GROUND WATER MANAGEMENT PLAN

for

RIVERDALE IRRIGATION DISTRICT

October 25, 1995

Prepared by

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I. INTRODUCTION

A. General

The Riverdale Irrigation District was organized in 1920 under the California Water Code. The District covers 14,873 acres wholly within Fresno County near the trough of the San Joaquin Valley (Figure 1).

On December 7, 1993 the District's board of directors adopted a resolution of intention to draft a Ground Water Management Plan, pursuant to California Assembly Bill No. 3030 (AB 3030). A copy of Riverdale Irrigation District Resolution No. 93-6 is included as Appendix A.

B. Purpose and Goal

The purpose of this Ground Water Management Plan is to develop a coordinated and comprehensive approach to the evaluation and management of ground water resources within the Riverdale I.D.

The goal of this Plan is to implement effective ground water management which moves to restore, where possible, and maintain a high quality and dependable ground water resource.

Upon adoption of this Plan, action on specific elements will be initiated within the Management Program to achieve the stated goal. As specific elements take effect, and/or other concerns arise, the Management Program may be revised to assure continued progress toward the management goal.

C. Authority

California Assembly Bill No. 3030, which became law on January 1, 1993, authorized local agencies that are within ground water basins as defined in California Department of Water Resources (DWR) Bulletin 118-80, and that meet certain other criteria, to prepare and adopt ground water management plans. Riverdale Irrigation District qualifies under the law. The District encompasses a portion of the Kings Ground Water Basin as defined in Bulletin 118-80, which lies within the San Joaquin Basin Hydrologic Study Area (Figure 1).

San Joaquin Basin

Hydrologic Study Area

FIGURE 1

Location Map

Ref: DWR Bulletin 118-80

II. DESCRIPTION OF DISTRICT

A. Description of District Area

1) Location

The Riverdale Irrigation District is situated in the central San Joaquin Valley of California approximately twenty miles south of the City of Fresno in Fresno County (Figure 1). The community of Riverdale lies in the eastern portion of the District, and the much smaller community of Lanare lies near the center. Located adjacent to the Fresno Slough on the southwest, District lands lie at or near the trough of the valley floor.

2) Topography

Land in the District generally slopes downward from east to west at three to four feet per mile, with local variations caused by remnants of slough channels. Elevations range from 200 to 225 feet above sea level.

3) Climate

The climate of Riverdale I.D. is characterized by cool, mild winters and hot, dry summers. Temperatures in the summer often exceed 100 degrees Fahrenheit. Fog is experienced for long periods in the winter, with temperatures typically in the mid-30's. Winter temperatures occasionally drop into the 20's. Average annual precipitation is about 9.0 inches, with 80 percent of the rainfall occurring in the winter months. The frost-free growing season averages around 250 days per year.

B. Water Supply

1) Surface Water Quantity

Riverdale I.D.'s entire surface water supply comes from the Kings River. Kings River water is divided among the member units of the Kings River Water Association (KRWA) based on an allocation schedule. Over the 100 year historical record, Riverdale I.D.'s annual entitlement of Kings River water has averaged about 29,500 acre-feet (af). The District also holds reservoir storage rights totalling 26,240 af

on the Kings River. This storage typically allows the District to store much of their water until irrigation demands begin in the spring.

2) **Surface Water Quality**

Kings River water is of excellent quality for irrigation. Salt content, measured as total dissolved solids (TDS), typically runs around 50 parts per million (ppm) and boron content is generally less than 0.1 ppm.

3) **Ground Water Quantity**

The District overlies a portion of the enormous, San Joaquin Valley-wide, aquifer. Growers typically own and operate private wells to supplement District supplied surface water. Ground water supplies have been adequate to meet crop requirements, even in years with little or no surface water deliveries.

4) **Ground Water Quality**

Ground water quality in the District is generally adequate for agricultural use. Quality tends to worsen to the west within Riverdale I.D., but remains useable. Below about 2,000 feet below ground level throughout the District the ground water contains greater than 2,000 mg/l sodium chloride (Page and LeBlanc, USGS 1969). Sufficient data is not available to characterize ground water quality in Riverdale I.D. in any greater detail.

C. Land Use

Riverdale Irrigation District was formed in 1920, at which time agricultural development of its lands was well underway. As irrigation facilities were constructed, use of the land gradually converted from grassland and dryland farming to irrigated cropland. District lands are now essentially fully developed for agriculture.

The prevalent crops in the District are cotton, alfalfa and field corn. Other significant crops include other grain crops, melons and irrigated pasture. Very little land is planted to permanent crops.

D. Water Demand

Water demand in the District has slowly increased over the years as land was brought into production. Since full agricultural development has occurred, change in demand now would be due largely to changes in cropping pattern.

Riverdale I.D. does not keep data on overall water use, crop acreage or ground water pumping. Therefor, no good information exists to develop a very precise estimate of crop water demand. Based upon the District area of 14,873 acres and an assumed average annual demand of about 2.5 af per acre, water demand in Riverdale I.D. is probably around 35,000 to 40,000 af per year.

E. Water Related Facilities

1) District System Inventory

The District owns and operates approximately 37 miles of distribution canals (Figure 2). All canals are earthen, and vary in capacity from less than 10 cfs to 200 cfs in the upper portion of the Riverdale Ditch. All Riverdale I.D. water enters the District through the Riverdale Ditch.

District water is diverted from the Kings River into Murphy Slough, and from Murphy Slough into the Riverdale Ditch. The District participates in the ownership and operation of Murphy Slough via membership in the Murphy Slough Association (MSA). Other MSA members are Liberty Mill Race Company and Reed Ditch Company.

Riverdale I.D. has two reservoirs within its boundaries. One, near the junction of Turner Ditch and Burrel Ditch, is operated as a regulation reservoir. A small, low head lift pump is used to move the water back into the canals for later use. A second reservoir, at the end of the Turner Ditch, is used as a tailwater pond to catch excess water from the ditch before it spills into the North Fork Kings River.

Riverdale I.D. does not own or operate any ground water wells, nor any surface or sub-surface drainage facilities.

2) Other Facilities

The communities of Lanare and Riverdale, while largely excluded from Riverdale I.D., are wholly contained within District boundaries (Figure 2). These communities operate municipal water systems, and ground water is their sole supply.

F. Institutional Programs

1) Ground Water Monitoring Programs

Well Water Levels

The United States Bureau of Reclamation (USBR) and the California Department of Water Resources (DWR) act as clearing houses to gather and process well water-level data from agencies and organizations throughout the San Joaquin Basin Hydrological Study Area. Riverdale I.D. does not currently measure ground water levels, however, DWR does monitor water levels in a few wells within the District.

Well Water Quality

No program currently exists to systematically collect and evaluate ground water quality data within Riverdale I.D.

III. HYDROGEOLOGIC CHARACTERISTICS

A. Ground Water Basin Description

1. Kings Basin

The Kings Basin has been identified by the DWR as a basin with boundaries appropriate for ground water management purposes (DWR Bulletin 118-80). These boundaries were identified on the basis of geological and hydrological conditions, as well as political boundary lines. The Kings Basin lies within the San Joaquin Basin Hydrologic Study Area (HSA). Riverdale I.D. lies in the southern portion of the Kings Basin (Figure 1). The individual basins within the San Joaquin Basin HSA were defined primarily upon political boundaries due to the vast shared aquifer system within the HSA.

The Kings Basin was determined in Bulletin 118-80 to be a "critically overdrafted" basin, according to the following definition:

> "A basin is subject to critical conditions of overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social or economic impacts."

This definition implies a more dire circumstance than mere "ground water overdraft", which is generally defined as that condition where extractions exceed ground water replenishment over some specified time period.

The Kings Basin extends from the Sierra Nevada foothills on the east to the San Joaquin Valley trough on the west, and from the San Joaquin River on the north to roughly the Fresno County line on the south. The Kings Basin does include small portions of Kings and Tulare counties.

B. Riverdale Irrigation District - Aquifer Characteristics

1) Geology

Overview

An enormous aquifer system lies beneath the Kings Basin and extends the length and breadth of the San Joaquin Valley. The valley is a broad structural trough, with the Sierra Nevada mountains on the east and the Coast Range mountains on the west. The Sierra basement rock extends from the foothills on the east, sloping downward to the southwest at 4° - 6°. Consolidated and unconsolidated continental and marine deposits from both the Sierra and the Coast Range mountains overlie this basement complex. Unconsolidated alluvial deposits make up most of the basin's freshwater aquifer (USGS Water Supply Paper 1999-H, 1972).

Interspersed within the unconsolidated deposits that comprise the useable aquifer in the region are a number of clay layers that can act as confining beds. The first significant clay layer is known as the A-Clay. This clay is about 20 feet thick within the District and the top of the layer is approximately 40 feet below ground surface. The A-Clay underlies the southwestern two-thirds of Riverdale I.D. The other two clays, the C- and the E-Clay underlie the entire District. The C-

Clay, again about 20 feet thick within Riverdale I.D., lies about 220 feet deep. The E-Clay, also known as the Corcoran Clay, is the most important clay layer in the region. The E-Clay is about 90 feet thick within the District and at a depth of about 480 feet. The E-Clay is generally considered to be a confining bed. The aquifer is typically considered an unconfined "water table" aquifer, while that below the clay is considered a confined "pressure surface" aquifer. Figure 3 depicts a generalized geologic cross section for the District.

Soils

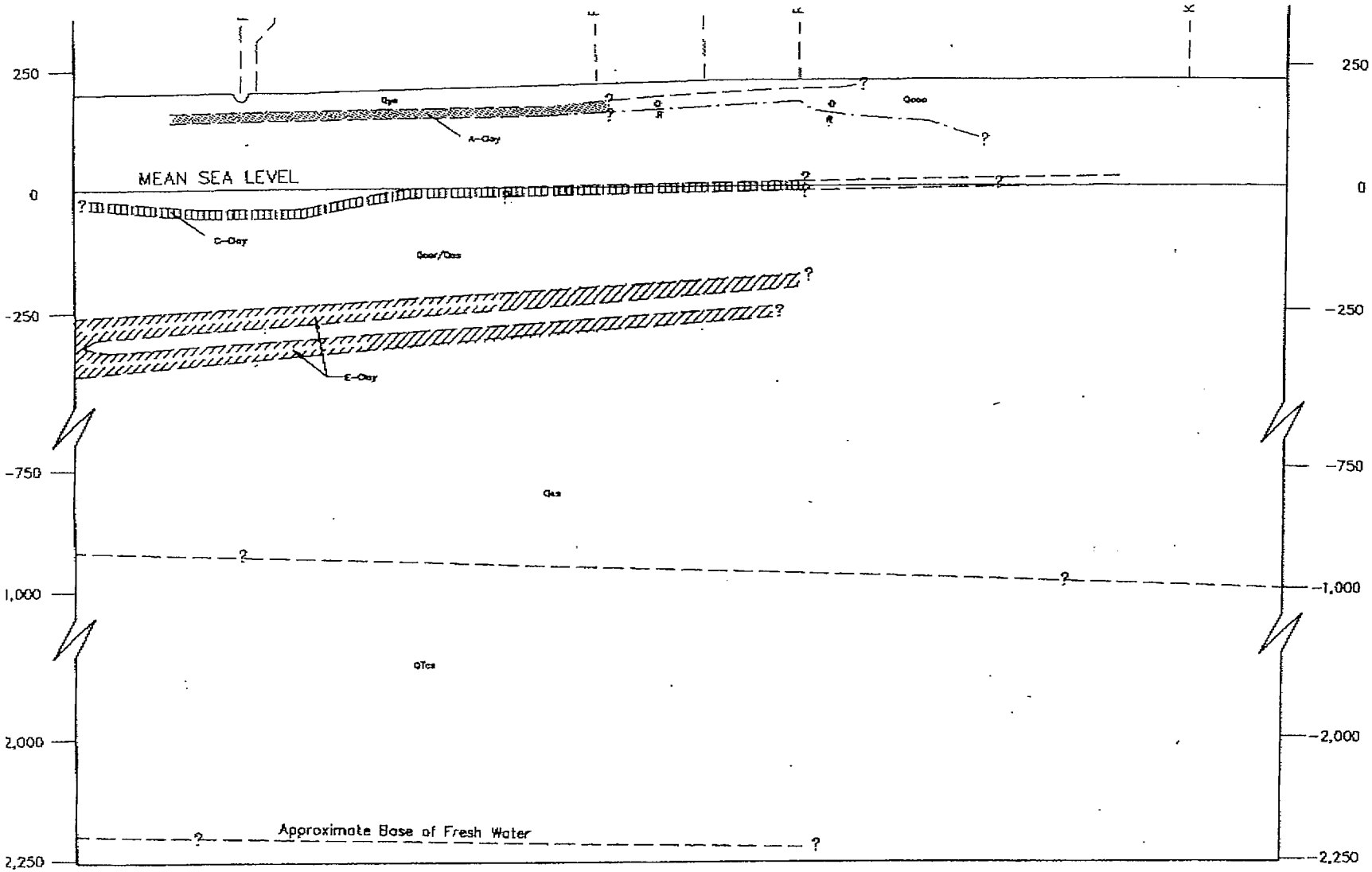
Soils in the District are predominantly loams, ranging from sandy loam to clays, and some soils are saline-alkali. Soils in the western portion of the District generally have a higher clay content, and this is also where the saline-alkali soils tend to occur. Soils within the region were deposited in the valley trough during flood periods and are derived from mixed granitic and sedimentary rocks from both the Sierra Nevada and Coast Range mountains. Soils in the eastern portion of the District tend to have a higher sand content and are derived mostly from granitic Sierra Nevada sediments deposited on alluvial fans. Soils throughout the region are stratified, with interspersed sandy and clayey streaks.

2) **Well Yields**

Well yields within the District typically range from 600 to 2,000 gpm. Nearly all agricultural wells tap the aquifer above the E-Clay, most wells not being any deeper than 450 feet.

3) **Storage Capacity**

The aquifer currently being used by agricultural wells within the District is approximately 480 feet deep. Assuming it is desirable for the water table to come no closer than ten feet from the ground surface, and applying an average specific yield of 0.11 to the aquifer, total storage capacity of the aquifer in use can be calculated to be approximately 800,000 af. Specific yield is the ratio of the volume of water which will drain freely from a material to the total volume of the formation.



SECTION A–A'

HORIZONTAL SCALE, MILES

2 0 2 4

urce: Geology, Hydrology and Water Quality
in the Fresno Area, California
U. S. Department of the Interior Geological Survey
Water Resources Division, Menlo Park, California, 1969
Page & LeBlanc
& USGS Water Supply Paper 1999 – H
Subsurface Geology of the Late Tertiary
and Quaternary Water-Bearing Deposits of the
Southern Part of the San Joaquin Valley, California
G. Croft, 1972

Coast Ranges

Pleistocene and Holocene

Older Al
Qoar-Reduce
Qoa-Oxidize

Qya

Younger A

Pliocene to Holocene

QTcc

Continental & alluvial deposits

Flooc
lacus
marsh

Pliocene and Pleistocene (?)

CONSOLIC

Marine & nonmari

Baseme

Lithol

Contact Bet
and Reduc

RIVERDALE IRR

Generaliz
Cross

PROVOST PRITCHAR

IV. GROUND WATER CONDITIONS

A. Historical Conditions

1) Ground Water Levels

Prior to development of the Riverdale region, ground water levels were typically within ten or fifteen feet of the ground surface. The earliest available ground water map shows the elevation of the ground water table in the Fall of 1936. Ground water levels within the District at that time ranged in elevation from 185 to 215 feet (Figure 4).

As land was brought into agricultural production, and with the advent of deep well turbine pumps, ground water levels began to decline. By about 1950 water levels had begun a sharp decline that appears to have continued into the 1970's before moderating. In this period a significant portion of the unconfined aquifer was dewatered. Figure 5 shows ground water levels in the unconfined aquifer in the Spring of 1971 and again in the Spring of 1988. In that period water levels remained stable in the southeast portion of the District, at an elevation of about 200 feet, while water levels in the northwest were dropping from an elevation of around 110 feet in 1971 to about 70 feet in 1988.

The level of water in wells tapping the confined aquifer below the E-Clay has not appeared to decline in recent decades. Figure 6 shows the pressure surface of this confined aquifer in the Spring of 1971 and Spring of 1988. While the shape of the pressure surface has changed somewhat, the levels within the District appear to have remained fairly static.

2) Ground Water Quality

Ground water quality data for the District area is not readily available. As stated previously in Chapter 2, the ground water has been of adequate quality for agricultural use.

B. Current Conditions

1) Ground Water Levels

The most recent ground water level map showing conditions within the District was prepared by the KRCD in 1993. This map indicates

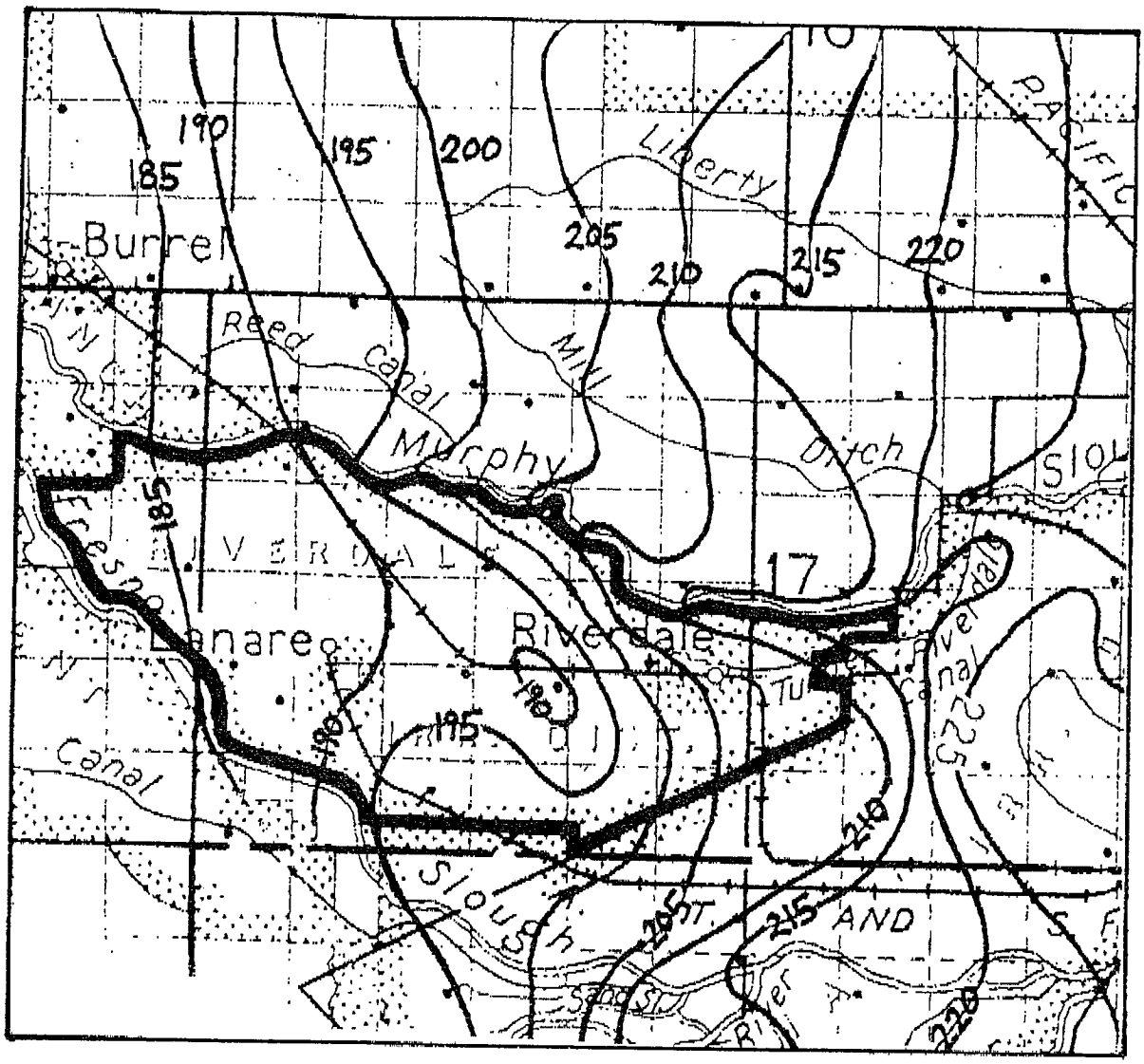


FIGURE 4

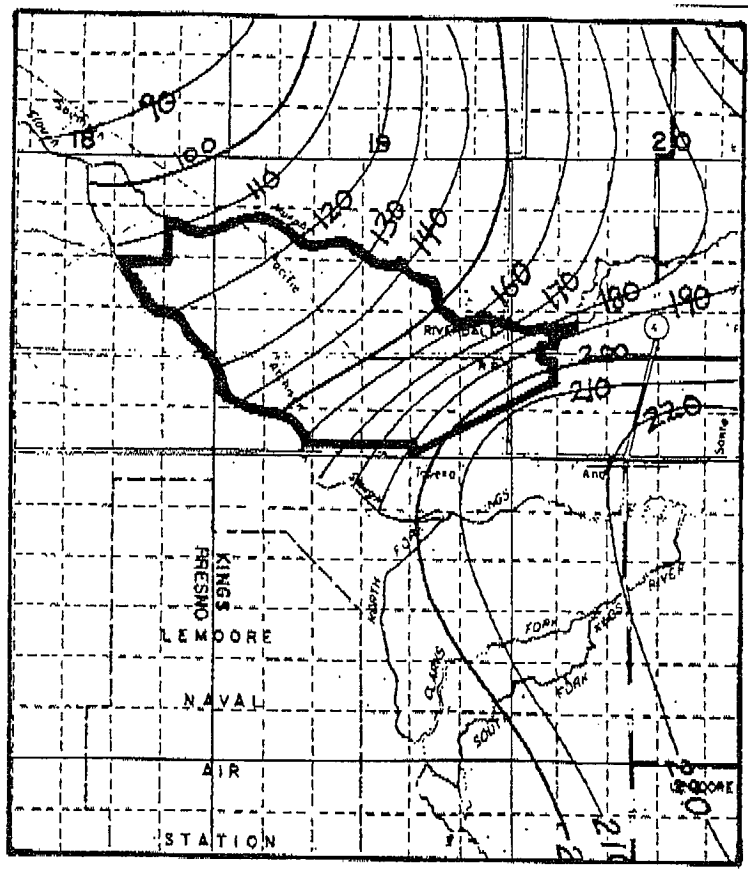
Lines of Equal Elevation

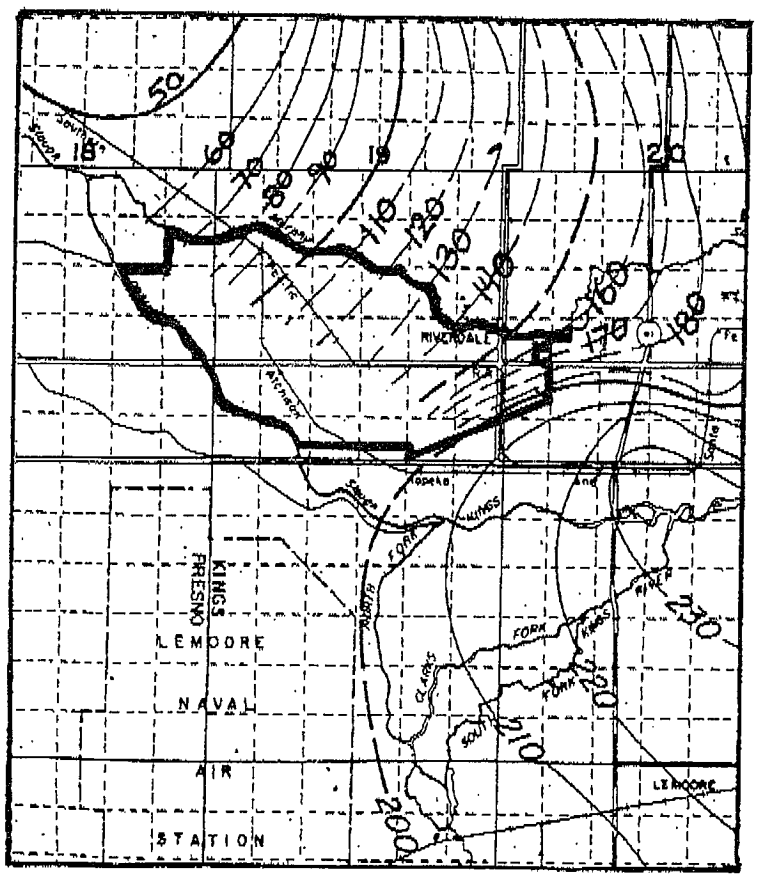
of Ground Water Table

Fall of 1936

Ref: Calif. Dept. of Water Resources

Spring 1971





Spring 1988

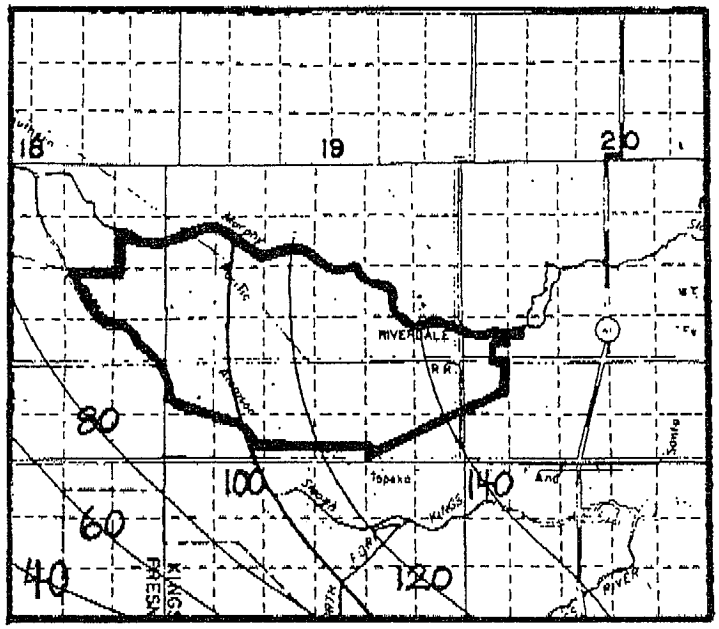
FIGURE 5

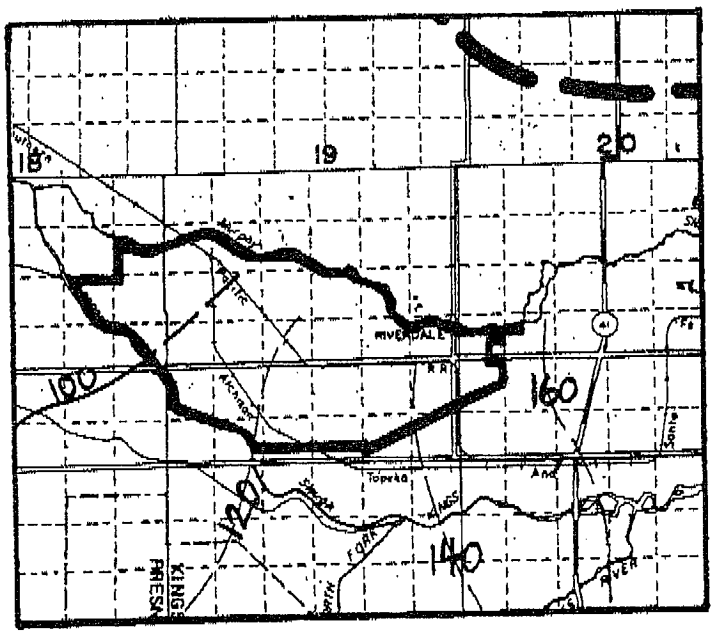
Lines of Equal Elevation of Water in Wells

UNCONFINED AQUIFER

Ref: Calif. Dept. of Water Resources

Spring 1971





Spring 1988

Ref: Calif. Dept. Water Resources

FIGURE 6

Lines of Equal Elevation of Water in Wells

PRESSURE SURFACE

ground water surface elevation in the unconfined aquifer ranged from around 60 to 180 feet in the Spring of 1993 (Figure 7).

a) **Estimated Pump Lift**

Pumping lifts within the Riverdale I.D. for large capacity irrigation wells tapping the unconfined aquifer above the E-Clay typically range from less than 100 feet in the southeastern portion of the District to more than 250 feet in the northwest.

2) **Ground Water Quality**

Ground water pumped from the unconfined aquifer remains adequate for agricultural use. As stated previously, the ground water quality in the District generally improves from west to east.

C. Ground Water Overdraft

The preferred approach to estimate overdraft involves using historical well water-level measurements during a hydrological base period. This base period must extend for a long enough time that both wet periods and droughts are covered, and the water supply conditions approximate the long-term average. Unfortunately, well water-level measurements within the District are insufficient to support this approach.

The term overdraft is used here to indicate a long-term water-level decline in an area during an average hydrologic base period. It is not used to describe short-term water-level declines during drought periods.

An alternative method to calculate overdraft is to estimate average ground water levels from available ground water contour maps and calculate the difference in volume from one map to the other. Review of the maps representing ground water surface elevation in 1971 and 1988 (Figure 5) indicates average water surface elevation dropped in this period from around 145 to 130 feet. Applying the average annual decline of 0.9 feet to the District area of 14,873 acres and an estimated average specific yield of 0.11 results in an overdraft estimate of 1,500 af per year.

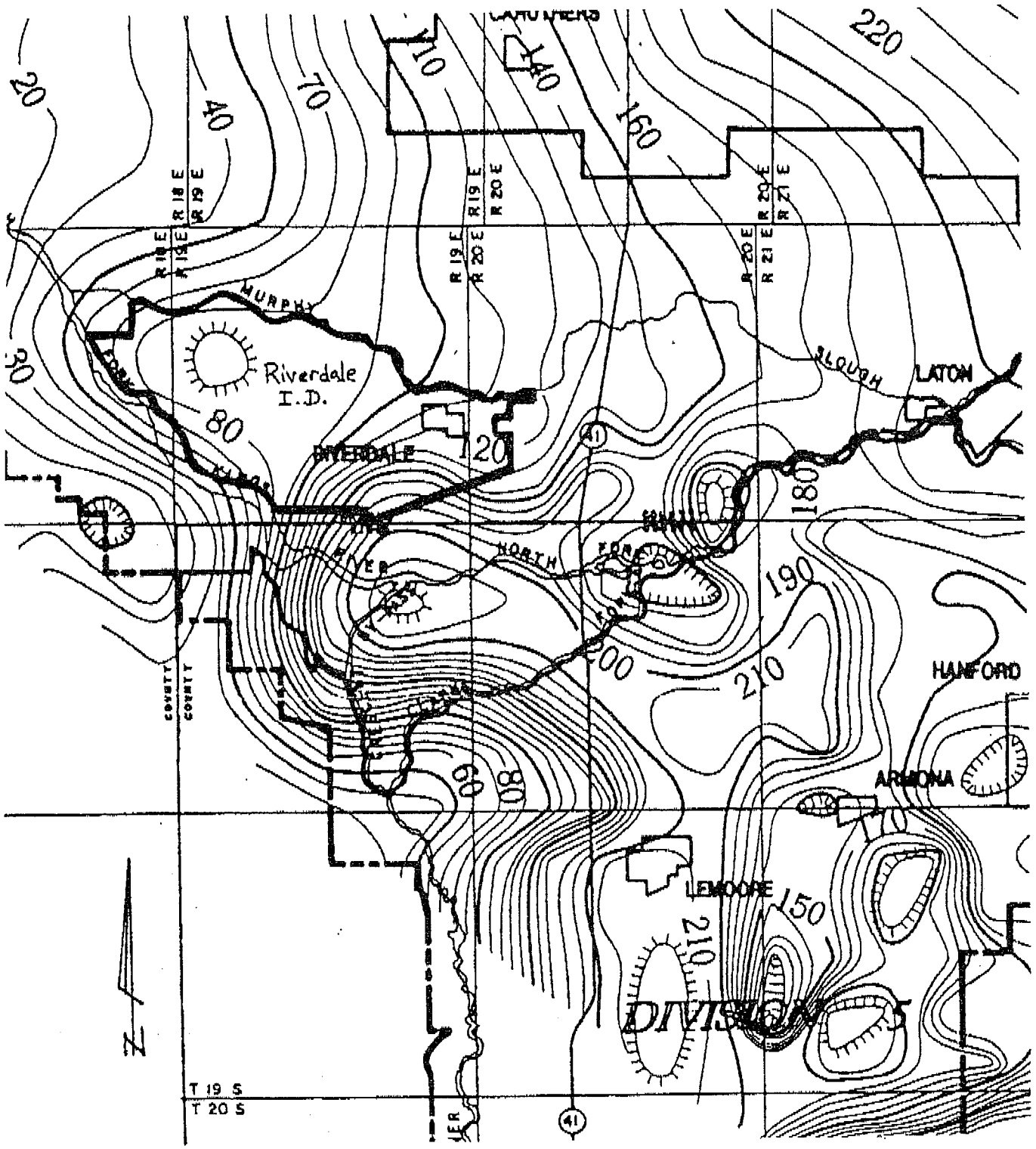


FIGURE 7

Groundwater Surface Elevation
(feet above M.S.L.)
Spring 1993

Ref: Kings River Service Area Annual Groundwater Report 1993, KRCD 1994

D. Extraction and Perennial Yield

Ground water extraction within Riverdale I.D. is unknown. The District does not own or operate any wells. Private wells extract an unknown amount for agricultural, domestic and municipal uses.

Perennial, or sustained, yield is defined here as the average annual amount of ground water pumping that can be supported over an average hydrologic base period that will not result in a long-term decline in water levels. The base period must be long enough to include both wet and dry hydrologic cycles.

Perennial yield is currently impossible to quantify for Riverdale I.D. due to a lack of sufficient data and the shared nature of the aquifer. Riverdale I.D. is not a "closed" ground water system. That is, ground water in the District is hydraulically connected to ground water in the surrounding area. If ground water management activities substantially decrease water levels adjacent to Riverdale I.D., subsurface outflow from the District could increase, subsequently decreasing perennial yield.

The overdraft, roughly estimated to be 1,500 af per year, implies that pumping within the District has been exceeding the current perennial yield by that amount.

E. Ground Water Monitoring

Riverdale I.D. does not currently monitor ground water levels or quality. The DWR does measure water levels in a few wells within the District. These measurements are taken each spring and fall as a part of the State's San Joaquin Valley-wide ground water monitoring program.

V. MANAGEMENT PLAN ELEMENTS

A. Control of Saline Water Intrusion

Saline water intrusion is not currently a concern for Riverdale I.D. While the ground water does tend to be more saline in the western portion of the District, this appears to be a natural condition inherent in the geology. Also, the prevailing ground water gradient within Riverdale I.D. is from east to west (see Figure 7). This gradient prevents poorer quality water from moving east to degrade ground water of better quality.

B. Identification and Management of Wellhead Protection Areas and Recharge Areas

The Federal Wellhead Protection Program was established by Section 1428 of the Safe Drinking Water Act Amendments of 1986. The purpose of the program is to protect ground water sources of public drinking water supplies from contamination, thereby eliminating the need for costly treatment to meet drinking water standards. The program is based on the concept that the development and application of land use controls, usually applied at the local level in California, and other preventative measures can protect ground water.

A Wellhead Protection Area (WHPA), as defined by the 1986 Amendments, is "the surface and subsurface area surrounding a water well or wellfield supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield." The WHPA may also be the recharge area that provides the water to a well or wellfield. Unlike surface watersheds that can be easily determined from topography, WHPA's can vary in size and shape depending on subsurface geologic conditions, the direction of ground water flow, pumping rates and aquifer characteristics. There are several different methods typically used to delineate the lateral boundaries of a WHPA.

Under the Act, states are required to develop an EPA-approved Wellhead Protection Program. To date, California has no state-mandated program, but instead relies on local agencies to plan and implement programs. This is one of the factors that prompted the State Legislature to enact AB 3030. Wellhead Protection Programs are not regulatory in nature, nor do they address specific sources. They are designed to focus on the management of the resource rather than control a limited set of activities or contaminant sources.

As Riverdale I.D. does not provide public drinking water, Wellhead Protection Areas are not currently applicable to this plan. Depending on the relationship developed with the communities of Riverdale and Lanare (see item K of this section) delineation of WHPA's may be addressed at a later date.

C. Regulation of the Migration of Contaminated Ground Water

Ground water contamination can originate from many sources or activities. Clean-up of contaminated ground water is a complex and expensive task generally involving a number of organizations. Agencies with roles to play in mitigating ground water contamination include the California Regional Water

Quality Control Board (RWQCB), the California Department of Toxic Substances Control (DTSC) and the U.S. Environmental Protection Agency (EPA). Each agency has its own set of regulatory authorities and expertise to contribute. The degree to which they participate depends on the nature and magnitude of the problem. If necessary, the role of Riverdale I.D. or other ground water management agency would be to supplement the roles of the other involved agencies.

D. Administration of a Well Abandonment and Well Destruction Program

Existing State and Fresno County law requires that owners or lessees properly destroy their abandoned wells. Proper destruction of abandoned wells is necessary to protect ground water resources as abandoned or improperly destroyed wells can result in water of different chemical qualities from different strata mixing, and useable ground water being degraded. The responsibility for administration and enforcement of the County well ordinance will be left with Fresno County.

E. Mitigation of Conditions of Overdraft

Overdraft of the ground water supply can lead to a variety of problems, including land subsidence and increased pumping costs. Additionally, if overdraft continues unchecked, the ground water supply may become unreliable when surface water is scarce, as in a time of extended drought.

Ground water overdraft is due to an imbalance in the rates of extractions and replenishment. There are several methods to correct this imbalance. The first is to decrease the extraction to match the rate of replenishment. The second is to increase ground water replenishment to match the extraction rate. The third method is a combination of the first two, to balance replenishment and extraction. Each of the methods are applied over an extended period, making use of the storage capacity of the aquifer. Extractions can exceed replenishment in drought periods as long as replenishment equally exceeds extractions in wetter periods.

Overdraft could be a significant concern if any activities were to occur which would result in increased pumping, reduced recharge, and/or increased ground water outflow. Periodic analyses of ground water overdraft, perhaps every five years, are needed to reassess the need for mitigation of overdraft.

Possible mitigative measures include reducing ground water pumping by reducing District water demand and increasing the District's surface water

supply. Demand reduction could be effected by cropping changes or land fallowing.

F. Replenishment of Ground Water Extracted by Water Producers

Replenishment of ground water is an important technique in management of a ground water supply and mitigate a condition of overdraft. Assuming the estimated overdraft for the District is confirmed by future monitoring, Riverdale I.D. can probably offset the imbalance by increased diversion and recharge of Kings River flood waters.

G. Monitoring of Ground Water Levels and Storage

The purpose of a ground water level monitoring program is to provide information that will allow computation of the change in ground water storage. Riverdale I.D. will initiate a program of measuring well water levels in the spring and fall, in cooperation with the USBR and DWR. Contour maps depicting level of water in wells in the District and surrounding area will be prepared on an annual basis, along with estimates of changes in ground water storage.

H. Facilitating Conjunctive Use Operations

Conjunctive operation of a ground water basin is defined in DWR Bulletin 118-80 as:

> "Operation of a ground water basin in coordination with a surface water reservoir system. The basin is intentionally recharged in years of above average precipitation so ground water can be extracted in years of below average precipitation when surface water supplies are below normal."

Such management results in the ground water storage being reduced in dry periods and increased in wetter periods. To avoid a condition of overdraft, replenishment must balance extraction over the long-term.

A conjunctive use program generally requires:

- A source of surface water in years of high surface water supply.

- Recharge facilities.

- Conveyance facilities to import and export water to and from the ground water storage area.

- Available storage capacity in the aquifer.

- Extraction facilities.

- Distribution facilities for surface and ground water.

Riverdale I.D. currently has the facilities in place to operate a conjunctive use program, and in fact has been operating in this manner for some time. Expansion of the recharge facilities may be necessary to fully offset the apparent overdraft in the District.

I. Identification of Well Construction Policies

Improperly constructed wells may result in contaminated ground water by establishing a pathway for pollutants entering a well through drainage from the surface, allowing mixing between aquifers of varying water quality, or the unauthorized disposal of waste into the well. Fresno County has enacted and is responsible for enforcing an County Well Ordinance that regulates well construction.

J. Construction and Operation of Ground Water Management Facilities

Effectively managing a ground water supply requires facilities that protect the quality and assure that the quantity of ground water in storage is sufficient to meet long-term operational goals. Riverdale I.D. appears to have most facilities in place to meet long-term goals. Recharge capabilities may require expansion in the future as the intended ground water monitoring program better defines the extent of the problem.

K. Development of Relationships with Federal, State and Local Regulatory Agencies

The development of relationships between the ground water management district and the various regulatory agencies is an important part of an effective ground water management plan. This plan will be submitted to DWR and Riverdale I.D. will work with KRCD, DWR and USBR to monitor and report

ground water conditions within the District. Ground water management activities will be coordinated with surrounding Kings Basin ground water management agencies through annual meetings. Two such meetings have already occurred, with representatives from Riverdale I.D., KRCD, Mid Valley Water District, Raisin City Water District, Consolidated I.D., Fresno I.D., Tranquillity I.D., Alta I.D., James I.D., County of Fresno and City of Fresno in attendance at one or both of the meetings.

L. Review of Land Use Plans and Coordination with Land Use Planning Agencies

An important component of developing a ground water management plan is the review of land use plans for the surrounding area or basin, and coordinating efforts with regional and local land use planning agencies. Land use planning activities in unincorporated areas of Fresno County are performed by the County of Fresno's Department of Public Works planning department, and overseen by the Fresno County Planning Commission. While the communities of Lanare and Riverdale are unincorporated, and as such do not have planning departments, they do have utility districts that provide water and sewer service. Riverdale I.D. proposes to pursue "memorandums of understanding" (MOU's) with the two communities to coordinate all party's on-going ground water management activities, mainly by facilitating the sharing of mutually needed data.

VI. GROUND WATER MANAGEMENT PROGRAM

A. Program Components

This Program requires the implementation of the following Plan Elements, as defined in the previous section:

1) Monitoring and analysis of ground water levels.

2) Development of relationships with regulatory agencies, neighboring agencies with ground water management authority, and the communities of Riverdale and Lanare.

If additional funds are necessary to implement the Program and are outside the current authority of the Riverdale I.D. to raise, but within the powers granted by AB 3030, a public vote will be required. A simple majority is necessary to approve a measure to levee a fee for ground water management.

D. Implementation Schedule

Upon adoption of the Ground Water Management Plan, the Program will be implemented on the following schedule:

1) Initiate a ground water monitoring program within six months.

2) Begin developing relationships with other agencies immediately.

3) Execute MOU's with the communities of Riverdale and Lanare within one year.

APPENDIX A

Riverdale I.D. Resolution No. 93-6

Resolution of Intention of Riverdale Irrigation District
to Draft a Ground Water Management Plan

RESOLUTION NO. 93-6

RESOLUTION OF INTENTION
OF RIVERDALE IRRIGATION DISTRICT
TO DRAFT A GROUNDWATER MANAGEMENT PLAN

WHEREAS, Part 2.75 of Division 6 of the California Water Code permits the adoption and implementation of groundwater management plans to encourage authorized local agencies providing water service to manage groundwater resources within their service areas; and

WHEREAS, the Riverdale Irrigation District (the "District") is an authorized local agency providing water service and may therefore adopt and implement such a groundwater management plan; and

WHEREAS, a public hearing was held on November 2, 1993 to discuss the adoption and implementation of a groundwater management plan; and

WHEREAS, the Board believes the groundwater can best be managed, as in the past, by the owners of lands overlying the groundwater basin; and

WHEREAS, the Board believes that the adoption of a groundwater management plan will be in the best interests of the District's landowners and water users and can help meet the projected long-term water needs of the District;

BE IT RESOLVED, that it is the intention of the District to draft a groundwater management plan in accordance with Part 2.75 of Division 6 of the California Water Code, and the District's consultant is hereby authorized and directed to prepare such a plan;

RESOLVED, that this resolution shall be deemed a resolution of intention in accordance with California Water Code Section 10753.2;

RESOLVED, that the Director will consult with and solicit involvement from other agencies impacted by the action of the District in carrying out a groundwater management plan;

RESOLVED, that the District's proposed groundwater management plan shall be completed no later than two years from the date of adoption of this resolution;

RESOLVED, that after such plan has been prepared, the District will conduct a second public hearing in accordance with the California Water Code Section 10753.5, et seq. to determine whether to adopt the plan;

RESOLVED, that the officers of the District are authorized and directed to publish this resolution of intention to draft a groundwater management plan in accordance with the provisions of California Water Code Section 10753.3 and to provide interested persons with a copy of this resolution upon written request;

RESOLVED, that the Board hereby authorizes each of the officers of the District to execute all documents and take any other action necessary or advisable to carry out the purpose of this resolution.

The foregoing Resolution was passed and adopted this 7th day of December, 1993, by the following vote:

AYES: Director Jensen, Director Coelho, Director Ayres

NOES: None

[illegible]

ABSENT: None

RIVERDALE IRRIGATION DISTRICT

By: Dean L. Jensen
DEAN L. JENSEN, President

CERTIFICATE OF SECRETARY

The undersigned certifies that she is the Secretary of the Riverdale Irrigation District and that the foregoing resolution was adopted by the Board of Directors in said District at a meeting thereof, duly and regularly held on December 7, 1993 following public hearing at which meeting a quorum of the Board of Directors was at all times present and acting.

IN WITNESS WHEREOF, I have set my hand this 7th day of December, 1993.

Kimberley Mayfield
Kimberley Mayfield, Secretary
Riverdale Irrigation District

APPENDIX B

Draft Memorandum of Understanding
Between Riverdale Irrigation District and
Communities within the District

MEMORANDUM OF UNDERSTANDING
BETWEEN
RIVERDALE IRRIGATION DISTRICT
AND
XXXXXXXXXXXXXXX

ARTICLE I - AGREEMENT

The articles and provisions contained herein constitute a bilateral and binding agreement by and between RIVERDALE IRRIGATION DISTRICT, a California Irrigation District ("District") and _____ ("Agency").

ARTICLE II - RECOGNITION

The District has developed a Ground Water Management Plan ("Plan"). Agency consents to the Plan, pursuant to Water Code section 10750.8. 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 ("MOU") between such Agency and District.

ARTICLE III - PURPOSE

It is the purpose of this MOU, entered willingly, between District and Agency, to document the interests and responsibilities of both parties in the adoption and implementation of a coordinated 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 arise.

ARTICLE IV - COORDINATION

There shall be an annual coordinating meeting ("Meeting") between the District and the Agency. District shall give notice to the Agency thirty (30) days prior to date of the Meeting. 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 - OBJECTIONS

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.

ARTICLE VIII - CLARIFICATIONS

In order to avoid disputes regarding various provisions of the Plan, Agency and District agree with respect to the following such provisions:

"DISTRICT"

RIVERDALE IRRIGATION DISTRICT, a California Irrigation District

by _____
Dean Jensen, President

by _____
Kimberley Mayfield, Secretary

"AGENCY"

xxxxxxxxxxxxxxxxxxxx

by _____