AF into 2011. TCCWD will try to carryover at least 2,000 AF each year so that it can begin importing SWP water on April 1, weeks prior to DWR's pronouncement of SWP allocation for the year.
2. Inform West Kern Water District that surplus water would not be available for sale. In 2010, TCCWD sold WKWD 2,000 AF of surplus SWP water.
3. Pump groundwater from TCCWD's banked supply to temporarily replace SWP imports. TCCWD has the capacity to pump 7 cfs from its six wells in the Tehachapi Basin, which would replace one-third of its peak summertime flow (June-August) and one-half of its mid-season flow (April, May and September). As of December 31, 2009, TCCWD has 4,813 AF in storage in Tehachapi Basin, which represents 73% of its average annual SWP imports.
4. Temporarily cease recharging operations for the M&I water purveyors. They would still be allowed to pump groundwater from wells they own (as they do under normal circumstances) and TCCWD would recharge the basins with SWP water in the following year.
5. Adopt an ordinance establishing the priorities for delivery of the limited water supply during the year. A similar ordinance was adopted in 2009 (Ordinance 2009-1) and is included as Appendix __.
6. Consider emergency water rates that would encourage the wise use of the limited supply available that year and would replace some of the district's reduced revenue.
7. Initiate a district-wide public information campaign in cooperation with the participating UWMP agencies.

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.

City of Tehachapi

Water Shortage Contingency Plan

In the best interest of the City Of Tehachapi and its residents, the City has existing water shortage regulations (Ord. # ?) 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. The City 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.

Stages of Action

The water shortage regulations include three stages of implementation. Actions in each stage would be undertaken by the City and/or its residents. When staff determines that a water supply condition warrants activating a water alert or stage change, the City Manager will approve and notify the City Council. 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 residents are given opportunities to voluntarily reduce consumption in Stage I. If these efforts are not sufficient, the 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 specifics of these stages are discussed in latter sections of this plan.

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 would probably only achieved with strict enforcement and significant voluntary reductions.

Estimate of Minimum Supply Next 3 Years

Historically, the City of Tehachapi 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 can be somewhat significant. As a result, the City 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 supply shortages during the next three years.

Catastrophic Supply Interruption Plan

The City of Tehachapi 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 Alert Condition (10% Reduction)

During a Stage I Alert Condition, City of Tehachapi residents are asked to put voluntary water conservation practices to use to ensure that water is not wasted. All water withdrawn from City facilities shall be put to reasonable beneficial use. Water conservation measures include, but are not limited to:

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. Immediate repair of any and all observable leaks of water on residents premises
4. Use of a broom or blower to clean driveways and/or paved or hard surfaces.
5. Use of water for washing down driveways and/or 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.
11. Local restaurants and eateries serving water only upon request

Stage II Alert Condition (30% Reduction)

A Stage II Water Alert Condition shall apply when it is apparent that the City's production or supply facilities cannot meet customer demand even with a 10% reduction from normal demands or Stage I Alert Condition measures. During a Stage II Alert Condition all measures in a Stage I Alert condition shall apply. In addition, the City Manager may implement the following restrictions on water use:

1. Odd/Even irrigation scheduling. Mondays, Wednesdays, and Fridays: addresses ending in odd numbers. Tuesdays, Thursdays and Saturdays: addresses ending in even numbers. Irrigation of any type is prohibited on Sundays. The only exception shall be areas irrigated with non-potable water.
2. No hosing down of non-landscaped areas.
3. Construction water shall be prohibited during a Stage II Alert Condition.
4. 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.
5. The use of water in ornamental fountains shall only be permitted if the water is recirculated.
6. The introduction of water into swimming pools, wading pools and spas shall be prohibited.
7. 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. Watering of any park site, greenbelt or open area will be performed between 10:00pm and 6:00 am. Any run-off shall be prohibited.
8. Other restrictions may be imposed if deemed necessary by the City manager and/or City Council.

Stage III Alert Condition (50% Reduction)

A Stage III Alert Condition shall apply when it is apparent that even with a 30% reduction from normal demands or Stages I and II measures, that the City's production and /or supply facilities cannot meet customer demand. During a Stage III Alert Condition, all measures in Stages I and II shall apply. In addition, the City Manager may implement the following restrictions on water use:

1. No irrigating of lawns. Plants and bushes may be water 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. No washing of motor or recreational vehicles, except at a car wash facility.

4. 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 City experiences a facility malfunction or supply interruption during high water use periods, Stage I, II, or III restrictions may be implemented at once.

In the event of a prolonged Stage III Alert Condition, which may include drought conditions, the City Council shall have the authority to take any other action available to insure that the City's water supply is not jeopardized.

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
Tehachapi Basin Service Area				
Golden Hill CSD Supply ¹				
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
Golden Hills CSD Minimum Supply	1,864	1,864	1,864	1,864
Notes:				
¹ 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 1st 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.

Water Shortage Contingency Plan for Stallion Springs Community Services District

SCOPE OF CONSERVATION PROGRAM:

The provisions of this chapter respond to short term and long 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 public meetings to inform District water customers of any change in the level of water conservation necessary to achieve conservation and limitation compliance.

WATER SHORTAGE CONDITIONS DESCRIBED:

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 Supply 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 Supply Shortage. A Stage Three condition applies 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 Stallion Springs CSD finds and declares that:

1. The current rate of home construction on unoccupied lots will, in the future, increase the demand 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 regular 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 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.

WATER REDUCTION MEASURES:

A. Stage One Condition: 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 washing driveways and other paved surfaces is allowed only when necessary to alleviate immediate fire or sanitation hazards.
5. Refrain from leaving the 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 restaurants, within the service area, is only upon specific request.

B. Stage Two Condition: During a Stage Two Condition, the following water conservation measures shall apply, including all provisions of a Stage One Condition:

1. **Lawn Watering:** Lawn watering and landscape irrigation is permitted every other day between the hours of eight (8:00) P.M. and six (6:00) 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.
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 Condition: During a Stage Three Condition, all the provisions of Stage 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 Condition: During a Stage Four Condition, all the provisions of Stage 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 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.