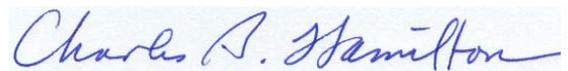


Groundwater Management Plan

Carpinteria Valley water District

August 14, 1996

Adopted and approved by the Board of
Directors of the Carpinteria Valley Water
District at a regular Board meeting held on
August 14, 1996, by resolution No 670



Charles B. Hamilton, Secretary

Table of Contents

	Page No.
Introduction	1
Description of Groundwater Basin	2
Estimated Storage	2
Historic Monitoring and Reports	2
Historic Variations in Groundwater Levels	3
Historic Variations in Groundwater Pumpage	3
Water Quality	3
Action Elements	4
Inventory of Wells	4
Monitoring of Groundwater Levels and Quality	4
Creation of a Database and Reporting System	5
Identification and monitoring of Recharge Areas	5
Implementation of a Sanitary Seal Retrofit Program	5
Implementation of a Well Abandonment Program	6
Dissemination of Public Information Relative to the Plan	6
Procedure for Changes to this Plan	6
Addendum-1 Clarifications to this Plan	
Basin Management by Other Agencies	7
Purpose and Goal of this Plan	7
Water Sampling & Monitoring Protocol	7
Use of Technology in Management	8
Recharge Areas	8
Figure 1	Map of Carpinteria Groundwater Basin
Exhibit A	State Water Code Section 13050
Exhibit B	Santa Barbara County Ordinance No. 3458
Exhibit C	Water Well Standards: State Of California Bulletin 74-81 (excerpts)
Exhibit D	California Well Standards Bulletin 74-90 (excerpts)

Introduction

Assembly Bill 3030 (AB3030), passed by the California Legislature in 1992, provides for management of the groundwater basin in order to protect water quality, maximize water supply, and to eliminate protracted legal battles over groundwater. The bill encourages local agencies to create and adopt groundwater management plans for their groundwater basins.

Based on the current information about the volume and quality of groundwater available in the Carpinteria Valley Basin, there appears to be no compelling reason for an aggressive approach to groundwater management by the Carpinteria Valley Water District (CVWD). There is, however, a clear need for systematic monitoring and analysis of groundwater levels and water quality in the Carpinteria Valley Basin. There is a **growing use** of the basin by private land owners, through private wells, as a source of irrigation water and the **continuing need** to maintain the groundwater basin as a sustainable drinking water resource for all. Systematic monitoring, analysis and reporting will provide an early warning/detection system, should the growing use of the basin begin to adversely affect the basin. As a management tool, the use of such a system allows for an informed decision-making process relative to possible groundwater management actions relative to other possible elements of a groundwater management plan identified in the legislation.

Responding to the AB3030 initiative, and the desire to accept the groundwater management challenge, Carpinteria Valley Water District's Board of Directors adopted a resolution of intention to draft a Groundwater Management Plan September 14, 1994.

Description of the Groundwater Basin

The Carpinteria Groundwater Basin extends from a small area located in Ventura County, east of the Santa Barbara County Line, across the Carpinteria Valley, to and including the small Toro canyon area on the west. The areal extent of the basin is about 12 square miles. See attached Figure 1 for map of the groundwater basin.

Estimated Basin Storage Capacity

Geotechnical Consultants, Inc (GCI) estimated in 1986 that the total basin storage, 700,000 acre feet, about 27% or 170,000 acre feet is located in Storage Unit 1 in four major aquifers within the confined the area of confined groundwater. Safe yield of the basin is estimated to be about 5,000 acre feet (GCI, 1986).

Historical Monitoring and Reports

Collection of data and evaluation of the groundwater resources in the Carpinteria Valley area have historically been performed by the United States Geologic Survey (USGS) in conjunction with the Santa Barbara County Water Agency and the Carpinteria Valley Water District (District). Data collection was begun by the USGS in 1941. In 1972 the USGS monitored 19 wells. Data from the monitoring wells were supplemented with a survey conducted in 1973 in conjunction with a test hole drilling program conducted by the District and Geotechnical Consultants, Inc in 1972, 1976, and 1986. A detailed description of the basin with an emphasis on the aquifer characteristics and well yields was also prepared by Richard Slade in 1975. Limited water quality data was available for about 25% of the wells in the basin in 1976, as is the case in 1996.

Rain gauges within Carpinteria Valley have been maintained since 1941 at the Middle School and at the Carpinteria Reservoir since 1957. The USGS has collected data on stream flow measurements on Carpinteria Creek since 1941.

Since 1976 the District and the USGS have had a cooperative agreement providing groundwater level measurements and other water quality data from 41 wells in the

Valley. The agreement also provides for continued operation and maintenance of the stream gauging station on Carpinteria Creek.

Historical Variations in Groundwater Levels

At the time of the District's formation in 1941, groundwater levels were declining. Hydrographs for the basin indicate that from 1941 to 1951, prior to the importation of surface water from Lake Cachuma, groundwater levels fell below sea level. Hydrographs since 1951 show rising water levels leading up to artesian conditions in 1979. Since the 1986-1991 drought, when levels declined as well production increased, water levels have nearly returned to the historic high levels partly brought about by a very wet winter in 1983.

Historical Variations in Groundwater Pumpage

Groundwater pumpage has varied greatly over the last 60 years depending upon the availability of surface water, precipitation and land use. Both irrigation acreage and total pumpage doubled after World War II. Following the introduction of the Cachuma Project water in the early 1950s pumpage declined. Toward the end of the most recent 1987-91 drought, as many as 60 additional private wells were drilled, bringing the total number of active private wells to about 100. Estimated private pumpage that once averaged about 1600 acre feet/year, reached a new high in 1994 of 2,780 acre feet/year. District Pumpage historically averaged about 2,200 acre feet/year, but in 1,994 totaled 1,305 acre feet. Total 1994 pumpage (District and private) was 4,085 acre feet, or about 82% of the conservatively estimated 5,000 acre feet safe yield of the basin.

Water Quality

There are no known contamination problems in the Carpinteria Valley groundwater basin. Chloride, a common sea water constituent, is generally low in samples taken from the basin. Total Dissolved Solids (TDS) concentrations range from a low 450 to moderate 980 ppm. It is believed that the Rincon Fault acts as a barrier to seawater intrusion.

Action Elements

1. Inventory of Wells

The profile of each well drilled in the basin shall include the following:

- a. Location
- b. Size of well casing (diameter)
- c. Pump size (horsepower)
- d. Depth (bottom and screened sections)
- e. Sanitary seals (yes/no depth)
- f. Meter (yes/no)
- g. Active/ inactive/ abandoned/ destroyed
- h. Secured yes/no
- i. Other data if available: drillers log, electric log, chemical analysis, etc.

Note: This information will be treated as confidential information in the same way that customer account information is treated and released only with written permission of the well owners.

2. Monitoring of Groundwater Levels and Quality

Groundwater levels shall be measured every 2 months and aquifer characteristics and health determined annually by the District. The scope of this effort will be expanded as needed.

Annually, 30 wells shall be sampled for nitrate, chloride, TDS, and boron, a second sample of 30 wells shall be tested for general mineral and inorganic characteristics. A third sample of (number to be determined) wells shall be tested on as needed basis for trace contaminants such as VOCs (volatile organic chemicals). Frequency of sampling for water quality may increase if a problem is identified.

It is anticipated that water quality information produced by the private pumpers will also be shared with the District.

Note: Participation in this effort by well owners, whether solely by providing the District with well information (element 1), or by allowing sampling and water level measurements (element 2), or both, is entirely voluntary. Results of District water quality testing and water level measurements will be shared with well owners. Water quality testing by the District may result in benefit to all well owners through pooled purchasing power, and this opportunity will be explored.

3. Creation of a Database and Reporting System

All water level and water quality data obtained shall be organized and correlated by the District. The District will prepare an annual summary report of the data and findings, entitled “Carpinteria Valley Groundwater Basin Report”.

4. Identification and Monitoring of Recharge Areas

In monitoring recharge areas, the Manager will include in the Annual Basin Report, a status report on recharge areas in the watershed. The status report will identify the major recharge areas of the watershed and identify significant potential and/or actual threats caused by pollution or reduction of recharge area.

5. Implementation of Sanitary Seal Retrofit Program

Wells identified as being contaminated or polluted, or subject to a material or substantial contamination or pollution risk (in accordance with the definitions of contamination or pollution provided in State Water Code Section 13050, attached as Exhibit A) and identified as not having a sanitary seal, shall be fitted with a sanitary seals or remedied by other actions as determined by the District, at the owners expense, in accordance with State and County standards, incorporated in this Plan as Exhibit B, County Ordinance Number 3458, Exhibit C, Water Well Standards: State

of California- Bulletin 74-81, and Exhibit D, California Well Standards- Bulletin 74-90

Examples of a “material or substantial risk” would include but be limited to the following:

- 1) A septic tank in close proximity to a well
- 2) Storage of hazardous material in close proximity to a well
- 3) A well located within a drainage channel or floodplain
- 4) A leach field in close proximity to a well
- 5) A horse or other livestock corral in close proximity to a well.

6. Implementation of a Well Abandoned Program

All abandoned and/or improperly secured wells shall be identified and at the owner’s expense, abandoned and secured in accordance with current State and County requirements attached as Exhibits B, C, and D.

All wells that need to be destroyed shall be identified at the owner’s expense, and destroyed in accordance with current State and County requirements attached as Exhibits B, C, and D.

7. Dissemination of Public Information Relative to the Plan

The District shall prepare a well owners handbook, including information and regulations about well drilling, the dangers of open and/or improperly secured wells, and well abandonment and destruction procedures.

Procedures for Changes to this Plan

Material or substantial changes to the Board approved Plan will necessitate a complete review and public participation process as set forth in AB3030.