MEMORANDUM OF UNDERSTANDING BETWEEN KAWEAH DELTA WATER CONSERVATION DISTRICT AND CALIFORNIA WATER SERVICE COMPANY

ARTICLE I - AGREEMENT

The articles and provisions contained herein constitute a bilateral and binding agreement by and between KAWEAH DELTA WATER CONSERVATION DISTRICT (hereinafter the "District") and CALIFORNIA WATER SERVICE COMPANY (hereinafter "Agency").

ARTICLE II - RECOGNITION

The District has developed a Groundwater Management Plan (hereinafter the "Plan") with input from several local agencies located within the District. It is the intent of District to allow and encourage such agencies to coordinate efforts and be a part of the District's Plan by means of a separate Memorandum of Understanding (hereinafter the "MOU") between each agency and District.

ARTICLE III - PURPOSE

It is the purpose of the MOU, entered into willingly, between District and Agency, to document the interests and responsibilities of both parties in the adoption and implementation of the Plan. It is also hoped that such MOU will promote and provide a means to establish an orderly process to share information, develop a course of action and resolve any misunderstandings or differences that may arise regarding the Plan.

ARTICLE IV - COORDINATE

There shall be an annual coordinating meeting (hereinafter the "Meeting") between the District and the Agency. District shall give notice to the Agency thirty (30) days prior to date of the Meeting to discuss the manner in which the Plan is being implemented and other items related to the Plan. If there are concerns or questions regarding the Plan, Agency shall transmit its concerns in writing to District seven (7) days prior to the Meeting.

ARTICLE V - OBLIGATIONS

The Plan shall be binding on the parties hereto unless superseded by the MOU or amendment thereto. It is acknowledged that Agency's funding of the Plan is subject to review and approval by the California Public Utilities Commission (CPUC).

ARTICLE VI - AREA OF PLAN.

The Plan shall be effective in all areas within the Agency boundaries for the Visalia service area. The Plan shall also be effective in any area annexed to the Agency subsequent to the adoption of the Plan.

ARTICLE VII - TERM

The initial term of the MOU shall commence on the date hereof and continue for five (5) years, and shall continue year to year thereafter, unless terminated by written notice given at least one (1) year prior to such termination.

This Memorandum of Understanding is made and entered into this 7TH day of SEPTEMBER, 2004.

KAWEAH DELTA WATER CONSERVATION DISTRICT

By: Don Mills

Title: President

By: Bruce Lopez

Title: General MANAGER

CALIFORNIA WATER SERVICE COMPANY

By:

Title: Vice President

By: Paul G. Ekstrom

Title: Corp. Secretary

KAWEAH DELTA WATER CONSERVATION DISTRICT
GROUNDWATER MANAGEMENT PLAN

Adopted July 5, 1995

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EXHIBITS

Exhibit A Groundwater Management Plan Rules and Regulations to Implement the Groundwater Management Plan of Kaweah Delta Water Conservation District

Exhibit B Memorandum of Understanding Between Kaweah Delta Water Conservation District and

KAWEAH DELTA WATER CONSERVATION DISTRICT

GROUNDWATER MANAGEMENT PLAN

I. INTRODUCTION

A. General

The Kaweah Delta Water Conservation District (hereinafter the "District") is entirely located on the alluvial fan distribution system of the Kaweah River. The alluvial fan of the Kaweah River extends approximately 40 miles in a southwesterly direction, commencing in the foothills of the Sierra Nevada range on the east and continuing to near the central axis of the San Joaquin Valley in the vicinity of the bed of Tulare Lake. The north and the northwest boundaries of the District generally abut on the service area of the Kings River. The south boundary of the District generally abuts on the service area of the Tule River.

The majority of the water shed area for the Kaweah River is in the high Sierra Nevada mountains, which receives heavy snowfall during most winter months. During the spring and summer months, the snow melts into tributaries which fill the Kaweah River. In normal years, the Kaweah River does not reach its highest stage until the middle of May or early June. For the last twenty years, the average annual runoff for the Kaweah River is 442,813 acre-feet. Of course, the average runoff is not the runoff every year. In fact, there are great variations in the amount of water in the Kaweah River, not only from year to year, but also

from month to month. Historically, there were alternating periods of flood and drought in the drainage area of the Kaweah River, which were greatly curtailed when Terminus Dam was completed in 1961.

Rainfall in the District occurs primarily in the winter months with virtually no rainfall in the summer months. The average annual rainfall in the District is approximately eleven inches with the annual crop use per acre averaging several times that amount. As a result, the agricultural crops within the District only partially depend upon rainfall for their water needs, with heavy dependance upon surface water deliveries and groundwater pumping.

In addition to the Kaweah River and rainfall, water enters the District by way of smaller streams such as Dry Creek and Yokohl Creek. Also, water is often imported into the District from the Federal Central Valley Project and Kings River sources.

Historically, most of the land within the District had a groundwater table close to the land surface. In the early part of this century, the distance from the ground surface to the groundwater table may have averaged less than fifty feet. With each successive drought period resulting in an increase in the groundwater pumping, the water table has dropped significantly over the last fifty years. As agricultural land is converted to urban uses and industry grows, the competition for control of water resources among agricultural, urban, industrial and environmental interests will be significantly increased.

B. Purpose and Goals

The District has long recognized the importance of groundwater to the area. With new state legislation, AB 3030 (California Water Code section 10750, et seq.), enacted in 1992, an opportunity is available to the District to prepare and implement a Groundwater Management

Plan (hereinafter the "Plan") on a local basis in lieu of a mandated plan administered by the State of California Department of Water Resources. While the new legislation allows for separate plans to be developed by each public agency providing water service, such as cities and special districts, located within the District a well conceived Plan covering the entire District will be more manageable and will have the potential to provide greater benefit. In addition, the availability of groundwater pumped to serve a community can be impacted by activities that take place a considerable distance beyond local boundaries. There is common use of the groundwater resource and it is hoped that this coordinated Plan will be of benefit to competing interests using the groundwater resource. The coordination will be accomplished through the establishment of Memorandums of Understanding between the District and other local agencies.

For the reasons set forth above, it is the desire of the District that its Plan cover all of the land within the boundary of the District. However, any local agency, as that term is defined by Government Code section 10752(g), can preclude the land within its boundary from being covered by the Plan by refusing to agree to the Plan. Accordingly, the Plan shall cover all land with the boundary of the District, less that land within the boundaries of local agencies, as described above, which refuse to agree to the Plan or which opt out of the Plan (hereinafter the "Plan Area").

The Plan recognizes that the conjunctive use of the water supplies within the Plan Area must be continued. To achieve this delicate hydrologic equilibrium requires the management of both surface and groundwater supplies. The long-term continuation of this balance will be the principal benefit to be derived from the Plan. Retaining all existing

surface and groundwater supplies within the Plan Area is critical to maintaining this delicate balance.

The principal action item in the Plan will be gathering and evaluating additional data concerning the quantity of groundwater. Action items will be developed to enhance the valuable groundwater resource by promoting those actions necessary to reduce the long-term groundwater level decline in the area. Many of the action items identified are currently being conducted or will begin with adoption of the Plan. Other action items will require further study prior to implementation.

Through the proposed Plan, duplication of activities by local jurisdictions will be reduced and the adopted Plan can be utilized in the long-term planning activities of all the agencies within the Plan Area. The Plan will be flexible allowing updates to be made as needed, based on the additional information that is gathered through the monitoring programs.

The Plan preparation is being funded by the District. Future activities required to fully implement the Plan may require additional funding sources. AB 3030 allows for the levying of groundwater assessments or fees under certain circumstances and according to specific procedures. Prior to instituting a fee structure, the District must hold an election on whether or not to proceed with the enactment of the assessments. A majority of the votes cast at the election will be required to implement an additional funding assessment.

II. BACKGROUND

A. The District

The District was formed under the provisions of the Water Conservation District Act of 1927, for the purpose of doing those things allowed by the Act.

The boundary of the District, which lies in both Tulare County and Kings County, is shown on Plate 1, which also shows hydrologic units identified in the District. The total area of the District is about 337,000 acres, with approximately 255,000 acres located in the westerly portion of Tulare County and the balance, or about 82,000 acres, in the northeasterly corner of Kings County.

The District lands are primarily used for agriculture, although the cities of Visalia and Tulare constitute significant areas of urbanization. Other communities include Farmersville, Exeter, Goshen, Ivanhoe, Waukena and Guernsey.

At McKays Point, a significant geographical feature immediately to the east of the eastern District boundary and about 1 1/2 miles west of the community of Lemon Cove, the Kaweah River divides into the St. Johns River and Lower Kaweah River branches and enters the District in these two channels. Within the District, these branches continue to divide in both natural and manmade distributaries.

Numerous public and private entities within the District divert surface water from the Kaweah River and its distributaries. About 250,000 acres within the District have access to surface water supplies from the river system. Because of the erratic nature of flow in the Kaweah River, which varies substantially in magnitude from month to month and year to year, nearly all these lands satisfy supplemental water needs from groundwater. Practically all municipal and industrial uses within the District are supplied from groundwater.

Terminus Dam and Reservoir, located on the Kaweah River about 3 1/2 miles to the east of the District, was completed in 1961 by the U.S. Corps of Engineers. This project was constructed mainly for flood control purposes on the Kaweah River and to provide river

control for irrigation purposes. The dam is an earth fill structure with controlled outlet capacity of up to 8,500 cfs. The reservoir space available for conservation and irrigation reregulation is 142,000 acre-feet. The District has a contract with the United States for the repayment of project costs allocated to conservation and irrigation reregulation space purposes.

The Friant-Kern Canal, a feature of the Federal Central Valley Project (hereinafter "CVP"), traverses the easterly portion of the District. San Joaquin River water is delivered to certain lands within the District via this facility. Tulare Irrigation District, which lies entirely within the District, obtains water from the Friant-Kern Canal. Although the Tulare Irrigation District is the only entity within the District with a long-term contract for CVP water, the District itself, as well as other entities therein, historically have received substantial quantities of CVP water from time to time. This water was either percolated or used to offset groundwater extraction. Other special districts located partially within the boundary of the District, such as Exeter Irrigation District and Ivanhoe Irrigation District, also have long-term contracts for CVP water.

In common with other areas along the east side of the San Joaquin Valley, the District historically has experienced the anomaly of flood control problems coupled with water deficiency. From time to time, flows in the Kaweah River reach damaging levels , with substantial volumes of water escaping their channels to flood valuable agricultural lands within the District. Even with these high flood flow events, an ever increasing water demand is causing groundwater levels to decline in most portions of the District.

B. Climate

The area is semi-arid with mild winters and hot, dry summers. The average rainfall, based on District records, is approximately 11 inches per year. The majority of this rainfall occurs from November through April. With the long, hot summers that normally occur in the valley, there is a potential of about five feet of evaporation per year with the majority of that evaporation occurring during the period May through October.

C. Land Use

The cropping pattern within the District changes with the agricultural economics. In 1968 approximately 78% of the irrigated land was planted in row crops, 14% in permanent plantings and 8% in pasture. In 1984, approximately 79% of the irrigated land was in row crops, 19% in permanent plantings and 2.4% in pasture.

A tabulation of the land utilization for 1968 and 1984 can be found in Plates 2-1 and 2-2 respectively.

D. Water Demand

The applied water demand for the crops grown in the District range from 1.5 acre-feet per acre for grain crops to 7.5 acre-feet per acre for rice with an average annual applied water demand of approximately 3.8 acre-feet per acre based on the 1984 crop survey.

A summary tabulation of estimated annual water demands for crops grown in the District for the years 1968 and 1984 are set forth in Plate 3.

E. Surface Water Supplies

The District receives approximately 75% of its annual average surface water supply from the Kaweah River and approximately 20% of its average surface water supply through

imported water. The remaining water demands are pumped from the groundwater basin by the landowners.

Since 1974, records show that 2,425,811 acre-feet of water has been imported into the District. The annual imported supply is variable and is dependent on the available CVP and the Kings River supplies. The annual imported surface water supply and deliveries (1974 through 1994) are included in Plate 4, Kaweah Delta Water Supply Inventory.

F. Groundwater

Groundwater is the most dependable water supply for the Basin's agricultural, industrial and domestic water users who regularly draw upon this valuable resource from individually owned wells.

The continued pumping of groundwater has resulted in an overdraft of the groundwater basin, that is, more water has been pumped from the basin than has been imported on the surface or has naturally recharged the basin on a long-term basis.

Even though over 2 million acre-feet of surface water has been imported into the District over the past 20 years, the average depth to groundwater within the Plan Area has continued to drop.

III. GROUNDWATER CONDITIONS

A. Groundwater Charting

The District has been monitoring the groundwater level for the last 52 years. This is accomplished through groundwater level measurements taken in the late fall and early spring.

Based on the water level readings, the overall trend has shown a declining groundwater level within the Basin. This decline has been periodically interrupted by a short-

term groundwater recovery, usually during years of above-average precipitation. The rate of decline can be decreased if sufficient supplemental surface water supplies are made available to reduce the amount of groundwater pumping that is necessary to meet the water demands. In addition, the overdraft results in additional pumping costs to provide the increased lift. As the water table continues to drop, the pumping occurs from lower portions of the aquifer which have lower porosity and specific yield factors than those found in the upper portions of the unconfined aquifer. The long-term impact is a greater incremental reduction in the available groundwater storage per acre-foot of overdraft. Using the collected historical data and the transmissivity factor of the aquifer, a determination can be made of the estimated quantity of inflow and/or outflow of groundwater within the Plan Area. This data also will allow the District to identify and evaluate areas that are more severely impacted during periods of sustained drought due to the low yield of the wells and the limited depth of the aquifer. This is an important water management tool that is useful to the District in developing long-term planning decisions.

The collection of this data will be continued with the Plan. The information that has been prepared from this data in the past includes the following:

1. Charts of spring and fall water elevations.
2. Charts of spring and fall depths to groundwater.
3. Charts showing the changes in groundwater levels.

In addition, groundwater reports can include estimates of changes in groundwater storage, water delivered, water use, and overdraft. This will allow an evaluation of the management activities to be made.

B. Groundwater Recharge

In any conjunctive use area, groundwater recharge is a critical part of the overall Plan. For many years, the District has maintained recharge basins throughout the District. They are generally located in areas of highly permeable soils. In addition, effective recharge is also obtained through the natural channels, canals and ditches located within the Plan Area. The District has an ongoing objective to locate and purchase additional recharge sites in the District.

To proceed with a groundwater recharge program, additional surface water supplies are necessary to fully implement the Plan. The surface water necessary to conduct an extensive program is available only in wet years when flood waters are available on the Kaweah River or additional water supplies are available from other sources. The District's goal has been and will continue to be that it make beneficial use of flood waters and excess waters by recharging the underground. Further, the District will continue to seek opportunities to purchase and import water into the District for groundwater recharge purposes.

IV. GROUNDWATER MANAGEMENT PROGRAM

A. Statutory Authority

The District hereby includes in its groundwater management program the right to engage in all of those activities provided by statute which authorize or are related to the Plan.

California Water Code section 10753.7 authorizes the District to include as components in its groundwater management plan the following:

1. The control of saline water intrusion.

2. Identification and management of wellhead protection areas and recharge areas.

3. Regulation of the migration of contaminated groundwater.

4. The administration of a well abandonment and well destruction program.

5. Mitigation of conditions of overdraft.

6. Replenishment of groundwater extracted by water producers.

7. Monitoring of groundwater levels and storage.

8. Facilitating conjunctive use operations.

9. Identification of well construction policies.

10. The construction and operation by the local agency of groundwater contamination cleanup, recharge, storage, conservation, water recycling, and extraction projects.

11. The development of relationships with state and federal regulatory agencies.

12. The review of land use plans and coordination with land use planning agencies to assess activities which create a reasonable risk of groundwater contamination.

Additionally, the District intends to exercise all of the authority given to a water replenishment district in California Water Code sections 60220 through 60232, together with the authority of a water replenishment district to fix and collect fees and assessments within the Plan Area for groundwater management in accordance with California Water Code sections 60300 through 60352, all as may be necessary for the District to accomplish its purposes and goals for the Plan.

Notwithstanding the foregoing, the District reserves the right to decide whether or not it will be involved in each of the activities authorized by the aforementioned statutes. The

District assumes no responsibility or liability for any authorized activity in which it is not actually involved. Further, upon thirty (30) days written notice to all other local agencies located within the Plan Area, the District may terminate the Plan, together with any and all activities which may be a part of its groundwater management program at the time of such termination. The District shall not be required to notify other local agencies, or anyone else, if it merely terminates its involvement in an activity authorized by the aforementioned statutes, without terminating the Plan itself.

B. Action Items

There have been eleven (11) action items identified for the Plan and those items will be implemented according to the Rules and Regulations (See Exhibit "A"), as amended from time to time. To have a successful Plan, it is not necessary to implement all of the action items identified. The last three items would be required only as a last resort due to the occurrence of emergency conditions within the Plan Area. It is recommended that action items one (1) through eight (8) be implemented immediately. Action items nine (9) through eleven (11) may require additional staff study, board approval and public hearings. Other specific action items permitted by the aforementioned code sections may be identified and implemented as the program is put in process.

If funding is necessary to implement a portion of the Plan, an election will be required prior to instituting an assessment. It is felt that through the management activities listed in the Plan, the District can preserve the groundwater resource and avoid the drastic steps identified in the last three action items.

1. Water Monitoring: The District shall continue to monitor water levels

every six months. Further, the District will prepare charts depicting the information gathered through the monitoring phase, as well as reports quantifying the water demands, surface water and groundwater supplies. These summaries will assist the District in evaluating the effectiveness of the various elements of its program.

2. Direct Recharge: The District will continue to use surface waters when available to recharge the underground by sinking those waters in its basins. The District will actively seek the cooperation of other government entities in construction and purchase of such sites.

3. Indirect Recharge: Many miles of natural channels are located within the Plan Area. Indirect recharge is accomplished through the seepage that occurs in some reaches of the natural channels. During winter months many of the natural channels carry surface runoff that recharges the groundwater. The natural channels are typically located in permeable soils. The effective amount of this recharge varies from year to year and is dependent upon the amount of rainfall that occurs. Additional water supplies will be pursued for groundwater recharge in the natural channels. By providing surface water to the area, the District has reduced the amount of groundwater pumping, resulting in an effective in-lieu recharge program. The District will continue efforts to maximize the amount of surface water available to users within its boundaries.

4. Water Conservation: Water conservation efforts will be encouraged throughout the Plan Area for agricultural, industrial and residential users. Existing and new irrigation methods, reuse of industrial water and domestic water saving devices will all be encouraged.

5. No Exportation of Groundwater: Since the District is located within an overdrafted basin, it is prudent to utilize all groundwater resources within the Plan Area's boundary. The District will take all appropriate action to prevent the exportation of water from the Plan Area.

6. Intra-district Water Transfers: Kaweah River water transfers within the Plan Area have taken place on a routine basis. The District will continue to monitor water transfers within the Plan Area.

7. Inter-district Water Transfers: Kaweah River water transfers between different water districts are currently taking place. New legislation is being proposed that will enhance the water transfer process. In the past, the District has completed such transfers on a limited basis. This mechanism would be used to increase the total water supply within the Plan Area or to augment the water supply in specific areas of the basin during critically dry years.

8. Reduction in Groundwater Outflow: The direction and quantity of groundwater flow is susceptible to changes that occur to the hydraulic gradient. The groundwater level measurements taken twice a year within the District will identify the direction of groundwater flow. Typically, this outflow has been to the west and southwest. The District will continue its efforts to monitor the amount of such groundwater outflow.

9. Pumping Restrictions: Pumping restrictions would reduce the amount of groundwater use. This is a controversial item and pumping restrictions would be the last item to be considered. This step could have severe economic implications since the local economy, that has been developed with a reliance on unrestricted groundwater, would be

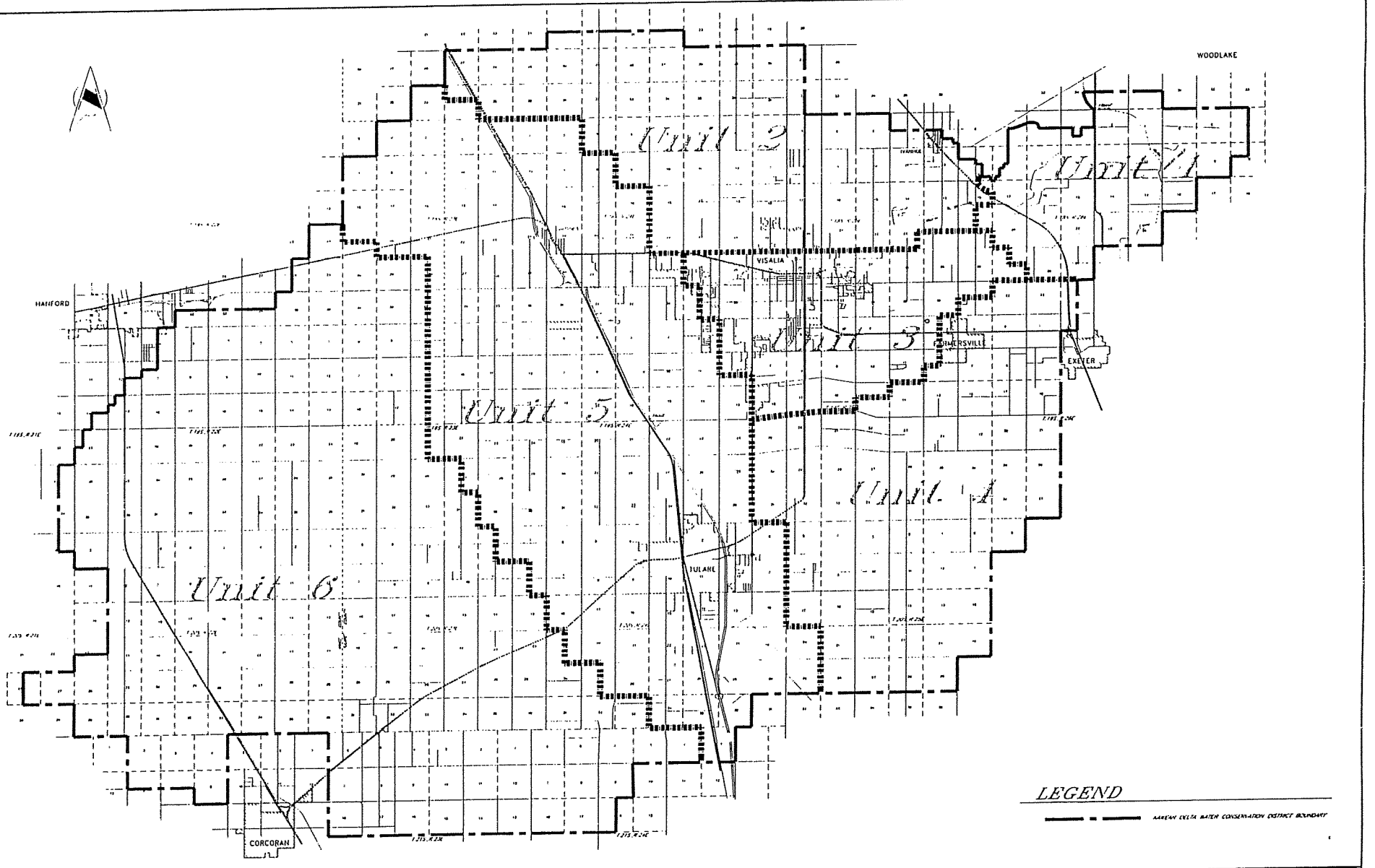
detrimentally impacted. Initially, any program requiring pumping restrictions would be voluntary rather than mandatory. From a practical standpoint, only if the urban water supplies are being restricted, will mandatory agricultural pumping restrictions be implemented.

10. Additional Water Supply and Storage: Additional water supplies would enhance the local groundwater. Present political realities discourage developing additional water supplies by building dams and large water storage projects. The District will continue to pursue feasible efforts to secure additional water supply and storage which will be beneficial to the Plan Area.

11. Distribution of District owned Water: There is a tremendous difference in the aquifer characteristics within the Plan Area. This is evident in both storage capability and yield. The impact of the recent drought is evidenced by the larger drop in water level for those areas with limited aquifer depth versus portions of the basin that are located over a deeper and higher yielding aquifer. During critically dry years District owned surface water, if available, may need to be directed to the most severely impacted areas. The distribution of District owned water shall be at the discretion of and according to the direction given by the Board of Directors of the District.

C. Memorandum of Understanding

The District shall endeavor to enter into an agreement with other local agencies in the form of a Memorandum of Understanding in compliance with California Water Code section 10750.8. A sample of one form of Memorandum of Understanding is attached hereto as Exhibit "B".



KAWEAH DELTA WATER CONSERVATION DISTRICT

District Boundary Map & Hydrological Zones

PLAN SCALE 1in=4

DRAWN BY: H.ETHERIDGE

APPROVED BY: J. CROOK

C.E. NO. 19173 DATE 10/01/96

PLATE 1
District
MAP

Kaweah Delta Water Conservation District

1968

Summary of Land Utilization

(Value in Acres)

Category of Land Use	Hydrological Units 1	2	3	4	5	6	District Total
Irrigated							
Cotton	129	6,729	2,548	7,649	23,065	27,661	67,781
Alfalfa	1,226	2,626	1,646	4,403	16,734	21,764	48,399
Grain	384	2,238	245	3,522	5,961	13,363	25,713
Deciduous & Nuts	2,420	4,984	6,095	6,939	3,906	204	24,548
Pasture	2,941	2,011	452	4,401	3,967	5,978	19,750
Miscellaneous Field	290	736	276	1,868	3,682	8,286	15,138
Sugar Beets	0	1,814	130	751	1,363	3,138	7,196
Grapes	1,363	463	207	2,256	1,567	10	5,866
Citrus	2,322	516	0	64	0	0	2,902
Truck	477	161	57	72	510	290	1,567
Rice	0	0	0	0	0	84	84
Field and grain Double Crop	550	6,472	1,392	4,397	8,366	13,547	34,724
Interplanted Orchard	324	258	816	486	230	132	2,246
Subtotal, Irrigated	12,426	29,008	13,864	36,808	69,351	94,457	255,914
Nonirrigated							
Urban, Commercial & Industrial	436	1,599	3,083	1,090	2,723	1,811	10,742
Farmsteads & Feed Lots	166	479	434	814	936	1,618	4,447
Idle	936	376	745	1,100	2,650	5,796	11,603
Roads, Channels & Canals	1,100	1,342	2,736	1,159	6,239	3,736	16,312
Undeveloped	2,874	6,879	462	2,902	8,685	15,892	37,694
Sub-total, Nonirrigated	5,512	10,675	7,460	7,065	21,233	28,853	80,798
Total	17,938	39,683	21,324	43,873	90,584	123,310	336,712

Bookman - Edmonston, Inc. - Feburary 1972

PLATE 2-1

Kaweah Delta Water Conservation District

1984

Summary of Land Utilization

(Value in Acres)

Category of Land Use	Hydrological Units 1	2	3	4	5	6	District Total
Irrigated							
Cotton	249	10,696	2,090	5,814	31,403	52,392	102,644
Alfalfa	234	1,621	373	3,042	10,209	22,373	37,852
Grain	17	1,223	198	2,208	647	6,637	10,930
Deciduous & Nuts	3,939	6,381	7,203	12,279	7,374	1,492	38,668
Pasture	2,076	909	489	1,371	887	744	6,476
Miscellaneous Field	1,757	2,360	782	4,110	10,845	7,965	27,819
Sugar Beets		636	75	151	909	1,182	2,953
Grapes	775	2,116	179	3,597	1,813	482	8,962
Citrus	2,723	595		179			3,497
Truck	4	17	7	1	10	893	932
Rice							0
Field and grain Double Crop	112	3,988	500	5,970	8,081	12,208	30,859
Interplanted Orchard	41	79	138	92	229	72	651
Subtotal, Irrigated	11,927	30,621	12,034	38,814	72,407	106,440	272,243
Nonirrigated							
Urban, Commercial & Industrial	799	2,705	5,492	2,406	6,365	4,715	22,482
Farmsteads & Feed Lots	188	561	333	935	1,759	1,658	5,434
Idle	539	370	203	803	1,467	1,446	4,828
Roads, Channels & Canals	1,292	1,531	3,118	1,492	6,384	4,142	17,959
Undeveloped	3,349	3,042	448	983	1,853	5,091	14,766
Sub-total, Nonirrigated	6,167	8,209	9,594	6,619	17,828	17,052	65,469
Total	18,094	38,830	21,628	45,433	90,235	123,492	337,712

Bookman - Edmonston Engineering , Inc. - 12-10-85

PLATE 2-2

Estimated Application of Irrigated Water
To Crops In District Under 1968 & 1984 Conditions

Category of Land Use	1968 Unit Application (Feet)	1968 Net. Irrigated Area (Acres)	1968 Total Application (Acre-Feet)	1984 Unit Application (Feet)	1984 Net. Irrigated Area (Acres)	1984 Total Application (Acre-Feet)	Change In District Total
Irrigated							
Cotton	3.5	67,781	237,234	3.5	102,644	359,254	122,021
Alfalfa	5.0	48,399	241,995	5.0	37,852	189,260	(52,735)
Grain	1.5	25,713	38,570	1.5	10,930	16,395	(22,175)
Deciduous & Nuts	4.5	24,548	110,466	4.5	38,668	174,006	63,540
Pasture	5.0	19,750	98,750	5.0	6,476	32,380	(66,370)
Miscellaneous Field	3.0	15,138	45,414	3.0	27,819	83,457	38,043
Sugar Beets	3.5	7,196	25,186	3.5	2,953	10,336	(14,851)
Grapes	4.0	5,866	23,464	4.0	8,962	35,848	12,384
Citrus	4.5	2,902	13,059	4.5	3,497	15,737	2,678
Truck	2.5	1,567	3,918	2.5	932	2,330	(1,588)
Rice	7.5	84	630	7.5	0	0	(630)
Field and grain Double Crop	3.5	34,724	121,534	3.5	30,859	108,007	(13,528)
Interplanted Orchard	5.0	2,246	11,230	5.0	651	3,255	(7,975)
Weighted Average or Total	3.8	255,914	971,449	3.8	272,243	1,030,264	58,815

Notes:

1- Unit Application Values from Bulletin No. 113-2, Table 13.

2- 1968 Net Irrigated Areas from "Bookman and Edmonston Report of February 1972, Table III - 2

3- 1984 Net Irrigated Areas from "Bookman and Edmonston Report Supplemental of December 1984

PLATE 3

Kaweah Delta Water Conservation District

Kaweah Delta Water Supply Inventory

(Value expressed in Acre Feet)

Water Year	Total Surface Water Inflow							Total Outflow			Average Change In Ground Water Depth by Zone						
	Terminus Release	Dry Creek	Yokohl Creek	Cottonwood Creek	C.V.P. Imports	Kings River	Total Inflow	Total Spill	Friant / Kern Pumping	Total Outflow	1	2	3	4	5	6	Istrict Averag
1974	485,553	16,253	3,068	6,972	260,717	19,785	793,148	29,566	0	29,566	2.40	8.20	8.40	10.60	10.40	8.90	8.15
1975	376,316	8,882	1,646	3,388	162,649	20,168	573,049	7,589	0	7,589	0.60	2.20	-1.20	2.50	0.50	-5.20	-0.10
1976	135,521	1,506	0	0	36,782	1,753	175,562	202	0	202	-2.60	-4.50	-1.70	-7.40	-14.60	-11.20	-7.00
1977	96,148	196	0	0	0	0	96,344	0	0	0	n/a	n/a	n/a	n/a	n/a	n/a	0.00
1978	814,550	42,350	19,444	38,057	122,304	9,037	1,045,822	44,863	9,112	53,975	-3.00	-12.00	-13.00	-12.00	-7.00	-4.00	-8.50
1979	421,335	12,393	444	6,409	284,406	7,716	732,703	13,885	0	13,885	6.80	22.90	20.90	25.20	16.30	20.60	19.12
1980	876,060	38,450	7,614	16,308	209,352	1,087	1,148,871	97,785	5,095	102,880	-1.00	-4.00	-3.00	-1.00	-2.00	1.00	-1.67
1981	246,932	5,655	42	0	66,096	11,117	329,842	1,956	0	1,956	-1.00	9.00	6.00	7.00	7.00	12.00	6.67
1982	742,712	30,266	7,313	4,756	242,116	3,217	1,030,380	58,035	29,532	87,567	-2.00	-3.90	-2.50	-3.70	-4.10	-7.20	-3.90
1983	1,398,516	93,259	41,476	35,898	95,353	0	1,664,504	459,652	148,198	607,850	7.30	10.20	8.00	13.00	17.60	21.40	12.92
1984	528,172	16,598	11,296	9,174	134,868	42,684	742,792	49,315	0	49,315	0.40	4.60	4.30	5.10	9.60	20.00	7.33
1985	328,952	6,559	0	0	92,923	3,207	431,641	278	0	278	-3.00	-2.30	-4.00	-3.00	1.50	-0.90	-1.95
1986	808,040	33,610	6,232	11,494	162,470	18,068	1,039,914	63,670	92,739	156,409	-1.00	-4.80	-3.40	-4.50	-3.50	-9.00	-4.37
1987	188,171	3,160	0	0	12,181	2,430	205,942	0	0	0	-8.30	-9.60	-8.10	-12.80	12.40	20.80	-0.93
1988	182,617	2,747	0	0	99,058	1,995	286,417	0	0	0	0.50	-9.70	-8.60	-9.30	-8.90	-18.30	-9.05
1989	207,780	2,269	0	0	39,612	1,000	250,661	0	0	0	-3.10	-6.10	-8.80	-11.50	-9.73	-17.23	-9.41
1990	133,843	859	0	0	0	0	134,702	0	0	0	-1.50	-8.40	-5.10	-9.60	-8.40	-5.20	-6.37
1991	246,486	15,416	0	0	51,067	0	312,969	0	0	0	-5.80	-15.00	-13.30	-29.10	-19.40	-33.30	-19.32
1992	157,811	1,787	0	0	17,639	1,226	178,463	0	0	0	4.10	-4.10	-1.30	-1.10	-0.70	-1.50	-0.77
1993	544,357	26,418	0	0	145,686	7,093	723,554	0	0	0	2.00	-8.00	-5.80	-4.70	-6.00	-1.80	-4.05
1994	379,190	5,030	0	0	36,108	2,761	423,089	0	0	0	n/a	n/a	n/a	n/a	n/a	n/a	0.00
Totals (1974 - 1994)	9,299,064	363,663	99,375	132,456	2,271,467	154,344	12,320,369	826,796	284,676	1,111,472	-8.2	-35.3	-32.2	-46.3	-7.03	-10.13	-23.19
Average (20 yr. period)	442,813	17,317	4,732	6,307	108,165	7,350	586,684	39,371	13,556	52,927	-0.39	-1.68	-1.53	-2.20	-0.33	-0.48	-1.10

Notes:

1- Average Change in Ground Water Depth by Zone is based on Spring Measurements

2- 1977 - 100 year low water year (22%)

3- 1983 - 100 year high water year (323%)

4- 1974 - 1993 total average water year = 104.85%

PLATE 4

GROUNDWATER MANAGEMENT PLAN

RULES AND REGULATIONS

TO IMPLEMENT THE

GROUNDWATER MANAGEMENT PLAN

OF

KAWEAH DELTA WATER CONSERVATION DISTRICT

Adopted August 1, 1995

1. Water Monitoring: At least twice per year, the Kaweah Delta Water Conservation District (hereinafter the "District") shall provide staff at its expense to monitor and measure the depth to standing groundwater at well sites within the Plan Area. In its sole discretion, District shall select the number and location of well sites. District shall prepare charts as required by the Plan.

2. Direct Recharge: When feasible, District will consider delivery of water to recharge basins within the Plan Area. All such deliveries of recharge water shall be at the discretion of District Board of Directors ("Board of Directors").

3. Indirect Recharge: District shall endeavor to evaluate and utilize recharge from natural channels when appropriate, as determined by District. Natural channels with good recharge capabilities will be evaluated for potential use as groundwater recharge facilities to receive recharge water.

4. Water Conservation: District's policies and procedures promote the beneficial use of water. The District shall continue to promote policies that enhance water conservation policies. The District Board of Directors has the authority to adopt water conservation and

water regulation policies for the District and, pursuant to its groundwater management plan, the Plan Area. If a local public agency adopts and enforces a water conservation plan within its boundaries, such Plan shall be effective to the extent it is not inconsistent with the District's Plan.

5. No Exportation of Groundwater: After the adoption hereof, there shall be no exportation of groundwater that results in any additional net loss to the Plan Area's total available water supplies. The District Board of Directors has the authority to institute any measures proposed to prevent such net loss.

6. Intra-district Water Transfers: Water transfers within the Plan Area are permissible, subject to the approval of either the Kaweah River Watermaster or the Board of Directors of the District.

7. Inter-district Water Transfers: District shall endeavor to promote advantageous water transfers (water transfers that increase the water supply available within the Plan Area). The Board of Directors has the authority to initiate such transfers.

8. Reduction in Groundwater Outflow: The District may monitor the outflow of groundwater from the Plan Area. Before the District takes any steps to prevent such outflow, such steps shall be approved by the Board of Directors of the District.

9. Pumping Restrictions: Only under special circumstances would pumping restrictions be imposed. The Board of Directors shall not impose such restrictions until after consulting with local agencies and holding a mandatory public hearing at least sixty (60) days prior to the effective date of such restrictions. The Board of Directors could impose such action only by resolution.

10. Additional Water Supply and Storage: The District will continue to actively review and evaluate potential new supplies of water and new storage facilities for water which may benefit the Plan Area. To the extent the Board of Directors of the District determines that it has the capability to do so, the District will fund projects which increase the water supply and water storage which benefit the Plan Area. The District's involvement in any project to increase water supply or water storage shall be approved by the Board of the Directors of the District.

11. Redistribution of Surface Water

The District, in its sole discretion, shall determine which sinking basin(s), natural channel(s), canal(s) or ditch(es) shall be used to sink any water which the District has available for such purpose.

MEMORANDUM OF UNDERSTANDING

BETWEEN

KAWEAH DELTA WATER CONSERVATION DISTRICT

AND

CONSOLIDATED PEOPLES DITCH

ARTICLE I - AGREEMENT

The articles and provisions contained herein constitute a bilateral and binding agreement by and between KAWEAH DELTA WATER CONSERVATION DISTRICT (hereinafter the "District") and *CONSOLIDATED PEOPLES DITCH* (hereinafter "Agency").

ARTICLE II - RECOGNITION

The District has developed a Groundwater Management Plan (hereinafter the "Plan") with input from several local agencies located within the District. It is the intent of District to allow and encourage such agencies to coordinate efforts and be a part of the District's Plan by means of a separate Memorandum of Understanding (hereinafter the "MOU") between each agency and District.

ARTICLE III - PURPOSE

It is the purpose of the MOU, entered into willingly, between District and Agency, to document the interests and responsibilities of both parties in the adoption and implementation of the Plan. It is also hoped that such MOU will promote and provide a means to establish an orderly process to share information, develop a course of action and resolve any misunderstandings or differences that may arise regarding the Plan.

EXHIBIT B

ARTICLE IV - COORDINATE

There shall be an annual coordinating meeting (hereinafter the "Meeting") between the District and the Agency. District shall give notice to the Agency thirty (30) days prior to date of the Meeting to discuss the manner in which the Plan is being implemented and other items related to the Plan. If there are concerns or questions regarding the Plan, Agency shall transmit its concerns in writing to District seven (7) days prior to the Meeting.

ARTICLE V - OBLIGATIONS

The Plan shall be binding on the parties hereto unless superseded by the MOU or amendment thereto.

ARTICLE VI - AREA OF PLAN

The Plan shall be effective in all areas within the Agency boundaries. The Plan shall also be effective in any area annexed to the Agency subsequent to the adoption of the Plan.

ARTICLE VII - TERM

The initial term of the MOU shall commence on the date hereof and continue for five (5) years, and shall continue year to year thereafter, unless terminated by written notice given at least one (1) year prior to such termination.

District:	Agency:
KAWEAH DELTA WATER CONSERVATION DISTRICT	
By _____	By _____
Title: President	Title: President
By _____	By _____
Title: Manager	Title: Vice - Pres.