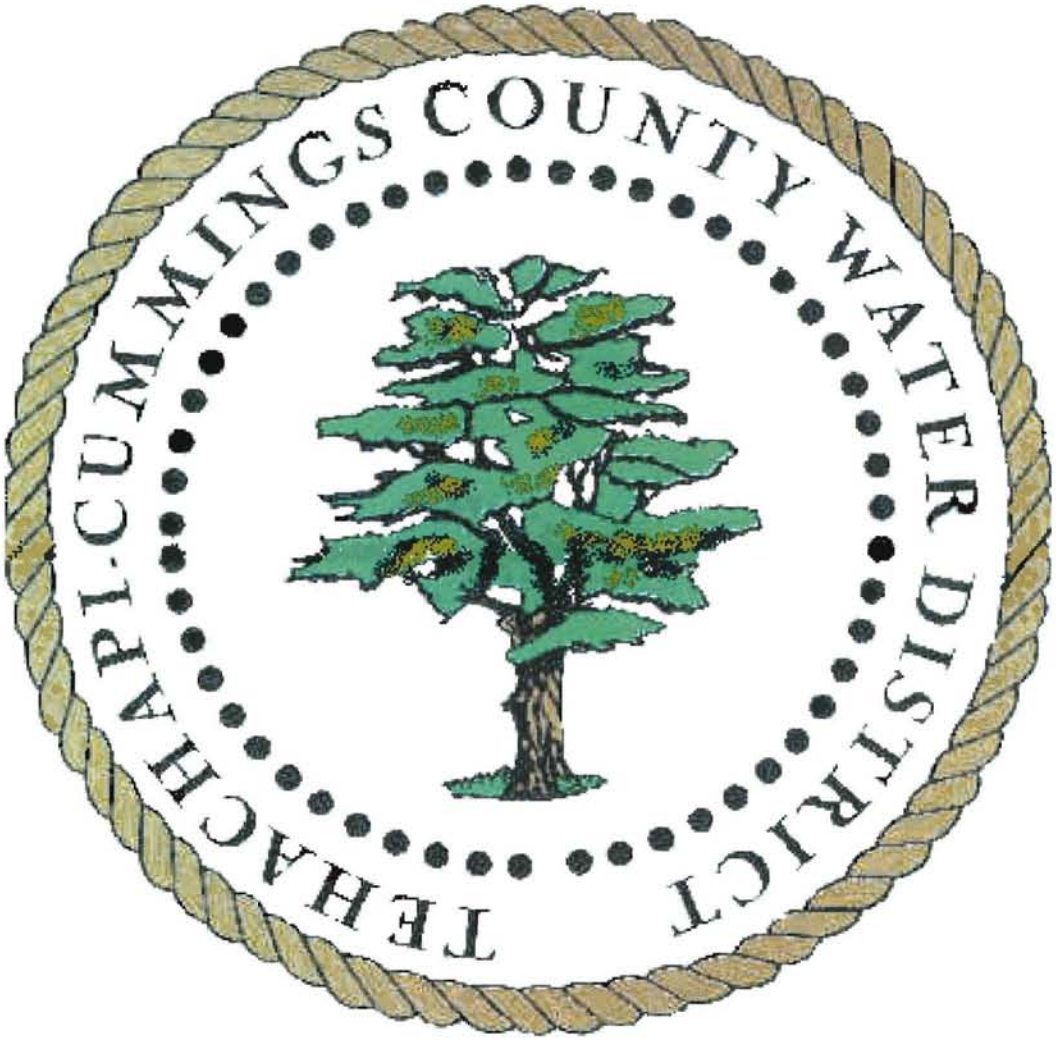
REPORT OF TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT AS WATERMASTER FOR CALENDAR YEAR 2012



THIRTY-NINTH ANNUAL WATERMASTER REPORT FOR TEHACHAPI BASIN

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF KERN

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT, a Body corporate and politic,	)	
Plaintiff	)	No. 97210
vs.	)	THIRTY-NINTH ANNUAL REPORT TEHACHAPI BASIN WATERMASTER (For Calendar Year 2012)
(A) CITY OF TEHACHAPI, a municipal corporation et al.,	)	
Defendants.	)	

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FOREWORD

The Tehachapi-Cummings County Water District as Watermaster for the Tehachapi Basin submits this thirty-ninth annual report as a review of the water supply, operation, and condition in the Basin during the 2012 calendar year. This report is prepared for the Superior Court in the County of Kern and for the parties to the Tehachapi Basin Judgment, whose provisions authorize this publication. This report contains information on the following:

(a) Groundwater conditions;

(b) Groundwater extractions and base water rights as of December 31, 2012;

(c) Exchange pool operation;

(d) Use of imported water;

(e) Claim by Tehachapi-Cummings County Water District to all return flow, waste and seepage resulting from water imported by District;

(f) Change of ownership of water rights, leases, and licenses thereof;

(g) A statement in a separate section, of those matters in the report which constitute written findings, order, or determination as provided for in subparagraph 15 (c) of the Amendment to Judgment; and

(h) A designation of those lands on which agricultural water rights had been developed.

Address of Tehachapi-Cummings County Water District as Watermaster is:

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Tehachapi, CA 93581
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I. THE TEHACHAPI BASIN

DESCRIPTION OF TEHACHAPI GROUNDWATER BASIN

The Tehachapi groundwater basin surface is generally the Tehachapi Valley floor, bordered on the west by the foothill area of the low-lying ridge running north and south between the Tehachapi Mountains and the Sierra Nevada. It is bordered on the north by the Sierra Nevada; on the south by the Tehachapi Mountains; and on the east by a ridge of the Sierra Nevada and the Tehachapi Mountains, separated by Proctor Gap. The Tehachapi Basin is generally elongated east and west approximately 9 miles wide, and approximately oval-shaped and 5 miles wide at its widest. The Tehachapi groundwater basin may be pictured as a bowl, the bottom and sides of which are composed of impervious materials. The bowl is filled with heterogeneous pervious alluvium deposited through geologic time by the streams carrying eroded materials from the surrounding watershed areas.

Surface outflow from Tehachapi Valley occurs during time of heavy storms via Tehachapi Creek to the west and Cache Creek to the east. Surface and subsurface basin inflow occurs from the creeks of the surrounding watershed areas and replenishes the groundwater within the basin. Subsurface outflow is restricted by the impervious rock outcroppings in the Tehachapi Creek outlet on the west and by the narrow Proctor Gap. Groundwater is stored within the alluvium of the basin. The average annual safe yield of groundwater within the basin has been determined by the Court to be 5,500 acre feet.

HISTORY OF WATER MANAGEMENT PROGRAM

The Tehachapi Cummings Water Conservation District was formed in l96l to carry out basic groundwater and watershed studies. This was a continuation of the Tehachapi Soil Conservation District's efforts in seeking solutions to water shortages within the area.

The Tehachapi-Cummings County Water District was formed February l6, l965, by popular vote within the District, replacing the Tehachapi-Cummings Water Conservation District. A citizens advisory committee, composed of a cross section of community residents, was established. This committee worked for more than a year on the basic solution to the groundwater overdraft and water shortage within the three major groundwater basins of the district.

On May l6, l966, the Citizens Advisory Committee recommended to the Board of Directors of the Tehachapi-Cummings County Water District that three separate adjudication actions be filed on the Tehachapi, the Cummings, and the Brite Valley groundwater basins. The purpose of these actions was to establish groundwater rights of all parties, establish a physical solution and a groundwater management program in each basin when necessary to prevent further damage to the basin, and also to allow the integration of imported supplemental water with local ground water supplies. These actions were filed in the Superior Court by Plaintiff, Tehachapi-Cummings County Water District, on October 3, 1966.

On December 16, 1966, the Tehachapi-Cummings County Water District Board of Directors signed two contracts with the Kern County Water Agency for entitlement to State Project water, one contract for an annual entitlement of 5,000 acre feet of agricultural water (4,300 firm and 700 surplus) and the other for an annual entitlement of l5,000 acre feet of municipal and industrial water.

The Tehachapi Basin Case 972l0 went to trial in late l970, and the original Judgment was filed March 22, l97l. On June 8, l97l, a special district election was held with 65% of the eligible voters casting ballots. A federal loan under Public Law 984 in the amount of 6.5 million dollars and a general obligation bond totaling 2.5 million dollars were approved by a 9l% majority. The purpose of this financing was to construct an imported water system to convey State water to the Tehachapi-Cummings County Water District.

Construction on the water system began in May l972. On November l4, l973, the first State water was pumped from the California Aqueduct near A. D. Edmonston Pumping Plant into the Tehachapi area.

On November 20, l973, an Amendment to Judgment was filed in the Tehachapi Basin Case 972l0 following a brief court hearing. The Amendment to Judgment established the physical solution to meet the parties' water needs, including exchange pool provisions. This Amended Judgment named the Tehachapi-Cummings County Water District as the Watermaster, established "Allowed Pumping Allocations" and, among other matters, restricted total annual extractions within the Tehachapi Basin to the safe yield of Tehachapi Basin.

The Judgment and Amendment to Judgment for the Tehachapi Basin case, containing the legal descriptions of the areas involved, were recorded in the office of the Kern County Recorder as constructive notice to all buyers of property (Book 45l3, Pg. 234 et seq. and Book 48l6, Pg. 802 et seq. respectively).

In addition to restricting groundwater extractions, the Judgment and Amendment thereto, in general

1. With certain exceptions specified in the Judgment, enjoined and restrained the parties from exporting groundwater extracted from Tehachapi Basin outside of the Tehachapi Basin areas, as said areas are defined in the Judgment;

2. Enjoined and restrained parties from exporting outside of Tehachapi Basin watershed, as said area is defined in the Judgment, surface water diverted within Tehachapi Basin watershed; and

3. Enjoined and restrained the parties from making any diversions of surface waters within Tehachapi Basin watershed, except to the extent of diversions having been made by any such party as of the water year prior to the commencement of said action Case No. 97210.

First deliveries of State Project water and operation of the exchange pool within the Tehachapi Basin began in early 1974. The Tehachapi-Cummings County Water District project works and the Tehachapi Groundwater Management Program have successfully completed their thirty-eighth year.

II. OWNERSHIP AND TRANSFER OF WATER RIGHTS

Table 1 describes ownership of base water rights as of December 31, 2012 and shows permanent transfers in ownership of base water rights through 2012.

Table 2 shows the current ownership of party domestic wells as of December 31, 2012.

Table 3 indicates temporary transfers of allowed pumping allocations, which occurred during 2012.

TABLE I. OWNERSHIP OF BASE WATER RIGHTS - 2012

Party and Successor		Base Water Right (Acre Feet Per Year)
Diana E. Pecora Abel, Trustee UTD 5/3/02		16.560
Successor in Part to Roy A. Abel		
Mirta Abel, Successor to Roy A. Abel:		12.420
E.R. Conner & Grant Frezieres	37.000	
Transfer in Part to Diana E. Pecora Abel	(16.560)	
Transfer in Part from Frezieres & Conner	18.000	
Transfer in Part to Valley Development	(26.020)	
*Theodore R. Arnds, Successor to Karl Arnds		3.000
Baker, Scott D. and Marian S.		9.000
Successor in Part to Herbert & Karin Volz		
Benz, Paul		9.000
Successor to Dan and Peggy Friesen		
Gary Bozenich		32.000
Successor in Part to Don Carroll	55.000	
Transfer in Part to Golden Hills CSD	(23.000)	
Donald R. & Betty Jean Burgeis		24.000
Jeffrey Ciachurski		122.000
Successor to Robert R. Scott and Dorothy Scott	45.000	
Successor to Tehachapi-ET Ventures LLC	77.000	
Continuity I, LLC		73.000
Successor to Willow Springs Mobile Home Park	59.000	
Successor in Part to Grant Frezieres	30.000	
Transfer in Part to Clifford Meridth	(16.000)	
Wilson Wayne & Alice Faye Cooper		15.333
Successor in Part to Floyd M. Garrett,		
Lyn Sudduth & Jeannette E. Sudduth	5.333	
Successor in Part to Henry B. Hand	10.000	
*Lewis M. Dye, Jr., Successor to Lewis M. Dye, Sr.		3.000
Grant E. Frezieres, Successor		9.000
in Part to Grant E. Frezieres & Everett R. Conner	139.000	
Transfer in Part to Golden Hills CSD	(100.000)	
Transfer in Part to Continuity I	(30.000)	
GE Wind Energy, LLC		75.000
Successor to Enron Dissolution Corp. (Formerly Zond)		

Party and Successor		Base Water Right (Acre Feet Per Year)
**Golden Hills Community Services District,		1,299.000
a body corporate & politic	159.000	
Successor to White Oak Knolls	6.000	
Successor to Gary Warner	10.000	
Successor to Fowler & Schaeffer	31.000	
Successor to Cozette Sullivan Trust	300.000	
Successor in Part to Jack Iriart	140.000	
Successor to Conner Revocable Trust	48.000	
Successor to Blair Land Co., Inc.	60.000	
Successor to Sierra National Bank	163.000	
Successor to Paul and Marit Robb	115.000	
Successor to Mettler & Armstrong	57.000	
Successor in Part to Gary Bozenich	23.000	
Successor in Part to Don Carroll	55.000	
Successor in Part to Grant Frezieres	100.000	
Successor to Mid Valley Ventures	32.000	
Grand Oaks Water Company, a corporation		6.000
KunSik Ha and Kyung Ran Ha		135.000
Successor to Vernon E. Blain and Dolly I. Chandler	35.000	
Successor to Tae Won Kang	64.210	
Successor to Hailu Ejigu and Enanu Ejigu	35.790	
Kenneth R. Hensler, Successor in Part to Lorene Gilreath		1.500
Richard Hwang, Successor to Valley Development Unit III		13.000
Transfer in Part to Nunhems USA, Inc.	(13.000)	
Joaquina Iriart for life, then to		0.500
Jack C. Iriart as to remainder	172.500	
Transfer to Golden Hills CSD	(140.000)	
Transfer to Mid Valley Ventures	(32.000)	
Gwendolyn Jones		10.000
Successor in Part to Joaquina Iriart & Jack C. Iriart		
Alice Keel		3.000
Alice Knaus, Successor to Melvin & Frances Ruff		4.000
John Kolesar, Successor in Part to Lorene Gilreath		1.500
Kubicek Trust, Successor in Part to Tehachapples		305.000

Party and Successor		Base Water Right (Acre Feet Per Year)
Russell Larson, Successot to E.T. Tyson, Sr. and Winifred A. Tyson		3.000
*Spencer H. Lees Successor to Robert W. Karpe & Phyllis J. Karpe Successor to Harold T. Lutge and Helen Lutge		3.000
Lehigh Southwest Cement Company		1,744.000
(Formerly Calaveras and Monolith Cement Company)	1,487.000	
Successor to Max Thelen, Jr., Wells Fargo Bank &		
I.W. Hellman, all as Co-Trustees of the S.H. Cowell Foundation	340.000	
Transferred to Zond Systems, Inc.	(75.000)	
Transferred in Part to White Oak Knolls	(3.000)	
Transferred in Part to West Tehachapi Mutual Water Co.	(5.000)	
John R. Lokey & Muriel Adele Lokey Successor to Harold T. Lutge & Helen Lutge		3.000
Don Matthews, Successor to Susan Phillips		7.000
Frank and Isabel Mendez, Successor to Evelyn Smith,		18.000
Clifford Meridth Successorin Part to Continuity I, LLC		16.000
John E. Mills & Gracie E. Mills Successor to Darrel Stevens & Louise Stevens		19.000
Miner, Milton and Carolyn Successor to Betty and David Barnes		4.000
Mojave Bank, Successor to Gerald and Elizabeth Davis		15.000
Mojave Public Utility District		75.000
Fred H. and Leattrice Neely, Successor to Lynn Dewey		4.000
N.I.R.S. Investment Co., Inc., Successor to Leo Harriman		47.000
Nunhems, USA, Inc. Successor in Part to Richard Hwang		13.000
R. Paul Robb and Marit B. Robb		5.000
Successor in Part to Frank Armstrong & Phyllis Armstrong	120.000	
Transfer to Golden Hills CSD	(115.000)	
William S. Robison Successor in Part to Joaquina Iriart & Jack C. Iriart		4.500
Al Lester Safier & Paul Birnbach Successor to Carl D. Hubble & Anna Hubble		451.000
Donna Rae Schmidt, Michael Sulllivan and Stacey Hall Successor to the Grant D. Sullivan Trust		43.000

Party and Successor		Base Water Right (Acre Feet Per Year)
Schultz Enterprises, Successor to John O. Christopher, Virginia E. Christopher & Madge Q. Schlotthauer		27.000
Schultz, Robert and Barbara		20.000
Successor to Jon Hammond		
Estate of John H. Starbird,		10.000
Successor in Part to Jack C. Iriart		
Gerson Stiekman Trust		23.000
Successor in Part to E.R. Conner & Grant Frezieres	15.000	
Successor in Part to E.R. Conner & Grant Frezieres	8.000	
Transfer to Benezra Tehachapi Ptn.	(8.000)	
Successor to Benezra Tehachapi Ptn.	8.000	
Sun Trail, Inc.		305.000
Successor in Part to Tehachapples		
Tehachapi, City of, a municipal		2,733.000
corporation	753.000	
Successor in Part to Sue Sullivan	40.000	
Successor to J. Morgan Greene & Margaret L. Greene	266.000	
Successor in Part to Tehachapi Unified School District	45.000	
Successor to John Nunes	1561.000	
Successor in Part to Tony & Rita Damiana	20.000	
Successor to Ashtown Mutual Water Co.	42.000	
Successor to Tony & Rita Damiana	6.000	
Tehachapi-ET Ventures, LLC		0
Successor to Joan M. Jurenka	77.000	
Transfer to Jeffrey and Heidi Ciachurski	(77.000)	
Tehachapi Hospital, Successor to Gene A. Gale, et al		58.000
Tehachapi Public Cemetery District, a political subdiv.		11.000
Tehachapi Unified School District,		7.000
a body politic	30.000	
Successor in Part to G. Wilder	12.000	
Successor in Part to Fred Patterson	10.000	
Transfer in Part to City of Tehachapi	(45.000)	
Union Pacific Transportation, a corporation		98.000
Volz, Herbert and Karin		10.000
Successor to Dee C. Hindman	19.000	
Transfer in Part to Scott and Marian Baker	(9.000)	
Gerald Vukich		3.000
Successor to Don Adams Land Company		

Party and Successor		Base Water Right (Acre Feet Per Year)
Juanita Weir Successor to E.F. Weir & J.C. Weir		18.000
West Tehachapi Mutual Water Company, a corporation	3.000	13.000
Successor in Part to Monolith Portland Cement Company	5.000	
Successor in Part to Jacobsen Bros. Turf Farms, Inc.	3.000	
Successor in Part to Grant D. Sullivan and Cozette Rae Sullivan Edward L. Tompkins, Co-Trustees Under the Will of Mortimer J. Sulliv	2.000	
White, M. R. and Mildred		4.000
Wietsman, Harry		3.000
Gary D. Wilder & Wanda W. Wilder		2.667
Successor in Part to Floyd M. Garrett, Lyn Sudduth & Jeannette E. Sudduth	14.667	
Transfer in Part to Tehachapi Unified School District	(12.000)	
Louise Yeager		3.000
Patricia G. Young Successor to Ralph L. & Patricia D. Thomas		15.000
Zond Systems, Inc.		0.000
Successor in Part to Monolith Portland Cement Company	75.000	
Transfer to G. E. Wind Energy, LLC	(75.000)	
*In addition to Domestic Water **In addition to Salvage Provision		
Total Base Water Rights		8,019.980

TABLE 2. OWNERSHIP CHANGES OF PARTY DOMESTIC WELLS TO 2012

NEW OWNER	WELL NUMBER	PREVIOUS OWNER
Jon and Donna McMurtrey	23Q1	McMurtrey Living Trust

TABLE 3. TEMPORARY TRANSFER OF ALLOWED PUMPING ALLOCATION
2012

PARTY/SUCCESSOR (FROM)	ALLOWED PUMPING ALLOCATION IN ACRE FEET	PARTY/SUCCESSOR (TO)
Crystal Organic Farms	57.894	David Ha and Jin Chung
Golden Hills Community Services District	26.667	California Water Service Co.(Grand Oaks Water Co.)
Golden Hills Community Services District	333.333	City of Tehachapi
Golden Hills Community Services District	10.000	West Tehachapi Mutual Water Co.
Kubicek Trust	203.333	Kundert Brothers Farms
Lehigh Southwest Cement Co.	0.667	American Cement Company
Lehigh Southwest Cement Co.	100.000	Benz Visco Youth Sports
Lehigh Southwest Cement Co.	10.000	County of Kern
Lehigh Southwest Cement Co.	800.000	Golden Hills CSD
Schmidt, Donna Rae et al.	20.000	John Pulford
Total	1,561.894	

III. GROUNDWATER BASIN OPERATION

The lands within Tehachapi Basin on which agricultural water rights had been developed are shown on Figure l. These lands are identified on the map of ownership as entered in the Judgment and the Amendment to Judgment. Also illustrated on Figure l are wells that are actively producing together with a few inactive wells for which hydrographs are drawn in Figures 4A through 4F. Figure 2 is an aid for locating on Figure l any wells with an assigned well number as found on the hydrographs and in Figure 3.

The Tehachapi Basin Watermaster continues to make seasonal soundings of selected wells throughout the Basin. These measurements provide data indicative of groundwater elevation changes. Figures 4A through 4F are continuations of well hydrographs used as exhibits during the Tehachapi Basin trial. As of November 1971, Well No. 32S/33E-21E2 could no longer be sounded, and readings began at that time on nearby Well No. 32S/33E-21L1. As of December 1976, Well No. 32S/33E-21L1 was destroyed.

Operation of the Exchange Pool was suspended in 1997 because of changes in land use and permanent transfers of agricultural water rights to M&I interests. It should be noted that exchange pool provisions such as those contained in the Tehachapi Basin Judgment and Amendment to Judgment have become unnecessary in many of the 22 other adjudicated groundwater basins in California because of changes in land use and changes in ownership of water rights.

The groundwater operation for Tehachapi Basin is described in Figure 3. For the 2012 calendar year, parties are listed with total amounts pumped. Also included in Figure 3 are Allowed Pumping Allocations, temporary transfers of water rights, and allowable carryovers (or over-extractions). In addition to the total amount pumped as shown in Figure 3, an estimated 311 acre feet of non-metered groundwater was produced by small domestic users.

Paragraph 12 of the Amendment to Judgment provides for each party, pumping less than its Allowed Pumping Allocation during a particular calendar year, to carryover for the next two succeeding years an amount not to exceed 25% of its Allowed Pumping Allocation. Such carryover not pumped by the end of the second year will remain within the Tehachapi Basin. The order in which water is pumped by a party from the Basin during a calendar year is as follows: first, its Allowed Pumping Allocation including leased water; next, any carryover from the previous two years with the oldest portion being pumped first and finally, artificial replenishment water, that is, imported water purchased from the District and intentionally spread and stored in the basin.

In 2012, the Tehachapi-Cummings County Water District delivered imported State Project Water directly from its surface facilities for use within the Tehachapi Basin in the following quantities: for agricultural use 631 acre feet, for municipal/industrial use 271 acre feet and for artificial replenishment 279 acre feet. Return flows from imported State Project Water are shown in Figure 5.

Resolution 20-11 was adopted by the Board of Directors on December 21, 2011. This resolution amended the rules and regulations for the sale, use and distribution of water by adopting a new form of Term M&I Agreement for recharge water customers. The four new elements of this Term M&I Agreement include: A 10-year term with an evergreen provision, which provides a water supply assurance to the water purveyors so they are able to approve development projects and water supply assessments. The contract will have an ultimate termination date of December 31, 2039, concurrent with the expiration of the State Water Project contract; Establishes banked water reserve accounts. Water purveyors are being asked to put a five-year water supply in the ground, which would be equal to a five-year imported water requirement. This can be accumulated over a 10-year period; This agreement also limits the amount of imported water that the District is committed to furnish, by the amounts shown in the Tehachapi Regional Urban Water Management Plan for 2040; and This agreement also reiterates the District's policy to meet the present and future needs of its Term M&I Agreement customers from the District's State Water Project water supply.

Conjunctive use of imported water and groundwater has become a priority issue within the Tehachapi Basin during the last several years. The Golden Hills Community Services District had experienced increasing difficulty and costs in meeting California drinking water standards with treatment of imported State Project Water. Golden Hills CSD discontinued operation of its freshwater treatment plant as a primary source of potable water in 1994. Golden Hills CSD, the City of Tehachapi and all other purveyors of potable water within the Tehachapi Basin are entirely dependent upon groundwater for domestic use. By Resolution TW1-92, a new Paragraph 18 entitled "Artificial Replenishment" was added to the Watermaster's Rules and Regulations setting forth procedures whereby any party may propose and be granted the right to spread imported water and thereafter extract groundwater under such terms and conditions as will protect the rights of other parties and the Tehachapi Basin in general. Golden Hills CSD spreads SWP water in its China Hill recharge area.

In 2001, the District and Golden Hills Community Services District (GHCSD) entered into a letter of intent to enhance the conjunctive use of the State Water Project (SWP) water and native groundwater in the Tehachapi Basin. Construction of this project was under way in the fall of 2004 and was completed in June 2005. The project involves spreading SWP water in the floor of the District's Antelope Dam, recovering such water through a new well located down gradient from Antelope Dam and conveying such water to GHCSD's service area in a new transmission line constructed within the District's mainline easement. This project was funded by Proposition 13 funds and local money.

In reference to Section V. of this report, entitled Claim by Tehachapi-Cummings County Water District to Return Flow from Imported Water; Figure 5 shows the amount of imported water sales in the Tehachapi Basin by year and quantities of imported water returned to the Tehachapi Basin as a result of applied imported water. Figure 5 also indicates the volume of imported water extracted from the Basin by year. Return flow water extracted from the Basin has been delivered for beneficial use within the Tehachapi-Cummings County Water District. Figure 6 shows calculations of credits for stored water in Tehachapi Basin at the beginning and at the end of 2012.

The District, in cooperation with the City of Tehachapi and Golden Hills Community Services District retained Fugro West, Inc. to prepare a Groundwater Modeling Study for the Tehachapi Basin as part of the Watermaster's ongoing program to better understand the hydrogeology of the Tehachapi Basin. That report was completed in 2009. The Executive Summary of the Tehachapi Basin Groundwater Study is included herein as Figure 7.

Resolution No. 3-96 authorized pumping of recharged imported water in lieu of surface delivery of imported water. The Tehachapi-Cummings County Water District in cooperation with the City of Tehachapi constructed groundwater recharge facilities, which enable the District to store imported State Project Water for subsequent extraction and beneficial use. Sound groundwater management has been significantly improved by the above in terms of improvement of water quality and groundwater banking to ensure adequate local water supplies during drought years. A copy of Resolution No. 3-96 is included herein as Figure 8.

The Tehachapi-Cummings County Water District became aware of the sudden appearance of nitrate levels exceeding the California maximum contaminant level in two wells within the Tehachapi Basin in February 1998. The two wells are located within the Ashtown Mutual Water Company's service area, immediately adjacent to the north and east city limits of the City of Tehachapi. These two particular wells served 72 lots within a single subdivision known as "Ashtown".

Pumping of the two Ashtown wells was immediately discontinued following the connection of the subdivision to the City of Tehachapi's water supply system. The 72 lots within Ashtown were developed in 1955 and had individual septic systems. The long term percolation of septic system effluent into the groundwater basin immediately adjacent to Ashtown's domestic water supply wells is responsible for the nitrate contamination of the groundwater supply in the local area. The City of Tehachapi has annexed the Ashtown subdivision, constructed a new water delivery system within the subdivision and has connected all 72 lots within Ashtown to the City's wastewater treatment plant. The Tehachapi-Cummings County Water District acquired the two Ashtown wells, constructed a pipeline from the wells to the District's transmission system and began pumping the wells in June 1997. Funding of the above nitrate remediation project was provided by the Kern County Community Development Department, USDA Rural Development Department, Ashtown Mutual Water Company (subsequently dissolved with all water rights and funds held by the water company transferred to the City of Tehachapi, under an agreement with the City dated January 28, 1998), Tehachapi-Cummings County Water District and the City of Tehachapi. This was a good example of local community and government cooperation.

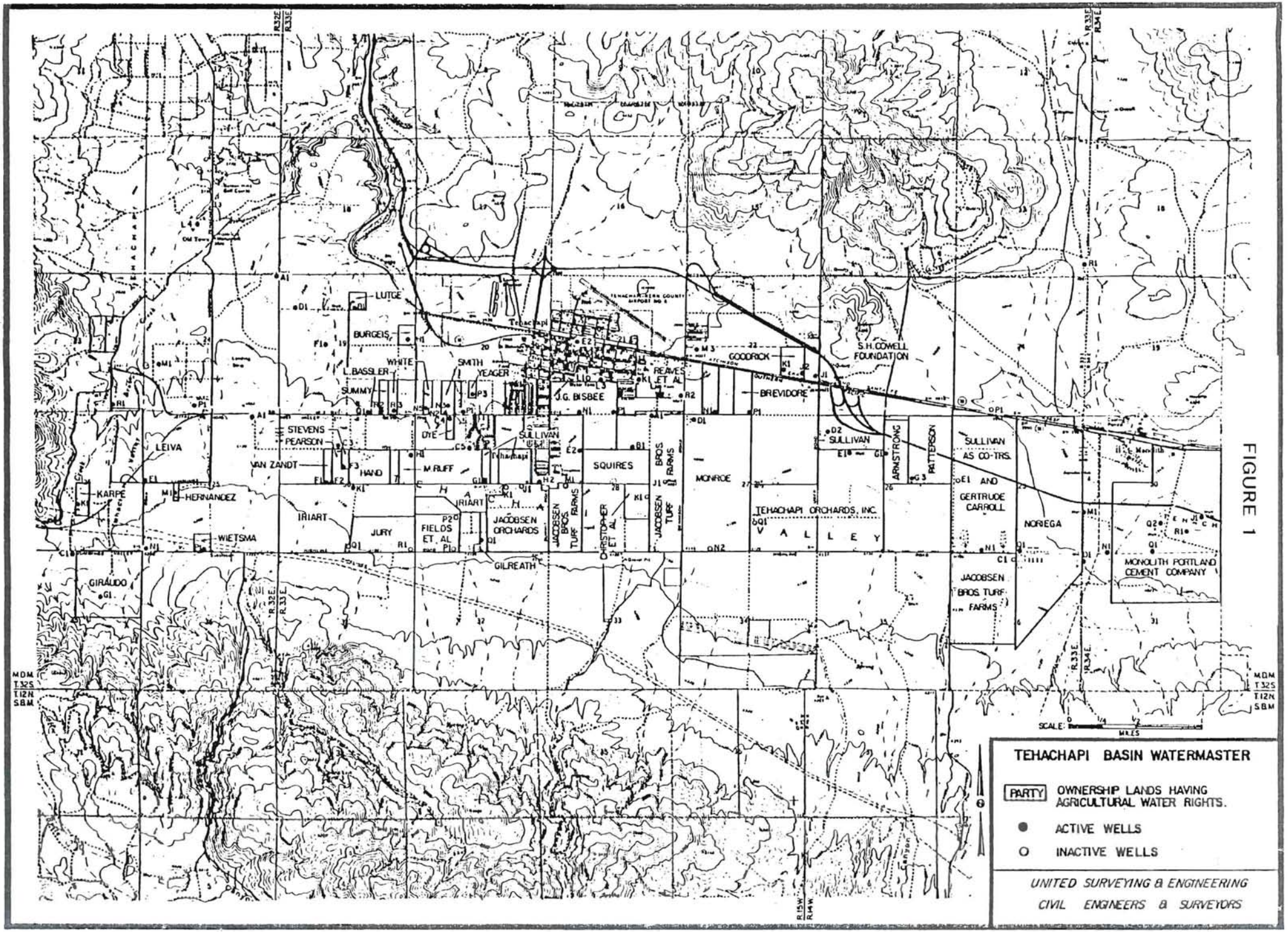


FIGURE 1

FIGURE 1

FIGURE 2

water facts

No. 7

Numbering Water Wells in California

Why a State Well Number is Necessary

A systematic and uniform procedure for numbering wells in California is necessary for the following reasons:

1. California has between one to two million wells of all shapes, sizes, and conditions. On the average, 10,000 to 15,000 more wells are added to this total each year. During droughts the number of water wells built each year increases temporarily.

2. The Department of Water Resources has more than 1 million records from water wells, monitoring wells, and cathodic protection wells on file including construction logs; measurements of depth to water; physical, chemical and bacteriological analyses; and pumping records.

3. Many state, federal, county, city, and local water agencies build and extract water from or inject water into these wells, or obtain samples for analysis and measurements of depth to water from these wells.

Water Facts *are short reports on water resources issues of general interest. They are published periodically by the California Department of Water Resources and can be obtained free by contacting DWR Bulletins & Reports, P.O. Box 942836, Sacramento, CA 94236-0001; 916/653-1097.*

To prevent uncoordinated numbering of wells by numerous agencies, which would result in confusion, a single agency is responsible for the assignment of well numbers. That responsibility and authority belongs to DWR because:

- DWR is the legal and prime repository for groundwater information in California.

- DWR also has responsibility and authority for surveying and mapping and related cartographic activities in California.

The Well-Numbering System

The State's well-numbering system is based on a rectangular system called the "**United States System of Surveying the Public Lands**," commonly referred to as the "**Public Lands Survey**," established by the Continental Congress in 1784. Under it all tracts of land are referenced to an initial point and identified as being in a **township**. A township is a square parcel of land six miles on each side. Its location is established as being a certain number of six-mile units east or west of a north-south line running through the initial point (called the "**principal meridian**") and a certain number of six-mile units north or south of an east-west line running through the initial point (called the "**baseline**").

In California there are three initial points and corresponding principal meridians and baselines (see the figures on page 3). They are Mount Diablo, San Bernardino, and Humboldt, and we identify them

Nomenclature and Notation Examples

Example of a State Well Number: T3S/R4E/36N04S

Ignoring the slash and the hyphen, the well number's components are:

State Well Number	T3S	R4E	36	N	04	S
Township	/	/	/	/	/	/
Range	/	/	/	/	/	/
Section	/	/	/	/	/	/
40-Acre Tract	/	/	/	/	/	/
Sequence Number	/	/	/	/	/	/
Base & Meridian	/					

- Township is the third 36-square-mile parcel of land (township) south of the initial point (T3S).
- Range is the fourth 36-square-mile parcel of land (township) east of the initial point (R4E).
- Section is that parcel of land one mile square numbered 36 in T3S/R4E.
- Tract is that 40-acre parcel of land in section 36 lettered "N".
- Sequence number 4 is the number assigned to this particular well in tract N of section 36 and it indicates that three other wells in this tract have been assigned numbers in the past.
- Base & Meridian is that particular initial point, baseline and principal meridian to which this well is referenced, in this case S, the San Bernardino Base and Meridian.

by the letters M, S, and H, respectively. Longitudinal lines are east or west of the principal meridian and are called **Range Lines**. Latitudinal lines are parallel to, and north or south of the baseline and are known as **Township Lines**. Each township is described with respect to the initial point by its distance in numbers of six-mile units and direction from that point. Townships are north or south and ranges are east or west of that point.

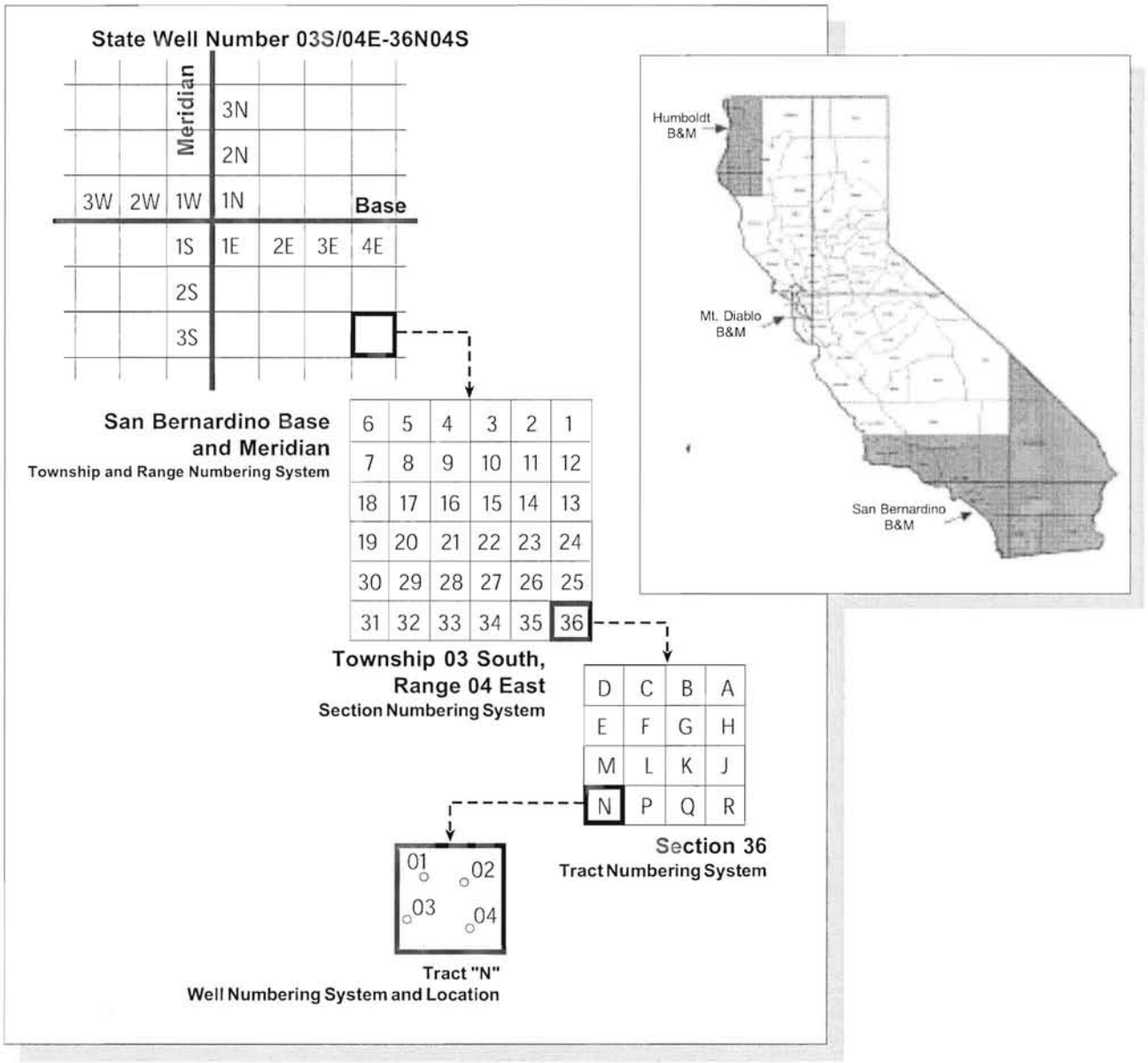
Every township is further divided into 36 parts called **sections**. A section is a square parcel of land one mile on a side, each containing 640 acres. Numbering of these sections is illustrated on page 3. This "grid" system is very useful in locating "points on the ground," such as water wells in areas with few identifying landmarks. While this precision is customarily maintained, shortcomings in surveying techniques and the adjustments required by converging meridians (longitude lines) as they approach the north and south poles have resulted in some abbreviated or irregular sections.

Spanish land grants which predate the public land surveys in California have not been subdivided in this manner. However, DWR in cooperation with the USGS has extended section lines on maps on which land grant boundaries appear and many extended section lines are published. DWR maintains an official file of these lines.

The State's well-numbering system is an extension of the public land survey system and has been employed by DWR, USGS, and other agencies for over 50 years. Under this system, each well is assigned a unique number referred to as the **State Well Number**. The extension of the system involves dividing each section of land into sixteen 40-acre tracts, identified as illustrated on page 3. Once the well's location is established in the 40-acre tract it is assigned a sequence number. These sequence numbers are assigned in chronological order by DWR personnel. DWR maintains an index to prevent duplication.

How to Get Well Numbers Assigned

Agencies or anyone desiring well numbers should contact the district office of DWR in whose area the wells are situated. There are four district office locations: Red Bluff (Northern District); Sacramento (Central District); Fresno (San Joaquin District); and Glendale (Southern District). Addresses of these offices plus a list of the



counties in each district are listed on page 4. If you are uncertain about which office to contact or if you need additional assistance, contact the Statewide Well Standards Coordinator in the Division of Planning and Local Assistance in Sacramento at (916) 327-8861.

Your request should be accompanied by:

1. A map of reasonably large scale or a sketch map showing the location of the wells with respect to prominent manmade features or natural landmarks and the distance to them. A most useful map is the standard USGS 7.5-minute quadrangle topographic map with a scale of 1:24000 (a little over 2-1/2 inches equals one mile).

2. An exact description and the location of each well including:

- address of the property that includes county, city or town, and street or highway address;
- the name or number assigned to the well by its owner agency because agencies owning more than one well commonly identify each well by some designation;
- the township, range, and section if known;
- direction and distance from the nearest city or town, roads, streets, canals, powerlines, or other distinctive structure, and
- the distance and direction to other existing wells.

3. A description of the well itself, including anything that is known about the well, such as:

- owner;
- date constructed, reconstructed, or modified;
- driller;
- well depth;
- casing material and its diameter;
- pump horsepower and pump manufacturer;
- motor and serial number; and
- utility company meter number.

Although this information may not be readily available for each well, the more information there is, the less the possibility of misnumbering and confusion at a later date.

DWR uses a standard form (DWR Form 429, "Well Data") for recording information for each well.

To get more information or to get a copy of DWR's Well Data form, contact any of the DWR District Offices listed below, or see our Web site at **wwwdpla.water.ca.gov/cgi-bin/supply/gw/main.pl**

Northern District
2440 Main Street
Red Bluff, CA 96080-2398
(530) 529-7300
www.dpla.water.ca.gov/nd

Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, Tehama, and Trinity

Central District
3251 "S" Street
Sacramento, CA 95816-7017
(916) 227-7561
www.dpla.water.ca.gov/cd

Alameda, Alpine, Amador, Calaveras, Contra Costa, El Dorado, Marin, Mendocino, Mono (North), Napa, Nevada, Placer, Sacramento, San Francisco, San Joaquin, San Mateo, Santa Clara, Sierra, Solano, Sonoma, Sutter, Tuolumne, Yolo, and Yuba

San Joaquin District
3374 E. Shields Avenue
Fresno, CA 93726-6990
(559) 230-3300
www.dpla.water.ca.gov/sjd

Fresno, Kern (San Joaquin Valley), Kings, Madera, Mariposa, Merced, Monterey, San Benito, Santa Cruz, Staniaslaus, and Tulare

Southern District
770 Fairmont Avenue
Glendale, CA 91203-1035
(818) 543-4611
www.dpla.water.ca.gov/sd

Imperial, Inyo, Kern (Desert), Los Angeles, Orange, Riverside, Mono (South), San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Ventura

FIGURE 3

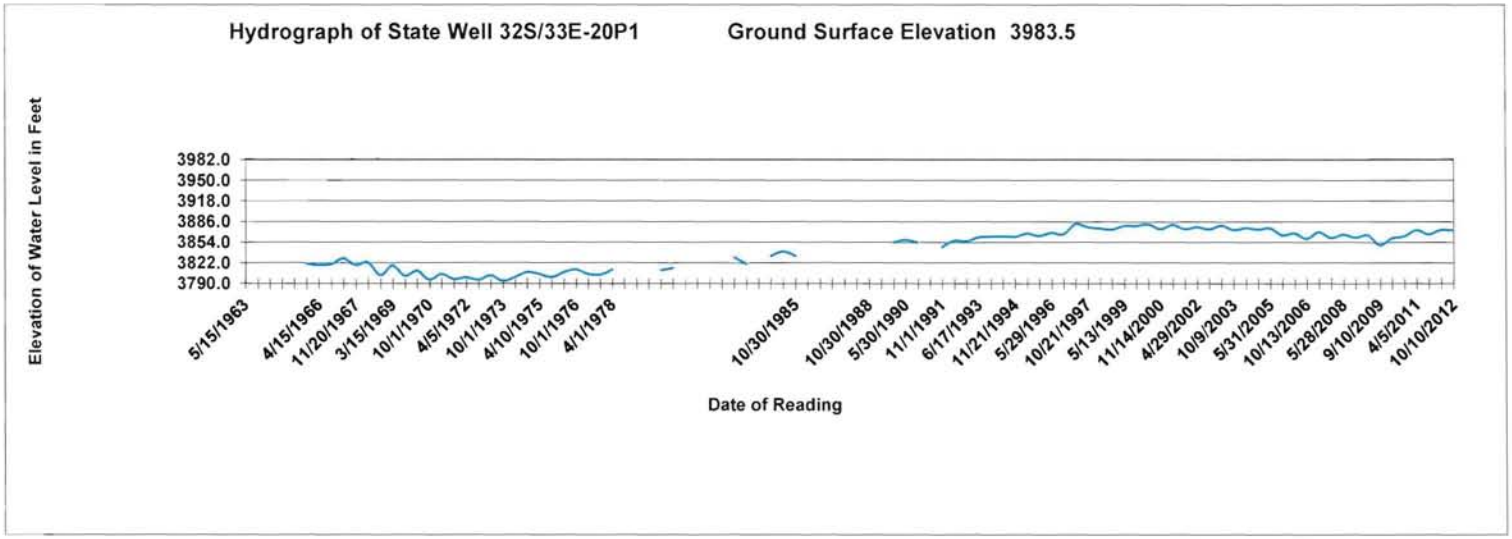
FIGURE 3. ALLOWED PUMPING ALLOCATION AND TOTAL BASIN OPERATION (IN ACRE FEET) FOR 2012

Party and/or Successor	Allowed Pumping Allocation	APA Leased In	APA Leased Out	Ded. For Over-extraction	Allowed Carryover Into 2012	Allowable Extractions	Extractions by Source: From APA	2010 Carryover	2011 Carryover	Pumped/ Purchased Recharge	Remaining APA	Portion From 2011 Carryover	Portion From 2012 Carryover	Allowed Carryover Into 2013
Abel Trustee, Diana P.	11.040				5.524	16.564					16.564	2.762	2.762	5.524
Abel, Mirta	8.280				4.142	12.422					12.422	2.071	2.071	4.142
American Cement Co.	-	0.667			-	0.667	(0.667)				-	-	-	-
Arnds, Theodore	2.000				1.000	3.000					3.000	0.500	0.500	1.000
Baker, Scott and Marian	6.000				3.000	9.000					9.000	1.500	1.500	3.000
Benz, Paul	6.000				3.000	9.000					9.000	1.500	1.500	3.000
Benz Visco Youth Park	-	100.000			50.000	150.000	(66.652)				83.348	25.000	25.000	50.000
Bozenich, Gary	21.333				10.666	31.999					31.999	5.333	5.333	10.666
Burgeis, Donald & Betty	16.000				8.000	24.000					24.000	4.000	4.000	8.000
Ciachurski, Jeffrey	81.333				40.666	121.999					121.999	20.333	20.333	40.666
Continuity I, LLC	48.667				24.334	73.001					73.001	12.167	12.167	24.334
Cooper, W.W. & Alice	10.222				5.110	15.332	(0.659)				14.673	2.555	2.555	5.110
Crystal Organic Farms	-		(57.894)		57.894	-	-				-	-	-	-
Dye, Lewis M., Jr.	2.000				1.000	3.000					3.000	0.500	0.500	1.000
Frezieres, Grant	6.000				3.000	9.000					9.000	1.500	1.500	3.000
GE Wind Energy, LLC	50.000				25.000	75.000	(1.527)				73.473	12.500	12.500	25.000
Golden Hills CSD	865.667	800.000	(370.000)		261.109	1,556.776	(1,109.706)				447.070	-	185.961	185.961
Grand Oaks Water Co.	4.000	26.667		(6.380)	0.000	24.287	(49.347)				(25.060)	(6.380)	(25.060)	(25.060)
Ha, Kun Sik & Kyung R.	90.000	57.894			33.086	180.980	(147.984)	(7.703)			25.293	16.658	-	16.658
Hensler, Kenneth	1.000				0.500	1.500					1.500	0.250	0.250	0.500
Hwang, Richard T.	8.667				4.334	13.001					13.001	2.167	2.167	4.334
Iriart, Jack C.	0.333				0.166	0.499					0.499	0.083	0.083	0.166
Jones Estate, Gwendolyn	6.667				3.334	10.001					10.001	1.667	1.667	3.334
Keel, Alice	2.000				1.000	3.000					3.000	0.500	0.500	1.000
Kern Co. Waste Mgmt.	-	10.000			5.000	15.000	(9.902)				5.098	2.500	1.275	3.775
Knaus, Alice	2.667				1.138	3.805	(1.026)				2.779	0.471	0.667	1.138
Kolesar, John	1.000				0.500	1.500	(1.000)	(0.500)		(1.624)	-			-
Kubicek Trust	203.333		(203.333)								-	-	-	-
Kundert Brothers	-	203.333			78.415	281.748	(203.333)	(50.833)	(27.582)		-	-	-	-
Larson, Russell	2.000				1.000	3.000					3.000	0.500	0.500	1.000
Lees, Spencer H.	2.000				1.000	3.000					3.000	0.500	0.500	1.000
Lehigh Southwest Cement Company	1,162.667		(910.667)		124.750	376.750	(22.879)				353.871	62.375	63.000	125.375
Lokey, John R. & Adele	2.000				1.000	3.000					3.000	0.500	0.500	1.000
Mathews, Don	4.667				2.334	7.001					7.001	1.167	1.167	2.334
Mendez, Frank	12.000				6.000	18.000					18.000	3.000	3.000	6.000
Meridth, Clifford	10.667				5.334	16.001	(8.740)				7.261	2.667	1.927	4.594
Mills, John & Gracie	12.667				6.334	19.001					19.001	3.167	3.167	6.334
Total Page 1	2,662.877	1,198.561	(1,541.894)	(6.380)	778.670	3,091.834	(1,623.422)	(59.036)	(27.582)	(1.624)	1,381.794	184.013	333.492	523.885

FIGURE 3. ALLOWED PUMPING ALLOCATION AND TOTAL BASIN OPERATION (IN ACRE FEET) FOR 2012

(Continued)

Party and/or Successor	Allowed Pumping Allocation	APA Leased In	APA Leased Out	Ded. For Over-Extraction	Allowed Carryover Into 2012	Allowable Extractions	Extractions by Source: From APA	2010 Carryover	2011 Carryover	Pumped/ Purchased Recharge	Remaining APA	Portion From 2011 Carryover	Portion From 2012 Carryover	Allowed Carryover Into 2013
Miner, Carolyn & Milton	2.667				1.334	4.001					4.001	0.667	0.667	1.334
Mojave Bank	10.000				5.000	15.000					15.000	2.500	2.500	5.000
Mojave PUD	50.000				25.000	75.000					75.000	12.500	12.500	25.000
Neely, Leattrice	2.667				1.334	4.001					4.001	0.667	0.667	1.334
N.I.R.S. Invest. Co. Inc.	31.333				-	31.333	(31.333)				-	-	-	-
Nunhems, USA Inc.	8.667				-	8.667					8.667	-	2.167	2.167
Pulford, John	-	20.000		(6.029)	-	13.971	(11.796)				2.175	(6.029)	2.175	2.175
Robb, Paul R.	3.333				1.668	5.001					5.001	0.834	0.834	1.668
Robison, William	3.000				1.500	4.500					4.500	0.750	0.750	1.500
Safier, Lester A. et al	300.667				150.334	451.001					451.001	75.167	75.167	150.334
Schmidt, Donna Rae et al	28.667		(20.000)		9.334	18.001					18.001	7.167	2.167	9.334
Schultz Enterprises	18.000				-	18.000					18.000	4.500	4.500	9.000
Schultz, Robert & Barbara	13.333				-	13.333					13.333	3.333	3.333	6.666
Starbird, John H., et al	6.667				3.334	10.001					10.001	1.667	1.667	3.334
Stiekman Trust, Gerson	15.333				7.666	22.999					22.999	3.833	3.833	7.666
Sun Trail, Inc.	203.333				-	203.333					203.333	-	-	-
Tehachapi, City of	1,822.000	333.333			90.182	2,245.515	(2,155.333)	(51.052)			39.130	21.932		21.932
Tehachapi Hospital	38.667				-	38.667					38.667	-	-	-
Tehachapi Pub. Cemetery	7.333					7.333	(7.333)				-	-	-	-
Tehachapi Unified SD	4.667				2.334	7.001					7.001	1.167	1.167	2.334
Union Pacific	65.333				32.666	97.999	(16.152)				81.847	16.333	16.333	32.666
Volz, Herbert and Karin	6.667				3.334	10.001					10.001	1.667	1.667	3.334
Vukich, Gerald	2.000				1.000	3.000					3.000	0.500	0.500	1.000
Weir, Juanita	12.000				6.000	18.000					18.000	3.000	3.000	6.000
West Tehachapi Mutal	8.667	10.000			9.540	28.207	(18.667)	(9.540)	(0.973)		(0.973)	9.540	(0.973)	8.567
White, Mildred	2.667				1.334	4.001					4.001	0.667	0.667	1.334
Wietsman, Harry	2.000				1.000	3.000					3.000	0.500	0.500	1.000
Wilder, Gary & Wanda	1.778				0.890	2.668					2.668	0.445	0.445	0.890
Yeager, Louise	2.000				1.000	3.000					3.000	0.500	0.500	1.000
Young, Patricia	10.000				5.000	15.000					15.000	2.500	2.500	5.000
Total Page 2	2,683.446	363.333	(20.000)	(6.029)	360.784	3,381.534	(2,240.614)	(60.592)	(0.973)	-	1,079.355	166.307	139.233	311.569
GRAND TOTAL	5,346.323	1,561.894	(1,561.894)	(12.409)	1,139.454	6,473.368	(3,864.036)	(119.628)	(28.555)	(1.624)	2,461.149	377.902	472.725	863.036


Hydrograph of State Well 32S/33E-20P1
Ground Surface Elevation 3983.5
Elevation of Water Level in Feet
3982.0
3950.0
3918.0
3886.0
3854.0
3822.0
3790.0
5/15/1963
4/15/1966
11/20/1967
3/15/1969
10/1/1970
4/5/1972
10/1/1973
4/10/1975
10/1/1976
4/1/1978
10/30/1985
10/30/1988
5/30/1990
11/1/1991
6/17/1993
11/21/1994
5/29/1996
10/21/1997
5/13/1999
11/14/2000
4/29/2002
10/9/2003
5/31/2005
10/13/2006
5/28/2008
9/10/2009
4/5/2011
10/10/2012
Date of Reading

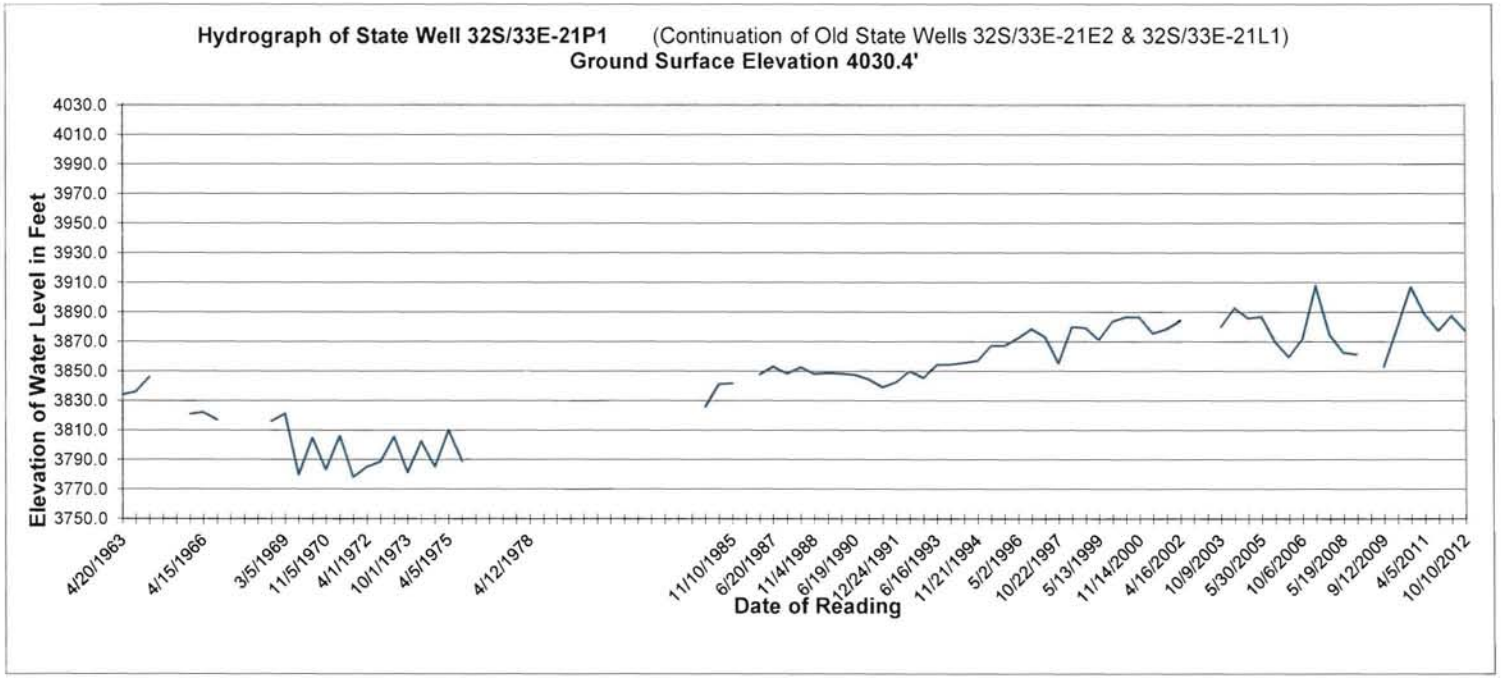
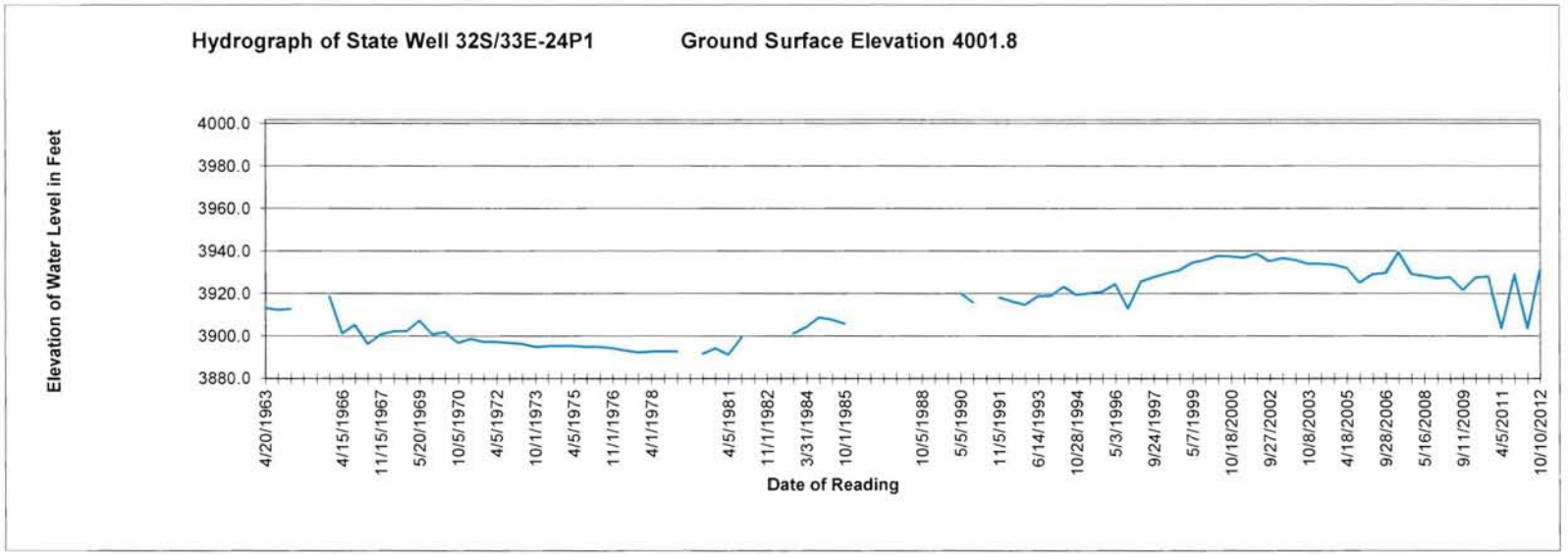
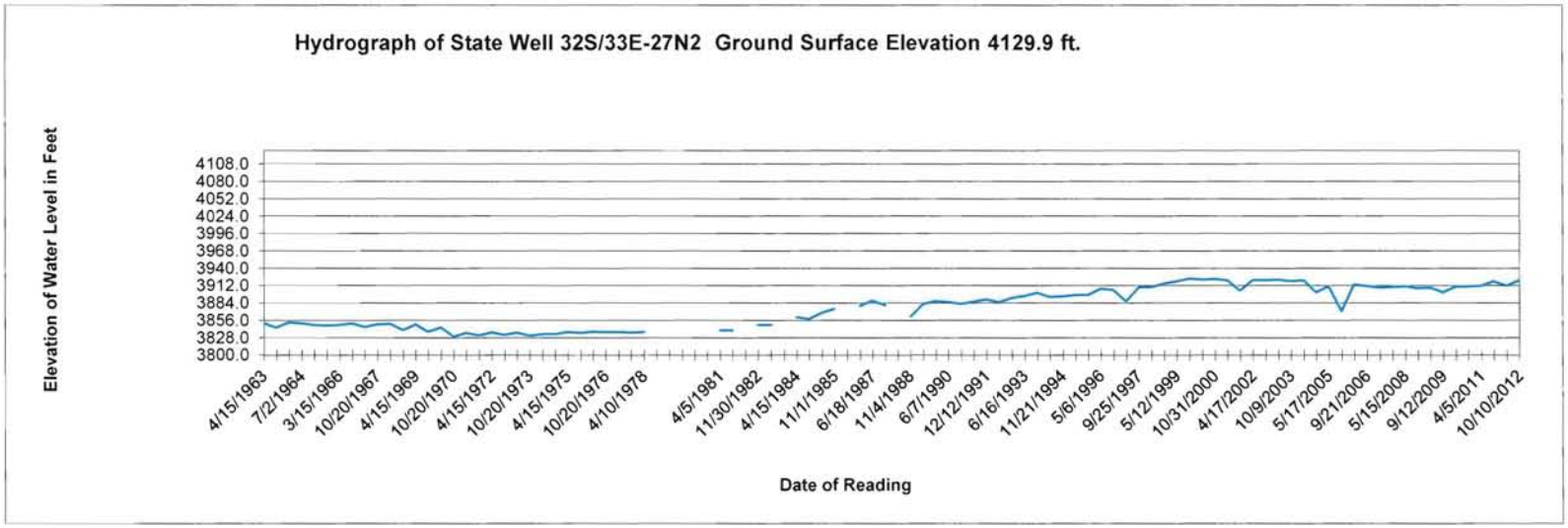
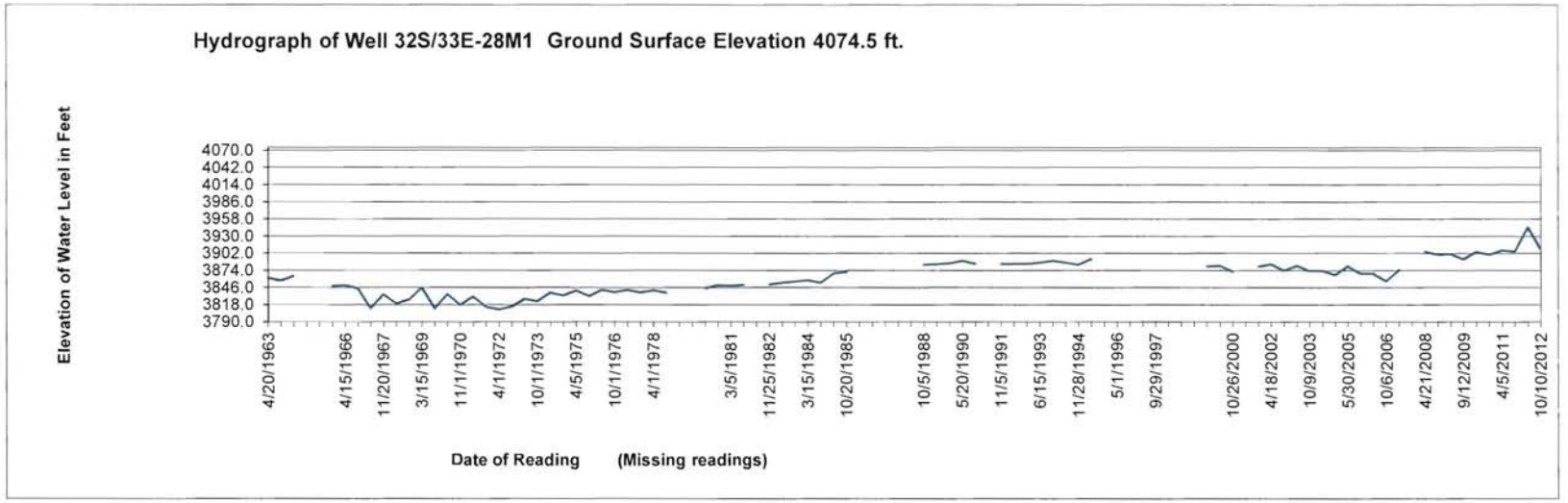

Hydrograph of State Well 32S/33E-21P1 (Continuation of Old State Wells 32S/33E-21E2 & 32S/33E-21L1)
Ground Surface Elevation 4030.4'
Elevation of Water Level in Feet
4030.0
4010.0
3990.0
3970.0
3950.0
3930.0
3910.0
3890.0
3870.0
3850.0
3830.0
3810.0
3790.0
3770.0
3750.0
4/20/1963
4/15/1966
3/5/1969
11/5/1970
4/1/1972
10/1/1973
4/5/1975
4/12/1978
11/10/1985
6/20/1987
11/4/1988
6/19/1990
12/24/1991
6/16/1993
11/21/1994
5/2/1996
10/22/1997
5/13/1999
11/14/2000
4/16/2002
10/9/2003
5/30/2005
10/6/2006
5/19/2008
9/12/2009
4/5/2011
10/10/2012
Date of Reading

FIGURE 4


Hydrograph of State Well 32S/33E-24P1
Ground Surface Elevation 4001.8
Elevation of Water Level in Feet
4000.0
3980.0
3960.0
3940.0
3920.0
3900.0
3880.0
4/20/1963
4/15/1966
11/15/1967
5/20/1969
10/5/1970
4/5/1972
10/1/1973
4/5/1975
11/1/1976
4/1/1978
4/5/1981
11/1/1982
3/31/1984
10/1/1985
10/5/1988
5/5/1990
11/5/1991
6/14/1993
10/28/1994
5/3/1996
9/24/1997
5/7/1999
10/18/2000
9/27/2002
10/8/2003
4/18/2005
9/28/2006
5/16/2008
9/11/2009
4/5/2011
10/10/2012
Date of Reading


Hydrograph of State Well 32S/33E-27N2 Ground Surface Elevation 4129.9 ft.
Elevation of Water Level in Feet
4108.0
4080.0
4052.0
4024.0
3996.0
3968.0
3940.0
3912.0
3884.0
3856.0
3828.0
3800.0
4/15/1963
7/2/1964
3/15/1966
10/20/1967
4/15/1969
10/20/1970
4/15/1972
10/20/1973
4/15/1975
10/20/1976
4/10/1978
4/5/1981
11/30/1982
4/15/1984
11/1/1985
6/18/1987
11/4/1988
6/7/1990
12/12/1991
6/16/1993
11/21/1994
5/6/1996
9/25/1997
5/12/1999
10/31/2000
4/17/2002
10/9/2003
5/17/2005
9/21/2006
5/15/2008
9/12/2009
4/5/2011
10/10/2012
Date of Reading


Hydrograph of Well 32S/33E-28M1 Ground Surface Elevation 4074.5 ft.
Elevation of Water Level in Feet
4070.0
4042.0
4014.0
3986.0
3958.0
3930.0
3902.0
3874.0
3846.0
3818.0
3790.0
4/20/1963
4/15/1966
11/20/1967
3/15/1969
11/1/1970
4/1/1972
10/1/1973
4/5/1975
10/1/1976
4/1/1978
3/5/1981
11/25/1982
3/15/1984
10/20/1985
10/5/1988
5/20/1990
11/5/1991
6/15/1993
11/28/1994
5/1/1996
9/29/1997
10/26/2000
4/18/2002
10/9/2003
5/30/2005
10/6/2006
4/21/2008
9/12/2009
4/5/2011
10/10/2012
Date of Reading (Missing readings)

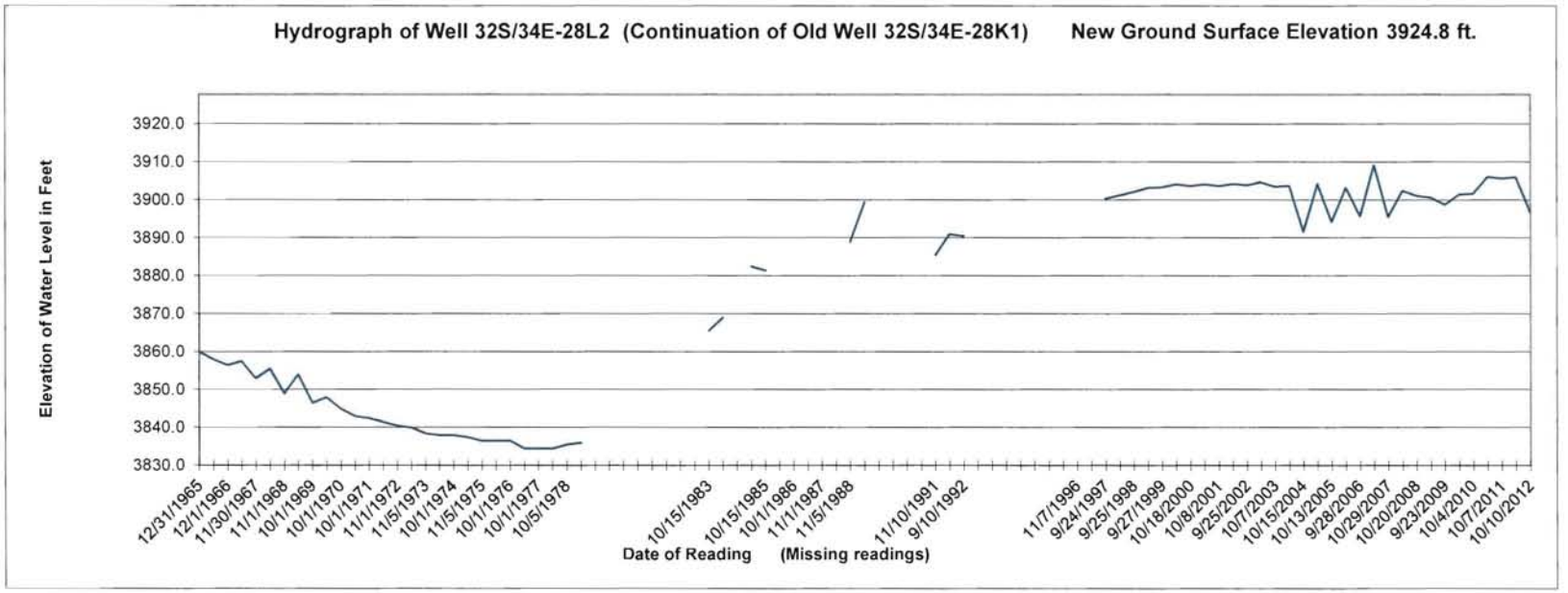

Hydrograph of Well 32S/34E-28L2 (Continuation of Old Well 32S/34E-28K1) New Ground Surface Elevation 3924.8 ft.
Elevation of Water Level in Feet
3920.0
3910.0
3900.0
3890.0
3880.0
3870.0
3860.0
3850.0
3840.0
3830.0
12/31/1965
12/1/1966
11/30/1967
11/1/1968
10/1/1969
10/1/1970
10/1/1971
11/1/1972
11/5/1973
10/1/1974
11/5/1975
10/1/1976
10/1/1977
10/5/1978
10/15/1983
10/15/1985
10/1/1986
11/1/1987
11/5/1988
11/10/1991
9/10/1992
11/7/1996
9/24/1997
9/25/1998
9/27/1999
10/18/2000
10/8/2001
9/25/2002
10/7/2003
10/15/2004
10/13/2005
9/28/2006
10/29/2007
10/20/2008
9/23/2009
10/4/2010
10/7/2011
10/10/2012
Date of Reading (Missing readings)

FIGURE 5.

IMPORTED WATER RETURNED TO TEHACHAPI BASIN
(15% OF APPLIED IMPORTED WATER IN ACRE FEET)

YEAR	AG	M&I	TOTAL	RETURN FLOW TO BASIN	EXTRACTED	CUMULATIVE REMAINING
1974	3,545	397	3,942	591	0	591
1975	3,945	103	4,048	607	0	1,199
1976	2,311	178	2,489	373	0	1,572
1977	1,337	136	1,473	221	0	1,793
1978	1,187	45	1,232	185	0	1,978
1979	1,376	52	1,428	214	0	2,192
1980	2,167	75	2,242	336	0	2,528
1981	1,912	142	2,054	308	0	2,836
1982	1,202	33	1,235	185	0	3,021
1983	491	10	501	75	0	3,097
1984	470	12	482	72	0	3,169
1985	435	43	478	72	0	3,241
1986	920	15	935	140	0	3,381
1987	991	31	1,022	153	0	3,534
1988	1,236	1,009	2,245	337	0	3,871
1989	360	1,054	1,414	212	0	4,083
1990	396	1,086	1,482	222	0	4,305
1991	395	549	944	142	815	3,632
1992	863	28	891	134	0	3,766
1993	408	239	647	97	0	3,863
1994	491	538	1,029	154	0	4,017
1995	1,452	21	1,473	221	0	4,238
1996	1,664	48	1,712	257	0	4,495
1997	2,365	28	2,393	359	367	4,487
1998	1,834	29	1,863	279	52	4,714
1999	2,391	140	2,531	380	735	4,359
2000	1,606	199	1,805	271	0	4,630
2001	844	123	967	145	361	4,414
2002	993	267	1,260	189	0	4,603
2003	727	319	1,046	157	0	4,760
2004	720	560	1,280	192	0	4,952
2005	855	209	1,064	160	1200	3,912
2006	519	263	782	117	383	3,646
2007	1,074	438	1,512	227	0	3,873
2008	638	441	1,079	162	481	3,554
2009	233	0	233	35	52	3,537
2010	450	0	450	68	77	3,528
2011	170	0	170	26	88	3,466
2012	631	0	631	95	93	3,468

***FIGURE 6. CALCULATION OF STORED WATER CREDIT**
2012 TEHACHAPI BASIN (ACRE FEET)

	TCCWD			GOLDEN HILLS CSD RECHARGE	CITY OF TEHACHAPI RECHARGE
	RETURN FLOW	RECHARGE	TOTAL		
1. STORED WATER CREDIT (AS OF JAN. 1, 2012)	3,466	3,979	7,445	2,576	1,066
2. CONTRIBUTION TO STORAGE FOR TCCWD	95	279	374		
3. CONTRIBUTION TO STORAGE FOR OTHERS (ADDED IN EXCHANGE FOR WHEELED WATER)			0	200	200
4. EXTRACTION RIGHT 2012 WATER YEAR	3,561	4,258	7,819	2,776	1,266
5. 2012 EXTRACTIONS	(93)	0	(93)	-139	0
6. SPREADING LOSS		(17)	(17)	0	
7. STORED WATER CREDIT (AS OF JAN. 1, 2013)	3,468	4,241	7,709	2,637	1,266

*WITHOUT REGARD TO "ANNUAL PUMPING ALLOCATION"

EXECUTIVE SUMMARY

This report presents the findings of the Tehachapi Groundwater Basin Study conducted for the Tehachapi-Cummings County Water District (TCCWD), the City of Tehachapi, and the Golden Hills Community Services District (GHCSD). The base period of the study covers the water years of 1986 to 2004. This study was divided into four major tasks. Task 1 consisted of the collection of available hydrologic and hydrogeologic data for the Tehachapi Groundwater Basin (Basin), the characterization and conceptualization of the Basin aquifer hydrogeology, and the estimation of a hydrologic balance for the Basin. The findings of Task 1 were documented in the Task 1 Interim Report (Fugro, 2007). Task 2 was the construction and calibration of a numerical groundwater flow model for the Basin aquifer. The objective of Task 3 was to develop a solute transport model for evaluating nitrate transport in the Basin. During the construction of the solute transport model, it was concluded that the nitrate input data required to appropriately develop the model was insufficient. Finally, Task 4 consisted of the application of the groundwater model to evaluate the potential impacts on Basin groundwater resources of three different future scenarios, each dealing with water supply and demand issues. Originally, Task 4 was to also include the application of the solute transport model to evaluate a fourth future scenario which dealt with groundwater nitrate transport. Since the solute transport model was not completed as planned because of an insufficient dataset, a comprehensive groundwater nitrate monitoring program was recommended instead. The data eventually generated through the implementation of the monitoring program could then be used at a later time to properly develop the solute transport model and evaluate the groundwater nitrate scenario. This Final Report presents the findings of Tasks 2, 3, and 4 for the Tehachapi Groundwater Basin Study.

GROUNDWATER MODEL DEVELOPMENT

The boundary of the Basin alluvial deposits (Basin Alluvium) was originally defined by Michael-McCann (1962) and is approximately 25,670 acres in size. The groundwater model was constructed and calibrated for a 17,023-acre sub-area of the Basin Alluvium. This sub-area is referred to as the "Model Domain". The boundary of the Model Domain was defined predominantly by the distribution of wells with available groundwater level measurements and the locations of important hydrographic and geographic features in the Basin. The Model Domain is regarded as the portion of the Basin Alluvium that contains the alluvial sediments with the highest water-bearing capacity and the most anthropogenic hydrogeologic stresses (e.g., pumping and artificial recharge). For the purposes of analysis, the Model Domain was further divided into four hydrologic units. Hydrologic Unit 1 covers the northwest region of the Model Domain and includes the Tehachapi Creek outlet area and a significant area of GHCSD. Hydrologic Unit 2 covers the middle region of the Model Domain and includes a portion of GHCSD, the City of Tehachapi, and most of the agricultural lands in the Basin. Hydrologic Unit 3 covers the Proctor Lake area and Hydrologic Unit 4 covers the area in the southwest region of the Basin that is separated from Hydrologic Unit 2 by a major northwest-southeast trending fault zone.

The groundwater model was calibrated by adjusting key hydraulic model parameters until a reasonable match between measured and modeled groundwater levels was achieved at well locations distributed throughout the Model Domain. Once satisfactorily calibrated, the groundwater model was considered ready for evaluating future scenarios in the Basin.

SCENARIOS

The calibrated groundwater flow model was successfully used to evaluate three future scenarios, each dealing with water supply and demand issues. Sufficient data was not available to evaluate a fourth scenario related to nitrate transport in the Basin. Instead, a groundwater nitrate monitoring program was recommended to eventually generate a sufficient database to properly develop the nitrate transport model. The simulation period for each scenario was from 2005 to 2023. Descriptions and major findings of each scenario are described below.

Scenario 1

Scenario 1 evaluated the "future baseline conditions" in the Basin. It represented a "no change" future scenario in which water demands are constant year-to-year from 2005 to 2023. Scenario 1 provided a baseline upon which all other scenarios can be compared to assess the impacts of changed conditions on the Basin. Under Scenario 1, anthropogenic groundwater recharge and discharge stresses in the aquifer are constant year-to-year from 2005 to 2023. Anthropogenic recharge consists of intentional recharge for conjunctive use programs, urban and rural domestic wastewater discharges to the subsurface, and agricultural return flows. Anthropogenic discharge consists of groundwater pumping to meet urban, agricultural, rural domestic, and miscellaneous municipal & industrial (M&I) water demands. Scenario 1 also assumes that State Water Project (SWP) deliveries within the Basin are constant for each year from 2005 to 2023 and are the same as those from 2007. Annual natural (i.e., non-anthropogenic) recharge stresses from 2005 to 2023, however, are assumed to be identical to those from 1986 to 2004. In other words, the climate from 1986 to 2004 is assumed to repeat itself from 2005 to 2023. Natural recharge includes deep percolation of precipitation and precipitation runoff in intermittent streams.

Under Scenario 1, groundwater storage decreased by 127 acre-feet (AF) in the Model Domain from 2005 to 2023, for an average storage change of -7 acre-feet per year (AFY). Annual groundwater storage changes varied widely from -1,657 to 4,448 AF. Annual recharge also varied from 3,471 to 9,971 AF. Modeled average annual recharge was 5,317 AF, in comparison to the adjudicated safe yield of 5,500 AFY.

The greatest groundwater level declines in Hydrologic Unit 4 occurred in the vicinities of the two northwest-southeast trending fault zones and generally ranged from 20 to 30 feet. Measurable declines also occurred in Hydrologic Unit 2 along the fault zone and in proximity to wells 32S/33E-19Q1, 32S/33E-19P1, and 32S/33E-30K1. Groundwater level declines there ranged from 10 to 15 feet. Groundwater levels displayed positive changes starting in the middle portion of Hydrologic Unit 2 and increased steadily to rises of about 20 feet along the northwest-southeast trending fault that separates Hydrologic Unit 2 from Hydrologic Unit 3. Groundwater levels within Hydrologic Unit 3 also displayed positive changes of up to 15 feet.

Overall, the results of Scenario 1 suggest that if anthropogenic water supplies and demands remained constant at approximately their 2004 levels then the Basin aquifer will achieve an approximate long-term balance between recharge and discharge stresses. Given the constant annual water demands and climate conditions assumed under Scenario 1, the annual SWP delivery of 1,946 AF (i.e., approximately 10 percent of the 20,000 AF maximum TCCWD SWP Table A contract amount) appears sufficient to help maintain long-term groundwater levels and storage in the Basin. Assuming that future climate variability and hydrologic conditions are similar to those of the base period, negative storage changes during dry periods would be offset by positive storage changes during wetter periods over the long term. Locating high production wells in areas southeast and east of the City of Tehachapi and north of the Antelope Basin appears to mitigate against significant localized declines in groundwater levels that could occur if these wells were located in the western and southwestern areas of the Basin. 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. An additional basin, for example, could be placed on the north side of the major fault zone that separates Hydrologic Unit 2 from Hydrologic Unit 4.

Scenario 2

Scenario 2 evaluated the impacts on groundwater levels and storage of increased water demands due to urban growth in the City of Tehachapi and in GHCSD. It assumed that increases in urban water demands from 2005 to 2023 were matched by concomitant increases in SWP water deliveries for the urban conjunctive use programs. Scenario 2 also evaluates the impacts of a multi-year stoppage in SWP water deliveries to the Basin. For this assumption, no deliveries of SWP water will occur over a consecutive 3-year period within the 19-year future simulation period. 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 (e.g., severe multi-year drought, SWP conveyance system failure, natural disaster). After the 3-year stoppage in this scenario, TCCWD regains access to SWP water supplies and resumes deliveries to meet the demands of the agricultural and M&I users and the conjunctive use programs in the Basin.

Under Scenario 2, groundwater storage decreased by 1,338 AF in the Model Domain from 2005 to 2023, for an average annual storage change of -70 AFY. Annual groundwater storage changes varied widely from –3,941 to 4,871 AF. Annual recharge also varied from 3,259 to 11,483 AF. Modeled average annual recharge was 6,372 AF, in comparison to the adjudicated safe yield of 5,500 AFY. The increase in average annual recharge compared to Scenario 1 was due to concomitant increases in artificial recharge of SWP water with increases in urban water demands.

The greatest groundwater level declines in Hydrologic Unit 4 occurred in the vicinities of the two northwest-southeast trending fault zones and generally ranged from 20 to 30 feet. Within Hydrologic Unit 2, the greatest groundwater level declines also ranged from 20 to 30 feet and occurred in proximity to production wells 32S/33E-28D, 32S/33E-28J2, and 32S/33E-29R. Except from 2008 to 2010, annual artificial recharge rates in the Antelope Basin increased concomitantly with annual increases in urban water demands by the City and GHCSD. By Fall

2023, these rate increases resulted in increased local groundwater levels in the Antelope Basin area of 40 feet or more.

Overall, the results of Scenario 2 suggest that despite concomitant increases in annual artificial recharge rates in most years to match annual increases in urban pumping demands, the impact of the 3-year stoppage in SWP water deliveries resulted in localized decreases in groundwater levels that persisted in areas until the end of the simulation period in Fall 2023. Therefore, 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. Again, an additional basin might be placed on the north side of the major fault zone that separates Hydrologic Unit 2 from Hydrologic Unit 4. Nevertheless, long-term losses of groundwater storage in the Basin were relatively small with an average change of about –70 AFY. Despite the significant short-term decreases in groundwater storage during the 3-year stoppage of SWP water deliveries, the Basin maintained an overall balance between recharge and discharge over the 19-year simulation period. Given the annual water demands and climate conditions assumed under Scenario 2, a maximum annual SWP delivery of 3,300 AF (i.e., 16.5 percent of the 20,000 AF maximum TCCWD SWP Table A contract amount) appears sufficient to help maintain long-term groundwater levels and storage in the Basin.

Scenario 3

Scenario 3 was identical to Scenario 2 except that in Scenario 3 we did not assume a stoppage of SWP imports from 2008 to 2010. Therefore, Scenario 3 assumes that increases in pumping from 2005 to 2023 to meet increases in urban water demands are matched each year by concomitant increases in artificial recharge of SWP water in the Antelope Basin.

Under Scenario 3, groundwater storage increased by 5,064 AF in the Model Domain from 2005 to 2023, for an average annual storage change of 267 AFY. Annual groundwater storage changes varied widely from –1,469 to 4,784 AF. Annual recharge also varied from 4,219 to 11,436 AF. Modeled average annual recharge was 6,492 AF, in comparison to the adjudicated safe yield of 5,500 AFY. Again, the increase in average annual recharge compared to Scenario 1 was due to concomitant increases in artificial recharge of SWP water with increases in urban water demands.

The greatest groundwater level declines in Hydrologic Unit 4 occurred in the vicinities of the two northwest-southeast trending fault zones and generally ranged from 10 to 20 feet. Within Hydrologic Unit 2, the greatest groundwater level declines also ranged from 10 to 20 feet and occurred in proximity to production wells 32S/33E-28D, 32S/33E-28J2, and 32S/33E-29R. Over the future simulation period, annual artificial recharge rates in the Antelope Basin increased concomitantly with annual increases in urban water demands by the City and GHCSD. By Fall 2023, these rate increases resulted in increased local groundwater levels in the Antelope Basin area of up to 50 feet. Generally, groundwater level declines by Fall 2023 were less severe under Scenario 3 in comparison to Scenario 2.

Overall, the results of Scenario 3 demonstrate the benefits of maintaining a consistent conjunctive use recharge program in the Antelope Basin for mitigating against potential

groundwater level declines due to pumping from nearby production wells. Given the annual water demands and climate conditions assumed under Scenario 3, a maximum annual SWP delivery of 3,300 AF (i.e., 16.5 percent of the 20,000 AF maximum TCCWD SWP Table A contract amount) appears sufficient to help maintain long-term groundwater levels and storage in the Basin. Nevertheless, optimal benefits to groundwater storage from the conjunctive use program may be furthered by the development of other artificial recharge areas in addition to the Antelope Basin and the China Hill area. Again, an additional basin might be placed on the north side of the major fault zone that separates Hydrologic Unit 2 from Hydrologic Unit 4.

Scenario 4

The objective of Scenario 4 was to evaluate the impacts on groundwater nitrate levels of urban growth in the City of Tehachapi and GHCSD from 2005 to 2023, as defined under Scenario 3. Six potential sources of nitrate for groundwater were identified in the Basin: 1) treated wastewater effluent from the City of Tehachapi wastewater treatment plant (WWTP), 2) treated wastewater effluent from a small treatment plant operated by Golden Hills Sanitation Company, 3) wastewater discharges from on-site septic tank systems in GHCSD, 4) wastewater discharges from rural domestic septic tank systems throughout the Basin, 5) existing nitrates in the soils beneath the former wastewater lagoon in the City (adjacent to the existing wastewater treatment plant), and 6) nitrates from fertilizer applications to agricultural lands.

Considerable uncertainty exists in the quantification of historical and future nitrate inputs to the subsurface from the six sources. In addition, groundwater nitrate measurements are available only from a small number of wells that have been sampled since the early to mid 1990s. During the construction of the nitrate transport model, it was concluded that insufficient historical nitrogen loading and groundwater nitrate monitoring data existed to adequately develop the model. To potentially remedy this situation, a groundwater nitrate monitoring program was therefore proposed in the report.

The groundwater nitrate monitoring program should consist of the following components: 1) a comprehensive network of wells to be sampled at regular time intervals for groundwater nitrate concentrations, 2) consistent monitoring of nitrogen loadings in the effluent discharge from wastewater treatment facilities, 3) collection of supportive data, 4) estimation of nitrogen loadings from septic systems and agricultural lands, 5) development of a basin-wide groundwater nitrogen database, and 6) periodic reporting of data collection and analyses. After the program has been implemented for at least 10 years, the data generated during that period could be used to properly calibrate the nitrate transport model and use it to evaluate future scenarios. In addition, the data generated by the monitoring program could be analyzed more generally using Geographical Information Systems (GIS) tools to relate long-term changes in groundwater nitrate concentrations to changes in land use (e.g., agriculture to urban conversion), hydrogeologic conditions, climate, and population.

IV. CLAIM BY TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT TO RETURN FLOW FROM IMPORTED WATER

At an adjourned regular meeting on June 13, 1973, the Board of Directors of the Tehachapi-Cummings County Water District adopted its Resolution No. 8-73 entitled "A Resolution of the Board of Directors of Tehachapi-Cummings County Water District Establishing Rates for Water Delivered by said District, Establishing other Charges and Rules and Regulations."

Said Part K of said Resolution remains in full force and effect, and said District's claim reflected in said Part K was affirmed and restated as Part K of the Tehachapi-Cummings County Water District's Resolutions No. 15-76. Park K was amended by Resolution 3-96 and later affirmed and restated as Part K of Resolution 13-09.

Part K of Resolution 13-09 provides in full as follows:

DISTRICT'S RIGHT IN WASTE, SEEPAGE AND RETURN FLOW. District has and claims all right, title and interest in and to all return flow into any ground water basin within District's boundaries resulting from water imported by District, along with the right to later recapture or otherwise utilize the same, provided, however, the District does not claim title to return flow from imported water purchased by a public entity from the District which is intentionally spread for storage in a groundwater basin by such public entity pursuant to rules and regulations promulgated therefore by the District acting as Watermaster of any such basin. The District's claim extends to all return flow from water imported by the District, whether from spreading operations by the District, from waste or seepage before any delivery of water by the District, from waste or seepage thereafter, and from percolation after or as a result of use or re-use of imported waters by any water user or other person, except imported water purchased from the District by a public entity which is intentionally spread for storage in a groundwater basin by such public entity pursuant to rules and regulations promulgated by the District acting as Watermaster of any such basin. District hereby expresses its intention to later recapture or otherwise utilize such return flow. Nothing herein shall prevent any person from engaging in drainage or other activities to protect his land or the use thereof from return flow which otherwise would injure or would threaten injury to the enjoyment or utilization of such land.

V. AMENDMENTS TO WATERMASTER RULES AND REGULATIONS

By Resolution TW 1-73, the District, acting as Watermaster, adopted a set of rules and regulations; which were amended by Resolution Nos. TW 1-74, TW 1-88, TW 1-92, TW 1-94, TW 1-97, TW 1-2000 and TW 1-2010.

Attached as Figure 8 to this report is Resolution TW 1-2011, with exhibits. This resolution contains a restated set of rules and regulations, incorporating all prior amendments to the rules and regulations. Resolution TW 1-2011 was adopted by the Board of Directors on August 17, 2011. This resolution amended the rules and regulations as follows:

1. Rule 2 provided an updated meter list, which standardized the District's metering requirements;

2. Rule 4 provides that if a party does not follow the procedures to notify the District of a transfer of water rights, that party will be responsible for paying the District's costs in the event of a dispute;

3. Rule 18 provides new wording in regard to artificial replenishment water. New wording was added to differentiate the District's recharge operations from privately owned recharge operations.

FIGURE 8

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT

Resolution TW 1-2011

A RESOLUTION OF THE BOARD OF DIRECTORS OF
TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT
ACTING AS WATERMASTER PURSUANT TO THE
JUDGMENT ENTERED IN *TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT v. CITY OF TEHACHAPI, ET AL.*,
KERN COUNTY SUPERIOR COURT NO. 97210, AS AMENDED,
AMENDING AND RESTATING
RULES AND REGULATIONS FOR WATERMASTER OPERATIONS

A. Recitals.

(i) Paragraph 14 of the judgment heretofore entered in *Tehachapi-Cummings County Water District v. City of Tehachapi, et al.*, Kern County Superior Court No. 97210, as amended (the "judgment"), appointed this District as Watermaster to administer the judgment.

(ii) Paragraph 15(a) of the judgment authorized the Watermaster to adopt and amend from time to time such rules as may be reasonably necessary to carry out its duties, powers and responsibilities under the judgment, any such amendment to be effective 30 days after mailing to parties specified by the Watermaster.

(iii) By Resolution No. TW 1-73, this District, acting as Watermaster, pursuant to the judgment adopted a set of rule and regulations which were amended by Resolution Nos. TW 1-74, TW 1-88, TW 1-92, TW 1-94, TW 1-97, TW 1-2000 and TW1-2010.

(iv) Attached hereto, marked Exhibit "A" and incorporated herein by reference, is a restated set of rules and regulations, incorporating all the prior amendments to the rules and regulations as aforesaid and containing certain minor modifications and amendments which are necessary to enable the District to more effectively carry out its duties, powers and responsibilities as Watermaster pursuant to the judgment.

B. Resolution.

NOW, THEREFORE, be it found, determined, resolved as follows:

1. All the matters set forth in the recitals above are true and correct.

2. The rules and regulations attached hereto and marked Exhibit "A" hereby are adopted pursuant to Paragraph 15(a)(vi) of the judgment, to be effective 30 days after the mailing thereof to the parties to said action or their successors in interest.

3. The adoption of the revised and restated rules and regulations attached hereto as Exhibit "A" shall not excuse any violation of a rule or regulation of the Watermaster

which violation occurred prior to the effective date of the amended and restated rules and regulations attached hereto as Exhibit "A."

4. The Secretary of the District shall certify to the adoption of this Resolution.

ADOPTED AND APPROVED this 17th day of August, 2011.

Harry M. Cowan, President

I, LORI BUNN, Secretary to the Board of Directors of the Tehachapi-Cummings County Water District, do hereby certify that the foregoing Resolution was introduced at a regular meeting of the Board of Directors of Tehachapi-Cummings county Water District held on the 17th day of August, 2011 and was adopted at such meeting by the following roll call vote:

AYES: Cowan, Hadley, Hall, Prel and Schultz

NOES: None

ABSENT: None

ATTEST:

Lori Bunn
Secretary to the Board of Directors

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RULES AND REGULATIONS
OF
TEHACHAPI BASIN WATERMASTER

1. Offices and Records.

The Watermaster's offices and records shall be maintained at 22901 Banducci Road, Post Office Box 326, Tehachapi, California, telephone number (661) 822-5504. Such records shall be available for inspection by any party or other member of the public during regular business hours of Tehachapi-Cummings County Water District. Copies of such records may be had by any party or member of the public upon payment of the duplication costs thereof.

2. Water Production Measuring Devices.

(a) Each party, subject to the exception stated below in Rule 2(e), shall, at his sole expense, and prior to extracting any ground water from Tehachapi Basin on or after January 1, 1974, install and maintain on each well so extracting a turbine or propeller meter for 1 ½" and larger, or with respect to wells having a discharge of less than 1 ½", a displacement meter. Each meter of less than 4" diameter shall have a totalizer recording in gallons. Each meter of 4" or larger shall have a totalizer recording in acre feet. The meter shall be of a make and model as the Watermaster shall approve in writing. The Watermaster hereby approves of the following makes and models of meters:

ALLOWED MAKES AND MODELS:

McCrometer – Propeller Model for 1 ½" and up only

Sensus – Model SR for 5/8" and 1" Series "W" Turbo for 1 ½" and up

The totalizer on each such meter shall be susceptible to correction only by changing mechanical gear equipment.

(b) Each such meter shall be accessible, shall be installed in a level position where there are at least ten (10) diameters of continuous straight pipe upstream and five diameters of continuous straight pipe downstream from said position, shall be installed so as to provide for a full flow of water for proper accuracy, and shall otherwise be installed according to good design practices. Watermaster personnel shall assist any party having any question as to installation requirements.

(c) No seal on any such well shall be broken without the prior written approval of Watermaster, except only for emergency repairs, in which event the Watermaster shall be immediately notified by telephone and in writing of the time and date on which broken.

(d) The Watermaster, either through its personnel or through an individual contractor or contractors, shall make inspections of required meters at such times and as often as

may be reasonable, and may require any party to provide such maintenance, repairs or replacements as are reasonably necessary to provide accurate water production measurement. The tolerance of each meter shall be the AWWA standard of +/-2%. Defective or inaccurate meters shall be repaired at the sole expense of the party in question within ten (10) days of the Watermaster mailing to that party a notice requiring him to make the repair.

(e) There is excepted from the provisions of Rules 2(a) through (d), inclusive, purely domestic party wells. Upon written application therefor, the Watermaster also may except from said provisions any well which in the judgment of the Watermaster will not collectively with any other wells (other than a separate purely domestic party well) cause to be produced by any one party on the same parcel or contiguous parcels, 25 acre-feet or more in a calendar year, provided that the above exception shall not apply to any party who requests the purchase of exchange pool water. The Watermaster shall provide mailed written notice of its decision on any such application for exception to the applicant as soon as is reasonably practicable after its receipt of an application. Any such exception granted may later be revoked by the Watermaster. Within thirty (30) days of the Watermaster's mailing written notice of any such revocation, the party in question shall install and maintain a meter in compliance with the provisions of Rules 2(a), (b), (c) and (d) hereof.

3. <u>Water Production Reports to Watermaster</u>.

(a) Each party, other than with respect to production from a purely domestic party well, or other wells excepted from metering pursuant to Rule 2(e) hereof, shall render to the Watermaster a monthly report of water produced by him from Tehachapi Basin on forms provided by the Watermaster. Notwithstanding the foregoing, the Watermaster may permit a lesser frequency of reporting as to any party, or as to any party during portions of a year, and adjust any forms accordingly. The Watermaster shall cause the forms to be mailed on or before the 20th day of the month or latest of the months for which the report thereon is to be made. Each party shall cause his report to be fully filled in, executed, verified and mailed to the Watermaster on or before the 10th day of the next succeeding month. A party's meter readings utilized to fill in such a form shall occur as near as is practicable to the last day of the month for which the report is made, or if the report is for more than one month, as near as is practicable to the last day of the latest of the months for which the report is made. Attached hereto, marked **Exhibit "A,"** incorporated herein by reference and hereby adopted, is the form of water production report to be utilized for monthly reports pursuant to this Rule 3. Variations thereof may be employed by the Watermaster for reports covering more than one (1) month, or to reflect other pertinent facts.

(b) Each party excepted from metering under Rule 2(e), other than with respect to a purely domestic party well, shall furnish to the Watermaster, bimonthly, or with such lesser frequency as the Watermaster may specify, copies of bills of energy consumption relating to the wells for which exception has been granted, and such other information as the Watermaster may request upon which computation of water production may be made. Upon request by the Watermaster each such party shall obtain pump efficiency tests from time to time. Each party applying for such exception under Rule 2(e) understands and agrees that for purposes of said judgment, as amended, including the Watermaster duties and responsibilities, the Watermaster

will employ the best information available to calculate water production with respect to such wells.

(c) If it appears that any meter reading may have been incorrect, the Watermaster may require other information upon which to compute water production and may adjust meter readings by any reasonable method.

4. Water Rights Transfers.

As used herein the word "transfer" includes any conveyance, lease, license or other type of transaction of whatever kind or nature, whereby another person becomes entitled to exercise, for whatever period, any water rights of a party.

(a) Procedures on Transfers.

Any transfer of water rights, other than a month-to-month lease of property to which a purely domestic party well water right is appurtenant, shall be in writing and shall:

(i) Identify the transferor(s) (Seller or Lessor) and the transferee(s) (Buyer or Lessee).

(ii) Contain the street address or addresses and mailing address or addresses of the transferee(s).

(iii) Contain substantially the following provision:

"Pumping from the underground, surface diversions, and any water rights involved in this transaction, are subject to the provisions and limitations contained in the Judgment, as amended from time to time, in the case of 'Tehachapi-Cummings County Water District, etc., Plaintiff, v. City of Tehachapi, et al., Defendants', Kern County Superior Court No. 97210.'"

(iv) Recite the quantity of Base Water Rights, in acre feet, transferred, together with substantially the following statement: "Said Base Water Right is subject to the Allowed Pumping Allocation permitted with respect thereto from time to time pursuant to the Judgment as amended from time to time in said cause."

(v) Be acknowledged in form sufficient for recordation. In order to secure the protection of the California Recording Statutes, Civil Code sections 1213 and 1214, a transfer document should be recorded in Kern County Official Records.

The transferor(s) shall file a copy of the recorded transfer document or, if the transfer document is not recorded, a duplicate original or a copy reproducing signatures of the signatories thereto,

with the Watermaster within ten (10) days after the transfer becomes effective. If the transferor fails to file a copy of the transfer document within ten days, then the transferee shall file a copy within twenty (20) days of the effective date. A transfer becomes effective if the agreement is immediately effective, although the operative date of the transfer is in the future, e.g., a lease executed in July to be operative the following January. On the other hand, a transfer contingent on close of escrow is not effective until close of escrow.[1]

(b) Certain Transfers Prohibited or Prohibited Without Prior Watermaster Approval.

The Judgment as amended contains certain restrictions on transfers of water rights:

(i) No assignment, transfer, license or lease may result in the utilization of water extracted from Tehachapi Basin in any area outside the alluvial boundaries of Tehachapi Basin. Any document(s) purporting to effect or allow such an assignment, transfer, license or lease shall be deemed invalid and of no force and effect.

(ii) Any document(s) purporting to effect the transfer of a water right apart from the land or a portion thereof on which that water right was theretofore exercised must be filed with Watermaster on or before March 1 of a calendar year to be effective for that year. In addition, said transfer shall not be effective until Watermaster has approved the extraction of water at said new location pursuant to Paragraph 18 of the Amended Judgment heretofore entered in this action and pursuant to Rule 7 hereof unless the transferred water right is to be exercised on land contiguous to the land on which the water right in question was originally developed.

(iii) Insofar as the Judgment as amended specifically recognizes a right of export in Southern Pacific Transportation Company or Golden Hills Community Services District, the foregoing provisions of this subparagraph (b) are not intended to apply thereto.

(c) Conveyances of Adjudicated Rights as Part of Land Conveyance.

When an owner of water rights conveys land, he should specify in the deed what water rights, if any, are transferred. If an owner intends to convey permanently an adjudicated water right as part of a conveyance of real property overlying the Tehachapi Basin, the seller should state in the deed itself the specific quantity of water rights transferred. If the owner does not intend to transfer any water rights, the deed should so state. If a deed is silent as to whether any adjudicated rights are transferred, the Watermaster will presume that no water rights are

[1] Where a transfer is through escrow, the escrow instructions should instruct the escrow, upon close, to mail to Watermaster the required copy under this Rule 4(a).

transferred unless a separate duly executed transfer document is filed with the Watermaster as provided in this Rule 4.

(d) Rules of Interpretation in Connection With Transfers.

The following rules shall be applicable to transfers of water rights, and are based on the Judgment as amended. They can be either categorized as such or as conclusive presumptions, but in any event are applicable conclusively. More than one such rule may be applicable to one transaction.

(i) The Allowed Pumping Allocation permitted with respect to any Base Water Right transferred shall be subject to subsequent upward or downward adjustment by the Court under its reserved jurisdiction, pursuant to the provisions of the judgment as heretofore or hereafter amended. In the event that the instrument of transfer is executed by the transferor prior to or on the date of any amendment to judgment executed by the Court, but the instrument is not effective until a later date, the transferee nonetheless takes subject to the benefits and burdens of such adjustment. All subsequent rules and examples are subject to this rule.[2]

(ii) Every transfer of a Base Water Right is subject to prior pumping of the Allowed Pumping Allocation pertaining thereto during the calendar year of the transfer, and is subject to reduction of increases of said Allowed Pumping Allocation pursuant to the Judgment as amended on account of prior calendar year over-extractions or carry-overs or other matters. Where a part of a transferor's Base Water Right is transferred, this rule applies proportionately.

Example: A transferor owns 150 acre feet of Base Water Right. A transfer is effectuated on February 15 of a year of 75 acre feet of Base Water Right. In the previous year the transferor over-extracted by 10 acre feet, leaving an Allowed Pumping Allocation for the calendar year in question of 90 acre feet. Prior to the transfer, and in the calendar year thereof, transferor pumped 10 acre feet. While the transferee receives an Allowed Pumping Allocation of 50 acre feet his remaining Allowed Pumping Allocation for the calendar year of the transfer is 40 acre feet.[3]

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[2]All of the ensuing examples are based upon the Allowed Pumping Allocations permitted under the Judgment as amended to the date of promulgation of these amended rules, whereunder the Allowed Pumping Allocation is 2/3rds of the Base Water Right.

[3]If the transferor and transferee wish to reach a different result for the year of transfer, there should be a lease for the year of so much of transferor's remaining Base Water Right as will accomplish the intended result.

(iii) If the transfer mentions Allowed Pumping Allocation only, it shall be deemed to have transferred that quantity of Base Water Right which, had said Base Water Right been specified, would yield the specified Allowed Pumping Allocation under the Judgment as then amended to the date the document of transfer is executed by the transferor.

Example: Transfer document purports to transfer 100 acre feet of Allowed Pumping Allocation. The document, therefore, transfers 150 acre feet of Base Water Right. If the Allowed Pumping Allocation for that quantity of Base Water Right is later increased or decreased by the Court, the Allowed Pumping Allocation so transferred will be so adjusted.

(iv) If the transfer mentions Base Water Rights only, it shall be deemed to carry with it the quantity of Allowed Pumping Allocation pertaining thereto under the Judgment as then amended (as of the date the document of transfer is executed by the transferor). This presumption is conclusive.

Example: Transfer document purports to transfer 150 acre feet of Base Water Right and does not mention Allowed Pumping Allocation. It will carry with it 100 acre feet of Allowed Pumping Allocation.

(v) If there is a discrepancy in the document of transfer between the Base Water Right and the Allowed Pumping Allocation, the latter will be disregarded and the last preceding presumption shall conclusively apply.

Example: The transfer document purports to transfer 160 acre feet of Base Water Right and 100 acre feet of Allowed Pumping Allocation. There is a discrepancy. The document will be conclusively presumed to have transferred 106 2/3 acre feet of Allowed Pumping Allocation (subject, of course, to future adjustments).

(e) Forms of Transfer Documents.

Approved forms of transfer documents are attached hereto, marked and identified as follows:

Exhibit "B"	-	Permanent Transfer of Water Rights
Exhibit "C"	-	Lease of Water Rights.

These forms are not intended to be exclusive, that is, parties to a transaction may use a traditional deed or lease forms to transfer adjudicated rights provided that forms contain the required

provisions set forth in Rule 4(a) above.

(f) Sanctions for Non-Compliance with Rule 4.

If a transferor or a transferee fails to timely file a copy of the transfer document as required above, or the parties to a transfer in any other respect fail to comply with the requirements set forth in this Rule 4, then such transferor and transferee, jointly and severally, shall be liable to the Watermaster for all costs and expenses incurred by the Watermaster, including attorneys fees and court filing fees, in (1) investigating such competing claims, holding public hearings and rendering a decision on such claims and (2) any subsequent legal proceedings, whether filed in Kern County Superior Court Case No. 92710 as an objection to the Watermaster's decision or in a separate legal proceeding.

5. Designees To Receive Future Notice.

(a) Attached hereto, marked **Exhibit "D,"** incorporated herein by reference and hereby adopted is a form by which each party shall designate the person to whom and the address at which all future notices, determinations, requests, demands, objections, reports and other papers and processes to be served upon or delivered to that party are to be so served or delivered pursuant to Paragraph 21 of the Amended Judgment heretofore entered in the subject action. Watermaster shall mail such a form on each party to the action as expeditiously as possible and, within thirty (30) days subsequent to said service, each party shall file a fully executed form with the Court, with proof of service of a copy thereof on Watermaster.

(b) Upon notification of any transfer of water rights, Watermaster shall mail to that transferee the form prescribed in Rule 5(a) hereof. Within thirty (30) days subsequent to said mailing said transferee shall file said form, fully executed, with the Court, with proof of service of a copy thereof on Watermaster.

6. Exchange Pool Reports, Requests and Notices, Forms Therefor.

(a) Attached hereto, marked **Exhibit "E,"** incorporated herein by reference and hereby adopted is a form to be utilized by each exchangor in estimating his agricultural water requirements for each calendar year and in specifying any claim he may have that his being designated an exchangor for the calendar year would result in undue hardship to him. On or before January 20th of each calendar year, Watermaster shall mail to each exchangor a copy of said form. Each exchangor shall return his form, fully filled in and executed, to Watermaster on or before February 20 of the calendar year in question.

(b) Attached hereto, marked **Exhibit "F,"** incorporated herein by reference and hereby adopted is a form to be utilized by parties in requesting purchases of exchange pool water for a calendar year. On or before January 20 of each calendar year, Watermaster shall mail to each party anticipated to be an Exchangee a copy of said form. It shall be the responsibility of the party to request the form from the Watermaster in writing prior to the particular January 20, but the Watermaster shall mail the same to any party who was an Exchangee in the prior calendar year and who is not disqualified in the then current calendar year from becoming an

Exchangee. Each party who wishes to purchase water from the exchange pool during the calendar year in question shall return his form, fully filled in and executed, to Watermaster on or before February 20 of the calendar year in question.

(c) Attached hereto, marked **Exhibit "G,"** incorporated herein by reference and hereby adopted is a form to be utilized by Watermaster in notifying the appropriate parties that they have been selected and designated as exchangors for a calendar year. Watermaster shall mail a fully filled in form to each designated party on or before March 1 of the calendar year in question and such mailing shall constitute the notices specified in Paragraph 16(f) and (g) of the Amended Judgment heretofore entered in the subject action.

(d) Attached hereto, marked **Exhibit "H,"** incorporated herein by reference and hereby adopted is a form to be utilized by Watermaster in notifying each exchangee of the quantity of exchange pool water it has purchased during a given calendar year and, where applicable, Watermaster's determination with respect to the price to be charged for the water so purchased pursuant to Paragraph 16(n) and (o) of the Amended Judgment heretofore entered in the subject action. Watermaster shall mail a fully filled in form to each such exchangee on or before March 1 of the calendar year in question and such mailing shall constitute the notices specified in Paragraph 16(g) of the Amended Judgment heretofore entered in the subject action.

(e) Pursuant to Paragraph 16(f) of the Amended Judgment heretofore entered in the subject action, a party already designated as an Exchangor for a calendar year may apply to Watermaster to have that designation rescinded on the ground that undue hardship has appeared. Said written application shall state in detail the facts upon which said claim of undue hardship is based. As soon as is reasonably practicable after receipt of such an application, Watermaster shall make its decision with respect thereto and shall provide the party in question written mailed notice of said decision and the basis or bases therefor.

(f) Pursuant to Paragraph 16(k) of the Amended Judgment heretofore entered in the subject action, any party may file with Watermaster a written request for an adjustment to exchange pool required subscriptions or purchases at any time subsequent to March 1 of a given calendar year. Said written request shall state in detail the facts upon which said request for adjustment is based. As soon as is reasonably practicable after receipt of such an application, Watermaster shall make its decision with respect to a request for adjustment and shall then provide written mailed notice to the party in question of that decision and the basis or bases therefor.

7. Application For Extraction of Water Under Water Rights At Different Location Than Where Developed.

Pursuant to Paragraph 18 of the Amended Judgment heretofore entered in the subject action, any party wishing to exercise a water right or portion thereof by extracting ground water other than on a parcel of land on which some or all of the right in question was originally developed or on land contiguous thereto shall make written application to Watermaster to do so prior to so doing. Watermaster shall act on any such application as expeditiously as is practicable in accordance with the provisions of said Paragraph 18.

8. Requests For Permission To Over-Extract.

Pursuant to Paragraph 13(a) of the Amended Judgment heretofore entered in the subject action, a party who desires to over-extract from Tehachapi Basin during a calendar year an amount exceeding either ten percent (10%) of that party's Allowed Pumping Allocation or 5 acre-feet, whichever is greater, may apply in writing to Watermaster for permission to do so. Any such application shall state the additional amount requested and the reasons for the request. As soon as is reasonably practicable after receiving such an application, Watermaster shall decide whether or not to approve the application and shall provide written mailed notice of said decision to the party in question, which notice shall include any conditions of approval imposed by Watermaster. Watermaster may approve a lesser amount of over-extraction than that amount requested by the party in question. In that regard, Watermaster's written notice shall specify the approved amount of over-extraction.

9. Requests To Prorate Reduction In Allowed Pumping Allocation.

Pursuant to Paragraph 13(b) of the Amended Judgment heretofore entered in the subject action, a party may apply in writing to Watermaster for permission to prorate required reductions in Allowed Pumping Allocation due to excessive over-extractions over the two (2) calendar years next succeeding the calendar year in which the excessive over-extractions occurred. Any such application shall state in detail facts indicating that the absence of such a proration will impose an unreasonable hardship on the party in question and shall be made not later than February 10 of the year next succeeding the calendar year in which such excessive pumping occurred. As soon as is practicable after receiving such an application, Watermaster shall decide whether to permit the proration and shall provide written mailed notice of said decision to the party in question.

10. Effect of Noncompliance by Watermaster With Time Provisions.

Failure of Watermaster to perform any duty or responsibility or to exercise any power set forth in these rules within a time limitation herein set forth shall not deprive Watermaster of authority to subsequently discharge such duty or responsibility or to subsequently exercise such power, except to the extent that any such failure by Watermaster may have rendered some otherwise required act by a party impossible.

11. Delegation of Watermaster Functions.

The performance of each and every duty and function of Watermaster set forth herein and in the Amended Judgment heretofore entered in the subject action other than making determinations in response to an objection to or appeal from a rule, determination, order or finding initially made by Watermaster hereby is delegated to the General Manager of Tehachapi-Cummings County Water District, or in his absence to the Assistant Manager.

12. **Delegation of Billing Function to Tehachapi-Cummings County Water District.**

There is hereby delegated to Tehachapi-Cummings County Water District the function of rendering those exchange pool billings prescribed in Paragraph 16(b) of the Amended Judgment heretofore entered in the subject action and collecting those sums paid pursuant to any such billings. Payments received by Tehachapi-Cummings County Water District from exchangors and exchangees shall be credited to Watermaster.

13. **Use of Terms.**

As used herein, all terms defined in the Amended Judgment heretofore entered in the subject action shall have the same meanings as therein set forth.

14. **Continuation of Prior Rules and Regulations.**

To the extent that these rules and regulations are continuous substantially of prior rules and regulations, they shall be deemed as continuous and effective as of the initial date of adoption of the rule or regulation involved.

15. **Addition of New Pumpers.**

Attached hereto and marked **Exhibit "I"** is a form to be used where a party desires to be added to the judgment as a new pumper under Paragraph 6 of the original judgment.

16. **Intervention As A Successor In Interest.**

Attached hereto and marked **Exhibit "J"** is a form of stipulation of substitution or partial substitution with respect to a successor in interest to the owner of water rights.

17. **Annual Adjustment of Cost of Pumping.**

To reflect any changes in groundwater elevations within the Tehachapi Basin as well as variable electrical energy costs, "Cost of Pumping" as such term is used in Paragraph 16 of the judgment shall mean the sum of $15.00 times the average depth to water prevailing in the preceding December divided by 189.5, times the current rates for electrical energy effective January 1 of the current year (per KWH), divided by .01535, or, expressed as a formula:

$$\text{Cost of Pumping} = \$15.00 \times \frac{\text{December Average Depth to Water}}{189.5} \times \frac{\text{January 1 Cost of Power Per KWH}}{.01535}$$

18. Artificial Replenishment.

(a) Introduction.

"Artificial replenishment" is the replenishment of the Tehachapi Basin achieved through the spreading of imported water, that is, water brought into the Tehachapi Basin area from a nontributary source by the District, such as State Water Project ("SWP") water. So long as there is sufficient storage space within the Tehachapi Basin for both natural and artificial replenishment and any particular artificial replenishment program does not unreasonably interfere with any other party's rights in the Tehachapi Basin, it is in the best interest of the owners of adjudicated Base Water Rights and the public in general for the Watermaster to encourage artificial replenishment, thereby raising water tables and avoiding the cost of surface reservoir and conveyance facilities. The District owns and operates spreading facilities overlying the Tehachapi Basin and artificially replenishes the Tehachapi Basin with SWP water to supply nonparty domestic well operators having water supply agreements under Rule 20, *supra,* and conjunctive use customers with Term M&I Agreements who take delivery of SWP water in the ground after it has been spread by the District. The Watermaster maintains accurate records of SWP water as it is banked for these customers and as it is extracted by these customers. These records are compiled annually as part of the Watermaster's Annual Report.

In addition to District spreading operations, any person or entity having a water service agreement with the District for imported water may claim the right to later extract imported water purchased from the District and intentionally spread and stored in the Tehachapi Basin provided that such party complies with the following procedures set forth in this Rule 18.

(b) Application.

Any party seeking to spread imported water in its own recharge area and later extract imported water after it has been artificially replenished shall file with the District a Notice of Intent to Engage in Artificial Replenishment in the form attached hereto as **Exhibit "K,"** and shall serve copies of such application upon any party owning a well within one mile of the exterior perimeter of the proposed spreading and extraction locations. In its discretion, the Watermaster may additionally provide copies of such notice to any other interested party. The Watermaster shall set the application for hearing and permit the Applicant and any other interested party to present evidence at the hearing in support or in opposition to the application. Following close of the hearing at either the same or subsequent meeting of the Watermaster, the Watermaster shall render its decision to grant, grant with conditions, or deny the application. Before granting such an application, the Watermaster shall find and determine based upon the evidence submitted that:

(i) The water proposed to be artificially replenished is imported water as such term is defined in the judgment, that is, imported water purchased from the District and obtained by the District from a source nontributary to the Tehachapi Basin area.

(ii) The applicant's ultimate use of the water artificially replenished is consistent with the restrictions upon use set forth in the applicant's water service agreement with the District.

(iii) Neither the applicant's proposed spreading nor extraction operations will unreasonably interfere with any other party's rights under the judgment as amended.

(iv) The applicant has obtained all necessary permits from other governmental agency having jurisdiction over the applicant's proposed project.

(c) Monthly Meter Readings.

Any party engaged in an artificial replenishment program shall install a meter which complies with rule 2 above at its recharge facilities' connection with the District's water distribution system. The District shall read such meter monthly.

(d) Annual Report.

As part of the Watermaster's Annual Report, the Watermaster shall determine the net amount of imported water artificially replenished by such person or entity during the previous calendar year, after taking into account the gross amount of imported water delivered to such party's spreading works, less losses due to evaporation, phreatophyte consumption, spillage from the Tehachapi Basin attributable to such artificial replenishment, extractions of artificially replenished water and other relevant factors. The amount of net artificial replenishment in storage as determined in the Watermaster's report may be extracted by such party in such calendar year in addition to such party's allowed pumping allocation and water purchased from the Exchange Pool, if any. If such person or entity also owns an adjudicated right, artificially replenished water shall be deemed the last water pumped in order of water pumped in any year.

(e) Appeals.

The applicant or any other interested party may appeal any ruling or determination of the Watermaster made pursuant to this Paragraph 18 in the manner provided in subparagraph (c) of Paragraph 15 of the Amendment To Judgment.

19. Water Quality.

The District as Watermaster intends to protect and defend water quality of the Tehachapi Basin from degradation from nitrates and other pollutants so as to preserve the Tehachapi Basin as a source of potable water for its overlying inhabitants. The Watermaster intends to actively sample and monitor groundwater quality and pursue mitigation measures to prevent the spread of nitrates and other pollutants. Accordingly, any party or pumper shall allow the Watermaster to take samples from any wells in the Tehachapi Basin to monitor water quality and mitigate threatened contamination of groundwater in the Tehachapi Basin.

20. **Non-Party Domestic Wells**.

An owner of a parcel overlying the Tehachapi Basin, but outside of the service area of a public water system, as defined in section 116275 of the Health and Safety Code, who is not a party or a successor of a party in Case No. 97210, may nevertheless pump State Water Project ("SWP") water, intentionally spread by the District in the Tehachapi Basin for his account, for domestic use on such parcel provided such owner signs and submits to the District, and the District accepts, an "Application and Agreement for Water Supply (Delivered Through Non-Party Domestic Well - Tehachapi Basin)" substantially in the form attached hereto as **Exhibit "L."** During the first five years after pumping begins under the Agreement, the Applicant shall be required to establish, pay for and maintain throughout the balance of the term of the Agreement a reserve account of recharged SWP water in the Tehachapi Basin equal to the Applicant's actual usage, as metered, during the first five years after pumping begins under the Agreement. The District shall recharge into the Tehachapi Basin during such five years an amount of SWP water equal to twice the Applicant's metered pumping. Throughout the balance of the term of the Agreement, the District shall recharge sufficient SWP water in the Tehachapi Basin to offset the Applicant's pumping, as metered.

The new Exhibit "L," referred to in the above new Rule 20, is attached hereto.

P. O. Box 326
Tehachapi, CA 93581
Telehphone: (661) 822-5504 or 325-3733
Fax: (661) 822-5122

MONTHLY PRODUCTION REPORT FOR _____

Name: _____

A. Allowed Pumping Allocation (APA) for _____:

1	Owned APA		
2	APA leased in		
3	APA leased out	-	
4	Deduction for previous over-extraction	-	
	Total owned/leased APA (pump first) *	-	

B. Carryover Into _____:

1	From ____ (pump second)	-	
2	From ____ (pump third)	-	
	Total carryover into ____	-	
	Allowable extractions (other than recharge water)		-

C. Extractions:

1	Amount of water extracted prior to reporting month		
2	Amount of water extracted during reporting month	-	
	Total extractions through end of reporting month	-	

D. Extractions by source:

1	From owned/leased APA		
2	From ____ carryover	-	
3	From ____ carryover	-	
4	Over-extractions		
	Total extractions through end of reporting month		-

E. Remaining allowed pumping allocation -
(if negative number, must be made up with recharge water)

1	Portion from ____ carryover	-	
2	Portion from ____ carryover (25% limit)	-	
	Allowed carryover into ____		-

F. Artificial Replenishment Water:

1	In storage at beginning of ____		
2	Recharge water purchased during ____		
3	Recharge water extracted during ____		
	Remaining in storage at end of ____	-	

* Amount subject to 25% carryover limit.

G. Beginning Meter Readings (As Shown on Last Report):

(To Be Supplied By Water Producer)
End of Month Readings

	Date Read / Meter Reading
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

Signature

Date Read / Meter Reading	

Date

Exhibit A

PERMANENT TRANSFER OF WATER RIGHTS

For a valuable consideration, receipt of which is hereby acknowledged, _____ _____ (Seller) does hereby assign and transfer in perpetuity to _____ (Buyer) the quantity of _____ acre feet of Base Water Right adjudicated to Seller or his predecessor, in the judgment, as amended, in the case of *Tehachapi-Cummings County Water District* v. *City of Tehachapi, et al.*, Kern County Superior Court No. 97210, with all the attendant rights, powers and privileges pertaining thereto. Said Base Water Right is subject to the Allowed Pumping Allocation permitted with respect thereto from time to time pursuant to the judgment as amended from time to time in said case.

Pumping from the underground, surface diversions, and any water rights involved in this transaction are subject to the provisions and limitations contained in the judgment, as amended from time to time in the above referenced case.

DATED: _____

SELLER	BUYER
_____	_____
_____	_____
(Attach notary public acknowledgments of all signatures)	Buyer's street address (and mailing address, if different from street address):
	Street: _____
	_____
	Mailing: _____
	_____

A duplicate original or a true copy hereof showing signatures must be filed with the Watermaster, P. O. Box 326, Tehachapi, CA 93581, 22901 Banducci Road, Tehachapi, CA 93561 within ten (10) days of the effective date of the transfer.

EXHIBIT B

TEMPORARY ASSIGNMENT OR LEASE OF WATER RIGHTS

For a valuable consideration, receipt of which is hereby acknowledged _____ _____, ("Assignor"), does hereby assign and transfer to _____, ("Assignee"), for a period of _____ months commencing on _____, and terminating on _____, the quantity of _____ acre feet of base water rights and _____ acre feet of allowed pumping allocation adjudicated to Assignor or his predecessor in the judgment in the case of *Tehachapi-Cummings County Water District* v. *City of Tehachapi, et al.*, Kern County Superior Court No. 97210.

Said assignment is made upon the following conditions:

(1) Pumping from the underground, surface divisions, and any water rights involved in this transaction are subject to the provisions and limitations contained in the judgment as amended from time to time in the above-referenced case.

(2) Assignee shall put all waters utilized pursuant to said transfer to reasonable beneficial use; and

(3) Assignee shall pay all Watermaster charges and assessments on account of the water production hereby assigned or leased.

Date: _____

ASSIGNOR	ASSIGNEE
_____	_____
_____	_____
_____	_____

(ATTACH ACKNOWLEDGMENT)

A true copy hereof must be filed with Watermaster within 15 days of execution.

EXHIBIT C

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF KERN

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT, Plaintiff, vs. CITY OF TEHACHAPI, et al., Defendants.	Case No. 97210 DESIGNATION BY OF PERSON AND ADDRESS FOR DELIVERY OF PAPERS AND PROCESSES

PLEASE TAKE NOTICE that pursuant to the Judgment heretofore entered in the above-entitled action as amended, defendant _____ hereby makes the following designation of the person to whom and the address at which all future notices, determinations, requests, demands, objections, reports and other papers and processes to be served upon said defendant or delivered to said defendant are to be so served or delivered:

PERSON ADDRESS

The above-named defendant is the successor in interest, whether mediate or immediate, in whole or in part, to _____, an named party in

the above-entitled action.

Dated: _____

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TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT

Exchangor's Estimate of Agricultural
Water Requirements for 20

Pursuant to Paragraph 16(e) of the Amended Judgment in *Tehachapi-Cummings County Water District* v. *City of Tehachapi*, Kern County Superior Court No. 97210, _____ hereby estimates that his/her agricultural water requirements related to the property shown on Appendix "6" to said Judgment by reason of which he/she is an Exchangor is _____ acre feet.

[The following is to be filled in only if applicable.]

_____ claims that his/her being designated as Exchangor for the calendar year 20____ would result in undue hardship to him based on the following facts: [Attach additional sheets if more space is required.]

_____
Exchangor's Signature

_____
Date

F:\376.00 - TCCWD - General\Rules&Regs\Exhibit E - Exchangor's Estimate.doc

EXHIBIT E

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT

Request to Purchase Exchange Pool Water During 20

Pursuant to Paragraph 16(e) of the Amended Judgment in *Tehachapi-Cummings County Water District* v. *City of Tehachapi*, Kern County Superior Court No. 97210, _____ hereby requests that he/she be allowed to purchase _____ acre feet of exchange pool water during the calendar year 20___.

It is estimated that _____ will require during 20__ acre feet of water in excess of allowed pumping allocation for that year.

Any exchange pool water purchased pursuant to this request shall be utilized as follows:

Use	Location	Amount (in acre feet)
Agricultural		
Municipal and Industrial		

_____ hereby offers to pay to the Tehachapi Basin Watermaster the Exchange Pool price for each acre foot requested hereby as computed in accordance with the provisions of the Amended Judgment in the above-referenced case. Upon notification from the Watermaster pursuant to Paragraph 16(g) of said Judgment this offer shall constitute an agreement to so pay.

(Provide the following information only if applicable.)

The lands upon which the water hereby requested is to be used for agricultural purposes is in such proximity to the imported water pipeline of Tehachapi-Cummings

County Water District that a connection economically may be obtained thereto. However, an undue hardship would result if this requesting party were required to take all needed water for said lands over and above allowed pumping allocation for 20__ directly from said pipeline as is shown by the following facts: (Attach supplemental sheets if required)

_____ is an exchangor and this request is applicable only in the event that _____ is not designated an exchangor for the calendar year 20__.

_____
Signature

_____
Date

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TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT

Notice of Designation as Exchangor
for the Calendar Year 20

TO: _____

Please take notice that pursuant to the provisions of Paragraph 16(f) of the amended Judgment in *Tehachapi-Cummings County Water District* v. *City of Tehachapi, et al.*, Kern County Superior Court No. 97210, you have been selected as and designated an exchangor for the calendar year 20__.

You also are hereby notified that if such facilities do not now exist, upon your application to Tehachapi-Cummings County Water District for water service, said District will install at its expense a connection which will enable you to take imported water at a location on your property as will enable you to effectively distribute that water through any existing distribution system.

You hereby are further notified that you are required to reduce your pumping below your otherwise allowed pumping allocation for 20__ by _____ acre feet.

Finally, please take notice that your payments with respect to your required subscription as an exchangor for the calendar year 20__ shall be at the rate of _____ for each acre foot of imported water taken. Said rate has been computed in accordance with the provisions of Paragraph 16(h) of the above-referenced Judgment as amended. Payments shall be made directly to Tehachapi-Cummings County Water District within the time prescribed by and in accordance with said District's effective rules and regulations.

TEHACHAPI BASIN WATERMASTER

By_____

Date_____

F:\376.00 - TCCWD - General\Rules&Regs\Exhibit G - Notice of Designation as Exchangor.doc

EXHIBIT G

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT

Notice of Honoring Request to Purchase Exchange Pool Water

TO: _____

Please take notice that your request to purchase exchange pool water during the calendar year 20__ hereby is honored as to the following amounts, and for the following uses at the following locations:

Amount	Uses	Locations
_____	____	_____
_____	____	_____
_____	____	_____
_____	____	_____
_____	____	_____

The honoring of your request is contingent upon and subject to the following conditions:

You hereby are further notified that the price which you are to pay for exchange pool water during the calendar year 20__ as computed in accordance with Paragraph 16(h) of the amended Judgment in *Tehachapi-Cummings County Water District* v. *City of Tehachapi, et al.*, Kern County Superior Court No. 97210, is as follows:

Agricultural	Municipal & Industrial	Term M & I
Price per Acre Foot:	Price per Acre Foot:	Price per Acre Foot:
Total Amount:	Total Amount:	Total Amount:

You are to remit payments of the aggregate of the total amounts stated above in six (6) equal monthly installments of $_____ directly to Tehachapi-Cummings County

Water District on or before the last day of April 20__ and on or before the last day of each five (5) succeeding calendar months to and inclusive of September 20__.

TEHACHAPI BASIN WATERMASTER

By_____

Date_____

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Attorneys for Plaintiff

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF KERN

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT, Plaintiff, vs. CITY OF TEHACHAPI, et al., Defendants.	Case No. 97210 STIPULATION RE INTERVENTION AFTER JUDGMENT OF_____, as a Party Defendant

IT IS HEREBY STIPULATED by and between the Tehachapi Basin Watermaster and _____, the proposed Intervenor herein, that said proposed Intervenor may intervene in the instant action.

Unless specifically provided under the "Special Provisions" below, the intervention by Intervenor is on the basis that said Intervenor has a "zero" Base Water Right and a "zero" Allowed Pumping Allocation, and that accordingly said Intervenor is enjoined from pumping or otherwise extracting any ground water from Tehachapi Basin other than as an Exchangee in compliance with the "Amendment to Judgment" filed in the above entitled case on November 20, 1974, or pursuant to a valid transfer of water rights, and is further enjoined from

making any diversions of surface waters from within Tehachapi Basin Watershed.

Special provisions applying to Intervenor are:

1. _____
_____.
2. _____
_____.
3. _____
_____.
4. _____
_____.

The Court will consider the proposed Order confirming said Intervention at _____ o'clock __M. on _____, 20___, in Department ___ located at _____.

Dated: _____

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT

By_____
Watermaster

Dated: _____

INTERVENOR

_____

By_____

By_____

(Each Order will be specially drafted)

F:\376.00 - TCCWD - General\Rules&Regs\Exhibit I - Stipulation Re Intervention After Judgment.doc

Attorneys for Plaintiff

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF KERN

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT, Plaintiff, vs. CITY OF TEHACHAPI, et al., Defendants.	Case No. 97210 STIPULATION OF PARTIAL SUBSTITUTION

IT IS HEREBY STIPULATED by and between A, a party defendant in the above-entitled action, and B, as follows:

1. A has heretofore transferred to B fifty (50) acre feet of A's 100 acre feet of Base Water Rights adjudicated to A in the Judgment in the above-entitled case, subject to all the provisions thereof and to the Watermaster rules pertaining to transfers.

2. To the extent of said transfer, and only to said extent, B is hereby partially substituted for A in said action and appears in pro per. B's address and telephone number of record for purposes of the above-entitled action are as follows:[1]

[1]List both street address and any post office box.

Street address and post office box, if any

City, State and Zip Code

Telephone number (including area code)

3. Pursuant to Paragraph 21 of the Amendment to Judgment filed November 20, 1973, all matters set forth in said Paragraph 21 shall be mailed to B (or otherwise delivered or served at the address in Paragraph 2.

4. Plaintiff joins in this stipulation.

Dated:

(To be executed on behalf of the transferor, the transferee and the plaintiff. If any party has an attorney of record, it must be executed by that attorney. The form can be modified for a total substitution but normally plaintiff will want to retain Court jurisdiction over the transferor if he remains on or owns land in the Tehachapi area.)

F:\376.00 - TCCWD - General\Rules&Regs\Exhibit J - Stipulation Re Partial Substitution.doc

TEHACHAPI BASIN

NOTICE OF INTENT TO ENGAGE
IN ARTIFICIAL REPLENISHMENT
OF IMPORTED WATER

TO WATERMASTER
TEHACHAPI BASIN AND INTERESTED PARTIES

PLEASE TAKE NOTICE that the undersigned intends to engage in the artificial replenishment of imported water in the Tehachapi Basin, as follows:

1. Source of Replenishment Water.

The undersigned proposes to spread imported water, as defined in the Judgment, purchased by the undersigned from Tehachapi-Cummings County Water District (the "District") pursuant to the Term M&I [Agricultural] Agreement dated _____, 20__, and delivered by the District to the undersigned at Turnout [insert number of district turnout] or a new turnout to be constructed at [insert description of location].

2. Spreading Works.

The undersigned intends to spread imported water in [describe recharge basins, natural channel or other spreading works]. A map of location and plans and profiles of the spreading works are collectively attached as **Exhibit 1**.

3. Extraction Wells.

The undersigned intends to extract imported water artificially replenished by means of [specify number] of wells, identified by District identification numbers as Well Nos. [insert numbers] or to be drilled by the undersigned at the locations and according to the specifications set forth in **Exhibit 2**.

4. Anticipated Rates of Net Recharge and Proposed Extraction Rates.

Anticipated losses through evaporation, phreatophyte consumption, faulting, spillage and other factors, net annual recharge and anticipated extraction for the next five years are set forth in **Exhibit 3** hereto. Any percolation or other tests to support such calculations are also attached as part of Exhibit 3.

5. Intended Uses of Extracted Water.

The undersigned intends to use artificially replenished imported water following extraction for the following purposes:

[insert purposes].

6. Permits.

The names, addresses and contact persons for other governmental agencies having jurisdiction over the proposed project are:

Name of Agency	Address	Contact Person	Telephone #

Copies of any permits issued by such agencies are collectively attached hereto as **Exhibit 4.**

Dated: _____, 20__ [Name of Applicant]

By_____
[Name of Authorized Officer or Agent]

VERIFICATION

The undersigned declares that he is the [insert title] of [insert name of applicant] and is authorized to execute the above notice pursuant to a minute order or resolution of the Board of Directors of [insert name of applicant] duly adopted on [insert date], that he has read the foregoing Notice of Intent and declares under penalty of perjury under the laws of the State of California that all of the foregoing is true and correct.

Executed at _____, California on _____, 20___.

_____

RECORDING REQUESTED BY,
OFFICIAL BUSINESS OF AND
FOLLOWING RECORDATION
RETURN TO:

Tehachapi-Cummings County Water District
P.O. Box 326
Tehachapi, CA 93581

APPLICATION AND AGREEMENT FOR WATER SUPPLY
(Delivered Through Non-Party Domestic Well - Tehachapi Basin)

APN: _____
Street Address: _____
Tehachapi, CA 93561
Mailing Address
(If Different): _____
_____

The undersigned ("Applicant") hereby requests the Tehachapi-Cummings County Water District (the "District") to provide and sell to Applicant water for domestic purposes on the above-described parcel (copy of Applicant's Deed is attached hereto as **Exhibit A** (hereafter "the Parcel")), according to the following terms and provisions:

1. Applicant acknowledges that all groundwater rights in the Tehachapi-Basin had been fully adjudicated in Kern County Superior Court Case No. 97210 and that the Applicant and the Parcel have no right to pump any of the native yield of the Tehachapi Basin.

2. Applicant hereby requests the District to spread in the Tehachapi Basin sufficient State Water Project ("SWP") water to meet applicant's reasonable requirements for domestic water use on the Parcel, and, in addition thereto, a reserve account equal to the Applicant's actual pumping during the first five years after pumping beings under this Agreement. During the first five years after pumping begins under this Agreement, the District shall recharge into the Tehachapi Basin an amount of SWP water equal to twice the Applicant's metered usage in order to establish the Applicant's reserve account. If SWP shortages occur and the District draws upon such reserve to meet Applicant's requirements, Applicant will pay the District to restore such account in full as soon as SWP supplies allow, which payment shall be in addition to the payment for water pumped through Applicant's well.

3. Applicant upon completion of his well on the Parcel shall provide the District with the well log certified by the driller. The District at Applicant's expense shall install a ___ inch meter manufactured by _____, model no. _____.

4. Applicant shall pay the District for all water spread and pumped hereunder at the Term M&I Rate, plus the spreading surcharge for the Tehachapi Basin, as such rate and surcharge are set from time to time by the District's Board of Directors. Concurrently herewith, Applicant has tendered to the District $_____, the amount required to purchase and install the meter.

5. The District will read Applicant's meter monthly and bill Applicant on or before the tenth day of the following month. Such statement shall be immediately due and payable and shall become delinquent if not paid by the 28th day of the month. Applicant acknowledges receipt of a copy of District's Rules and Regulations for the Sale, Use and Distribution of Water which are incorporated herein by reference. Applicant's attention is especially invited to Parts F, G and H thereof governing billing, payment and Applicant's responsibility for treatment. Water sold hereunder is untreated and the District disclaims any warranty or representation of its potability and its suitability for any use. Further, the District makes no representations or warranties as to whether a water well can be drilled on the Parcel and successfully completed or as to the quality and quantity of water which may be pumped from Applicant's well.

6. Applicant grants the District an irrevocable license for the term of this Agreement to enter the Parcel to install and read the meter and, in the event of non-payment or other breach hereof, remove the meter and render Applicant's well inoperative.

7. The term of this Agreement shall commence upon the date this Application is accepted by the District and shall terminate (a) when the parcel can be connected to a public water system, as such term is defined in section 116275 of the Health and Safety Code, in which event Applicant shall connect to such system and shall abandon the well in accordance with law, or (b) upon Applicant's purchase of adjudicated groundwater rights in the Tehachapi Basin sufficient to meet Applicant's reasonable requirements, whichever (a) or (b) occurs first.

8. Upon proof satisfactory to the District that the Parcel is connected to a public water system and Applicant's well has been properly abandoned, the District shall refund to the owner of the Parcel the amount paid by the Applicant to establish the reserve account. If this Agreement terminates because the Applicant or his successor in ownership of the Parcel has acquired sufficient adjudicated groundwater rights to meet the Parcel's reasonable requirements for water, then the District, as Watermaster of the Tehachapi Basin, shall add one-fifth of the reserve account to the Parcel's Allowed Pumping Allocation for five successive calendar years, beginning with the calendar year in which such adjudicated rights are acquired, provided, however, the Applicant shall be deemed to have pumped first his Allowed Pumping Allocation before such one-fifth share of the reserve account and further provided, however, there shall be no carry-over of un-pumped reserve account water from year to year.

9. This Agreement shall bind Applicant's successors and assigns in ownership of the Parcel and shall "run" with the Parcel. The District may record this Agreement in the Official Records of Kern County.

Dated: _____

_____
Print Applicant's Name:

_____
Print Applicant's Name:

Attachment: Copy of Applicant's Deed is Exhibit A

ACCEPTANCE

The above Application is accepted.

Dated: _____

TEHACHAPI-CUMMINGS COUNTY
WATER DISTRICT

By_____
General Manager

ACKNOWLEDGMENT

STATE OF CALIFORNIA)
)
COUNTY OF _____)

On _____, 20__, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

_____
Signature

[Notary Seal]

ACKNOWLEDGMENT

STATE OF CALIFORNIA)
)
COUNTY OF _____)

On _____, 20__, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

_____
Signature

[Notary Seal]

VI. MATTERS IN THIS REPORT CONSTITUTING WRITTEN FINDINGS OR DETERMINATIONS

The following matters, statements, and facts contained in this Report hereby are stated and declared to be and shall be considered to be findings, determinations, and orders of the Watermaster as provided for in subparagraph (c) or paragraph 15 of the Amendment to Judgment entered in Case No. 97210, as amended:

a. All statements and facts contained in Section II of this Report including, but not limited to, those statements and facts contained in Tables l, 2, and 3, excluding transfers of water rights, if any, of which Watermaster is unaware and which therefore are not reflected in said Tables l, 2, and 3;

b. All statements and facts contained in Section III of this Report including, but not limited to, those statements and facts contained in Figures l, 4(a), 4(b), 4(c), 4(d), 4(e), 4(f), and Figures 5 and 6;

c. All statements and facts contained in Section IV and V.

d. The amended and restated rules and regulations for Watermaster operations set forth as Figure 8.

This thirty-eighth annual report is submitted by the Tehachapi-Cummings County Water District as Watermaster for the Tehachapi Basin.

Dated: April 4, 2012

by: Harry M. Cowan, President

by: John A. Martin,
General Manager

Assimilation of data and preparation:

by: Lori A. Bunn,
Secretary/Office Manager

Harry M. Cowan, President

John A. Martin, General Manager