AB 3030 MEETING DECEMBER 8. 1994

[illegible signature]	SMWCD.
Richard E. Adam	SMWCD
MAURICE F. TWITCHELL	SMVWCD
LON FLETCHER	Hampton Farming / Cachuma RCD.
BRENDA KELSCH	GROWER-SHIPPER VEG ASSN
ROGER W. BRETT	CALIF. CITIES WATER
Scott Slater	Hatch And Parent - Cal. Cities
Mikel Hartsock	So. Ca. Water Co.
SID HAMILTON	WOODSTOCK RANCH, (S.Y. UPLANDS)
Jim Mcnugh	Newhall Land & Farming Co.
John Frye	Newhall Land & Farming Co.
BRIAN McCord	PACIFIC Engineering
Jeanne Sparks	Fifth District
JIM RADCLIFFE	BOBCAT SPRINGS MUTUAL
JULIUS BLUMENTHAL	" " "
Don Lewis	Santa Ynez Uplands GMC
Doug Jones	NIPOMO CSD
ALAN DEAMS	OWNER
REESE RIDDIOUGH	CITY OF SANTA MARIA
Janet Pittman	mediation Institute
Alan Kraster	mediation Institute
David Dunn	SMWCD
JAMES O. DALE	ORCUTT
MAYNARD SILVA	CITY OF GUADALUPE
TOM URBANSKE	CITY of SANTA MARIA
DWAYNE CHISAM	City OF SANTA MARIA
HERB GERFEN	JT. WTR. COMM.

Warren Bendixen	Univ of Calif.
Dorothy Laine	Calf Women for Ag
Ron Souza	Grower / H+R Souza Inc
JAMES R SHARER	SMUCD
PAM COSBY	COUNTY OF SANTA BARBARA

Officers
PRESIDENT
JAMES R. SHARER
SECRETARY
MAURICE F. TWITCHELL

SANTA MARIA VALLEY WATER CONSERVATION DISTRICT

P. O. BOX 364 -:- PHONE (805) 925-5212
SANTA MARIA, CALIFORNIA 93456

December 5, 1994

To All Parties Interested in the Proposed Joint Groundwater Management Plan:

This letter will remind you that the next meeting of the ad hoc group for the formulation of a joint groundwater management plan for the Santa Maria Valley will be held on Thursday, December 8, 1994, at 1:00 P.M.

The meeting will be held in the Minami Center in Adam Park in the City of Santa Maria. Minami Center is located at 600 West Enos Drive in the middle of Adam Park. The directions are from the 101 freeway, take Stowell Road exit and travel west to Depot Street, turn left on Depot Street. The Minami Center is located near the intersection of Depot and Enos.

At the meeting, members of the Fox Canyon Groundwater Management Agency will speak of their experience with their groundwater management plan. Enclosed is a flyer giving information of the presentation.

Also enclosed is a map submitted by Roger Brett of Cal Cities showing the approximate location of the northern boundary of the Santa Maria Valley groundwater basin in the Nipomo Mesa prepared by Engineer Charles Lawrence. This subject came up at the last meeting.

Also enclosed are copies of except from a Bureau of Reclamation publication concerning groundwater discharge into the Pacific Ocean. This copy was submitted by Rob Almy and utilized during his comments at the last meeting.

Also enclosed is a list of the persons attending the November 17, 1994 meeting. I have do not have a "hard copy" of the minutes of the last meeting that will be distributed in the future.

Yours very truly,

Maurice F. Twitchell,
Secretary

MFT:gn
Encls.

GROUNDWATER MANAGEMENT WORKSHOP
THE FOX CANYON GROUNDWATER MANAGEMENT AGENCY EXPERIENCE

PURPOSE: At a joint meeting of the Santa Maria, Santa Ynez Uplands, and Buellton Groundwater Management Committees, several persons involved with the formation and ongoing administration of the Fox Canyon Groundwater Management Agency (GMA) will share their perspectives on the local groundwater management process.

DATE AND TIME: Thursday, December 8, 1994
1 to 4 p.m.

LOCATION: Minami Center
600 West Enos
Santa Maria, California

(From the 101 Freeway, take the Stowell Road exit and head west. Turn left on Depot Road. The Minami Center is located at the intersection with Enos.)

SPEAKERS:

SAM McINTYRE
ProAg, Inc., Fox Canyon GMA Board member representing large agricultural water pumpers.

MIKE CONROY
Conroy Farms, Inc., Fox Canyon GMA Board member representing small agricultural water pumpers.

REX LAIRD
Ventura County Farm Bureau, Involved with initial GMA formation.

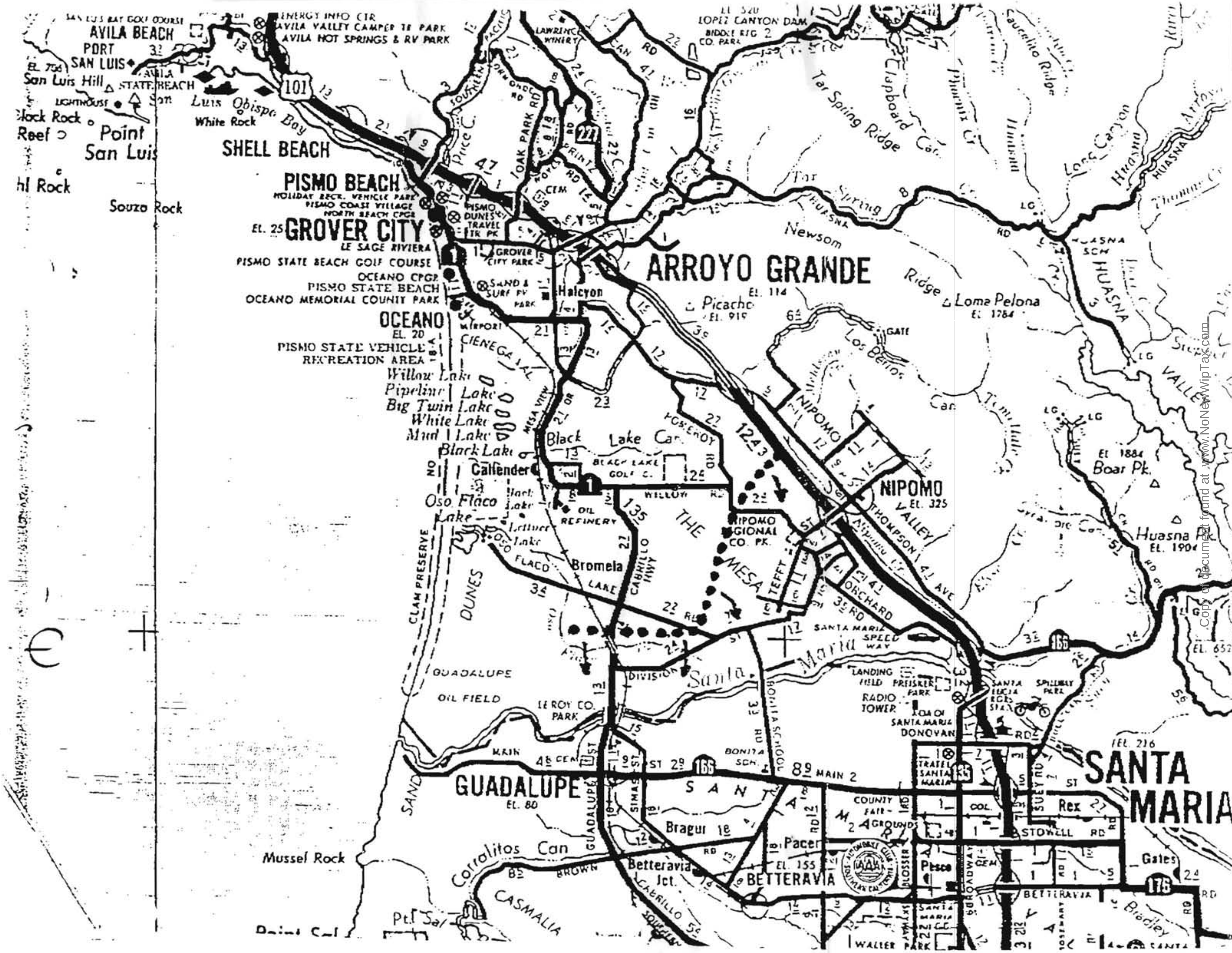
TOPICS:

- Groundwater management from an agricultural perspective.
- How their viewpoints have changed from the initial groundwater management discussions to today.
- Benefits of locally controlled groundwater management
- How GMA regulations have affected their farming operations
- Success of agricultural efficiency program
- Developing cooperation among agricultural and urban water users

There will be plenty of time for questions and answers from the audience.

FOR MORE INFORMATION:

Call Pam Cosby, Santa Barbara County Water Agency, at (805) 568-3545.


AVILA BEACH
PORT SAN LUIS
San Luis Hill
LIGHTHOUSE
Point San Luis
Souza Rock
San Luis Obispo Bay
White Rock
SHELL BEACH
PISMO BEACH
HOLIDAY RECR. VEHICLE PARK
PISMO COAST VILLAGE
NORTH BEACH CPGR
GROVER CITY
LE SAGE RIVIERA
PISMO STATE BEACH GOLF COURSE
OCEANO CPGR
PISMO STATE BEACH
OCEANO MEMORIAL COUNTY PARK
OCEANO
EL. 20
PISMO STATE VEHICLE RECREATION AREA
ENERGY INFO CTR
AVILA VALLEY CAMPER TR PARK
AVILA HOT SPRINGS & RV PARK
LOPEZ CANYON DAM
ARROYO GRANDE
Halcyon
Picacho
Loma Pelona
Tar Spring Ridge
Newsom Ridge
Los Berros
Black Lake Can
BLACK LAKE GOLF C.
Willow Lake
Pipeline Lake
Big Twin Lake
White Lake
Mud Lake
Black Lake
Callender
Oso Flaco Lake
OIL REFINERY
Bromela
THE MESA
NIPOMO REGIONAL CO. PK.
NIPOMO
EL. 325
NIPOMO VALLEY
THOMPSON AVE
ORCHARD RD
Boar Pk.
Huasna Pk.
HUASNA
CLAM PRESERVE
DUNES
GUADALUPE OIL FIELD
LE ROY CO. PARK
DIVISION
Santa Maria
SANTA MARIA SPEED WAY
LANDING FIELD
PREISKER PARK
RADIO TOWER
DONOVAN
SANTA MARIA
GUADALUPE
EL. 80
BONITA SCH.
MAIN
COUNTY FAIR GROUNDS
STOWELL RD
Rex
Bragur
Pacer
Betteravia Jct.
BETTERAVIA
Pesco
Gates
Mussel Rock
Corralitos Can
BROWN
CASMALIA
Bradley
101
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DISCHARGE

Discharge of ground water from the Santa Maria basin has occurred in four ways:

1. Underflow to the ocean.
2. Evapotranspiration by vegetation.
3. Overflow of the ground-water basin resulting in streamflow to the ocean.
4. Withdrawals from wells.

Before the turn of the century, practically all discharge from the basin was by natural means, in about 1898, however, irrigation by water from wells was begun in the valley, and since the early 1920's most of the discharge of ground water has been from wells (Worts, 1951, p. 84). Thus, irrigation, much of it from formerly flowing wells in the confined area, has resulted in a decline of water level near the west end of the valley. It has also affected the natural discharge by:

1. Decreasing the seaward gradient and reducing the underflow to the ocean.
2. Lowering the water level below the root zone of phreatophytes (the natural vegetation) and causing them to die.
3. Lowering the water level at the landward end of the confined area, thereby stopping natural ground-water overflow, which formerly discharged as streamflow to the ocean.

UNDERFLOW TO THE OCEAN

Under natural conditions, ground-water underflow discharges to the ocean in an undetermined area offshore, as is indicated by the seaward hydraulic gradient at the west end of the ground-water basin. The quantity of discharge can be estimated according to Darcy's Law expressed in the equation $Q=P_fIA$, where Q is the discharge, in gallons per day; P_f is the field coefficient of permeability, in gallons per day per square foot of aquifer at field temperature (64°F); I is the hydraulic gradient, in feet per foot; and A is the cross-sectional area, in square feet, through which discharge occurs. Worts (1951, p. 95) determined the values of coefficient of permeability, the cross-sectional area, and the hydraulic gradient for the coastal end of the Santa Maria Valley ground-water basin as follows:

Geologic unit	*Cross-sectional area (sq ft)*	*Field coefficient of permeability (gpd per sq ft)*
Alluvium (lower member)	2, 238, 000	2, 000
Undifferentiated deposits of Pliocene and Pleistocene age:		
Paso Robles and Orcutt Formations	29, 200, 000	65
Careaga Sand	11, 800, 000	75

Year	*Hydraulic gradient (ft per mile)*
1918	10
1936	6
1944	8

No new data are available on the permeability of the aquifers, but recent data from oil wells drilled near the coast generally substantiate the cross-sectional areas shown in the previous table. Hydraulic gradients of ground water are indicated by water levels, and, in 1961, a gradient of 5 feet per mile in the alluvium was computed from water levels in wells near the coast. The ground-water gradient in the alluvium thus determined in 1961 is considered representative of gradients of water in the deeper aquifers.

On the basis of amounts of underflow computed for 1918, 1936, 1944, and 1959 and correlated with hydrographs shown in figure 2, annual underflow to the ocean is estimated for the 41-year period (calendar years 1918–58) and is shown in table 5. Additional water-level data will be necessary to substantiate the assumed hydraulic gradient of ground water in the deep aquifers.

Table 5 shows a maximum annual underflow to the ocean of 16,000 acre-feet in 1918 and 1919, when the ground-water basin was nearly full and the hydraulic gradient was 10 feet per mile. By 1958, underflow had decreased to about 8,000 acre-feet per year and the gradient

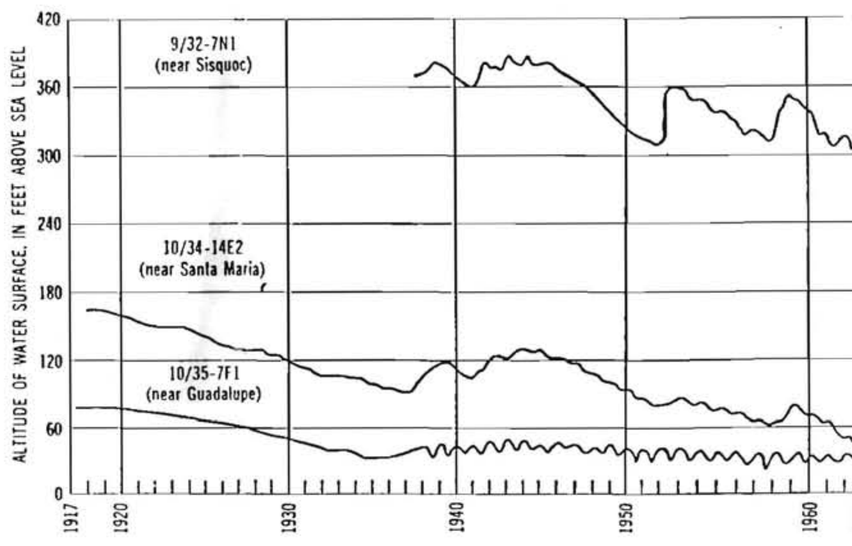

FIGURE 2.—Hydrographs of wells near Sisquoc, Santa Maria, and Guadalupe.

was approximately 5 feet per mile. The estimated average annual discharge by underflow into the ocean was about 11,000 acre-feet for the 41-year period 1918–58, and was about 8,000 acre-feet for the 9-year period 1950–58.

TABLE 5.—*Estimated underflow to the ocean from the ground-water basin, 1918–58*

[All values are rounded]

Calendar year	Underflow to ocean (acre-ft)	Calendar year	Underflow to ocean (acre-ft)	Calendar year	Underflow to ocean (acre-ft)
1918	[1] 16,000	1932	11,000	1946	12,000
1919	16,000	1933	10,000	1947	12,000
1920	16,000	1934	10,000	1948	9,300
		1935	10,000	1949	9,300
1921	16,000			1950	8,500
1922	15,000	1936	[1] 9,500		
1923	15,000	1937	9,500	1951	8,400
1924	15,000	1938	10,000	1952	8,300
1925	14,000	1939	12,000	1953	8,300
		1940	11,000	1954	8,200
1926	14,000			1955	8,200
1927	14,000	1941	11,000		
1928	13,000	1942	12,000	1956	8,100
1929	12,000	1943	12,000	1957	8,100
1930	12,000	1944	[1] 12,800	1958	8,000
1931	11,000	1945	13,000		

Underflow to ocean (acre-ft)	1918–58	1950–58
Total	470,000	74,000
Annual average	11,000	8,000

[1] Estimate by Worts (1951, p. 95, table 11).

WITHDRAWALS BY WELLS

Most of the ground-water discharge is by pumping from wells, and the water is used for agriculture, public supply, and industry. By far the largest quantity of pumped water is for irrigation of agricultural lands. A few irrigation wells are pumped by diesel or natural-gas engines, and the others are pumped by electric powerplants. The quantity of water pumped for public supply is determined by metered flow, and the quantity of water pumped for agriculture and industry is estimated.

Estimates of the quantity of water pumped for irrigation from 1932 to 1958 are based on electric-power data obtained from the power company. Estimates for years prior to 1932 are based on irrigated acreage and duty of water as described by Worts (1951, p. 85 and 88).

For the period 1945–58, estimates of the pumpage for irrigation are computed by dividing the electric power consumed (kilowatthours (kwhr)) during the base year of 1950 by the appropriate energy factor (kwhr per acre-ft) for each of 15 power areas. These areas were selected on the basis of pumping lift. Average energy factors for each power area were determined from pump-efficiency data for the years 1947–53. Energy factors were adjusted each year to account for increases in pumping lift in those power areas where water levels had changed since 1950. Pump efficiencies ranged from 30 to 80 percent and averaged 55 percent. The unit-power factor averaged 1.6 kwhr per acre-ft. per foot of lift.

Table 6 lists the net pumpage for irrigation for the 41-year period, calendar years 1918–58. Data for the years 1929–44 are from Worts (1951, p. 89). Net pumpage for irrigation is computed as 80 percent of the gross; use of this percentage leaves 20 percent of the gross for return to the ground-water body.

TABLE 6.—*Net pumpage for irrigation, 1918–58*

[All values are rounded. Pumpage for 1918–28 estimated by author from irrigated acreage and duty of water; that for 1929–44 estimated by Worts (1951, p. 89); that for 1945–58 estimated by author from electric power consumption]

Calendar year	Net pumpage (acre-ft)	Calendar year	Net pumpage (acre-ft)	Calendar year	Net pumpage (acre-ft)
1918	5,000	1932	41,000	1946	88,000
1919	5,000	1933	36,000	1947	96,000
1920	6,000	1934	38,000	1948	83,000
		1935	41,000	1949	88,000
1921	11,000			1950	90,000
1922	16,000	1936	48,000		
1923	22,000	1937	47,000	1951	74,000
1924	26,000	1938	47,000	1952	87,000
1925	28,000	1939	52,000	1953	77,000
		1940	60,000	1954	83,000
1926	31,000			1955	88,000
1927	34,000	1941	48,000		
1928	36,000	1942	49,000	1956	87,000
1929	40,000	1943	54,000	1957	86,000
1930	42,000	1944	57,000	1958	111,000
1931	43,000	1945	82,000		

Net pumpage (acre-ft)	1918–58	1950–58
Total	2,180,000	780,000
Annual average	53,000	87,000

In addition to pumpage for irrigation, a comparatively small amount of water is pumped each year for industrial, public-supply, domestic, and livestock uses. This pumpage is shown in table 7.

Estimates of pumpage for industrial use are based on pump capacity, operating time, and product or process requirements.

For the period 1952–58, records of public water-supply pumpage were furnished by the city of Santa Maria; and, for the period prior to 1952, estimates of pumpage were made from per-capita-use data derived for the years during which pumpage was metered. Both excess water applied to lawns and sewage effluent return an unknown quantity of water to the ground-water body. However, the amount probably is small and, therefore, has been disregarded. Estimates of pumpage for the city of Guadalupe were obtained from the Campodonico Water Works. Estimates of public water-supply pumpage used by other communities and rural areas in the valley are based on a per capita use of 150 gallons per day.

The Santa Barbara County Farm Advisor reported (Ray Gieberger, oral commun., 1962) that in recent years about 6,500 head of dairy cattle and about 15,000 head of beef cattle in the Santa Maria Valley have required more than 1 million gallons of water a day, or approximately 1,100 acre-feet per year.

Prior to 1946 a considerable quantity of water was discharged by flowing wells in the western part of the confined area. However, by 1949 these wells had stopped flowing. Estimates of the quantity of water discharged from these wells are based on a probable maximum flow of 2,000 acre-feet in 1918, a minimum flow of 500 acre-feet in 1936 (table 7), and an average flow of about 1,200 acre-feet a year for the period 1942–45 (Worts, 1951, p. 91). Estimates for the periods 1918–36 and 1945–51 are apportioned in accordance with a probable flow of 2,000 acre-feet in 1918 and no flow since 1948.

Estimates of withdrawal of water by pumping for purposes other than irrigation are shown in table 7.

CHANGE IN AMOUNT OF GROUND WATER IN STORAGE

The final element of the hydrologic equation, the change in amount of ground water in storage, is the difference between the quantity of water in storage at the beginning of a selected period and that in storage at the end of the same period. Water-level data were used to compute the volume of water in storage above sea level in 1918, 1950, and 1959, as shown in table 2. However, only data for 1950 and 1959 are adequate for making estimates of storage changes throughout the complete basin, and these show a depletion in storage of about 6 percent for the period 1950–59. Water-level data for 1918 are adequate for the valley floor but are largely extrapolated for the upland areas and are subject to error.

As is shown in table 2, the amount of ground water in storage decreased about 860,000 acre-feet in the period 1918–59, an average annual decrease of about 21,000 acre-feet. The amount of ground water in storage decreased about 150,000 acre-feet in the period 1950–59, an average annual decrease of about 17,000 acre-feet. No estimate of storage change has been made for the probable landward displacement of the fresh water–sea water interface in the offshore extension of the aquifer.

TABLE 7.—*Estimated withdrawal of water by wells for uses other than irrigation, 1918–58*

[All values rounded]

Calendar year	Industrial use (acre-ft)	Public-supply and domestic use (acre-ft)		Livestock use (acre-ft)	Flowing wells (acre-ft)	Total (acre-ft)
		Santa Maria	Other			
1918	200	500	500	250	2,000	3,400
1919	500	500	500	250	2,000	3,800
1920	800	550	500	250	2,000	4,100
1921	1,000	600	500	250	1,900	4,200
1922	1,100	600	500	250	1,900	4,400
1923	1,300	600	600	250	1,800	4,600
1924	1,400	700	600	250	1,800	4,800
1925	1,600	700	600	250	1,700	4,800
1926	1,600	700	600	250	1,600	4,800
1927	1,800	800	600	250	1,500	5,000
1928	1,900	800	600	250	1,400	5,000
1929	2,000	800	600	250	1,300	5,000
1930	2,100	900	700	250	1,200	5,200
1931	2,200	1,000	700	250	1,100	5,200
1932	2,400	1,000	700	250	900	5,200
1933	2,400	1,000	700	250	700	5,000
1934	2,600	1,100	700	250	600	5,200
1935	2,500	1,200	700	250	600	5,200
1936	2,700	1,200	700	250	500	5,400
1937	2,800	1,300	700	250	600	5,600
1938	2,900	1,300	700	250	700	5,800
1939	3,000	1,400	700	250	800	6,200
1940	3,100	1,400	800	250	900	6,400
1941	3,200	1,400	800	250	1,000	6,600
1942	3,500	1,600	800	250	1,100	7,200
1943	4,000	1,800	800	250	1,200	8,000
1944	4,200	1,700	800	250	1,300	8,200
1945	3,800	1,800	800	500	1,000	7,900
1946	3,700	1,800	800	750	500	7,600
1947	3,800	2,000	900	750	200	7,600
1948	3,800	2,000	900	750	100	7,600
1949	3,800	2,100	900	900	0	7,700
1950	3,800	2,200	1,000	1,200	0	8,200
1951	3,800	2,200	1,000	1,200	0	8,200
1952	3,900	2,300	1,000	1,200	0	8,400
1953	4,000	2,600	1,000	1,200	0	8,800
1954	4,000	2,600	1,100	1,200	0	8,900
1955	4,000	2,600	1,100	1,300	0	9,000
1956	4,100	2,800	1,100	1,300	0	9,300
1957	4,100	2,800	1,100	1,300	0	9,300
1958	4,200	2,800	1,200	1,300	0	9,500
Total	110,000	60,000	32,000	22,000	36,000	260,000

Withdrawal of water (acre-ft)	1918–58	1950–58
Total	260,000	80,000
Annual average	6,400	8,900

SUMMARY AND SIGNIFICANCE OF THE HYDROLOGIC EQUATION

Table 8 summarizes the hydrologic equation for the periods 1918–59 and 1950–59. Estimates of recharge, discharge, and change in storage are based on the same methods as those by Worts (1951, p. 72–123). However, estimates of storage change have been revised by the availability of extensive water-level data for the springs of 1950 and 1959. The most significant feature brought out by an analysis of the two periods of comparable recharge is that the equation is almost in balance for the period 1918–59. On the other hand, large withdrawals of ground water during the period 1950–58 have caused only a small depletion of ground water in storage; the result has been a relatively large imbalance or discrepancy in the hydrologic equation.

TABLE 8.—*Hydrologic equation for the Santa Maria Valley ground-water basin*

[All values rounded]

Average annual recharge (acre-ft)	*1919-59*	*1951-59*	
Seepage loss from streams (table 3)	39,000	41,000	
Infiltration of rain (table 4)	8,200	11,000	
Total	47,000	52,000	(1)
Average annual discharge (acre-ft)	*1918-58*	*1950-58*	
Underflow to ocean (table 5)	11,000	8,000	
Net pumpage:			
Irrigation (table 6)	53,000	87,000	
Other uses (table 7)	6,000	8,900	
Total	70,000	104,000	(2)
Equation balance (acre-ft)	*1918-59*	*1950-59*	
Recharge (1) minus discharge (2)	−23,000	−52,000	(3)
Average annual change in amount of ground water in storage (table 2)	−21,000	−17,000	(4)
Average annual discrepancy in hydrologic equation, (3) minus (4)	2,000	35,000	

The hydrologic equation shown in table 8 indicates an average annual discrepancy of about 35,000 acre-feet for the period 1950–59, compared to a near-balance for the period 1918–59, even though the annual average precipitation (table 4) was approximately the same for both periods. Because water-level data for 1950 and 1959 are more reliable than those for 1918, the estimate of storage change (table 2) for the period 1950–59 probably is more accurate even though the imbalance is significantly greater. Also, the discrepancy in the equation for the period 1950–59 is of a magnitude that indicates a situation similar to that in other basins in Santa Barbara County; that is, the difference between recharge and discharge is considerably more than the change in storage indicates (Wilson, 1959, p. 86–88, and Evenson and others, 1962, p. 61–101). The difference between recharge and discharge for the period 1950–1959 is about three times the estimated change in storage.

All estimates for the various elements of the hydrologic equation are subject to errors which are expressed as the discrepancy in the hydrologic equation (table 8). Errors in the estimated recharge may be due to low estimates of penetration of rain and additional unknown sources of recharge. One source of additional recharge may be subsurface inflow from fractured or weathered zones in the consolidated rocks that border and underlie the basin. Errors in estimated net pumpage may be due to inaccurate estimates of return irrigation water.

Estimates of storage change may be low because estimates of specific yield are low or because some water is being mined from the submarine extension of the ground-water reservoir. As ground-water outflow to the ocean has gradually decreased during the past years, the fresh water-salt water interface presumably has moved landward and thereby has displaced a corresponding amount of ground water in storage in the offshore extension of the aquifer. This amount would be in addition to the previously calculated storage. Supplemental hydrologic data will be necessary before estimates can be made of the magnitude of the displaced amount of storage.

PERENNIAL YIELD AND OVERDRAFT

Perennial yield of a ground-water basin generally is the maximum amount of water than man may use from the basin annually and still maintain the ground water in the basin as a permanently renewable resource. Overdraft is the quantity of water pumped from the basin in excess of the perennial yield. Worts (1951, p. 123) stated, "The perennial yield of the water-bearing deposits in a coastal area is the rate at which water can be pumped from wells year after year without decreasing the storage to the point where the rate becomes economically infeasible, the rate becomes physically impossible to maintain, or the rate causes the landward migration of sea water into the deposits and thus renders the water chemically unfit for use."

The detainment of floodflow by Twitchell Dam and reservoir, on the Cuyama River, will result in an estimated increase of 21,200 acre-feet per year to the yield of the ground-water basin (U.S. Bureau of Reclamation, 1958, p. 12).

Estimates of perennial yield are based on the hydrologic equation for the 1950–59 period and may be determined by two methods: perennial yield may be equal to the average annual recharge minus the unrecoverable water, or it may be equal to the average annual pumping draft plus or minus the change in amount of ground water in storage.

NOVEMBER 17 1994

Maurice Twitchell	SMVWCD
LARRY FERINI	Betteravia Farms
PETER Adam	Adam Bros Farming
ED HOLT	Rancho Sisquoc
Glenn Teixeira	Teixeira Farms
Warren Bendixen	Univ of Calif - Coop Ext.
ROGER W. BRETT	CALIF CITIES WATER
Scott S. Slater	Cal Cities / Hatch and Parent
mike Hartsock	So Cal. Water Co.
Susan Ostrov	SLO Co Planning Commission
Richard Quandt	Growers-Shippers Veg. Assn.
Jim Cleath	Cleath & Associates
R. C. UPHAM	LAGUNA SANITATION
Alan Reeves	
Ron Souza	N&R Souza Inc
Stu Johnston	~~SM~~
David Sun	SMV Water Dist #4
Robert Almy	S. B. Co. Water Agency
Olga Howard	
BRIAN McCORD	PACIFIC ENGINEERING
MAYNARD SILVA	CITY OF GUADALUPE
Pam Cosby	Santa Barbara Co. Wtr Agency
J. C. Teixeira	S. M. W. U. C. Div 3
[illegible]	SMVWCD #6
[illegible] Sharer	SMVWCD #7
Richard E. Adam	SMVWCD #5
Z. T. Sheehy	Santa Maria Berry Farms SMFBureau

Proposed SMVWCD Board Guidelines Growers V3.1

10/4/94

Proposed Groundwater Management Plan for the Santa Maria Valley Groundwater Basin, herein after referred to as "the Basin", under Part 2.75, Section 10750 of Division 6 of the California Water Code, hereinafter referred to as "the Plan". The Plan shall be adopted and administered by the Santa Maria Valley Water Conservation District, herein after referred to as "the District".

Mission Statement

It is the Districts mission, in developing, adopting, and implementing the Plan, to protect and preserve the quality and quantity of groundwater in the Basin/District and to maximize the usable supply of groundwater for the benefit of all users in the Basin.

Article I
Introduction

Section 101. The District is a local agency within the meaning of The Groundwater Management Act of 1993 and is eligible to adopt and implement a Plan pursuant to the act.

Section 102. The District may enter into agreements with other private or public entities providing water service when determined necessary or beneficial by the District board.

Section 103. The District finds and declares that by enhancing and maximizing the storage capacity and yield of the Basin, both public and private interest will be served.

Section 104. In adopting and implementing the Plan the District will consider the potential impacts of the Plan and it's implementation on business activities, especially agriculture. The District will minimize any adverse impacts on those business activities.

SECTION 105. TO EXEMPT THE SERVICE AREAS OF THE CITY OF SANTA MARIA, CITY OF GUADALUPE, AND CALIFORNIA CITIES WATER (DOMESTIC WATER PURVEYORS) FROM AD VALORUM TAXATION AND REPRESENTATION IN THIS PLAN.

Article II
Goals and Objectives

Goal 1. To develop a groundwater management plan which can enhance and preserve the long term viability of the groundwater supply with respect to both quantity and quality.

Objectives

1.1 The District shall contract with or employ a qualified hydrologist whenever it is determined investigation into or study of the Basin is necessary.

1.2 The District shall promote development of replenishment water sources.

1.2a Support and promote control burning of rangeland, National Forest and wilderness areas within watershed areas.

1.2b Support and promote in stream and off stream projects to maximize percolation of river water.

1.2b1 Inflatable dams

1.2b2 Streambed grading

1.2b3 Retention or spreading basins

1.2b4 Injection Wells

1.2b5 Other projects

1.2c Support and promote cloud seeding.

1.3 Allow water banking, water transfers, or other conjunctive uses only when it will not jeopardize the rights of overlying landowners

1.3a Oppose water transfers or other conjunctive uses that may jeopardize the rights of overlying landowners.

1.4 Monitor for subsidence.

1.5 Explore need to monitor for salt water intrusion.

1.6 Monitor and reduce point sources of pollution.

1.6a Waste water treatment plants

1.6b Brine recharge softeners

1.6c Softener brine injection wells

1.6d Other point source pollution.

1.6e Solid waste landfill.

1.7 Monitor non-point source pollution.

1.8 Manage Twitchell Reservoir.

1.8a Study measures to mitigate siltation.

1.9 Adopt well destruction guidelines.

1.11 Prepare annual reports on the status of the Basin.

1.11a Quality

1.11b Quantity

1.11c Efforts to enhance Basin.

1.11d Develop a method for distribution of the annual status reports to the relative Local, State, and Federal regulatory agencies.

Goal 2. To develop a groundwater management Plan which protects and preserves local control over the groundwater resource.

Objectives.

2.1 Preserve and support overlying uses of groundwater in the Basin.

2.2 No rules shall be adopted which may infringe on the rights of overlying users of groundwater, as provided for under California Water Law.

2.3 Issue reports on water availability and projected availability for use by land use planning agencies.

2.4 Consider financial impact of projects on business.

2.5 Retain Ad Velorum tax method of funding.

2.6 Avoid funding sources which will adversely affect overlying rights to groundwater

Goal 3. Adopt methodology for evaluating hydrologic data to determine storage capacity and contents of the Basin.

Objectives.

3.1 Conduct Hydrological evaluations to determine status of the basin. These evaluations will use definitions consistent with California law. All Hydrological evaluations must be consistent with and explain historically observed fluctuations in water levels over the time period of 1937 to the present for which the board finds that reliable data exists.

10/6 810 W. Church 2:00 DRAFT 9/23/94 "GOALS"

PROPOSED JOINT GROUNDWATER MANAGEMENT PLAN FOR THE SANTA MARIA VALLEY GROUNDWATER BASIN

MISSION STATEMENT

It is Santa Maria Valley Water Conservation District's mission, in developing and implementing a coordinated groundwater management plan, to protect and preserve the quantity and quality of groundwater in the Santa Maria Valley, and to maximize the long-term groundwater supply for the common benefit of agricultural, municipal, industrial and commercial users in the Santa Maria Valley Groundwater Basin.

ARTICLE I
INTRODUCTION

SECTION 101. The SANTA MARIA VALLEY WATER CONSERVATION DISTRICT (DISTRICT) is a local agency within the meaning of the Groundwater Management Act of 1993 (Water Code section 10750 et seq.) and is eligible to adopt and implement a coordinated groundwater management plan pursuant to that Act.

SECTION 102. As part of its efforts to encourage local agencies within the Santa Maria Valley Groundwater Basin to adopt and implement a coordinated groundwater management plan, the DISTRICT ~~has~~ may enter~~ed~~ into a Memorandum of Understanding with ____________ ____________, ____________, and ____________. All of the participating agencies pursuant to this Memorandum of Understanding shall, at least annually, meet to review and coordinate this groundwater management plan.

102.5

SECTION 103. The DISTRICT finds and declares the coordinated management of the Santa Maria Valley Groundwater Basin is in the public interest and will provide for the common benefit of the water users within the basin.

SECTION 104. In adopting this ~~coordinated~~ groundwater management plan and in adopting ~~rules and regulations to implement and enforce~~ the plan, the DISTRICT has considered the potential impact of this plan and those rules and regulations on business activities, including agricultural operations. The DISTRICT has determined the adoption of this plan and those rules and regulations will provide benefits to agricultural, municipal, industrial and commercial users which outweigh any economic hardship that may result. The DISTRICT has minimized, to the extent practicable and consistent with the protection of groundwater resources, any adverse impacts on those business activities.

ARTICLE II
GOALS AND OBJECTIVES

Quantity **GOAL 1: TO DEVELOP A ~~COORDINATED~~ GROUNDWATER MANAGEMENT PLAN WHICH PROVIDES IN-BASIN USERS WITH A LONG-TERM RELIABLE GROUNDWATER SUPPLY.**

OBJECTIVES:

1.1 To the extent practicable, utilize existing groundwater monitoring programs.
1.2 Develop replenishment water sources.
1.3 Develop water banking, so as to conjunctively utilize the basin.
1.4 Monitor for subsidence.
1.5 Maximize basin storage, thereby minimizing pump lifts, while at the same time avoiding the waste or loss of water.
1.6 Advocate watershed management programs.
 1.6.a Controlled burns.
 1.6.b Cloud seeding.
 1.6.c Modified Twitchell Reservoir operations.
 1.6.d In/off stream retention and spreading basins.
1.7 Advocate water conservation programs.
 1.7.a Municipal.
 1.7.b Agricultural.
 1.7.c Other users.
 1.7.d Utilize existing data/studies to the extent practicable.
1.8 Develop regulations/criteria for transfer of water within or outside the basin.
1.9 Avoid excessive pumping lifts to the extent practicable.
1.10 Establish and maintain a reasonable and acceptable hydrologic balance.

GOAL 2: TO DEVELOP A MANAGEMENT PLAN WHICH IMPROVES AND PROTECTS LONG-TERM GROUNDWATER QUALITY.

OBJECTIVES:

2.1 Monitor for and prevent salt water intrusion.
2.2 Identify nonpoint sources of pollution.
2.3 Reduce point sources of pollution.
 2.3.a Waste water plants.
 2.3.b Brine recharge softeners.
 2.3.c Other point source pollution.
2.4 Adopt well construction policies.
2.5 Adopt well destruction policies. Use state DWR programs.
2.6 Advocate "best quality" recharge projects.
2.7 Manage pumping patterns to preserve and enhance improved water quality.
2.8 Monitor for and prevent subsidence.

GOAL ~~3~~ 4: TO PROTECT AND PRESERVE THE RIGHTS AND BENEFICIAL USES OF ALL GROUNDWATER PRODUCERS WITHIN THE BASIN.

OBJECTIVES:

3.1 Advocate physical solutions.
3.2 Avoid litigation.
3.3 Establish water use guidelines for projects.
3.4 Include all water producers from the common sources of supply in the basin.
3.5 Protect pumping/property rights.
3.6 Protect existing points of extraction.
  3.6.a Well permitting.
  3.6.b Well registration.
  3.6.c Notification of new drilling.
  3.6.d Monitoring water levels and quality in key wells.
  3.6.e Well spacing requirements.
  3.6.f Extraction reports.
3.7 Develop well head protection program against contamination.
3.8 Prioritize groundwater uses in event of shortage.
3.9 Provide for storage/storage use rights.
3.10 Facilitate efficient water use.

GOAL ~~4~~ 5: TO DEVELOP A GROUNDWATER MANAGEMENT PLAN WHICH PROTECTS AND PRESERVES LOCAL CONTROL OVER THE GROUNDWATER RESOURCE TO THE FULLEST EXTENT POSSIBLE.

OBJECTIVES:

4.1 Develop relationships with local, state and federal regulatory agencies.
4.2 Review land use plans and coordinate with land use planning agencies.
4.3 Develop consensus among groundwater users.
4.4 Reduce/avoid excessive regulation.
4.5 Provide equal authority among plan participants so that the plan may be equitably and fairly administered.

GOAL ~~5~~ 3: TO ~~DEVELOP AN ONGOING~~ Agree Develop HYDROGEOLOGIC ~~MODEL~~ DATA OF THE BASIN.

OBJECTIVES:

5.1 Adopt agreed upon data base and level of data accuracy.
  5.1.a Previous studies.
  5.1.b Basin boundaries.

5.1.c Well data.
5.1.d Precipitation.
5.1.e Water budget.
5.1.f Water quality.
5.1.g Water demands.
5.1.h Hydrogeology.
5.1.i Environmental impacts.
5.1.j Groundwater levels.
5.1.k Storage capacity.
5.1.l Usable storage capacity.
5.1.m Extractions.
5.1.n Safe yield.
5.1.o Overdraft.
5.1.p Pump lifts.

5.2 Develop project parameters and timelines for initial and subsequent studies and investigations.

5.3 Prepare annual report on status of the basin.

5.4 Prepare reports on development of supplemental water supplies.

5.5 Prepare reports on groundwater quality.

5.6 Establish technical committee of engineers, geologists, other water professionals to review data, studies, reports and information.

5.6.a Develop rules, regulations and procedures for operation of technical committee.
5.6.b Develop basis of eligibility to serve on technical committee.

GOAL 6: TO DEVELOP A GROUNDWATER MANAGEMENT PLAN WHICH PROTECTS AND ENHANCES RECHARGE OF THE BASIN AND ~~MAXIMIZES~~ utilize BASIN STORAGE CAPACITY.

OBJECTIVES:

6.1 Spreading grounds.
6.2 Well injection.

~~GOAL 7:~~ 10 ~~TO DEVELOP PROGRAMS WHICH PROMOTE PUBLIC PARTICIPATION AND INVOLVEMENT IN LOCAL GROUNDWATER MANAGEMENT EFFORTS.~~

OBJECTIVES:

~~7.1 Provide public information/education.~~
~~7.2 Communicate, monitor and assess performance of plan.~~

9
GOAL ~~8~~: TO DEVELOP AN EFFECTIVE DISPUTE RESOLUTION MECHANISM.

8.1 Develop administrative procedure.
8.2 Establish technical advisory group.

7
GOAL ~~9~~: TO DEVELOP ALTERNATIVE MECHANISM FOR FUNDING OF THE GROUNDWATER MANAGEMENT PLAN.

To develop additional funding sources for alternative water sources

9.1 Respect cost sensitivities and economic feasibility.
9.2 Identify local, state and federal sources of funding for studies, investigations, monitoring, etc.

8
GOAL ~~10~~: TO OBTAIN SUPPLEMENTAL WATER.

ARTICLE III
DEFINITIONS

10.1 Identify potential sources of supplemental water.
10.2 Establish technical committee for acquisition of supplemental water for purpose of ~~replenishing~~ maximize yield basin.
10.3 Investigate impact of proposed replenishment project on business within the basin area.
10.4 Identify/develop funding mechanism for acquisition of supplemental water and operation of the ~~replenishment~~ maximize yield of project.

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SANTA MARIA VALLEY WATER CONSERVATION DISTRICT

P. O. BOX 364 -:- PHONE (805) 925-5212
SANTA MARIA, CALIFORNIA 93456

October 17, 1994

To All Parties Interested in the Proposed Joint Groundwater Management Plan:

This letter will remind you that the next meeting of the ad hoc group for the formulation of the groundwater management plan for the Santa Maria Valley will be held on Thursday, October 20, 1994, at the hour of 3:00 p.m., at the City of Santa Maria Public Works Conference Room at 810 West Church Street.

Please note that for this meeting, the hour has been changed from 2:00 to 3:00 p.m.

It was agreed at the last meeting that the meeting would be devoted to discussing the following matters:

1. Control of saline water intrusions;

2. Identification and management of well head protection areas and recharge areas.

3. Regulation of the migration of contaminated groundwater;

4. Administration of well abandonment and well destruction program;

5. Identification of well construction policies.

The foregoing are five of the possible elements of a groundwater management plan specified in AB3030.

Several members of the group have asked for copies of the proposed goals discussed at the last meeting. Enclosed for your information and files are the following:

1. Proposed SMVWCD Board Guidelines, submitted by Peter Adam on behalf of the growers.

2. Proposed Joint Groundwater Management Plan for the Santa Maria Valley Groundwater Basin, which I understand was

developed, or in the process of being developed by the subcommittee on goals. The enclosed copy was also delivered to me by Peter Adam.

Yours very truly,

Maurice F. Twitchell

MFT/11
Enclosures