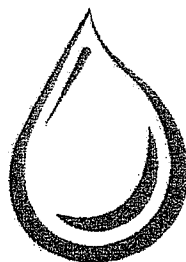


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CWD-RED TOP RCD JOINT POWERS AUTHORITY



Groundwater Management Plan

In accordance with AB 3030

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SECTION 1

INTRODUCTION

1.1 Groundwater Management Act

Groundwater is relied upon to meet water supply requirements in many areas throughout the state. In some locations, excessive use of groundwater has led to groundwater overdraft, land subsidence and groundwater quality degradation. For these reasons, the California State Legislature has declared groundwater a valuable natural resource, and has determined groundwater should be managed to ensure both its safe production and its quality. The Groundwater Management Act (AB 3030) was passed by the State Legislature in 1992; it became law January 1, 1993. The act is codified as Sections 10750 *et seq.* of the California Water Code. This groundwater management plan has been developed pursuant to the provisions of AB 3030.

1.2 Plan Components

According to California Water Code Section 10753.7, a groundwater management plan may include components relating to all of the following:

- The control of saline water intrusion
- Identification and management of wellhead protection areas and recharge areas
- Regulation of the migration of contaminated groundwater
- The administration of a well abandonment and well destruction program
- Mitigation of conditions of overdraft
- Replenishment of groundwater extracted by water producers
- Monitoring of groundwater levels and storage
- Facilitating conjunctive use operations
- Identification of well construction policies
- The construction and operation by the local agency of groundwater contamination cleanup, recharge, storage, conservation, water recycling and extraction projects
- The development of relationships with state and federal regulatory agencies
- The review of land use plans and coordination with land use planning agencies to assess activities which create a reasonable risk of groundwater contamination

1.3 Agency Authorization

California Water Code Section 10753 (a) authorizes any local agency, whose service area includes a groundwater basin, or a portion of a groundwater basin, that is not already subject to groundwater management, to adopt and implement a groundwater management plan, which is defined by Section 10752 (e) as "a document that describes the activities intended to be included in a groundwater management program." A groundwater management program is defined by Section 10752 (d) as "a coordinated and ongoing

activity undertaken for the benefit of a groundwater basin, or a portion of a groundwater basin, pursuant to a groundwater management plan adopted pursuant to this part."

"Local agency" is defined as any local public agency that provides water service to all or a portion of its service area (Section 10752 (g)). The definition also includes a local public agency that provides flood control, groundwater management, or groundwater replenishment, or a local agency formed pursuant to the Water Code for the principal purpose of providing water service that has not yet provided that service (Section 10753 (b)). These local agencies may exercise the authority of this part, and are authorized by Section 10752 (g) to form Joint Powers Authorities in order to work cooperatively in establishing a groundwater management program.

According to Water Code Section 10754, for purposes of groundwater management, a local agency that adopts a groundwater management plan has the authority of a water replenishment district pursuant to Part 4 (commencing with Section 60220) of Division 18 and may fix and collect fees and assessments for groundwater management in accordance with Part 6 (commencing with Section 60300) of Division 18, subject to the approval of voters within the agency's boundaries.

1.4 Eligible Groundwater Basins

The act applies to all groundwater basins in the state of California, except those already subject to groundwater management by a local agency or watermaster pursuant to other provisions of law or a court order, judgment or decree, unless the local agency or watermaster agrees to the applications of the act. The Chowchilla Groundwater Basin is eligible for groundwater management under AB 3030.

1.5 Objective

The Chowchilla Water District ("CWD" or "District") and Chowchilla-Red Top Resource Conservation District ("RCD") value the importance of groundwater in the state of California. The two Districts recognize that proper management of groundwater basins is necessary to sustain the environmental, social and economic conditions that prevail in today's society. More importantly, the well-being of future societies is dependent on the effectiveness of current groundwater resources planning. For these reasons, the Chowchilla Water District and Chowchilla-Red Top Resource Conservation District have decided to protect the groundwater in their area. As shown in Appendix 1, the agencies adopted a resolution of intention to draft a groundwater management plan on November 13, 1996. In order to complete and administer a groundwater management plan, the agencies formed a Joint Powers Authority on October 30, 1997 (see Appendix 2). The resulting agency is known as the CWD-Red Top RCD Joint Powers Authority ("Authority").

The objective of this groundwater management plan is to identify, formulate and implement effective groundwater management practices in order to maintain the long-term availability of groundwater resources throughout the Chowchilla Basin.

SECTION 2

THE DISTRICTS

2.1 Chowchilla Water District

The Chowchilla Water District was formed in 1949 for the purpose of furnishing a supplemental water supply for lands within its boundaries. Until that time, the District had been a part of the original Madera Irrigation District. In 1989, the La Branza Water District and Chowchilla Water District consolidated. The consolidated district is known as the Chowchilla Water District. The District consists of approximately 80,000 acres, including lands in Madera and Merced counties.

2.2 Chowchilla-Red Top Resource Conservation District

The Chowchilla Resource Conservation District and Red Top Resource Conservation District were formed by California State Law for the purpose of providing local leadership and guidance regarding resource conservation issues. The two Districts were combined in the late 1970s, resulting in the Chowchilla-Red Top Resource Conservation District. The combined District works closely with the United States Department of Agriculture National Resources Conservation Service; the two agencies address topics relating to soil, water, air quality, environmental assessment, conservation education, and wildlife preservation. The RCD encompasses the entire Chowchilla Groundwater Basin, excepting that portion of the Basin located in Merced County.

THE CHOWCHILLA GROUNDWATER BASIN

3.1 Boundaries

The Chowchilla Basin encompasses approximately 250 square miles and includes lands in both Madera and Merced counties. The Basin is bounded on the west by the San Joaquin River and the eastern boundary of the Columbia Canal Company service area and on the north by the southern boundary of the Merced Groundwater Basin. (The northern boundary runs Westerly along the Chowchilla River, then along the southern boundary of the Le Grand-Athlone Water District. The boundary then follows the northern boundaries of the former La Branza Water District and El Nido Irrigation District. The boundary turns southerly and follows the western boundary of El Nido Irrigation District, then runs westerly along the northern boundary of the Sierra Water District, to the San Joaquin River.) The southern boundary of the Chowchilla Basin runs along the southern boundary of Township 11 South, Range 14 East and the southern boundary of Progressive Water District, then northerly along the eastern boundary of Progressive Water District and Sections 9 and 16 of Township 11 South, Range 15 East. The boundary then runs northeasterly along the southern and eastern boundaries of the Chowchilla Water District, then northeasterly following Berenda Slough and Ash Slough to the Chowchilla River.

3.2 Agencies Within

Besides the Chowchilla Water District and the Chowchilla-Red Top Resource Conservation District, five other agencies exist wholly within the boundaries of the Chowchilla Basin, as shown in Appendix 3. The City of Chowchilla is considering entering into a Memorandum of Understanding with the Authority regarding this groundwater management plan. The other four agencies include El Nido Irrigation District, Sierra Water District, Clayton Water District and Progressive Water District. Lands within the boundaries of these four agencies are excluded from this plan.

3.3 Major Streams

As shown in Appendix 4, the Chowchilla Bypass, Fresno River, Chowchilla River and Dutchman Creek are the major natural stream channels that flow into the groundwater basin.

As previously described, the San Joaquin River forms the western boundary of the basin. Although it does not flow directly into the basin, one of its bypasses does. The

Chowchilla Bypass of the San Joaquin River crosses the southern boundary of the basin and flows northwesterly. At the southern basin boundary, the San Joaquin River and Chowchilla Bypass are separated by approximately six miles of land.

The Fresno River enters the southeastern portion of the Basin and flows westerly. Several miles into the basin, the Chowchilla Bypass and Fresno River merge, forming the Eastside Bypass. The Eastside Bypass continues northwesterly, exiting the basin. Eventually, the bypass rejoins the San Joaquin River.

Near the easternmost basin boundary, the Chowchilla River divides into three distributary channels. The northern channel continues as the Chowchilla River, which comprises the northern basin boundary for approximately nine miles, then flows through the basin. The other two channels, Ash Slough and Berenda Slough, flow southwestwardly through the basin to the Eastside Bypass.

Dutchman Creek enters the eastern side of the most northerly tip of the basin. It flows westwardly through the basin approximately three miles, then exits. Outside the boundaries of the basin, Dutchman Creek merges with Deadman Creek.

Although manmade, the Madera Canal is another channel that enters the basin. The Madera Canal is used to transport surface water from Friant Dam on the San Joaquin River. The Madera Canal terminates when it reaches the heading of the CWD conveyance system.

SECTION 4

DESCRIPTION OF STUDY AREA

4.1 Climate

The study area is characterized by hot, dry summers and fairly mild winters, accompanied by low to moderate precipitation. Fogs are common during the cool winter months; snow is very rare. Winds are gentle throughout most of the year, prevailing from the northwest.

The dry Mediterranean climate is well suited for irrigated agriculture. The long, warm-to-hot, dry summers allow ripening of crops without the threat of mildew. The summers are virtually rainless, permitting the attainment of high irrigation efficiencies. The mild, wet winters provide some water for winter crops, as well as leaching water to flush salts that may accumulate during dry periods.

4.2 Topography

The eastern side of the survey area is located on old alluvial terraces; the central portion, recent alluvial fans. The mid-westerly portion of the area is located on the basin rim of the east side of the San Joaquin Valley. Overflow lands occur in a nearly flat plain along the San Joaquin River, which constitutes the western boundary of the area.

The alluvial fans are the largest geomorphic features in the area. They are gently sloping with gradients toward the west. The area generally slopes westwardly about 9 feet per mile; however, the overflow lands slope only 2 feet per mile. The elevation is close to 110 feet above sea level at the northwestern edge of the study area, and 325 feet near the northeast corner.

4.3 Geology

The geologic features of the area were formed by alluvium deposited from streams originating in the nearby Sierra Nevada mountains. The older alluvium is believed to be of Pleistocene age and contains indurated hardpans cemented by iron and silica. The recent alluvium on the alluvial fans may also contain developed compact layers, but these layers are lime cemented and are not as hard as the iron silica hardpans. Both the older and younger alluvium are of granitic origin and tend to be coarse textured and nonsaline.

Under natural conditions, many areas were underlain by the aforementioned slowly permeable hardpans. Most of these areas have now been ripped, which has greatly improved the internal soil drainage. The material underlying the hardpan is typically softly consolidated sandy loam.

4.4 Subsurface Conditions

The stratigraphy of the area includes a non-water bearing complex (which underlies most of the study area), and various water bearing sediments on top of the basement complex. The basement complex consists of granitic and schistose rocks which do not yield water freely to wells. The basement complex outcrops in the Sierra Nevada foothills east of the area, yet is more than 10,000 feet deep under the western edge of the area. The basement complex dips to the southwest.

The basement complex is overlain by marine and continental sedimentary rocks (sandstone, claystone, siltstone, and shale) of pre-Tertiary and Tertiary age. The marine and continental rocks are not penetrated by water wells. These rocks are overlain by the continental deposit of Tertiary and Quaternary age. The top of the continental deposit ranges from about 100 to 1,000 feet deep and ranges in thickness from 1,000 to 2,200 feet. The deposit consists of interbedded, poorly-sorted sand, silt, clay and conglomerate with layers of hardpan and traces of volcanic glass and andesitic tuff. The deposit becomes finer grained with depth and distance from the foothills.

The older alluvium overlies the continental deposit and varies in thickness up to 1,000 feet. The older alluvium consists mostly of intercalated lenses of clay, silt, sand and some gravel. Near the surface of the older alluvium, a cemented-sediment hardpan occurs throughout the area. Within the older alluvium is an extensive clay bed called the E-clay or Corcoran clay of Pleistocene age. The E-clay varies in depth from 80 feet below the town of Chowchilla to 200 feet below the southwest corner of the area. The E-clay underlies all of the area except that portion east of highway 99. The E-clay divides the aquifer into the confined and unconfined zones. The thickness of the E-clay varies up to 80 feet. The E-clay consists mostly of clay, silty clay and silt. It is virtually impermeable and is considered an aquiclude. Nearly all ground water wells in the area tap the older alluvium. The base of fresh water (water less than 2,000 p/m) under the area is about 1,400 feet deep.

The younger alluvium is a thin-sedimentary, mostly-oxidized deposit of interbedded, poorly-to-well-sorted clay, silty clay, silt, silty sand, and fine to coarse grained sand. Because it is not as weathered as the older alluvium, the younger alluvium does not contain a hardpan. This feature distinguishes it from the older alluvium. The thickness of the younger alluvium varies up to 50 feet. Due to these characteristics, the younger alluvium is more permeable than the older alluvium.

SECTION 5

WATER SUPPLY

5.1 Precipitation

The heaviest rainfall in the Chowchilla Basin occurs between December and March. No significant amount falls from May through September. Precipitation increases with elevation; therefore, there is a gradual increase in total rainfall from west to east across the basin. The western area receives about 8.5 inches per year, while the eastern area receives about 12 inches per year. Most of the moisture falls as steady rain in winter storms that cover broad areas.

5.2 Surface Water

The Chowchilla Water District delivers surface water to lands within its boundaries, and administers the delivery of most local riparian water rights.

The District's first water contract was signed in 1951 for supply from the Friant Unit of the Central Valley Project. An additional contract for water from Buchanan Dam on the Chowchilla River was signed in 1967. The dam was completed in 1977 and deliveries began in 1978.

First deliveries of project water were through natural channels and ditches constructed by District farmers. Major construction of delivery facilities occurred in the early 1960s. The District now operates approximately 160 miles of unlined canals and laterals, and 46 miles of pipeline.

The District's present contract provides for an annual maximum of 55,000 acre-feet of class 1 water, an annual average of 77,000 acre-feet of class 2 water, and an annual maximum of 160,000 acre-feet of class 2 water (all via the Madera Canal from the Friant Unit, CVP). In addition to this, the District also receives an average of 24,000 acre-feet per year from the Buchanan Dam on the Chowchilla River.

5.3 Groundwater

The general movement of groundwater in the area is southwestward. Most irrigation wells tap the older alluvium. Well depths range from approximately 75 to 700 feet and average 260 feet. The capacity of wells ranges from 40 gallons per minute to 4,750 gallons per minute. The specific capacity of wells ranges from approximately 8 to 136 gallons per minute per foot of draw down and averages about 40 gallons per minute per foot of draw down. The specific capacities are generally greater in the western portion of

the study area. Table 1 contains statistical information describing groundwater conditions in the Chowchilla Basin. The statistics were derived from a sample of 222 wells.

Table 1		
LEVEL OF DEVELOPMENT		
CHOWCHILLA BASIN		
1990		
Extraction	252,000	ac-ft/yr
Perennial Yield	239,000	ac-ft/yr
Overdraft	13,000	ac-ft/yr
Usable Storage	1,043,000	ac-ft
Pump Lift	150	est. feet

Source: California Department of Water Resources

Appendix 5 shows the average depth to groundwater in both spring and fall since 1971. The data was derived from a sample of approximately 175 wells in the Chowchilla Water District. The chart shows obvious changes in depths to groundwater due to periods of drought and seasons of extensive rainfall. Groundwater levels recovered after the 1977 drought, then declined with the continuance of the late eighties/early nineties drought. There has not been a significant amount of recovery since this most recent drought.

Appendix 6 consists of thirteen groundwater contour maps, containing spring groundwater measurements. The first two maps show lines of equal depth to water in wells for the years 1988 and 1995. The remaining maps show lines of equal elevation of water in wells for the years 1986 through 1996. Again, the most recent period of drought is evident from these maps.

SECTION 6

WATER QUALITY

6.1 TOTAL DISSOLVED SOLIDS

Table 2 shows average water qualities described by total dissolved solids. Water in intermittent streams (i.e. Chowchilla River) generally contains more dissolved solids than does water in perennial streams (i.e. San Joaquin River). The quality of all surface water supplies in the basin is excellent. Due to factors such as differing well depths and locations, the quality of groundwater varies, but is good overall. The averages are shown below:

Table 2	
TOTAL DISSOLVED SOLIDS IN WATER SOURCES	
Source	TDS Parts Per Million
San Joaquin River (Madera Canal)	40
Chowchilla River	150
Groundwater	385

Source: United States Bureau of Reclamation

6.2 CHEMISTRY

Surface waters in the area are dominated by the bicarbonate ion and are very low in sulfate. Well waters are also dominated by bicarbonate, while the dominant cation is usually calcium. The bicarbonate ion does not concentrate in drainage waters as the chloride ion does; therefore, the effective salinity of this water is reduced. The bicarbonate ion tends to precipitate with calcium in the form of calcium carbonate.

Well waters within the boundaries of the Chowchilla Water District are considered safe from a trace element perspective. In the western part of the study area, however, larger concentrations of sodium and chloride increase the amount of total dissolved solids.

SECTION 7

PLAN COMPONENTS

The following plan components describe the actions that will be taken by the Authority.

7.1 Monitor Groundwater Levels and Storage

In the spring and fall of each year, the Chowchilla Water District measures 143 wells in the area. The Authority plans to continue and improve this practice.

To ensure a representative sample of wells, the Authority first intends to plot and analyze the current network. The integrity of the current sample of wells will be judged according to factors such as location, well depth, depth to groundwater, water quality, tapped aquifer zones, and other groundwater characteristics. From this analysis, the Authority will modify the existing network as needed.

Most of the wells currently measured are within the boundaries of the District; therefore, wells outside the District (yet still within the Chowchilla Basin) will need to be identified so they may be included in the sample. The United States Bureau of Reclamation maintains information that will be useful in locating and choosing new wells; the Authority plans to obtain assistance from the Bureau with respect to this matter.

As data is collected, it will be entered into a computer database to enable further analysis. The analysis will include a series of maps, charts and graphs. It is the intention of the Authority to track changing groundwater patterns and trends.

7.2 Facilitate Conjunctive Use Operations

Department of Water Resources Bulletin 118-80 defines conjunctive operation as:

"operation of a groundwater basin in coordination with a surface water reservoir system. The purpose is to artificially recharge the basin during years of above-average precipitation so that the water can be withdrawn during years of below-average precipitation, when surface supplies are below normal."

7.2.1 Conjunctive Use Program

On the spectrum of limited to comprehensive conjunctive use programs (limited being a program that uses surplus water for recharge only when it is readily available; comprehensive, a program that aggressively secures water for recharge, meters groundwater extraction, and utilizes other groundwater control methodologies), the policy of the Chowchilla Water District has leaned more toward the limited operations end in the

past. The District does purchase water for recharge when available, but is not able to secure an additional water supply solely for recharge. However, with the increasing price and decreasing availability of water, the District foresees the possibility of formulating a more comprehensive conjunctive use plan in the future.

7.2.2 Recharge

Recharge is imperative to conjunctive use operations. The underground aquifer must be recharged in order to maintain an adequate groundwater supply. Recharge helps alleviate the strain on the underground aquifer and prevents other groundwater problems caused by excessive extractions.

Recharge prepares the underground aquifer for unfavorable conditions, such as drought. Prolonged periods of below normal precipitation usually result in reduced surface water supplies, thereby necessitating heavy groundwater extraction. During these times, water is borrowed from the underground reservoir. This water must be returned in order to re-fill the basin and prepare for the next drought or water shortage.

Since the recent drought of the late eighties/early nineties, wet winters have enabled a considerable amount of groundwater recharge. The Chowchilla Water District took advantage of the surplus water supplies during this time; the District sent water through its conveyance system solely for recharge for many months. More information regarding groundwater recharge is given in Section 7.3, Groundwater Recharge.

7.2.3 Standby Charge

In 1995, the Chowchilla Water District instituted a standby charge on lands being irrigated for agriculture within its boundaries. The purpose of this charge is to increase the amount of surface water being used, thereby decreasing the amount of groundwater being pumped.

7.2.4 Expand Conjunctive Use Area

To increase conjunctive use operations near the Chowchilla Water District, the District plans to annex approximately 10,000 acres during late 1997. In the past, these lands have relied solely on groundwater for irrigation. Once annexed, these lands will be eligible to receive federal project water. The annexation will expand the conjunctive use area and decrease the pumping strain on the underground aquifer.

As a simple example, suppose that currently 3.0 acre-feet per acre per year of groundwater is applied to each of the 10,000 acres. Substituting 2.0 acre-feet per acre of surface water will result in a groundwater savings of 20,000 acre-feet per year.

7.3 Groundwater Recharge

Groundwater recharge is an integral component of the replenishment of groundwater extracted by producers, the mitigation of conditions of overdraft, and the facilitation of

conjunctive use operations. Due to groundwater extraction, recharge must be performed in order to maintain an adequate groundwater supply. In the Chowchilla Basin, there are three methods of groundwater recharge: natural, incidental and intentional.

7.3.1 Natural Recharge

Natural recharge is defined as rain, runoff, and natural stream flows. All three of these occurrences contribute to groundwater recharge within the Chowchilla Basin.

7.3.2 Incidental Recharge

Incidental recharge occurs as a by-product of another event. For example, the Chowchilla Water District delivers surface water for irrigation through a system of unlined canals. During this process, seepage losses occur; water is absorbed by the canals in which it travels. This water then percolates to the underground basin. Of all water that flows through the District's conveyance system, it is estimated that as much as 30 percent of it is lost to seepage. An average of 43,000 acre-feet of water is recharged through the District's conveyance system each year. During years of above average precipitation, the amount of recharge is considerably higher. Recharge is lower during years of below normal precipitation.

As irrigation water is applied to crops, a portion of the applied water percolates past the root zone and continues downward, also recharging the groundwater basin. Irrigation seepage (and resulting percolation) is estimated to be as much as 20 percent of total applied water. Assuming 140,000 acres in the Chowchilla Basin are irrigated at a rate of 3.0 acre-feet per acre per year, it can be concluded that 84,000 acre-feet of applied water is returned to the underground aquifer.

Another form of incidental recharge within the basin is the City of Chowchilla Sewer Treatment Plant. The plant processes 500,000 gallons of sewage per day. A very small portion of this is treated and re-used within the plant. The rest of the water is spread on 120 acres of ponds.

7.3.3 Intentional Recharge

Intentional recharge is purposely performed in order to combat the effects of excessive groundwater usage. Groundwater Management Facilities (such as percolation basins, injection wells, or spreading grounds) are necessary to operate intentional recharge programs.

Within the Chowchilla Basin, the following areas exist that promote intentional groundwater recharge:

- ◊ Surface water conveyance system
- ◊ Four natural stream channels
 - Chowchilla River Ash Slough
 - Dutchman Creek Berenda Slough
- ◊ Two surface water retention reservoirs
 - Berenda Reservoir Minturn Dam
- ◊ Eight regulating/recharge basins
 - Dairyland Pond Askew Pond
 - Haynes Pond Vera Pond
 - Townsend Pond Gregory Pond
 - Rutherford Pond Berenda Pond

Although use of the surface water conveyance system and natural stream channels results in incidental and natural recharge, they are also used as intentional recharge vehicles. As mentioned previously, in years of above normal precipitation, water is delivered through these systems for the sole purpose of recharging the underground aquifer. Stream channels are naturally favorable for groundwater recharge.

The reservoirs and basins are intended for recharge, storage and surface water regulation. The subsurface conditions of several of these recharge basins make them favorable for groundwater recharge, as well.

During seasons of extreme precipitation, water is purposely diverted into the Fresno River and Chowchilla and Eastside Bypasses to control flooding. Water seeps into these stream beds and percolates to the underground aquifer. This activity could be considered natural, incidental, or intentional recharge.

The Authority plans to research the possibility of constructing new recharge facilities and locating sites for new basins. As situations arise, warranting additional or improved groundwater recharge, feasible solutions will be determined and implemented.

7.4 Construct Groundwater Management Facilities

In order to regulate surface water and promote groundwater recharge, the Chowchilla Water District is in the process of constructing two additional recharge basins. The first basin has a capacity of 35 acre-feet. Construction of this facility began in May of 1996 and is expected to be completed in late 1997.

The District also purchased over 20 acres for a recharge basin in August 1997. The future basin site is located in the east side of the groundwater basin; it is removed from any

natural channels or other recharge basins. Construction of the facility is expected to be completed before 1999.

7.5 Wellhead Protection/Well Abandonment/Well Destruction

Serious groundwater problems can result if wellhead areas are contaminated or if wells are not properly destroyed. In these situations, wells can become conduits for contaminants, pollutants, and poor quality water. All situations relating to wells, wellhead protection and contamination resulting therefrom are currently administered by divisions of Madera and Merced counties, or other state and local agencies. The Authority is willing to provide these agencies with any relevant information upon request. The Authority is also ready to assist with any public education efforts these agencies may attempt.

7.6 Water Conservation

In 1995, the Chowchilla Water District submitted a Water Conservation Plan to the Bureau of Reclamation, which has been approved. The District must submit yearly updates detailing the continuation of water conservation practices. The issues addressed in the plan include:

- ♦ Measurement
- ♦ Pricing
- ♦ Conservation Staff
- ♦ Conservation Service
 - On Farm Evaluations
 - Real Time Evapotranspiration Information
- ♦ Construction of Reservoirs
- ♦ Tiered Block Pricing
- ♦ Flexible Deliveries
- ♦ Spill Reuse Systems
- ♦ Financial Incentives
- ♦ Increasing Conjunctive Use
- ♦ Measuring by Crop and Field
- ♦ Facilitating Transfers
- ♦ Pump Efficiencies

Water conservation measures reduce the amount of surface and groundwater being utilized inefficiently. Conservation is a beneficial practice that directly or indirectly reduces the amount of groundwater being pumped.

SECTION 8

IMPLEMENTATION

Upon adoption, several issues must be addressed by the Authority in order to implement the plan effectively.

8.1 Rules and Regulations

According to Water Code Section 10753.8 (a), a local agency shall adopt rules and regulations to implement and enforce an adopted groundwater management plan. The local agency is not authorized to make a binding determination of the water rights of any person or entity (Section 10753.8 (b)). The local agency is also not authorized to limit or suspend extractions unless the local agency has determined through study and investigation that groundwater replenishment programs or other alternative sources of water supply have proved insufficient or infeasible to lessen the demand for groundwater (Section 10753.8 (c)).

In adopting rules and regulations, the local agency shall consider the potential impact of those rules and regulations on business activities, including agricultural operations, and to the extent practicable and consistent with the protection of the groundwater resources, minimize any adverse impacts on those business activities (Section 10753.9).

8.2 Prioritize Plan Components

The Authority shall prioritize plan components according to urgency, time constraints, budget constraints, general feasibility and other conditions. From this, the Authority may present an estimated time frame of when the described plan components will be addressed and when results are to be expected.

8.3 Monitor Plan Progress

The Authority shall monitor the degree of progress made regarding groundwater management plan components. To do this, the Authority shall meet annually to review, discuss and evaluate activities previously undertaken and/or completed and to coordinate future groundwater management planning efforts. From this assessment, the Authority will determine if the plan and its implementation are achieving desired results, or if any adjustments are necessary.

8.4 Adjust Plan

The Authority shall establish a procedure to amend, adjust or alter the groundwater management plan or activities derived therefrom as conditions change. From the evaluation of groundwater management activities at the annual meeting, it may be determined that certain continuing efforts are ineffective, or that other situations have arisen demanding priority treatment. As a result of this information, the plan and its time frame may be modified. The Authority intends to maintain a plan that is flexible to changing conditions and emerging situations, in order to effectively manage and protect the Chowchilla Groundwater Basin.

LIST OF SOURCES

Mitten, Hugh T., et al. United States Geological Survey, Water Resources Division.
"Geology, Hydrology and Quality of Water in the Madera Area, San Joaquin Valley,
California." 1970.

State of California, Department of Water Resources. "Ground Water Basins in
California, Bulletin 118-80." January 1980.

State of California, Department of Water Resources. "California Water Plan Update,
Bulletin 160-93." October 1994.

United States Bureau of Reclamation, Land Suitability Section, Denver Office. "Land
Classification Report - Chowchilla Water District." March 1991.

United States Soil Conservation Service. "Soil Survey - Madera Area, California." 1962.

APPENDIX 1

Resolution of Intention to Draft a Groundwater Management Plan

CHOWCHILLA WATER DISTRICT

RESOLUTION NO. 96-12

WHEREAS, the Chowchilla Water District is considering whether or not to adopt a Groundwater Management Plan with the Chowchilla-Red Top Resource Conservation District pursuant to a Joint Power Authority to be established between the Water District and the Conservation District, and

WHEREAS, Water Code Section 10753.2 requires that prior to adopting a resolution of intention to draft a groundwater management plan the District must hold a public hearing, after publication of notice thereof, on whether or not to adopt a resolution of intention to draft a groundwater management plan, and

WHEREAS, the Water District and the Conservation District published notices as required by law that a public hearing on whether or not the Water District and the Conservation District should adopt resolutions of intention to draft a groundwater management plan pursuant to Part 2.75 of Division 6 of the Water Code of the State of California which said hearing would be held at the District Office, 327 South Chowchilla Blvd. on November 13, 1996 at the hour of 1:30 p.m.. At such hearing the Board of Directors of the District would hear evidence from landowners in favor of or against whether such resolution should be adopted, and

WHEREAS, said hearing was held and the Boards of Directors of the Water District and the Conservation District heard evidence from landowners as to whether or not such resolution should be adopted, and

WHEREAS, after hearing such evidence the Board of Directors of both the Water District and the Conservation District determined that it was to the best interests of the lands within both Districts that a resolution of intention to form a Joint Power Authority to draft a groundwater management plan be adopted,

NOW THEREFORE BE IT RESOLVED:

The Chowchilla Water District shall enter into an agreement with the Chowchilla-Red Top Resource Conservation District to form a Joint Power Authority pursuant to Water Code Section 10755.2 (b).

BE IT FURTHER RESOLVED:

That upon the establishment of a Joint Power Authority, the Authority adopt a groundwater management plan pursuant to the provisions of Part 2.75 Division 6 of the Water Code of the State of California.

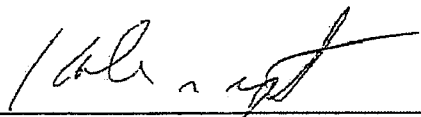
The foregoing Resolution was adopted at a regular meeting of the Board of Directors of the Chowchilla Water District held on the 13th day of November, 1996 upon the motion of Director Tarabini seconded by Director Mandala on the following vote:

Ayes: Directors, Mandala, Tarabini, Thiel and Upton.

Noes: None

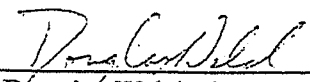
Abstain: None

Absent: Capehart



Kole M. Upton, President

ATTEST:



Douglas Welch, Secretary

APPENDIX 2

Joint Exercise of Powers Agreement

JOINT EXERCISE OF POWERS AGREEMENT
BY AND BETWEEN
CHOWCHILLA WATER DISTRICT AND
CHOWCHILLA-RED TOP RESOURCE CONSERVATION DISTRICT
FORMING THE
CWD-RED TOP RCD JOINT POWERS AUTHORITY

This Agreement, dated for convenience as of October 30, 1997 by and between the CHOWCHILLA WATER DISTRICT, a California Water District in the State of California ("CWD") and the CHOWCHILLA-RED TOP RESOURCE CONSERVATION DISTRICT, a Resource Conservation District ("Chowchilla-Red Top RCD").

WITNESSETH

WHEREAS, CWD and Chowchilla-Red Top RCD are empowered by law to adopt and enforce Groundwater Management Plans, and

WHEREAS, it is to the best interest of CWD and Chowchilla-Red Top RCD that they join in adopting a Groundwater Management Plan so as to cover the area embraced within both districts, and

WHEREAS, the formation of a Joint Powers Authority makes such a Plan available;

NOW, THEREFORE, CWD and Chowchilla-Red Top RCD, for and in consideration of the mutual agreements and covenants herein contained, do agree as follows:

SECTION 1. Definitions

1.01 Unless the context otherwise requires, the terms defined in this section shall for all purposes of the Agreement have the meanings herein specified.

Agreement

The term "Agreement" shall mean this joint exercise of powers agreement as originally executed and as it may from time to time be amended by all supplemental agreements entered into pursuant to the provisions hereof.

Authority

The term "Authority" shall mean the CWD-Red Top RCD Joint Powers Authority, being a separate entity consisting of a joint exercise of powers authority created by the Members pursuant to the Agreement.

Board of Directors, or Board

"Board of Directors" or "Board" shall mean governing body of the Authority.

CWD

The term "CWD" shall mean the Chowchilla Water District, a California Water District, duly organized and existing under the Constitution and laws of the State of California.

Groundwater Management Plan

The term "Groundwater Management Plan" shall mean a plan adopted by the Authority pursuant to the Groundwater Management Act.

Law

The term "Law" shall mean Articles 1 and 2 of Chapter 5 of Division 7 of Title 1 of the Government Code of the State of California, and all laws amendatory thereof or supplemental thereto.

Member

The term "Member" shall be either CWD or Chowchilla-Red Top RCD.

Chowchilla-Red Top RCD

The term "Chowchilla-Red Top RCD" shall mean the Chowchilla-Red Top Resource Conservation District duly organized and existing under the Constitution and laws of the State of California.

SECTION 2. Formation of the Authority

2.01 There is hereby created pursuant to the Law an agency and public entity to be known as the "CWD-Red Top RCD Joint Powers Authority." As provided in the Law, the Authority shall be a public entity separate from the Members, and the debts, liabilities and obligations of the Authority shall not constitute debts, liabilities or obligations of the

Members or either of them. The Authority shall own and hold title to all funds, property and works acquired by it during the term of this Agreement.

SECTION 3. Contributions to and Revenues from the Authority

3.01 The Members shall pay for the costs and expenses associated with the maintenance and operation of the Authority in such amounts as are agreed to be contributed to the Authority, and are entitled to all the revenues of the Authority in the following percentages:

CWD: 100% unless and until Chowchilla-Red Top RCD can secure funds to contribute to the Authority.

Chowchilla-Red Top RCD: 0% unless and until Chowchilla-Red Top RCD can secure funds to contribute to the Authority.

If Chowchilla-Red Top RCD secures funds which it can contribute to the Authority, to the extent that funds are available, it shall make contributions until its contributions equal the contributions of CWD.

SECTION 4. Term

4.01 The Agreement shall become effective as of the date hereof and shall continue in full force and effect until terminated by a member giving ninety (90) days notice of termination to the other member.

SECTION 5. Powers; Restrictions Upon Exercise

5.01 The Authority shall have power to adopt and enforce a Groundwater Management Plan, subject, however, to the conditions and restrictions contained in the Agreement.

5.02 The Authority is authorized, in its own name, to do all acts necessary or convenient for the exercise of such powers for such purposes that each of its Members could do separately, including but not limited to any or all of the following: to make and enter into contracts; to exercise the power of eminent domain for the acquisition of property for Projects; to employ agents and employees; to acquire, construct, manage, maintain and operate any buildings, works or improvements; to acquire, hold or dispose of property; to incur debts, liabilities or obligations (which do not constitute debts,

liabilities or obligations of the Members or either of them); and to sue and be sued in its own name.

5.03 Such powers shall be exercised subject only to such restrictions upon the manner of exercising such powers as are imposed upon CWD as set forth in Division 13 of the California Water Code and other applicable statutes in the exercise of similar powers.

SECTION 6. Termination of Powers

6.01 The Authority shall continue to exercise the powers herein conferred upon it until the termination of the Authority under the provisions of Section 5 hereof. Upon such termination, the groundwater management plan adopted by the Authority shall remain in force and effect for the lands within CWD until modified or rescinded by CWD and shall remain in force and effect for the lands within Chowchilla-Red Top RCD outside of the boundaries of CWD until modified or rescinded by Chowchilla-Red Top RCD.

6.02 Upon the termination of the Authority, CWD shall have no power to adopt a groundwater management plan outside of its boundaries and within the boundaries of Chowchilla-Red Top RCD without the written consent of Chowchilla-Red Top RCD.

6.03 Upon the termination of the Authority, Chowchilla Red-Top RCD shall have no power to adopt a groundwater management plan within the boundaries of CWD without the written consent of CWD.

SECTION 7. Board of Directors

7.01 The Authority shall be administered by the Board of Directors which shall consist of ten members, each serving in his or her individual capacity as a member of the Board, constituting the members of the Board of Directors of CWD and five members of the Board of Directors of Chowchilla-Red Top RCD. The term of office of each member of the Board shall continue only so long as such member is a member of either of said boards of directors, and shall terminate if such member of the Board shall cease to be a member of either of said boards of directors.

7.02 Members of the Board shall receive such compensation or serving as such is set by the Board from time to time, and shall be entitled to reimbursement for any

expenses actually incurred in connection with serving as a member if the Board shall determine that such expenses shall be reimbursed and there are unencumbered funds available for such purpose.

SECTION 8. Officers; Duties

8.01 The Board shall annually elect a President and Vice President of the Authority from among its members and shall appoint a General Manager of the Authority and a Secretary of the Authority, neither of whom shall be a member of the Board.

8.02 The General Manager of the Authority may be designated pursuant to the Law as Auditor-Treasurer of the Authority or at the pleasure of the Board a separate Auditor-Treasurer may be appointed. The Auditor-Treasurer is designated as the depository of the Authority to have custody of all money of the Authority from whatever source and to draw checks to pay demands against the Authority when such demands have been approved by the Authority, and such officer shall have the powers, duties and responsibilities of the offices of auditor and treasurer specified in the law.

8.03 The Auditor-Treasurer of the Authority is designated as the public officer or person who has charge of, handles, or has access to any property of the Authority, and such officer shall file an official bond with the Authority in the amount of \$100,000, the expense thereof to be paid by the Authority.

8.04 The Board shall have the power to appoint such other officers and employees as it may deem necessary, and to retain independent accountants, counsel, engineers and their consultants, and to determine the salary or compensation of all such persons.

SECTION 9. Meetings of the Board

9.01 The Board shall hold at least one regular meeting each year, and, by resolution, may provide for the holding of regular meetings at more frequent intervals. The date upon which, and the hour and place at which, each such regular meeting shall be held shall be fixed by resolution of the Board.

9.02 Special meetings of the Board may be called in accordance with the provisions of Section 54956 of the Government Code of the State of California, or as said section may be amended or superseded.

9.03 All meetings of the Board shall be called, noticed, held and conducted subject to the provisions of Sections 54950-54962 of the Government Code of the State of California, or as said Sections may be amended or superseded.

9.04 The Secretary of the Authority shall cause minutes of all meetings of open sessions of the Board to be kept and shall, as soon as possible after each meeting, cause a copy of the minutes to be forwarded to each member of the Board and to the Secretary of the Board of Directors of each Member.

9.05 Three members of the Board of Directors of CWD and three members of the Board of Directors of Chowchilla-Red Top RCD shall constitute a quorum for the transaction of business, except that less than a quorum may adjourn from time to time. The Board shall take no other action except upon the affirmative vote of at least three members of the board of directors of each Member.

SECTION 10. Fiscal Year

10.01 Unless and until changed by resolution of the Board, the fiscal year of the Authority shall be the period from January 1 of each year to and including the following December 31.

SECTION 11. Disposition of Assets

11.01 In the event of termination of the Authority, all assets of the Authority shall be distributed to the respective member grantor or assignor thereof, and any surplus money or other assets on hand shall be returned to the members in proportion to their contributions to the Authority.

SECTION 12. Adoption of Groundwater Management Plan

12.01 Immediately following the adoption of this Agreement, the Authority shall institute the formulation of a Groundwater Management Plan for the area embraced within the boundaries of both CWD and Chowchilla-Red Top RCD, within the Chowchilla Groundwater Basin, excluding therefrom, unless consent is given to include the area, any portions within the combined boundaries that is governed by a political agency which is authorized by law to adopt its own Plan.

SECTION 13. Agreement Not Exclusive

13.01 This Agreement shall not be exclusive and shall not be deemed to amend or alter the terms of other agreements by and between the Members.

SECTION 14. Contributions and Advances

14.01 Contributions or advances of public funds, or funds from their respective treasuries, and of personnel, equipment or property may be made to the Authority by either Member for any of the purposes of the Agreement. Any such advance may be made subject to repayment, and in such case shall be repaid in the manner agreed upon by the Member making such advance and the Authority at the time of making such advance.

SECTION 15. Accounts and Reports

15.01 The Authority shall establish and maintain such funds and accounts as may be required by good accounting practice. The books and records of the Authority shall be open to inspection at all reasonable times by the members and their representatives.

15.02 The Auditor-Treasurer of the Authority, subject to the approval of the Board, shall contract with a certified public accountant or public accountant to make an annual audit of the accounts and records of the Authority, and in each case the minimum requirements of the audit shall be those prescribed by the State Controller for special districts under Section 26909 of the Government Code of the State of California, or as the same may be amended or superseded, and shall conform to generally accepted auditing standards; except that the Members may, by unanimous request of the Boards of Directors thereof, replace the annual special audit with an audit covering a two-year period. A report of each such audit shall be filed as a public record with each Member and with the County Auditor of Madera County, the county in which both Members are located, which such report shall be filed within twelve (12) months of the end of the fiscal year or years under examination. All costs of such audit shall be borne by the Authority and shall be a charge against any unencumbered funds of the Authority available for the purpose.

SECTION 16. Breach

16.01 If default shall be made by either member in any covenant contained in the Agreement, such default shall not excuse the other Member from fulfilling its obligations

under the Agreement and such other Member shall continue to be liable for the payment of all contributions and the performance of all obligations herein contained. The Members hereby declare that the Agreement is entered into for the benefit of the Authority created hereby and the Members hereby grant to the Authority the right to enforce by whatever lawful means the Authority deems appropriate all of the obligations of each member hereunder. Each and all of the remedies given to the Authority hereunder or by any law now or hereafter enacted are cumulative and the exercise of any one right or remedy shall not impair the right of the Authority to any or all other remedies.

SECTION 17. Severability

17.01 Should any part, term or provision of the Agreement be decided by the courts to be illegal or in conflict with any law of the State of California, or otherwise be rendered unenforceable or ineffectual, the validity of the remaining parts, terms or provisions hereof shall not be affected thereby.

SECTION 18. Successors; Assignment

18.01 The Agreement shall be binding upon and shall inure to the benefit of the successors of each Member. Neither Member may assign any right or obligation hereunder without the consent of the other Member.

SECTION 19. Amendment of the Agreement

19.01 The Agreement may be amended by a supplemental agreement executed by the members at any time.

SECTION 20. Office

20.01 The office of the Authority shall be maintained at 327 South Chowchilla Boulevard, Chowchilla, CA 93610, until such time as the location thereof is changed by the Board.

SECTION 21. Notices

21.01 Any notice authorized or required to be given pursuant to this Agreement shall be in writing and shall be deemed to have been given when mailed, postage prepaid, or delivered during working hours to the following address, or to such changed address as are communicated to the Authority and the member entities in writing:

CWD:

P.O. Box 905, Chowchilla, CA 93610

Chowchilla-Red Top RCD:

c/o John Wolfshorndl, 11791 Avenue 22, Chowchilla, CA 93610.

SECTION 22. Section Headings

22.01 All section headings contained herein are for convenience of reference only and are not intended to define or limit the scope of any provision of the Agreement.

IN WITNESS WHEREOF the parties hereto have caused the Agreement to be executed and attested by their proper officers thereunto duly authorized, and their official seals to be hereto affixed, as of the day and year first above written.

CHOWCHILLA WATER DISTRICT

By: _____
Kole M. Upton, President

ATTEST:

Douglas Welch, Secretary

[Seal]

CHOWCHILLA-RED TOP
RESOURCE CONSERVATION
DISTRICT

By: _____
Norman Kuhr, Chairman

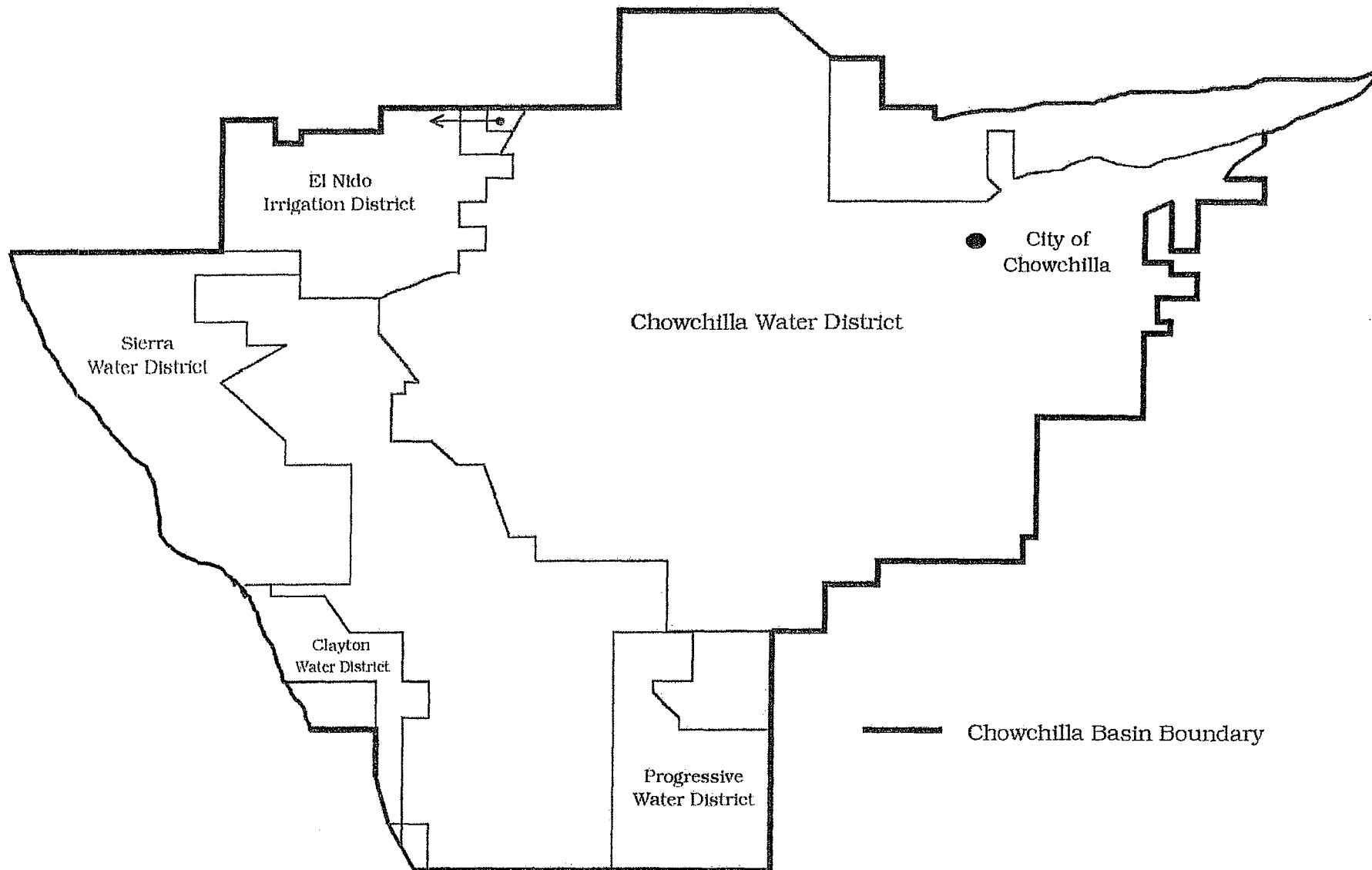
ATTEST:

John Wolfshorndl, Secretary

[Seal]

APPENDIX 3

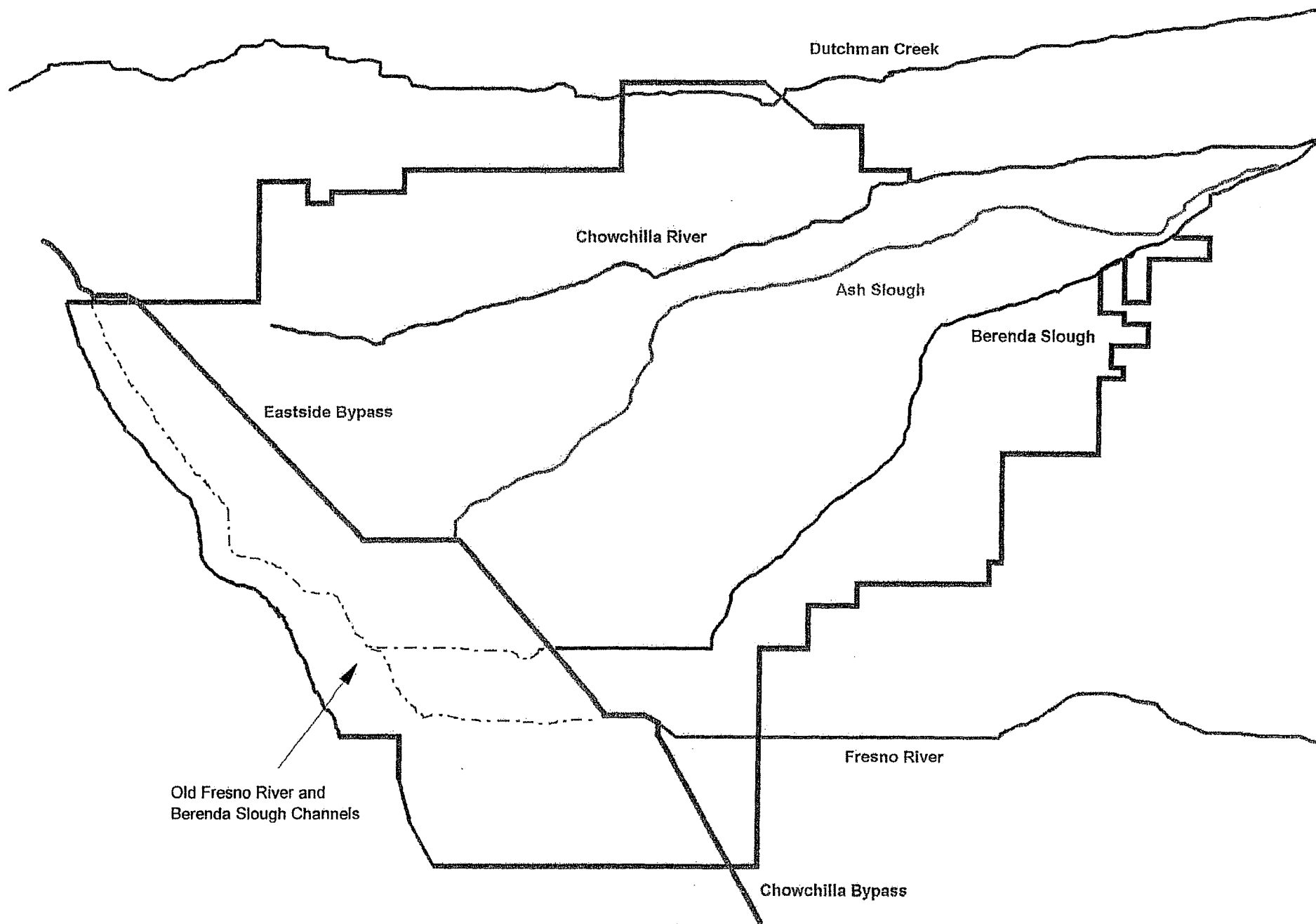
Agencies Within the Chowchilla Basin Map



AGENCIES WITHIN THE CHOWCHILLA BASIN

APPENDIX 4

Chowchilla Basin - Major Streams Map



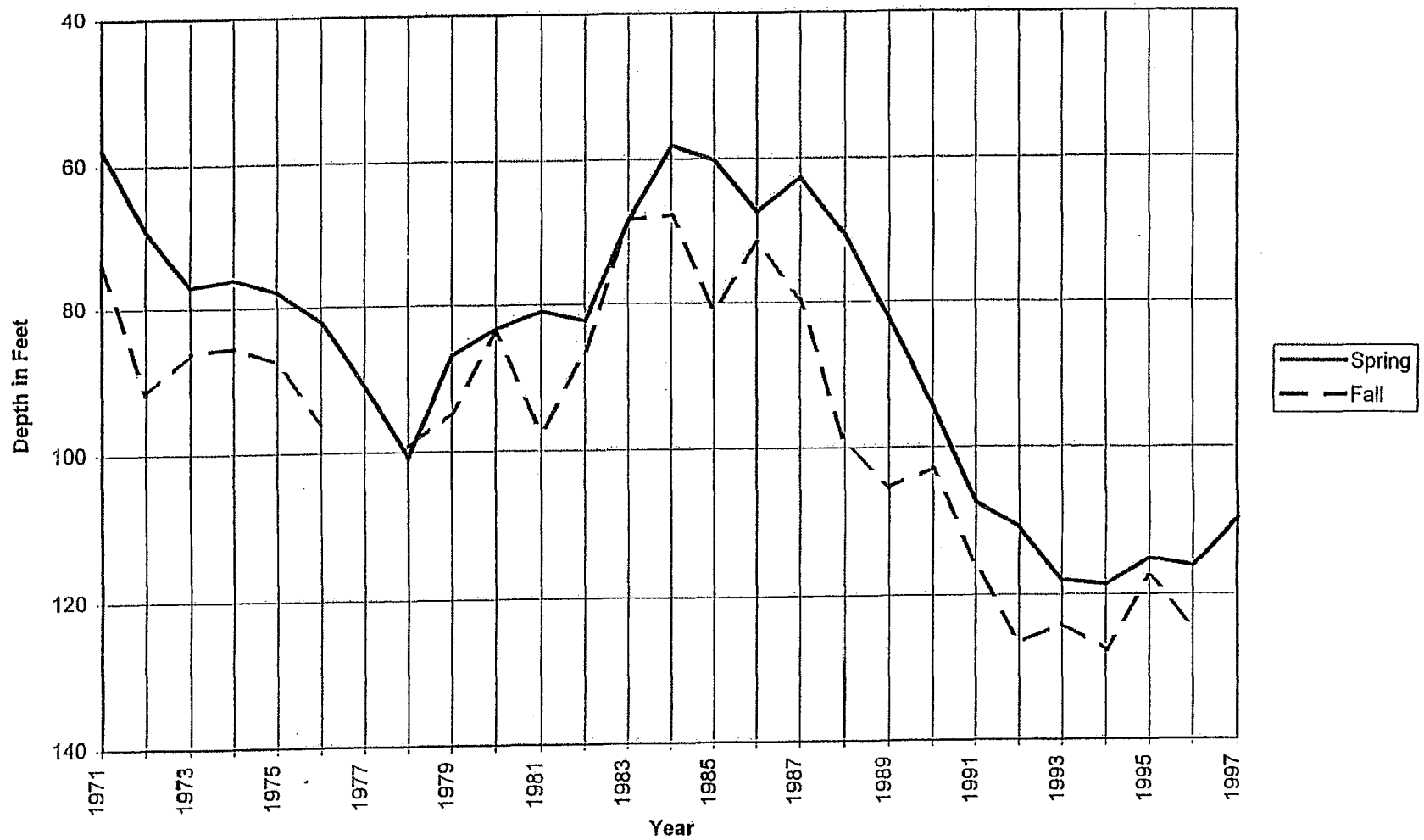
CHOWCHILLA BASIN - MAJOR STREAMS

APPENDIX 5

Average Depth to Groundwater Chart

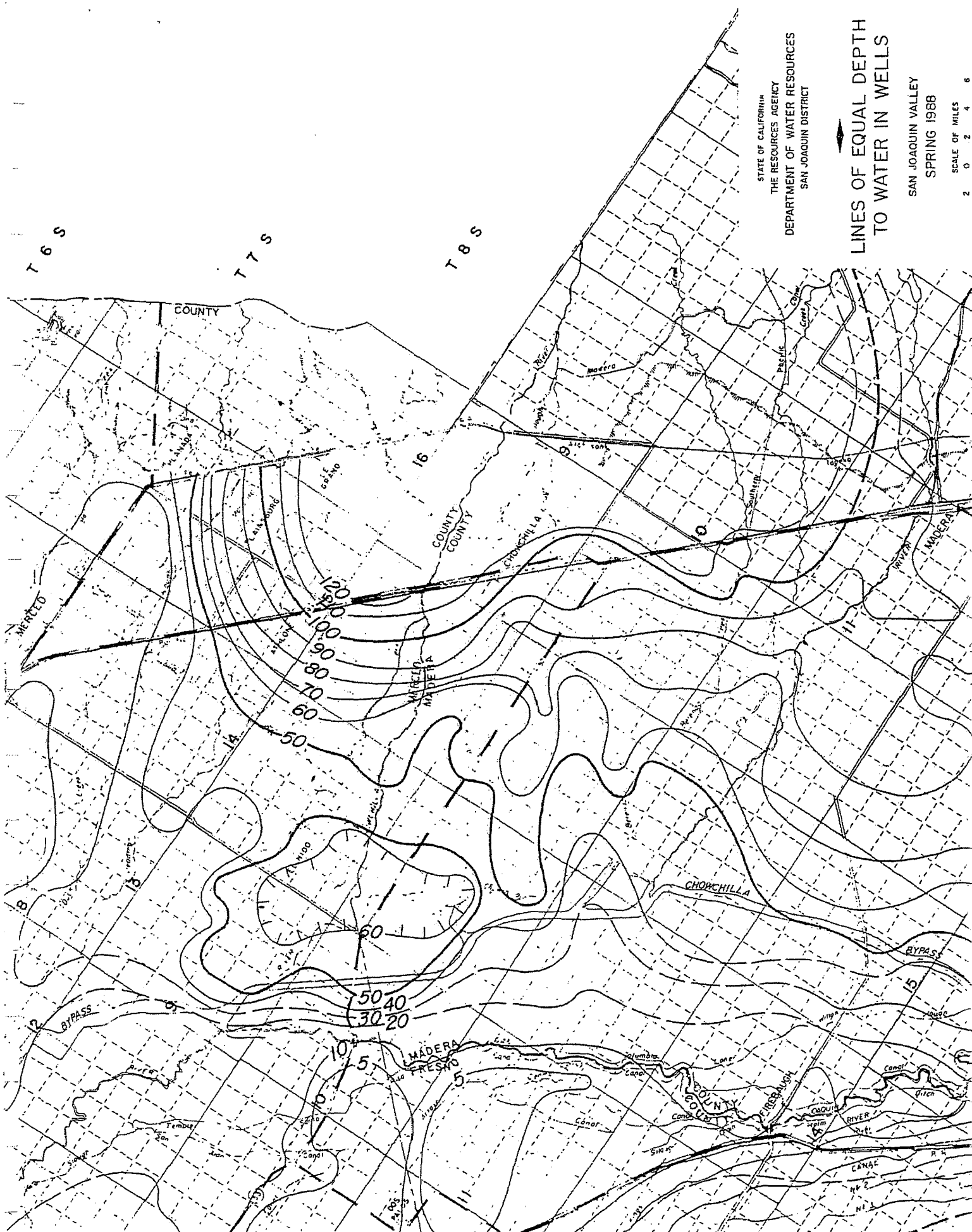
Chowchilla Water District

Average Depth to Groundwater



APPENDIX 6

Groundwater Contour Maps

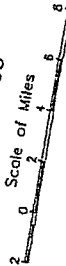
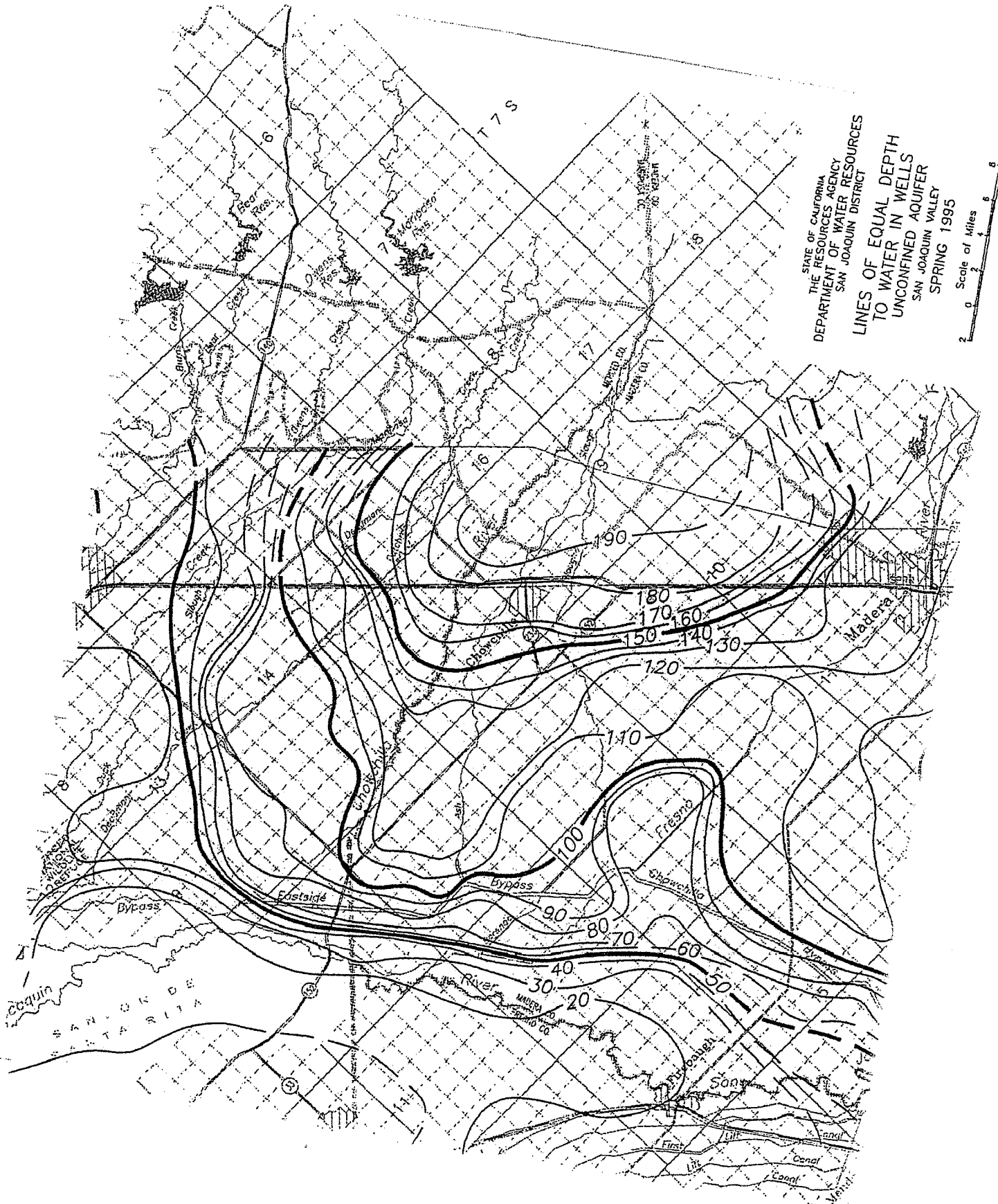


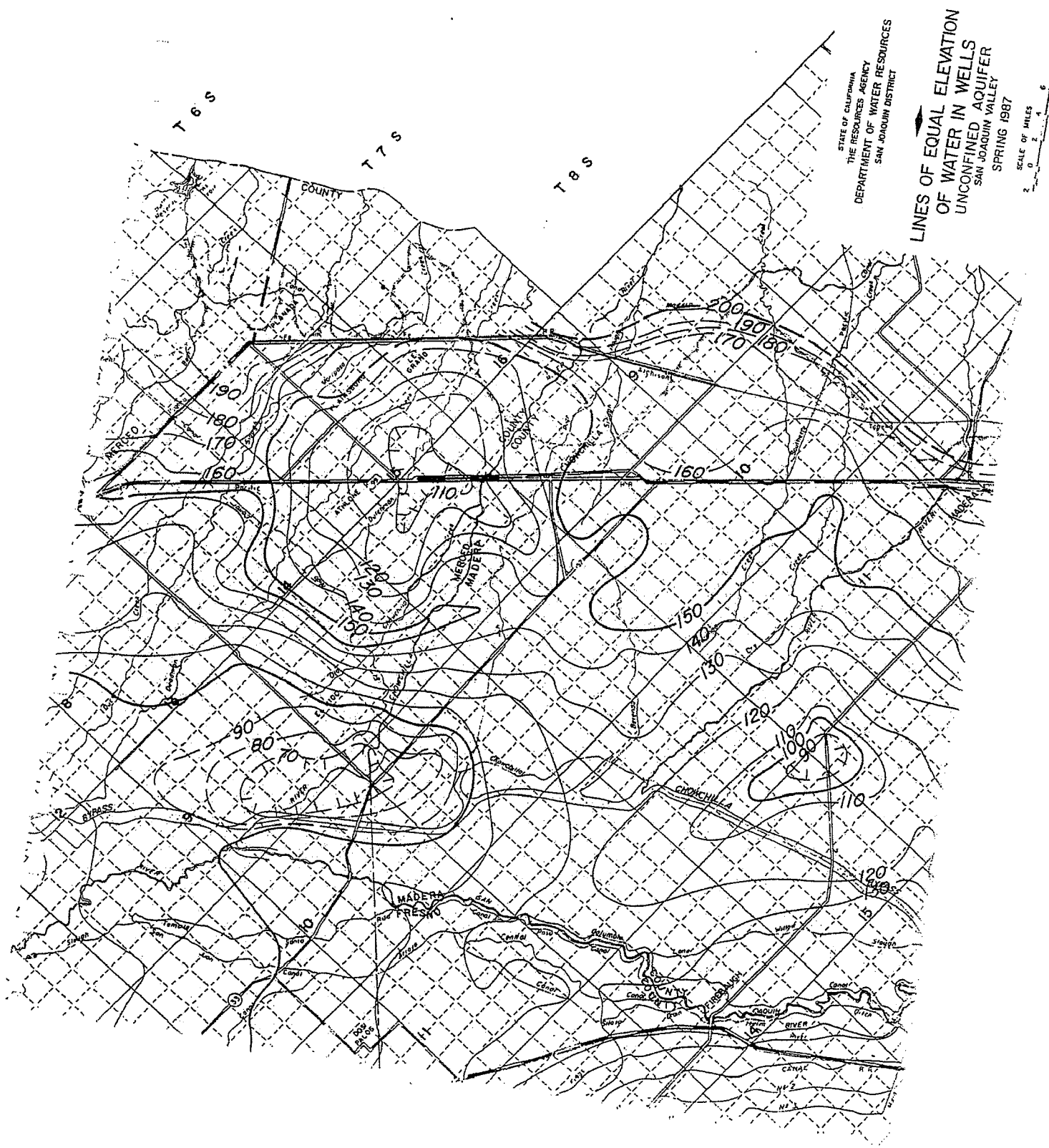
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT

LINE OF EQUAL DEPTH TO WATER IN WELLS

SAN JOAQUIN VALLEY
SPRING 1988

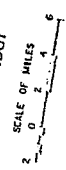
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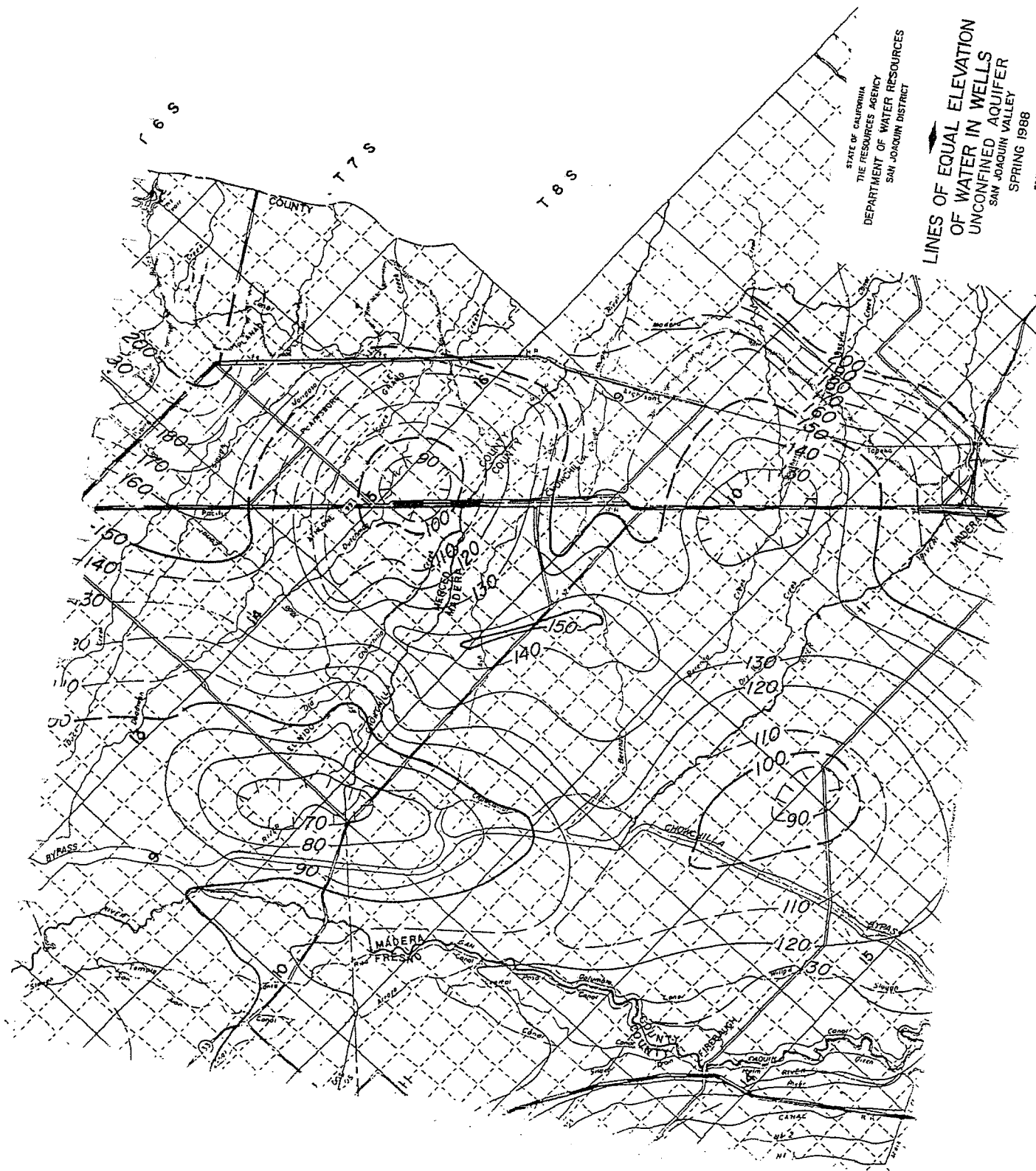




STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT

**LINES OF EQUAL ELEVATION
OF WATER IN WELLS
UNCONFINED AQUIFER
SAN JOAQUIN VALLEY
SPRING 1987**

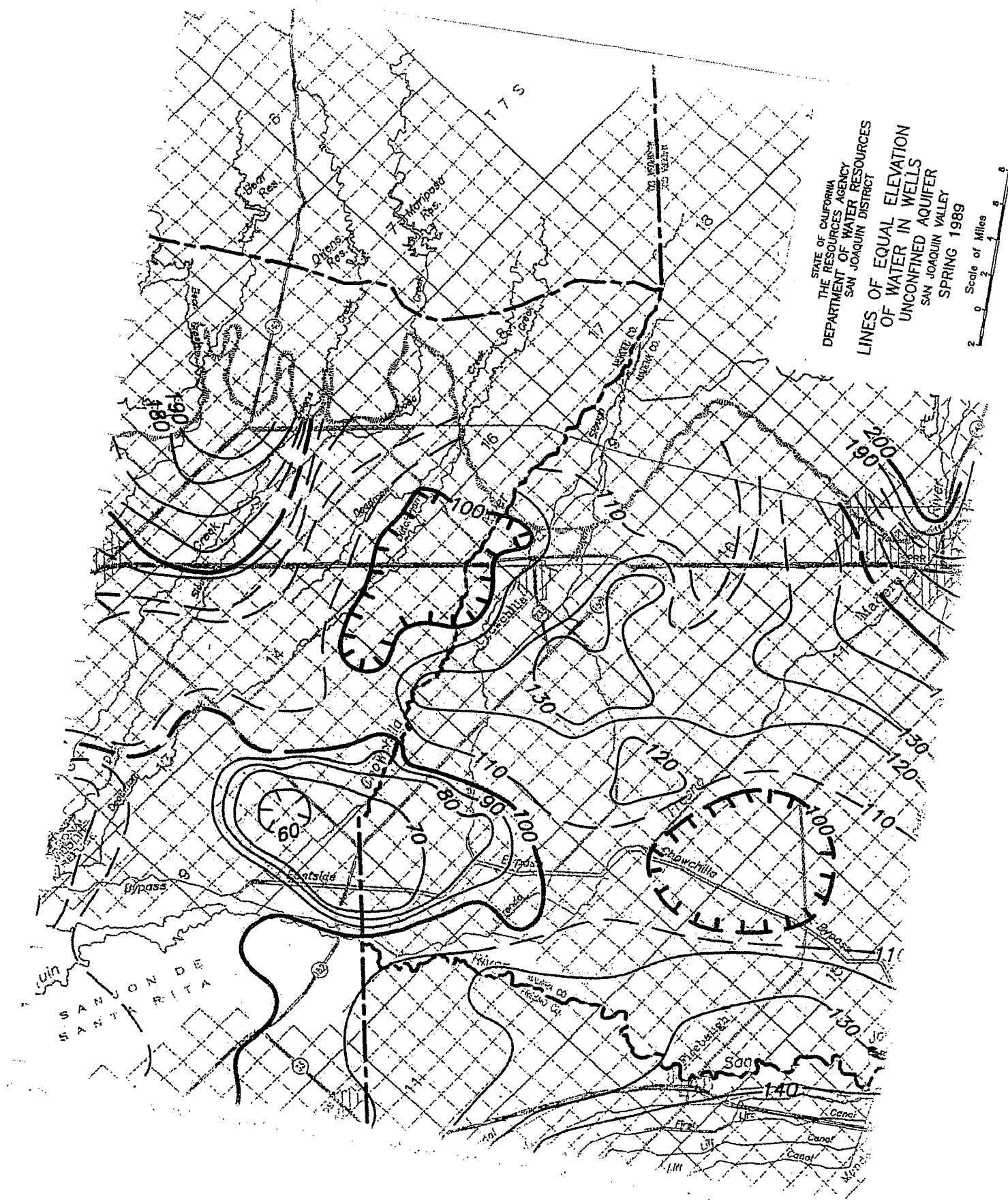


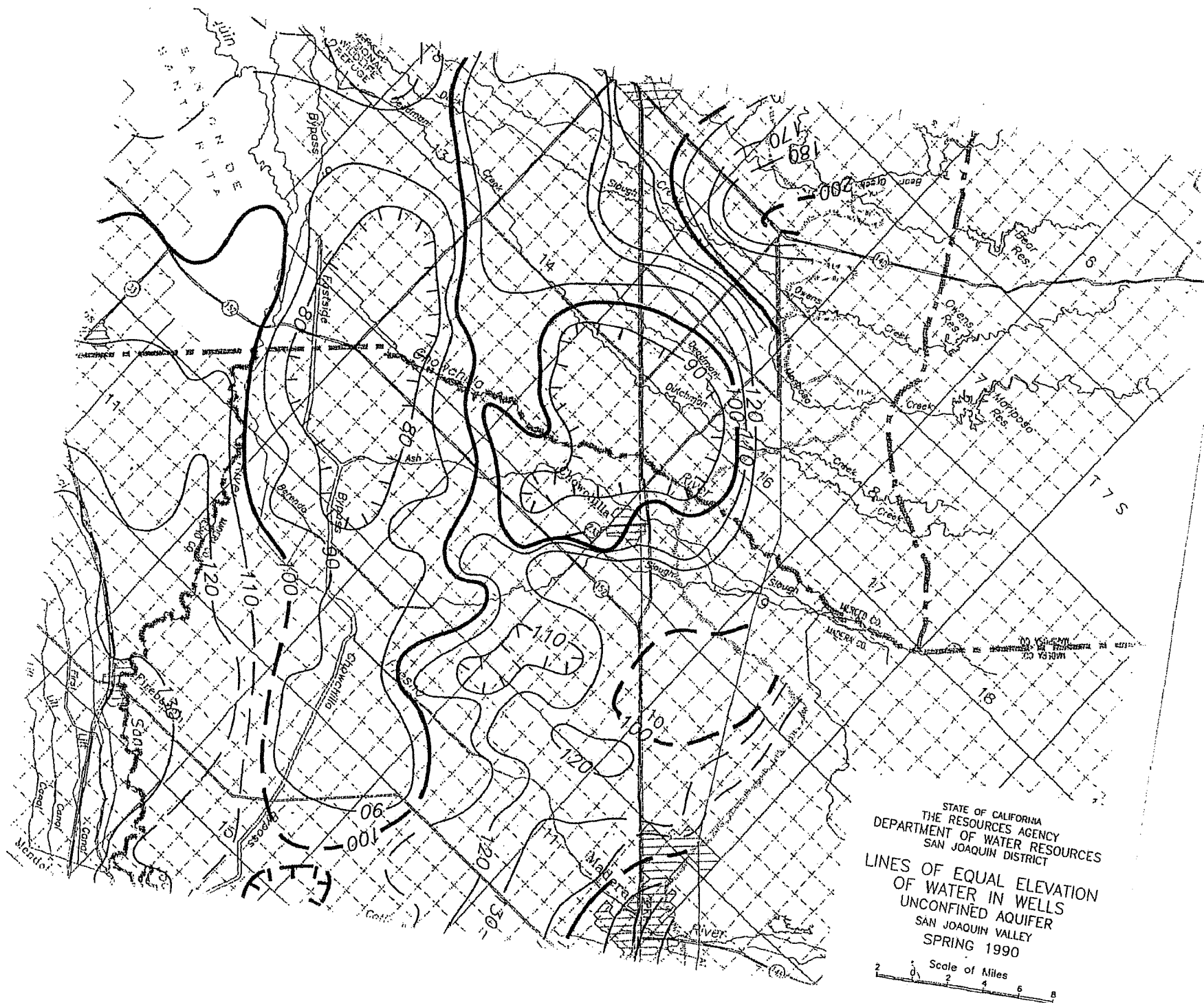


STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT

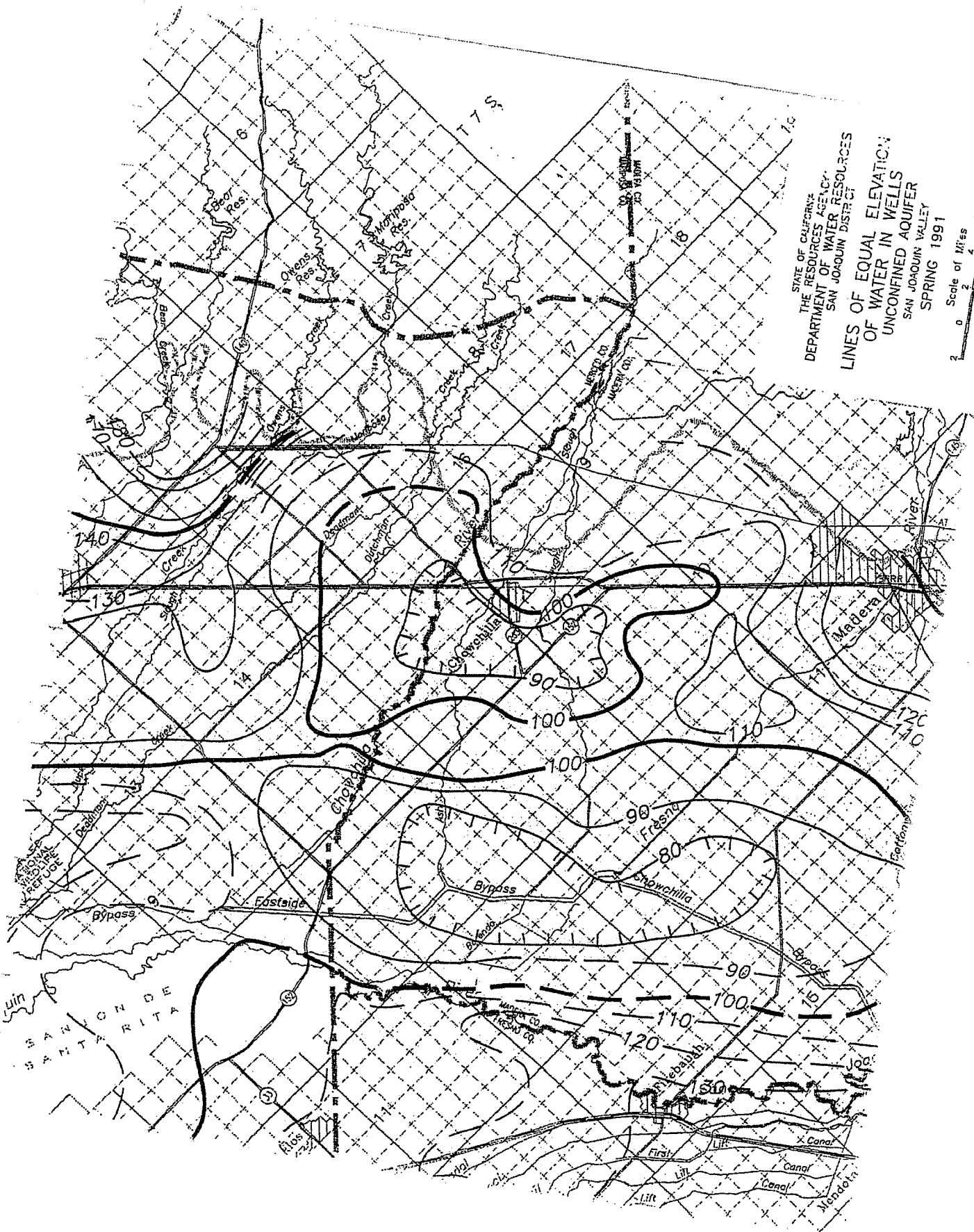
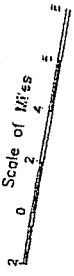
**LINES OF EQUAL ELEVATION
OF WATER IN WELLS**
UNCONFINED AQUIFER
SAN JOAQUIN VALLEY
SPRING 1988

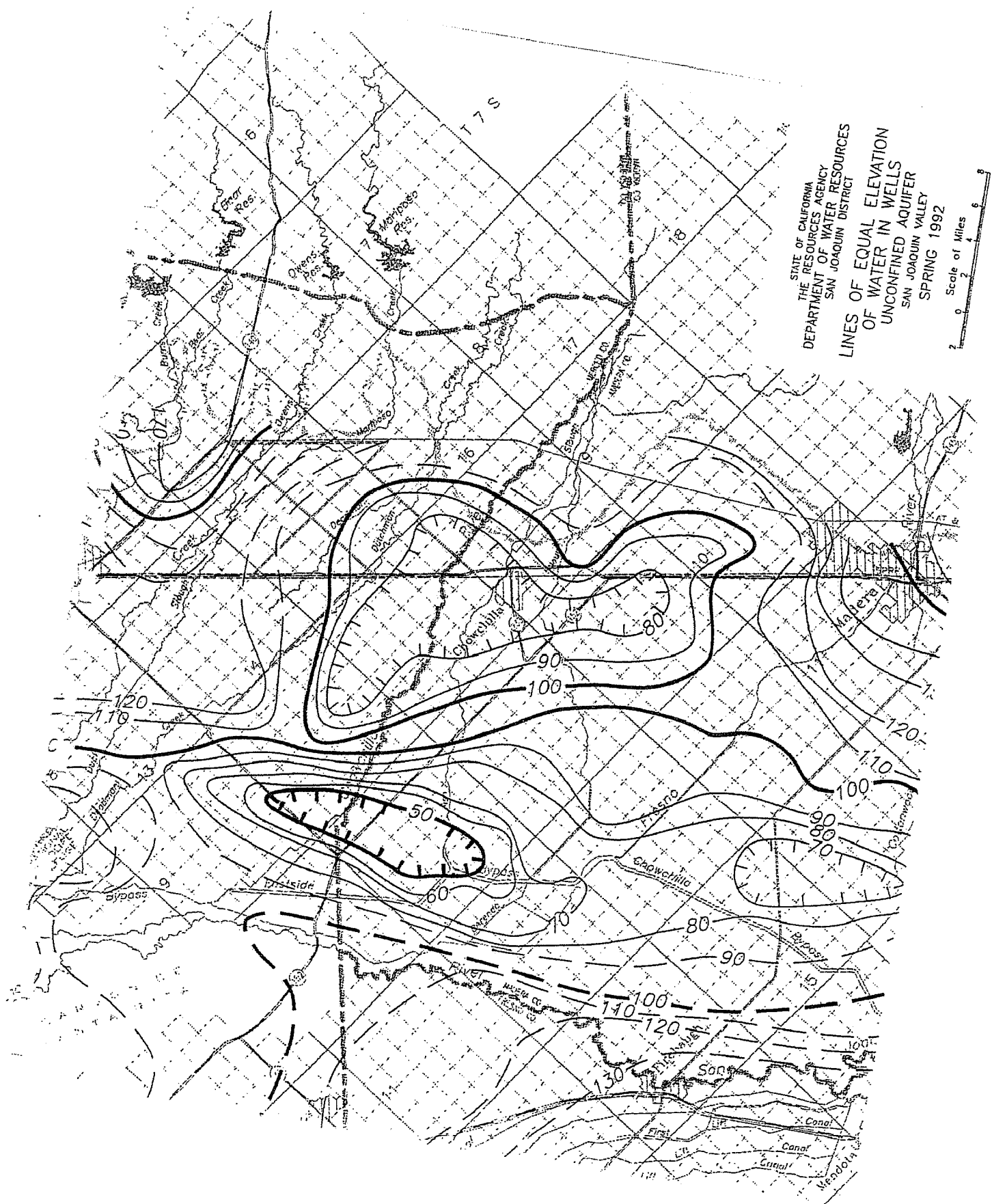
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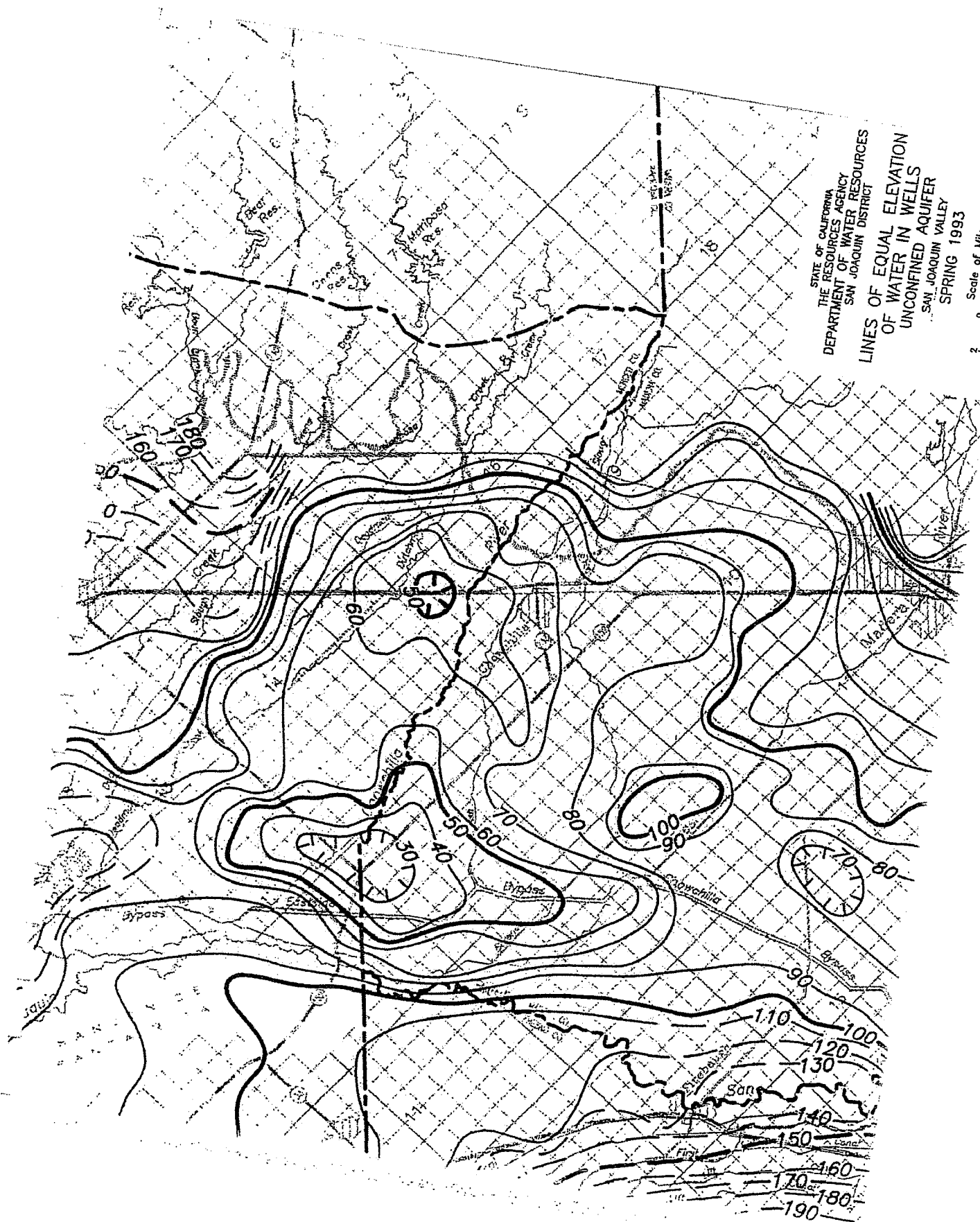
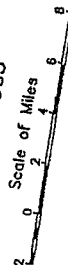
STATE OF CALIFORNIA
 THE RESOURCES AGENCY
 DEPARTMENT OF WATER RESOURCES
 SAN JOAQUIN DISTRICT
**LINE OF EQUAL ELEVATION
 OF WATER IN WELLS
 UNCONFINED AQUIFER
 SAN JOAQUIN VALLEY
 SPRING 1991**



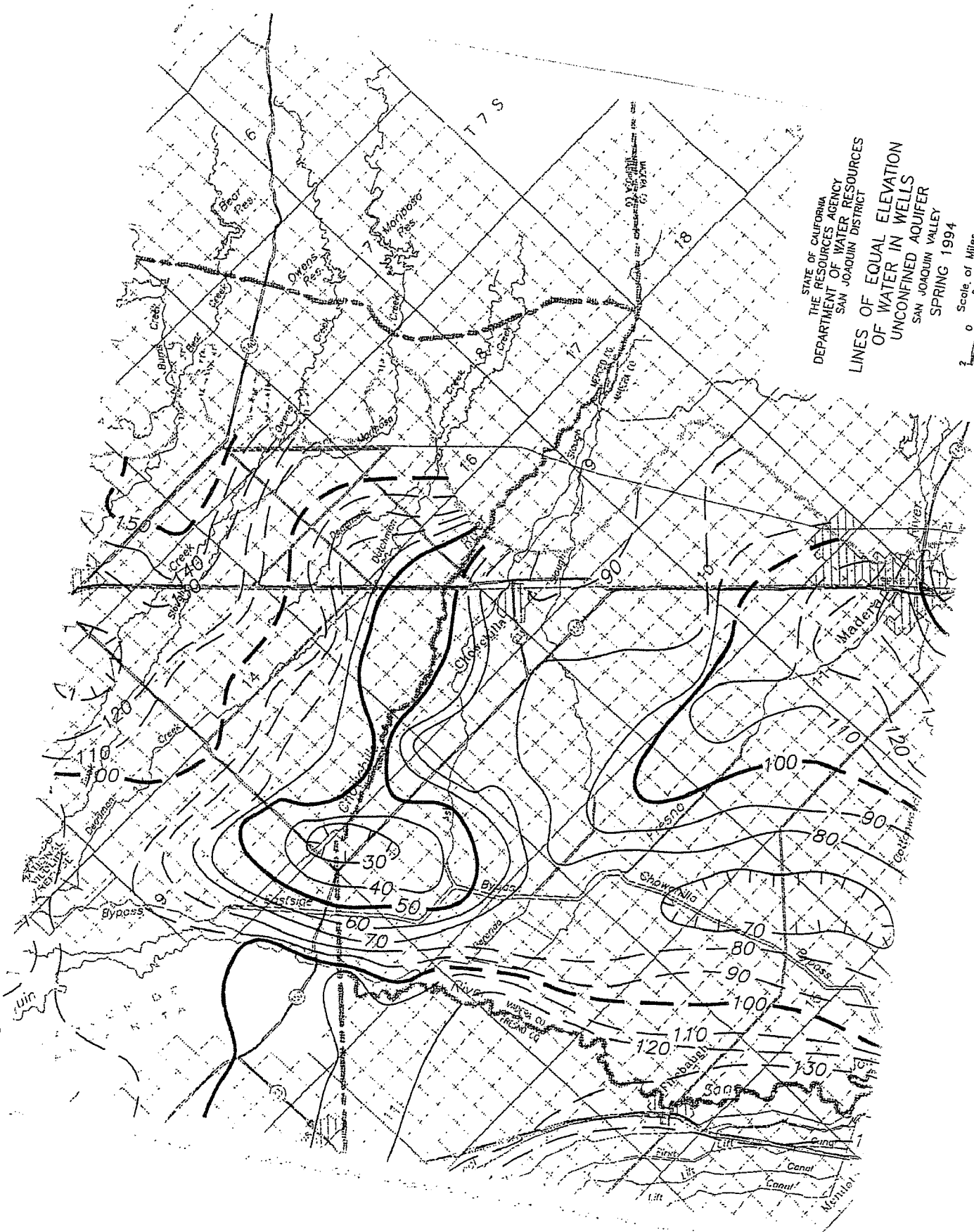
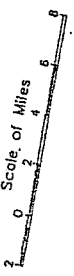


STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT

**LINE OF EQUAL ELEVATION
OF WATER IN WELLS
UNCONFINED AQUIFER
SAN JOAQUIN VALLEY
SPRING 1993**

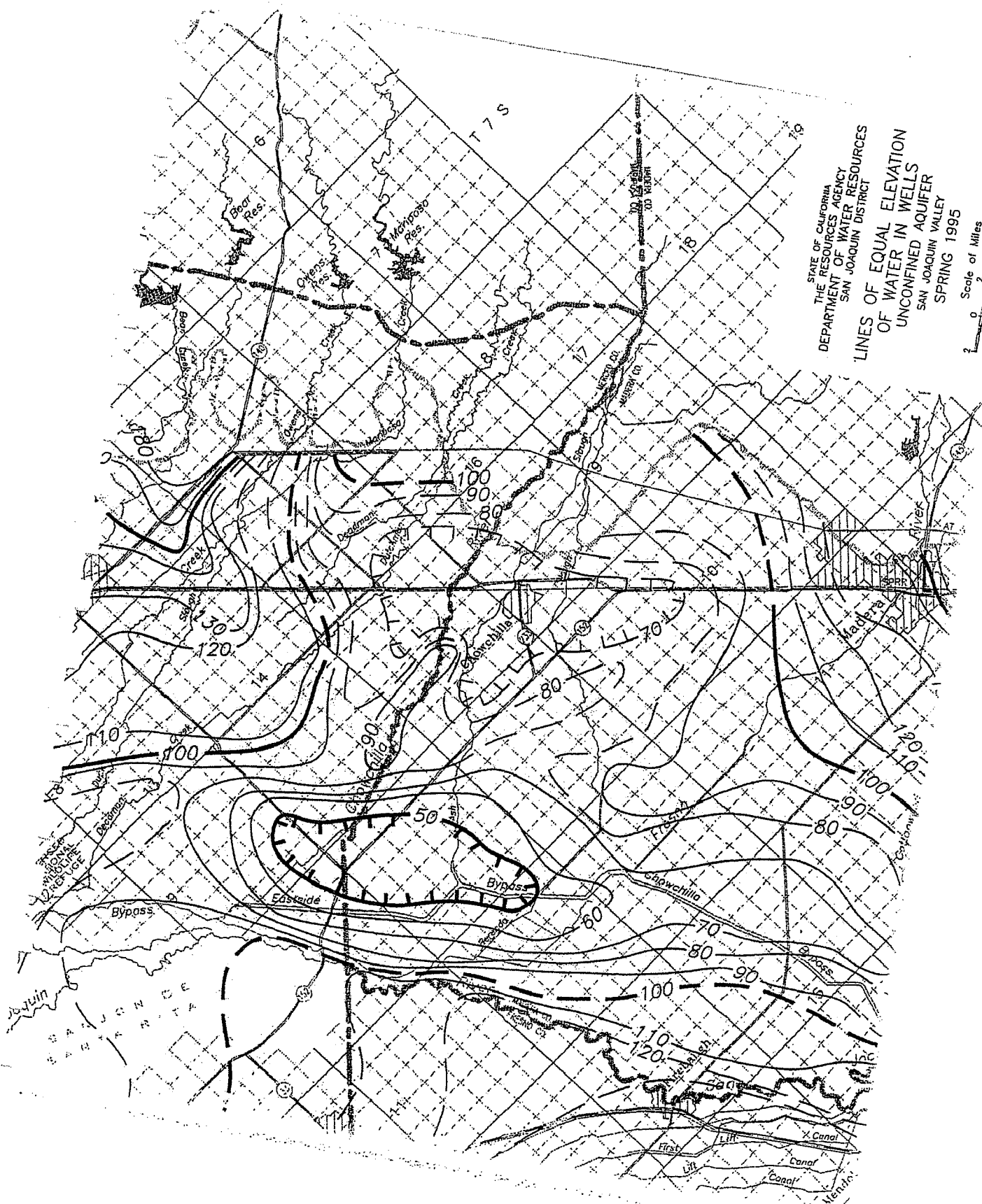
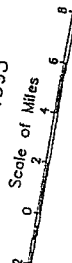


STATE OF CALIFORNIA
 THE RESOURCES AGENCY
 DEPARTMENT OF WATER RESOURCES
 SAN JOAQUIN DISTRICT
**LINE OF EQUAL ELEVATION
 OF WATER IN WELLS
 UNCONFINED AQUIFER
 SAN JOAQUIN VALLEY
 SPRING 1994**

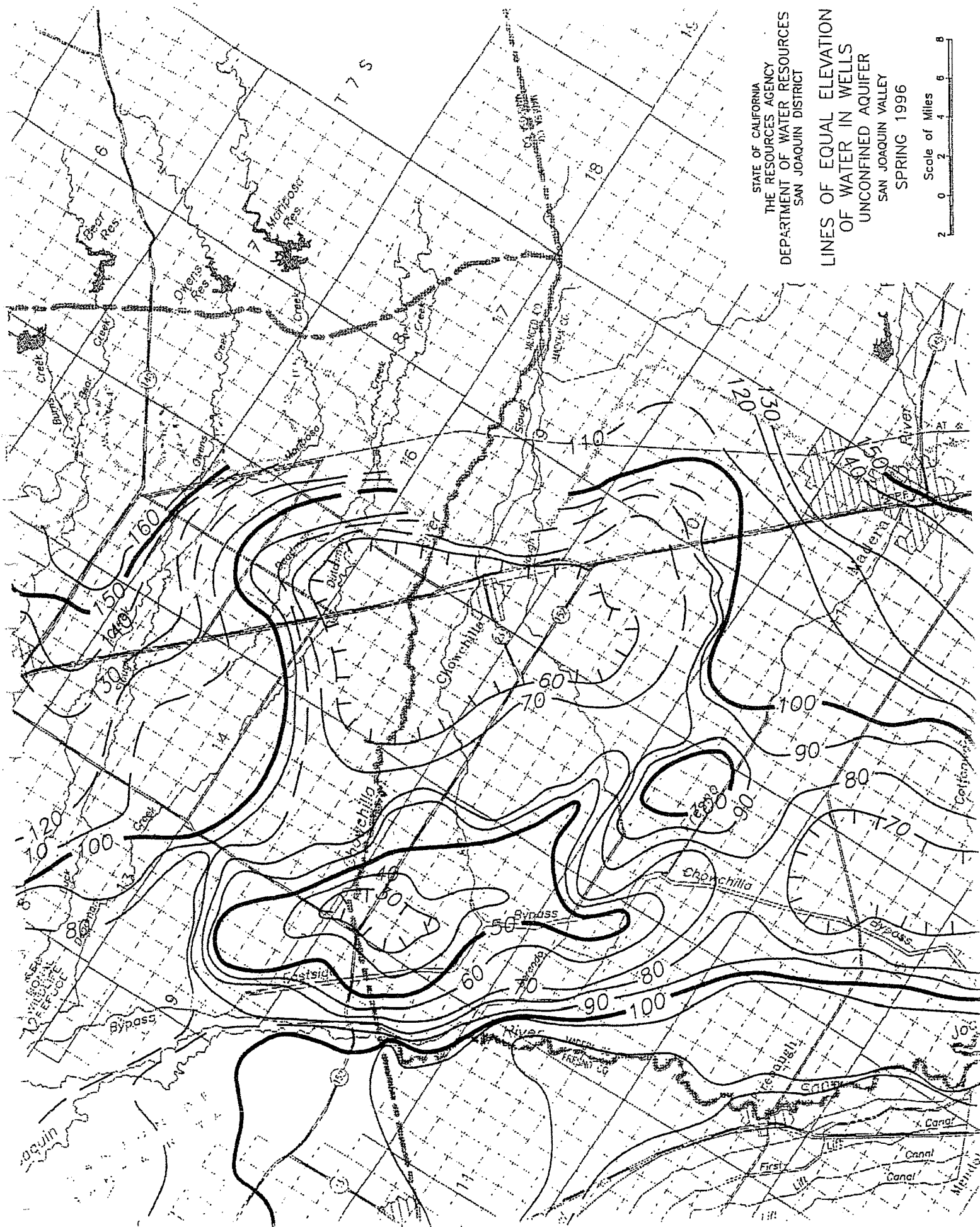


STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT

LINES OF EQUAL ELEVATION
OF WATER IN WELLS
UNCONFINED AQUIFER
SAN JOAQUIN VALLEY
SPRING 1995



LINES OF EQUAL ELEVATION
 OF WATER IN WELLS
 UNCONFINED AQUIFER
 SAN JOAQUIN VALLEY
 SPRING 1996



APPENDIX 7

AMENDED Joint Exercise of Powers Agreement

(This Joint Exercise of Powers Agreement was amended January 1, 1999 to include the City of Chowchilla as a member agency of the Joint Powers Authority.)

1 AMENDED JOINT EXERCISE OF POWERS AGREEMENT
2 BY AND BETWEEN CHOWCHILLA WATER DISTRICT.
3 CHOWCHILLA-RED TOP RESOURCE CONSERVATION DISTRICT AND
4 CITY OF CHOWCHILLA FORMING THE
5 CWD-RED TOP-CITY JOINT POWERS AUTHORITY

6 This Agreement, dated for convenience as of January 1, 1999, by and be-
7 tween the CHOWCHILLA WATER DISTRICT, a California Water District,
8 ("Chowchilla"), the CHOWCHILLA-RED TOP RESOURCE
9 CONSERVATION DISTRICT, a Resource Conservation District, (Red Top)
10 and the CITY OF CHOWCHILLA, a Municipality, ("City") all located in the
11 State of California.

12 *WITNESSETH*

13 WHEREAS, prior hereto by an agreement dated October 30, 1997
14 Chowchilla and Red Top formed the CWD-Red Top RCD Joint Powers
15 Authority to adopt and enforce a Groundwater Management Plan, and

16 WHEREAS, the CWD-Red Top RCD Joint Powers Authority on De-
17 cember 3, 1997 pursuant to Resolution 97-02 adopted the CWD-Red Top RCD
18 Joint Powers Authority Groundwater Management Plan, and

19 WHEREAS, the lands within City are also within the boundaries of
20 Chowchilla and Red Top, and

21 WHEREAS, City was not a party to the Authority at the time of the
22 adoption of the Plan and was not covered thereby, and

23 WHEREAS, it is the mutual desire of the parties that the CWD-Red Top
24 RCD Joint Powers Authority Groundwater Management Plan as adopted, cover
25 the lands within all three entities, and

26 WHEREAS, it is the desire of Chowchilla and Red Top to amend the CWD-
Red Top RCD Joint Powers Authority Agreement so as to include the City, and

1 WHEREAS, Chowchilla, Red Top and City are empowered by law to
2 adopt and enforce Groundwater Management Plans, and ;

3 WHEREAS, it is to the best interest of Chowchilla, Red Top and City
4 that they join in adopting the CWD-Red Top RCD Joint Powers Authority
5 Groundwater Management Plan so as to cover the area embraced within both
6 districts and the City, and

7 WHEREAS, the execution of an Amended Joint Powers Authority
8 Agreement makes such a Plan available;

9 NOW, THEREFORE, Chowchilla, Red Top and City, for and in consid-
10 eration of the mutual agreements and covenants herein contained, do agree as
11 follows:

12 SECTION 1. Definitions

13 1.01 Unless the context otherwise requires, the terms fined in this section
14 shall for all purposes of the Agreement have the meanings herein specified.

15 Agreement

16 The term "Agreement" shall mean this amended joint exercise of powers
17 agreement as originally executed and as it may from time to time be amended
18 by all supplemental agreements entered into pursuant to the provisions hereof.

19 Authority

20 The term "Authority" shall mean the CWD-Red Top-City Joint Powers
21 Authority, being a separate entity consisting of a joint exercise of powers
22 authority created by the Members pursuant to the Agreement.

23 Board of Directors. or Board

24 "Board of Directors" or "Board" shall mean governing body of the
25 Authority.

26 *****

1 City

2 "City" shall mean the City of Chowchilla, a municipal corporation, duly
3 organized and existing under the Constitution and laws of the State of Califor-
4 nia.

5 Chowchilla

6 The term "Chowchilla" shall mean the Chowchilla Water District, a Cali-
7 fornia Water District, duly organized and existing under the Constitution and
8 laws of the State of California.

9 Groundwater Management Plan

10 The term "Groundwater Management Plan" shall mean the CWD-Red
11 Top RCD Joint Powers Authority Groundwater Management Plan adopted by
12 the CWD-Red Top RCD Joint Powers Authority pursuant to the Groundwater
13 Management Act on December 3, 1997.

14 Law

15 The term "Law" shall mean Articles 1 and 2 of Chapter 5 of Division 7 of
16 Title 1 of the Government Code of the State of California, and all laws amen-
17 datory thereof or supplemental thereto.

18 Member

19 The term "Member" shall be either Chowchilla, Red Top or City.

20 Red Top

21 The term "Red Top" shall mean the Chowchilla-Red Top Resource Con-
22 servation District duly organized and existing under the Constitution and laws
23 of the State of California.

24 SECTION 2. Amendment to Formation of the Authority

25 2.01 There is hereby created pursuant to the Law, an agency and public
26 entity to be known as the "CWD-Red Top-City Joint Powers Authority." which

1 is a successor to and continuation of the CWD-Red Top RCD Joint Powers
2 Authority. As provided in the Law, the Authority shall be a public entity sepa-
3 rate from the Members, and the debts, liabilities and obligations of the Author-
4 ity shall not constitute debts, liabilities or obligations of the Members or either
5 of them. The Authority shall own and hold title to all funds, property and
6 works acquired by it during the term of this Agreement.

7 SECTION 3. Contributions to and Revenues from the Authority

8 3.01 The Members shall pay for the costs and expenses associated with
9 the maintenance and operation of the Authority in such amounts as are agreed
10 to be contributed to the Authority, and are entitled to all the revenues of the
11 Authority in the following percentages:

12 Chowchilla: 100% unless and until Red Top and or City can secure
13 funds to contribute to the Authority.

14 Red Top and City: 0% unless and until Red Top and/or City can
15 secure funds to contribute to the Authority.

16 3.02 If Red Top or City secure funds which either can contribute to the
17 Authority, to the extent that funds are available, it shall make contributions until
18 its contributions equal the contributions of Chowchilla and any other member.

19 SECTION 4. Term

20 4.01 The Agreement shall become effective as of the date hereof and
21 shall continue in full force and effect until terminated by two members giving
22 ninety (90) days notice of termination to the other member. If one member
23 terminates its interest in the Authority, the Authority shall continue with the
24 other two members until terminated by ninety (90) notice by a remaining mem-
25 ber.

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1 SECTION 5. Powers: Restrictions Upon Exercise

2 5.01 The Authority shall have power to adopt and enforce a Groundwa-
3 ter Management Plan, subject, however, to the conditions and restrictions
4 contained in the Agreement.

5 5.02 The Authority is authorized, in its own name, to do all acts neces-
6 sary or convenient for the exercise of such powers for such purposes that each
7 of its Members could do separately, including but not limited to any or all of
8 the following: to make and enter into contracts; to exercise the power of emi-
9 nent domain for the acquisition of property for Projects; to employ agents and
10 employees; to acquire, construct, manage, maintain and operate any buildings,
11 works or improvements; to acquire, hold or dispose of property; to incur debts,
12 liabilities or obligations (which do not constitute debts, liabilities or obliga-
13 tions of the Members or either of them); and to sue and be sued in its own
14 name.

15 5.03 Such powers shall be exercised subject only to such restrictions upon
16 the manner of exercising such powers as are imposed upon the Chowchilla
17 Water District as set forth in Division 13 of the California Water Code and
18 other applicable statutes in the exercise of similar powers.

19 SECTION 6. Termination of Powers

20 6.01 The Authority shall continue to exercise the powers herein conferred
21 upon it until the termination of the Authority under the provisions of Section 5
22 hereof. Upon such termination, the groundwater management plan adopted by
23 the Authority shall remain in force and effect for the lands within Chowchilla
24 until modified or rescinded by Chowchilla and shall remain in force and effect
25 for the lands within Red Top outside of the boundaries of Chowchilla until
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1 modified or rescinded by Red Top, and shall remain in force and effect for the
2 land within City until modified or rescinded by City. ;

3 6.02 Upon termination of the Authority, Chowchilla shall have no power
4 to adopt a groundwater management plan outside of its boundaries and within
5 the boundaries of Red Top or City without the written consent of Red Top or
6 City.

7 6.03 Upon termination of the Authority, Red Top shall have no power to
8 adopt a groundwater management plan within the boundaries of Chowchilla or
9 City without the written consent of Chowchilla or City.

10 6.04 Upon termination of the Authority, City shall have no power to
11 adopt a groundwater management plan outside of the boundaries of City and
12 within the boundaries of Chowchilla or Red Top without the written consent of
13 Chowchilla or Red Top.

14 SECTION 7. Board of Directors

15 7.01 The Authority shall be administered by the Board of Directors which
16 shall consist of twelve (12) members, each serving in his or her individual ca-
17 pacity as a member of the Board, constituting the five (5) members of the Board
18 of Directors of Chowchilla, five (5) members of the Board of Directors of Red
19 Top and two members from the City Council of City. The term of office of
20 each member of the Board shall continue only so long as such member is a
21 member of either of said boards of directors or council, and shall terminate if
22 such member of the Board shall cease to be a member of either of said boards
23 of directors or council.

24 7.02 Members of the Board shall receive such compensation or serving as
25 such as is set by the Board from time to time, and shall be entitled to reim-
26 bursement for any expenses actually incurred in connection with serving as a

1 member if the Board shall determine that such expenses shall be reimbursed
2 and there are unencumbered funds available for such purpose.

3 7.03 All directors shall take office on January 1, 1999 and hold office until
4 their successors are elected or appointed.

5 SECTION 8. Officers: Duties

6 8.01 The Board shall annually elect a President and Vice President of the
7 Authority from among its members and shall appoint a General Manager of the
8 Authority and a Secretary of the Authority, neither of whom shall be a member
9 of the Board.

10 8.02 The General Manager of the Authority may be designated pursuant
11 to the Law as Auditor-Treasurer of the Authority or at the pleasure of the Board
12 a separate Auditor-Treasurer may be appointed. The Auditor-Treasurer is des-
13 ignated as the depository of the Authority to have custody of all money of the
14 Authority from whatever source and to draw checks to pay demands against the
15 Authority when such demands have been approved by the Authority, and such
16 officer shall have the powers, duties and responsibilities of the offices of auditor
17 and treasurer specified in the law.

18 8.03 The Auditor-Treasurer of the Authority is designated as the public
19 officer or person who has charge of, handles, or has access to any property of
20 the Authority, and such officer shall file an official bond with the Authority in
21 the amount of \$100,000, the expense thereof to be paid by the Authority.

22 8.04 The Board shall have the power to appoint such other officers and
23 employees as it may deem necessary, and to retain independent accountants,
24 counsel, engineers and there consultants, and to determine the salary or com-
25 pensation of all such persons.

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1 SECTION 9. Meetings of the Board

2 9.01 The Board shall hold at least one regular meeting each year, and, by
3 resolution, may provide for the holding of regular meetings at more frequent
4 intervals. The date upon which, and the hour and place at which, each such
5 regular meeting shall be held shall be fixed by resolution of the Board.

6 9.02 Special meetings of the Board may be called in accordance with the
7 provisions of Section 54956 of the Government Code of the State of
8 California, or as said sections may be amended or superseded.

9 9.03 All meetings of the Board shall be called, noticed, held and
10 conducted subject to the provisions of Sections 54950-54962 of the
11 Government Code of the State of California, or as said Sections may be
12 amended or superseded.

13 9.04 The Secretary of the Authority shall cause minutes of all meetings
14 of open sessions of the Board to be kept and shall, as soon as possible after
15 each meeting, cause a copy of the minutes to be forwarded to each member of
16 the Board and to the Secretary of the Board of Directors of each Member.

17 9.05 Three members of the Board of Directors of Chowchilla, three
18 members of the Board of Directors of Red Top and one director from City
19 shall constitute a quorum for the transaction of business, except that less than
20 a quorum may adjourn from time to time. The Board shall take no other
21 action except upon the affirmative vote of at least three members of the board
22 of directors of Chowchilla and Red Top and one member from City.

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1 SECTION 10. Fiscal Year

2 10.01 Unless and until changed by resolution of the Board, the fiscal
3 year of the Authority shall be the period from January 1 of each year to and in-
4 cluding the following December 31.

5 SECTION 11. Disposition of Assets

6 11.01 In the event of termination of the Authority, all assets of the
7 Authority shall be distributed to the respective member grantor or assignor
8 thereof, and any surplus money or other assets on hand shall be returned to the
9 members in proportion to their contributions to the Authority.

10 SECTION 12. Adoption of Groundwater Management Plan

11 12.01 The Authority adopts as its Groundwater Management Plan the
12 CWD-Red Top RCD Joint Powers Authority Groundwater Management Plan
13 adopted on December 3, 1997 by the CWD-Red Top RCD Joint Powers
14 Authority.

15 SECTION 13. Agreement Not Exclusive

16 13.01 This Agreement shall not be exclusive and shall not be deemed to
17 amend or alter the terms of other agreements [except the Agreement forming
18 the CWD-Red Top RCD Joint Powers Authority] by and between the Mem-
19 bers.

20 SECTION 14. Contributions and Advances

21 14.01 Contributions or advances of public funds, or funds from their re-
22 spective treasuries, and of personnel, equipment or property may be made to the
23 Authority by any Member for any of the purposes of the Agreement. Any such
24 advance may be made subject to repayment, and in such case shall be repaid in
25 the manner agreed upon by the Member making such advance and the Author-
26 ity at the time of making such advance.

1 SECTION 15. Accounts and Reports

2 15.01 The Authority shall establish and maintain such funds and accounts
3 as may be required by good accounting practice. The books and records of the
4 Authority shall be open to inspection at all reasonable times by the members
5 and their representatives.

6 15.02 The Auditor-Treasurer of the Authority, subject to the approval of
7 the Board, shall contract with a certified public accountant or public account-
8 ant to make an annual audit of the accounts and records of the Authority, and
9 in each case the minimum requirements of the audit shall be those prescribed
10 by the State Controller for special districts under Section 26909 of the Gov-
11 ernment Code of the State of California, or as the same may be amended or
12 superseded, and shall conform to generally accepted auditing standards; except
13 that the Members may, by unanimous request of the Boards of Directors
14 thereof, replace the annual special audit with an audit covering a two-year pe-
15 riod. A report of each such audit shall be filed as a public record with each
16 Member and with the County Auditor of Madera County, the county in which
17 both Members are located, which such report shall be filed within twelve (12)
18 months of the end of the fiscal year or years under examination. All costs of
19 such audit shall be borne by the Authority and shall be a charge against any
20 unencumbered funds of the Authority available for the purpose.

21 SECTION 16. Breach

22 16.01 If default shall be made by any Member of any covenant contained
23 in the Agreement, such default shall not excuse the other Members from ful-
24 filling its obligations under the Agreement, and such other Member shall con-
25 tinue to be liable for the payment of all contributions and the performance of
26 all obligations herein contained.

1 16.02 The Members hereby declare that the Agreement is entered into
2 for the benefit of the Authority created hereby and the Members hereby grant
3 to the Authority the right to enforce by whatever lawful means the Authority
4 deems appropriate all of the obligations of each member hereunder. Each and
5 all of the remedies given to the Authority hereunder or by any law now or
6 hereafter enacted are cumulative and the exercise of any one right or remedy
7 shall not impair the right of the Authority to any or all other remedies.

8 SECTION 17. Severability

9 17.01 Should any part, term or provision of the Agreement be decided
10 by the courts to be illegal or in conflict with any law of the State of California,
11 or otherwise be rendered unenforceable or ineffectual, the validity of the re-
12 maining parts, terms or provisions hereof shall not be affected thereby.

13 SECTION 18. Successors: Assignment

14 18.01 The Agreement shall be binding upon and shall inure to the benefit
15 of the successors of each Member. No Member may assign any right or obliga-
16 tion hereunder without the consent of the other Members.

17 SECTION 19. Amendment of the Agreement

18 19.01 The Agreement may be amended by a supplemental or amended
19 agreement executed by all of the Members at any time.

20 SECTION 20. Office

21 20.01 The office of the Authority shall be maintained at 327 South
22 Chowchilla Blvd., Chowchilla, CA. 93610, until such time as the location
23 thereof is changed by the Board.

24 SECTION 21. Notices

25 22.01 Any notice authorized or required to be given pursuant to this
26 Agreement shall be in writing and shall be deemed to have been given when

1 mailed, postage prepaid, or delivered during working hours to the following
2 address, or to such changed addresses as are communicated to the Authority
3 and the member entities in writing:

4 Chowchilla:

5 P.O. Box 905, Chowchilla, CA. 93610

6 Red Top:

7 c/o John Wolfshorndl, 11791 Ave. 22, Chowchilla, CA. 93610

8 City:

9 145 West Robinson Blvd., Chowchilla CA. 93610

10 SECTION 22. Section Headings

11 22.01 All section headings contained herein are for convenience of refer-
12 ence only and are not intended to define or limit the scope of any provision of
13 the Agreement.

14 SECTION 23. Prior Agreement and Merger

15 23.01 This Agreement supercedes the agreement dated October 30, 1997
16 Chowchilla and Red Top which formed the CWD-Red Top RCD Joint Pow-
17 ers Authority.

18 23.02 The CWD-Red Top RCD Joint Powers Authority is hereby
19 merged with the CWD-Red Top-City Joint Powers Authority formed
20 hereunder.

21 IN WITNESS WHEREOF the parties hereto have caused the Agreement
22 to be executed and attested by their proper officers thereunto duly authorized,
23 and their official seals to be hereto affixed, as of the day and year first above
24 written.

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CHOWCHILLA WATER DISTRICT

By: Robert Capehart
Robert Capehart, President

ATTEST: Douglas Welch
Douglas Welch, Secretary

[Seal]

CITY OF CHOWCHILLA
By: Ronald Harris
Ronald Harris, Mayor

ATTEST: Lori Stayner
Lori Stayner, City Clerk

CHOWCHILLA-RED TOP
RESOURCE CONSERVATION
DISTRICT

By: Norman Kuhr
Norman Kuhr, Chairman

ATTEST: John Wolfshorn
John Wolfshorn, Secretary

[Seal]

[Seal]

RECEIVED
JUN 11 1964
South Central Region