Final Report

2005 Urban Water Management Plan—Orcutt

Golden State Water Company
A Subsidiary of American States Water Company

Region I Headquarters

3035 Prospect Park, Suite 60
Rancho Cordova, CA 95670

June 2006

CH2MHILL
325 E. Hillcrest Drive Suite 125
Thousand Oaks, CA
91360-5828

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Notice of Adoption

A meeting to solicit public comments on the 2005 Urban Water Management Plan for the Golden State Water Company Orcutt System was held on December 6, 2005 at 10:00 a.m. at the Center for Employment Training in Santa Maria, California. Notice of this meeting was published in accordance with Section 6066 of Government Code in the Santa Maria Times on November 22, 2005 and on November 29, 2005.

Copies of the Urban Water Management Plan were made available to the public at the Golden State Water Company Santa Maria Customer Service Office two weeks prior to the public hearing.

Comments, oral and written, if received and responses to comments are documented in Appendix H of this document.

Golden State Water Company hereby adopts the 2005 Urban Water Management Plan for the Orcutt System.

Roland S. Tanner
Vice President, Customer Service
Region I
Golden State Water Company
December 31, 2005

Abbreviations

ac-ft	acre-feet
ac-ft/yr	acre-feet per year
Act	Urban Water Management Planning Act
AMCL	alternative MCL
AWWA	American Water Works Association
BMPs	best management practices
CBO	community-based organization
CCL	contaminant candidate list
CCRs	consumer confidence reports
CDHS	California Department of Health Services
cfs	cubic feet per second
CIMIS	California Irrigation Management Information System
Council	California Urban Water Conservation Council
CPE	comprehensive performance evaluation
CPUC	California Public Utilities Commission
CSA	customer service area
CT	concentration time
CUWA	California urban water agencies
CWSs	community water systems
D/DBP	disinfectant/disinfection by-product
DMM	demand management measure
DOC	dissolved organic carbon
DOF	Department of Finance
DWR Guidebook	Guidebook to Assist Water Suppliers in the Preparation of 2005 Urban Water Management Plan
DWR	Department of Water Resources (California)
EC	enhanced coagulation

EPA	Environmental Protection Agency
ERP	emergency response plan
ETo	evapotranspiration
gpm	U.S. gallons per minute
GSWC	Golden State Water Company
GWR	Groundwater Rule
HAA5	haloacetic acids
IESWTR	Interim Enhanced Surface Water Treatment Rule
IOCs	inorganic contaminants
IRP	Integrated Resource Plan
LACSD	Sanitation Districts of Los Angeles County
LT1ESWTR	Long Term 1 Enhanced Surface Water Treatment Rule
LT2ESWTR	Long Term 2 Enhanced Surface Water Treatment Rule
MCLGs	maximum contaminant level goals
MCLs	maximum contaminant levels
Metropolitan	Metropolitan Water District of Southern California
MG	million gallons
MMM	multimedia mitigation
MOU	memorandum of understanding (regarding urban water conservation in California)
MRDLs	maximum residual disinfectant levels
mrem	millirems
MTBE	methyl tertiary-butyl ether
MWD	Municipal Water District with reference to any of the member agencies of the Metropolitan Water District of Southern California
N/A	not available
NAICS	North American Industry Classification System
NDMA	N-nitrosodimethylamine
NPV	net present value
NTNCWS	non-transient non-community water systems
NTU	nephelometric turbidity units

O&M	operation and maintenance
OEHHA	Office of Environmental Health Hazard Assessment
pCi	picoCuries
RO	reverse osmosis
SCAG	Southern California Association of Governments
SDWA	Safe Drinking Water Act
SMCL	secondary maximum contaminant level
SOCs	synthetic organic contaminants
SUVA	source-water-specific ultraviolet absorbance
SWP	State Water Project
SWTR	Surface Water Treatment Rule
TCR	Total Coliform Rule
TDS	total dissolved solids
TOC	total organic carbon
TTHMs	Total Trihalomethanes Rule
TVMWD	Three Valleys Municipal Water District
UCM	unregulated contaminants monitoring
ULF	ultra low flush
ULFT	ultra-low-flush-toilet
UWMP	Urban Water Management Plan
VOCs	volatile organic compounds
WEWAC	Water Education Water Awareness Committee
WRCC	Western Regional Climate Center
WRP	water reclamation plant
WSDM Plan	Water Surplus and Drought Management Plan
WY	water year

Definitions

Chapter 2, Part 2.6, Division 6 of the California Water Code provides for definitions for the construction of the Urban Water Management Plans. Appendix A contains the full text of the Urban Water Management Planning Act.

CHAPTER 2. DEFINITIONS

Section 10611. Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

Section 10611.5. "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

Section 10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

Section 10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

Section 10614. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

Section 10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

Section 10616. "Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.

Section 10616.5. "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

Section 10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

Chapter 1. Introduction and Overview

Background

The Urban Water Management Plan (UWMP) for the Golden State Water Company (GSWC) Orcutt System is prepared in compliance with Division 6, Part 2.6, of the California Water Code, Sections 10610 through 10657 as last amended by Senate Bill (SB) 318, the Urban Water Management Planning Act (Act). The original bill, requiring a UWMP, was initially enacted in 1983. SB 318, which became law in 2004, is the eighteenth amendment to the bill. Increased emphasis on drought contingency planning, water demand management, reclamation, and groundwater resources has been provided through the updates to the original bill.

Under the current law, urban water suppliers with more than 3,000 service connections or water use of more than 3,000 acre-feet per year (ac-ft/yr) are required to submit a UWMP every five years to the California Department of Water Resources (DWR). The reports must be submitted by December 31, 2005. Under the name Southern California Water Company, GSWC prepared a UWMP in 1985, 1990, 1995, and 2000. The 2005 UWMP is an update to the 2000 plan.

The law, as it is now, states and declares the following:

Section 10610.2

(a) The Legislature finds and declares all of the following:

- *(1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.*
- *(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.*
- *(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.*
- *(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.*
- *(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.*
- *(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.*
- *(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.*

(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.

(9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.

(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

Section 10610.4. The Legislature finds and declares that it is the policy of the state as follows:

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.

(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

System Overview

GSWC owns and operates the Orcutt System. GSWC is an investor-owned public utility company regulated by the California Public Utilities Commission (CPUC).

Located in Santa Barbara County, the Orcutt System serves an unincorporated portion of the County south of the City of Santa Maria. The service area is primarily characterized by residential and commercial land use. Figure 1-1 illustrates the location of the Orcutt System.

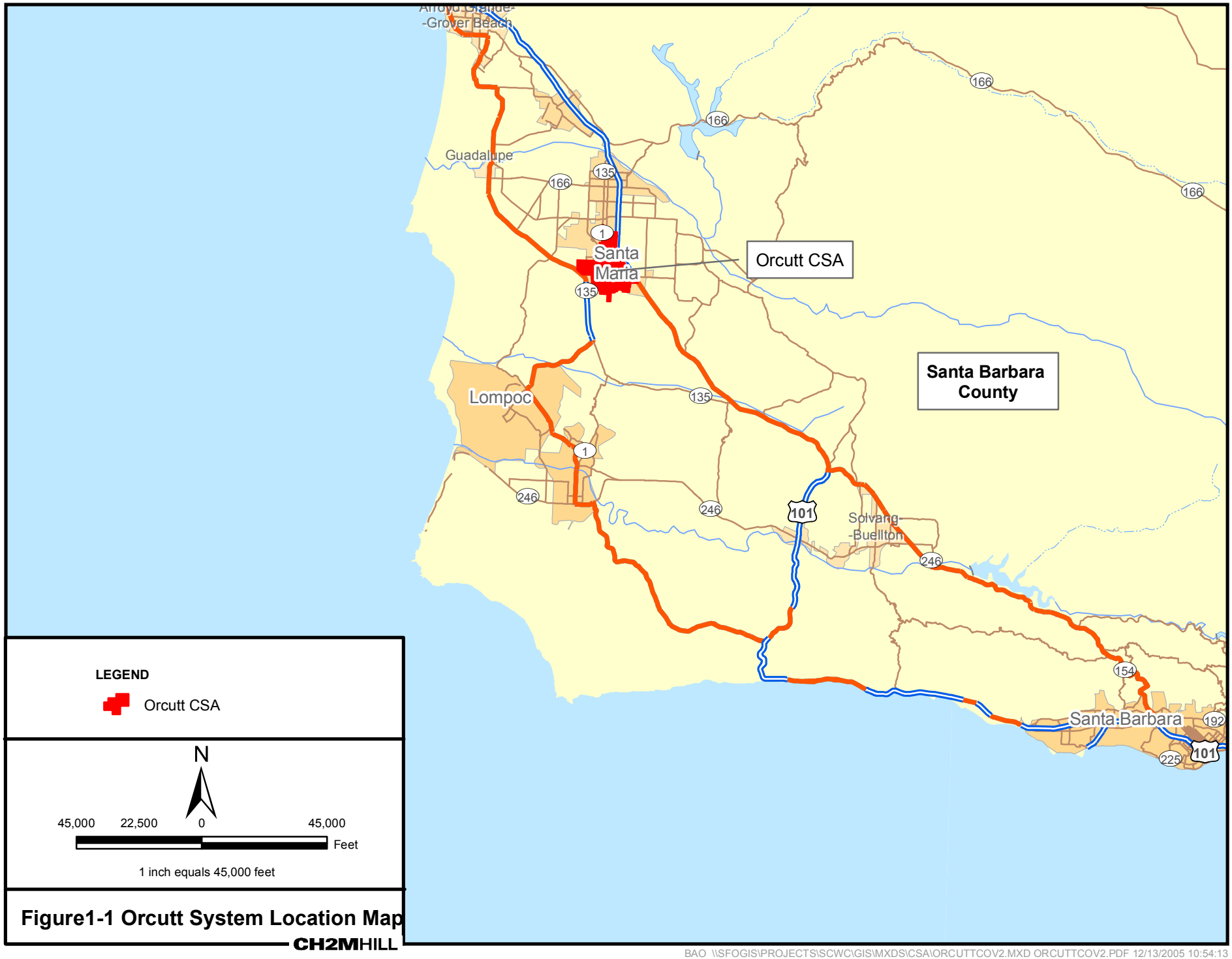

Figure1-1 Orcutt System Location Map

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California Urban Water Conservation Council

GSWC is a signatory to the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU) administered by the California Urban Water Conservation Council (Council). The Council had its beginnings as a independent entity housed under California Urban Water Agencies (CUWA). Currently, the Council is a fully independent nonprofit organization.

The objective of the Council is to implement the MOU. The MOU was signed into existence in 1991 by nearly 100 urban water agencies and environmental groups. Current membership of the Council is over 300 members from various groups such as water suppliers, public advocacy organizations, and other interested groups (Council, 2004).

The MOU is a document by which the signatories obligate themselves to implement the urban water conservation practices identified in the MOU. The goal of the practices in the MOU is to reduce long-term urban water demands and to provide practices that may be implemented during occasional water supply shortages (Council, 2004). The urban water conservation practices identified in the MOU are called the Best Management Practices (BMPs) and range from water audits to toilet replacements. There are 14 practices that also coincide with the 14 demand management measures (DMMs) identified in the Act.

Each agency that is a signatory to the MOU is required to file reports on the implementation of the BMPs identified in the MOU. For the purposes of the UWMP, the reports filed with the Council on the BMPs that are implemented or under implementation can be substituted for the reporting requirements of Section 10631 (f) (1). The UWMP uses the reports filed with the Council in addition to any necessary analysis as described in Section 10631.

Public Utility Commission Policy Changes

Concurrent with the finalization of this document, the CPUC is considering the adoption of policy changes and objectives that would be applicable to GSWC and all other regulated water utilities. The CPUC's draft "Water Action Plan" ("WAP") has established the following objectives:

1. Maintain highest standards of water quality;
2. Strengthen water conservation programs to a level comparable to those of energy utilities;
3. Promote water infrastructure investment;
4. Assist low income ratepayers;
5. Streamline CPUC regulatory decision-making; and
6. Set rates that balance investment, conservation, and affordability.

The WAP is a general policy document. Specific implementation policies and programs, along with necessary modifications to CPUC ratemaking policies, will be developed based on the final WAP and other programs including conservation, long term planning, water quality and drought management programs developed in conjunction with the CPUC.

GSWC has been actively involved with the CPUC in suggesting optimal approaches to the WAP. In particular, the GSWC has suggested specific implementation measures and modifications to certain CPUC ratesetting practices so that regulated utilities are able as a practical matter to achieve the policy objectives of the WAP. The exact implementation details have not yet been determined, but if successful, are expected to have a significant impact on GSWC approaches to the planning and management of resources. These efforts may include further investment in local resource optimization, reduced reliance on imported supplies, enhanced conservation and intensification of company-wide efforts to optimize water resource mix, including planned water supply projects and programs to meet the long term water supply needs of GSWC's customers.

In another example, the Urban Water Management Planning Act requires public water suppliers to have in place predetermined actions to be undertaken during water shortage conditions. GSWC has developed actions to be undertaken in response to water supply shortages, including up to a 50 percent reduction in water supply. However, implementation of the actions is dependent upon CPUC approval, particularly where mandatory water use restrictions may be required. As an element of the WAP and related policy improvements, GSWC has requested the CPUC adopt water shortage allocation policies that will facilitate appropriate drought response activities and associated cost recovery mechanisms.

Finally, as part of the Water Action Plan process and otherwise, GSWC is seeking parity with public water agencies in key areas that will impact its long term supply planning and reliability, namely, 1) access to state bond money on behalf of its customers, and 2) full participation in integrated regional water planning mechanisms to ensure that utility customers have a voice in planning outcomes, and, equal access to available funding to implement agreed planning objectives on behalf of their customers.

This UWMP presents an assessment of GSWC's demand projections and water supply availability and reliability under currently established CPUC regulations and conditions. While GSWC has detailed approaches to providing its customers with a reliable supply of water in accordance with UWMP criteria, adoption and implementation of the WAP and other policy objectives mentioned above will likely result in changes in the resource mix described in this UWMP which will likely further improve water supply reliability.

Agency Coordination

Water Code Section 10620 details the coordination requirements of the Act and provides guidance on how the UWMP can be prepared. The text of this section states:

Section 10620

(a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would

be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d)

(1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

GSWC initiated agency coordination with a mailing of letters to cities and counties within its service area, as well as to wholesale agencies, wastewater agencies, and agencies with which GSWC has emergency connections. The initial letters notified the agencies of GSWC intent and requested data for the preparation of the UWMPs. All identified agencies received a follow-up telephone call. Notices of the public meeting and intent to adopt were submitted to all above-mentioned agencies. Table 1-1 lists the agencies contacted during the preparation of this UWMP.

Table 1-1
Coordination with Agencies

Agency	Participated in UWMP Development	Commented on the Draft	Attended Public Meetings	Contacted for Assistance	Received Copy of the Draft	Sent Notice of Intent to Adopt	Not Involved/ No Information
Central Coast Water Authority (CCWA)				✓	✓		
City of Santa Maria				✓			
Laguna County Sanitation DIstrict				✓			
Santa Barbara County				✓			

Notes
1. This table is based on DWR's *Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan* (DWR Guidebook) Table 1.

Public Participation and Plan Adoption

Public participation and plan adoption requirements are detailed in the following section of the Act:

Section 10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

For this update of the Orcutt System UWMP, a public hearing was held on Thursday, December 6, 2005 at the Center for Employee Training in Santa Maria, California. This public session was held for review and comment on the draft plan before approval by GSWC. Legal public notices for the public hearing were published in the local newspapers in accordance with Government Code Section 6066. Copies of the draft plan were available to the public at GSWC's Stanta Maria Customer Service Office. Appendix B contains a copy of the hearing notice from a local newspaper and the meeting minutes from the public pertaining to the UWMP. Appendix C contains comments received, if any, and Appendix H contains responses to public comments.

The final UWMP, as adopted by GSWC, will be submitted to the DWR within 30 days of adoption. This plan includes all information necessary to meet the requirements of California Water Code Division 6, Part 2.6 (Urban Water Management Planning). Adopted copies of this plan are available to the public at GSWC's Manta Maria Customer Service Office.

UWMP Preparation

GSWC prepared this UWMP with the assistance of its consultant, CH2M HILL, as permitted by the following section of the Act.

Section 10620

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

During the preparation of the UWMP, documents that have been prepared over the years by GSWC and other entities were reviewed and results of those documents incorporated, as applicable, into this UWMP. The list of the documents is provided in Chapter 11.

The adopted plans are available for public review at GSWC's Santa Maria Customer Service Office. Copies of the plan were submitted to DWR, cities and counties within the service area, the State Library, and other applicable institutions within 30 days as required by Sections 10644 and 10645.

UWMP Implementation

GSWC is committed to the implementation of this UWMP as required by Section 10643 of the Act. Each region of GSWC has a conservation coordinator that oversees the implementation of DMM via GSWC participation in the Council's MOU.

Content of the UWMP

This UWMP addresses all subjects required by Section 10631 of the Act as defined by Section 10630, which permits "levels of water management planning commensurate with the numbers of customers served and the volume of water supplied." All applicable sections of the Act are discussed in this UWMP, with chapters of the UWMP cross-referenced against the corresponding provision of the Act in Table 1-2.

Table 1-2
Summary of UWMP Chapters and Corresponding Provisions of the California Water Code

Chapter	Corresponding Provisions of the Water Code	
Chapter 1. Introduction and Overview	10642	Public participation
	10643	Plan implementation
	10644	Plan filing
	10645	Public review availability
	10620 (a)–(e)	Coordination with other agencies; document preparation
	10621 (a)–(c)	City and county notification; due date; review
	10620 (f)	Resource optimization
	10630	Level of planning
	10641	Coordination
Chapter 2. Service Area	10631 (a)	Demographics and climate
Chapter 3. Water Supply	10631 (b)–(d), (h), (k)	Water sources, reliability of supply, transfers and exchanges, supply projects, data sharing
Chapter 4. Water Use	10631 (e), (k)	Water use, data sharing
Chapter 5. Demand Management Measures	10631 (f)–(g), (j)	DMM
	10631.5	DMM implementation status
Chapter 6. Desalination	10631 (i)	Desalination
Chapter 7. Water Shortage Contingency Plan	10632	Water shortage contingency plan
Chapter 8. Recycled Water Plan	10633	Recycled water
Chapter 9. Water Quality	10634	Water quality impacts on reliability
Chapter 10. Water Service Reliability	10635	Water service reliability

Resource Optimization

Section 10620 (f) asks urban water suppliers to evaluate water management tools and options to maximize water resources and minimize the need for imported water from other regions.

GSWC is committed to optimizing its available water resources and implements water conservation programs for each of its districts or customer service areas (CSAs). In an effort to expand the breadth of offered programs, GSWC partners with wholesale suppliers, energy utilities, and other agencies that support water conservation programs. While GSWC is fully committed to optimizing its available water resources and implementation of BMP's and DMM's, GSWC is currently limited in its ability to do so by certain ratesetting practices. As noted in the introduction, GSWC is working with the CPUC in the shaping of the Water Action Plan so that it assists regulated water utilities in implementing measures that optimize water resource programs.

Chapter 2. Service Area

Service area requirements are detailed in the following section of the Act:

Section 10631

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

Chapter Two summarizes the Orcutt System's service area and presents an analysis of available demographics, population growth projections, and climate data to provide the basis for estimating future water requirements.

Area

The Orcutt system is located in Santa Barbara County and is adjacent to the south side of the City of Santa Maria. The Orcutt System is bounded by Highway 101 and Highway 1 in northern Santa Barbara County. Since 2000, the boundaries of the Orcutt service area have changed. The new service area boundary includes developed and underdeveloped land area in the south and west portions of the Orcutt service area. Figure 2-1 illustrates the service area of the Orcutt System. The service area is primarily characterized by residential and commercial land use.

Demographics

The Orcutt community was chosen as demographically representative of the Orcutt service area. According to 2000 US census data, the median age of Orcutt's residents is 42.4 years. Orcutt has average household size of 2.42 and a median household income of approximately $44,593.

As detailed in the Orcutt community's Land Use Background Report, General Plan 2004 (OCP, 2004), residential development represents the predominant land use in Orcutt, with 97% of the existing housing falling into the single family category. This preference for single family housing is expected to continue; however, in future, new development of affordable multi-family housing units may potentially be implemented within the existing Orcutt service area. The Orcutt area has experienced average annual population growth of 4.1% between 1980 and 1990. It is expected to experience average annual population growth of 2.5% from 1990 through 2020.

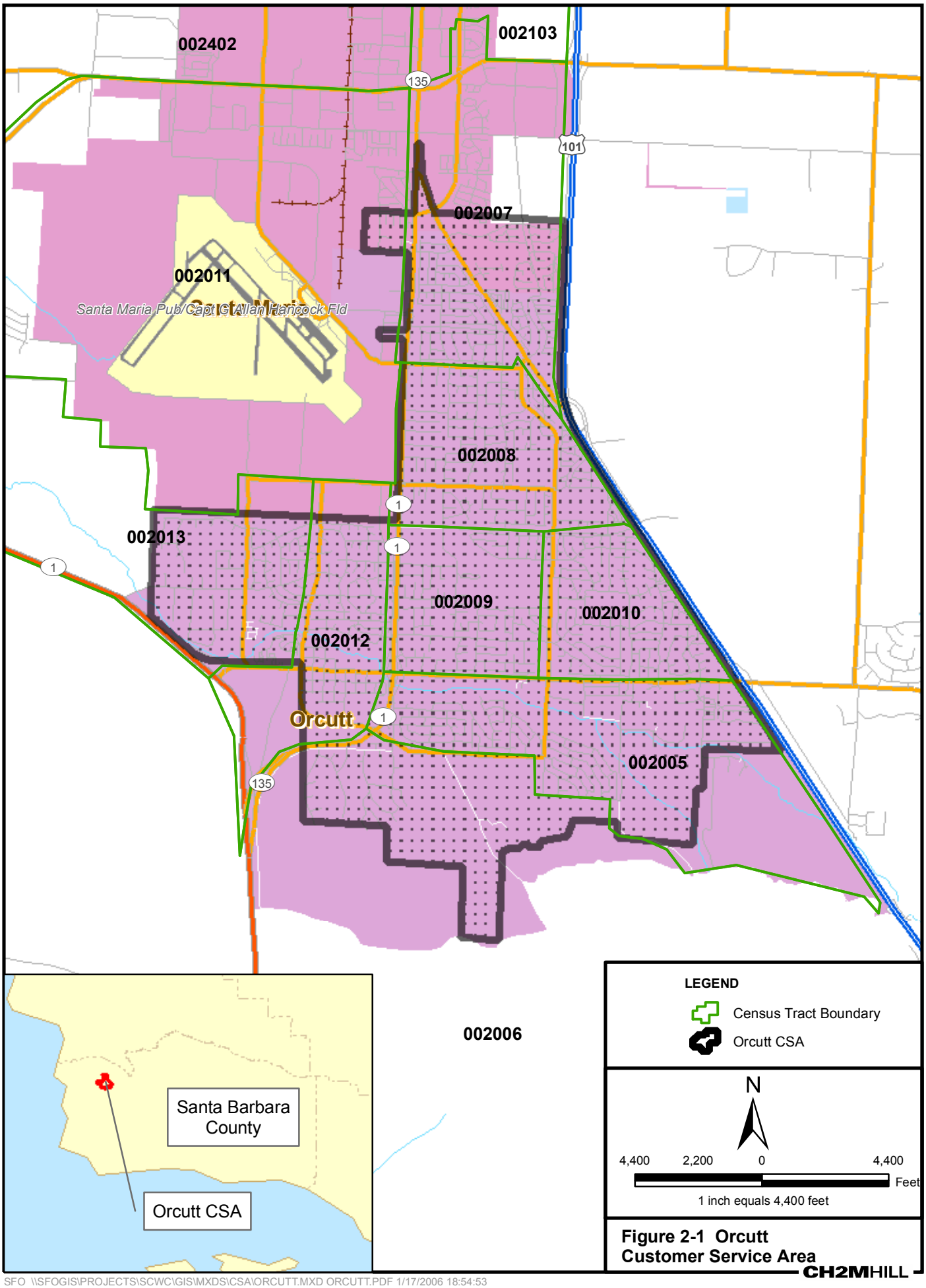

Figure 2-1 Orcutt Customer Service Area

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Population, Housing and Employment

Population data presented in the Orcutt Community Plan (Santa Barbara County, 2004) and build-out data provided by the County Planning Department were used to develop estimates of future population and housing projections. Employment projections were not made, as employment data was not available.

Existing housing data for the Orcutt area was obtained from the 2000 UWMP report. Projected housing data was obtained from the Orcutt Community Plan. Population for the Orcutt area was calculated by multiplying the projected number of households by the average household size, 2.74, in the Orcutt CSA. This average household size is based on the 2000 U.S. census report. The current population projections differ from previous projections developed in 2000 primarily by the use of the 2000 U.S. Census data. Previous projections utilized 1990 U.S. Census data.

Orcutt Population Projection Development Methodology

Santa Barbara County developed the Orcutt Community Plan (OCP) to provide for orderly development to meet the full spectrum of housing, commercial and industrial space, roads, public facilities, and amenities for the community. The OCP's goals, policies, programs, actions and development standards provide the framework for all future development in Orcutt and surrounding county unincorporated areas over the next 15 to 20 years.

The Orcutt Community Planning area is divided into residential neighborhoods and key sites. The Orcutt Community Plan contains 21 residential neighborhoods and areas describing the type of housing, population, and commercial development in each area. The OCP also contains 43 key sites, which are each identified as areas having the greatest potential for development. A key site is a principally vacant and underdeveloped area, generally larger than three acres. The future development plans for each key site are described in detail in the OCP.

Orcutt's theoretical build-out information in the OCP was used to estimate household and population data. The County Planning Department provided existing and planned future build-out information for approved and pending projects in vacant parcels and underdeveloped areas for years 1993 through 2020. The historical household data for year 1998 from the 2000 UWMP report was used as a basis for population projections. Planned future potential build-out information obtained from the OCP was added to the 1998 household data to result in household projections through 2030.

To complete the population projection analysis, several assumptions were made based on existing data and historical growth patterns. Seventy-two housing units per year were built in the Orcutt area between 1993 and 2000. Between 2000 and 2010, an average of 141 units per year were scheduled to be built. New construction on vacant parcels and underdeveloped parcels is scheduled to begin in approximately 2010, with estimated completion by 2030. An average of 55 units per year was estimated for this construction period. After 2030, the service area is assumed to have reached a near build-out condition. Household projects after 2030 are assumed to be minimal.

The household data were estimated for the years 2000 through 2030 at five year intervals. Population data was projected by multiplying the estimated number of households by average household size, 2.74. This average household size is based on the 2000 U.S. census report. Employment data was not predicted for the Orcutt system, as there was not sufficient employment information available in the OCP. According to the County Planning Department, there has not been a significant increase in employment in the Orcutt area. It has been steady for the past 5 to 7 years.

As a general note, a portion of the Orcutt Community Plan area is located within the sphere of influence of the City of Santa Maria, and outside GSWC's current CPUC-certificated service area. It is possible that some portion of the anticipated growth which GSWC assumes it will serve as the Orcutt area grows, will instead be annexed into and receive water service through the City of Santa Maria. However, for the purpose of this UWMP, the population growth estimates and related water supply needs assume these areas will obtain their water supply from GSWC.

Orcutt System Population Projections

As concluded from analysis of the Orcutt Community Plan demographic data, the Orcutt System has an estimated projected population of 29,577 people in 2005. This population is expected to reach 36,006 by 2030. A summary of historic and projected population and households within the Orcutt System (based on Orcutt build-out data) is presented in Table 2-1 and illustrated in Figure 2-2**.**

The 2000 Urban Water Management Plan (UWMP, 2000) predicted population in 2005 to reach 29,204 and 2020 population to reach 30,642 people. The population in 2005 and 2020, as estimated in this report, are 29,577 and 34,508 people, respectively. The population estimates and projections for year 2005 in the current study are more than the estimates in the previous year report. This is due to differing methods of demographic analysis. 2000 UWMP population projections used average household size based on 1990 census data and the current population projections used average household size based on 2000 census data.

Table 2-1.
Orcutt Service Area Historical and Projected Population

Year	Service Area Population	Service Area Household	Service Area Employment
1998[(2)]	27,263	9950	NA[(4)]
2000	27,654	10,093	NA
2005	29,577	10,795	NA
2010	31,499	11,496	NA
2015	33,003	12,045	NA
2020	34,508	12,594	NA

Table 2-1.
Orcutt Service Area Historical and Projected Population

Year	Service Area Population	Service Area Household	Service Area Employment
2025	35,257	12,868	NA
2030	36,006	13,141	NA

Notes
1. This table is based on the DWR Guidebook Table 2.
2. Based on fiscal year.
3. Dashed line represents division between historic and projected data
4. NA = Not Available

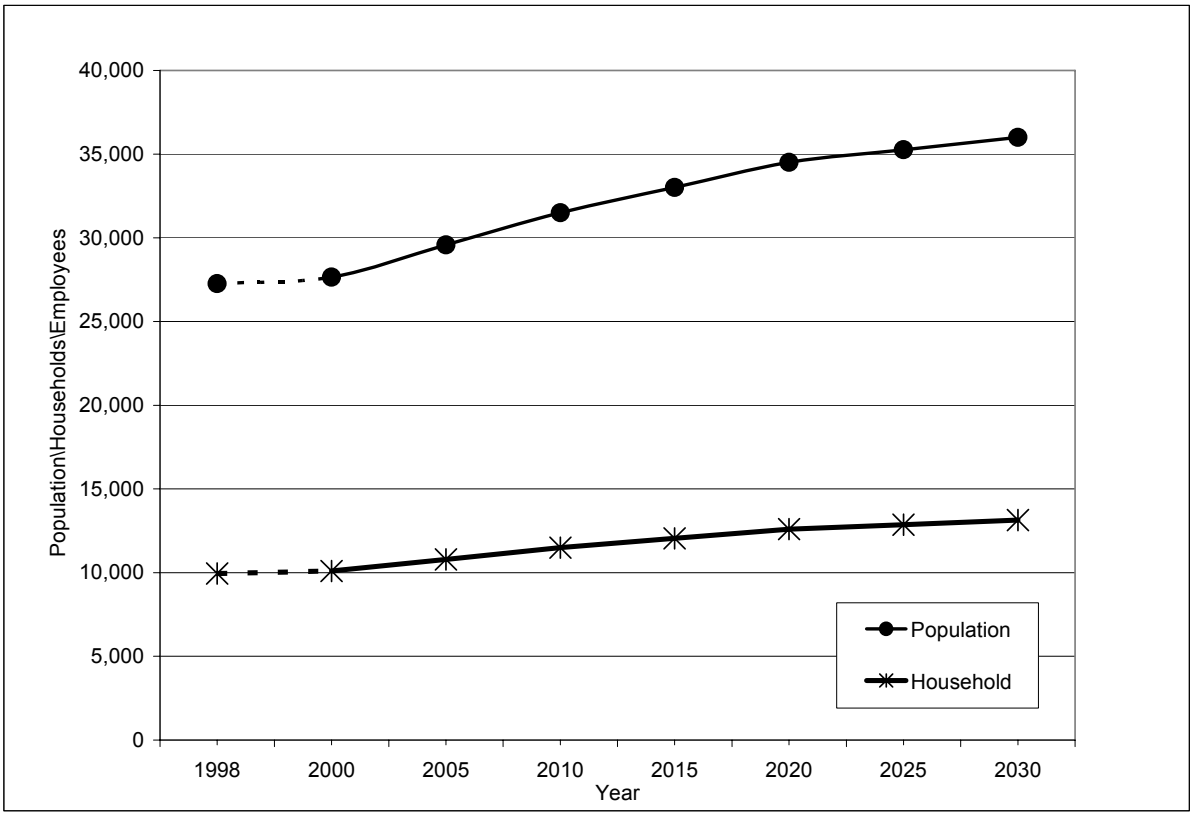

Figure 2-2. Historical and Projected Population, Household and Employment Growth within the Orcutt Service Area.

Climate

The Orcutt service area has cool, humid winters and mild, moderately humid summers. The Western Regional Climate Center (WRCC) maintains 30 year historic climate data for some cities. WRCC doesn't have a station at Orcutt and therefore the Santa Maria station, 10 miles from Orcutt, is utilized for the climate data analysis.

The Western Regional Climate Center web site (www.wrcc.dri.edu) maintains historical climate records for the past 30 years for Santa Maria. Table 2-2 presents the monthly average

climate summary based on 30 year historical data for the Orcutt system. In winter, the lowest average monthly temperature is approximately 41 degrees Fahrenheit while the highest average monthly temperature reaches approximately 75 degrees Fahrenheit in the summer. Figure 2-3 presents the monthly average precipitation based on 30 year historical data. The rainy season is from November to March. Monthly precipitation during the winter months ranges from 1 to 2 inches. Low humidity occurs in the summer months from May to October. The moderately hot and dry weather during the summer months typically results in moderately high water demand.

Similar to the Western Regional Climate Center in the Orcutt area, the California Irrigation Management Information System (CIMIS) web site (http://wwwcimis.water.ca.gov) tracks and maintains records of evapotranspiration (ETo) for select cities. ETo statistics used for this system also come from the Santa Maria station. ETo is a standard measurement of environmental parameters that affect the water use of plants. ETo is given in inches per day, month, or year and is an estimate of the evapotranspiration of a large field of well-watered, cool-season grass that is four- to seven-inches tall. The monthly average ETo is presented in inches in Table 2-2. As the table indicates, a greater quantity of water evaporated during June, July and August, which may result in high water demand.

Table 2-2
Monthly Average Climate Data Summary for the Orcutt Service Area

Month	Standard Monthly Average ETo[2] (inches)	Average Total Rainfall (inches)	Average Temperature (degrees Fahrenheit)	
			Max	Min
January	1.8	2.49	63.1	38.9
February	2.2	2.8	64.3	40.9
March	3.2	2.35	64.7	42.1
April	4.0	1.03	66.8	43.4
May	5.0	0.27	70.6	46.8
June	5.1	0.04	72.8	50.0
July	5.1	0.03	73.2	53.0
August	5.1	0.03	74.4	53.6
September	4.5	0.21	73.4	52.2
October	3.5	0.49	73.4	47.9
November	2.4	1.36	69.0	42.4
December	1.7	1.87	64.4	38.5

Notes
1. This table is based on the DWR Guidebook Table 3.
2. Evapotranspiration (ETo) from http://www.cimis.water.ca.gov/cimis/welcom.jsp

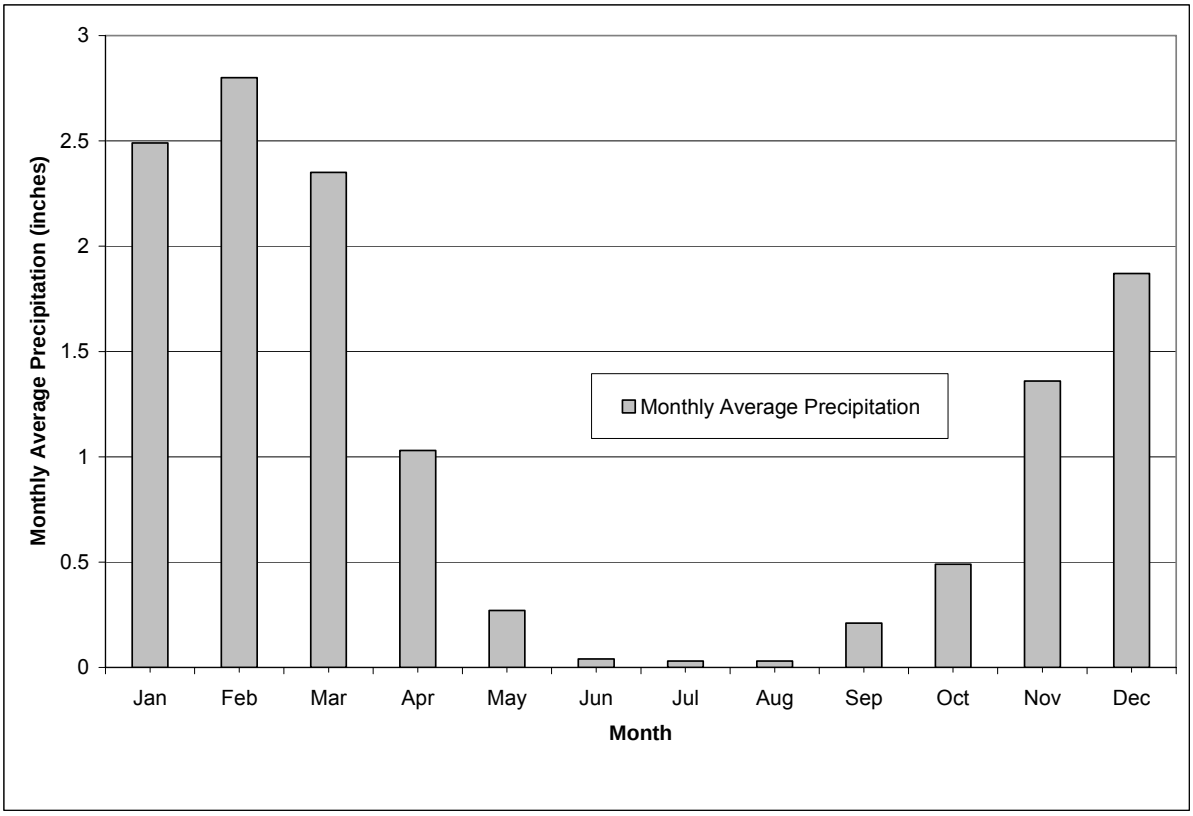

Figure 2-3. Monthly Average Precipitation in the Orcutt Service Area based on 30 Years Historical Data

Chapter 3. Water Supply

A detailed evaluation of water supplies is required by the Act. Sections 10631 (a) through (d) require that:

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree.

For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

(1) An average water year.

(2) A single dry water year.

(3) Multiple dry water years.

For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established

pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single dry, and multiple dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

This chapter addresses the water supply sources of the Orcutt System. The following sections provide details in response to those requirements of this portion of the Act.

Water Sources

For the Orcutt System, the Golden State Water Company (GSWC) currently has the following available water supply sources: local groundwater, purchased water from the State Water Project (SWP) and the associated return flows that may be recaptured from the Basin, purchased or assigned rights to water from Santa Maria, and a share of the yield of the Twitchell Reservoir operations that is commingled within the Basin.

The imported water supplies for the Orcutt System are obtained from the SWP via a contract with the Central Coast Water Authority (CCWA).

Although there is no direct connection between the Orcutt System and facilities of the SWP operated by CCWA, GSWC may obtain its SWP water through its SWP connection to its nearby Tanglewood System or through a cross-connection with Santa Maria (another SWP contracting entity via CCWA). GSWC and Santa Maria have a long-term agreement under which the two entities share access to their respective SWP supplies through this system interconnection. (See Appendix I.) Through the later arrangement, GSWC can obtain its SWP water by conveying – "wheeling" – it through the Santa Maria water system.

The Orcutt System has four reservoirs with a combined capacity of 2.0 million gallons.

Currently, groundwater is pumped from a total of eleven active groundwater wells in the Santa Maria Valley Groundwater Basin (Basin). GSWC's wells in the Orcutt System have a current total normal year active capacity of 19,863 acre-feet per year (ac-ft/yr). Between 2000 and 2004, the actual production averaged 8,674 ac-ft/yr.

GSWC's rights to rely on Basin water resources (for both pumping and storage) are governed by a settlement agreement ("Stipulation"), currently being finalized before the Santa Clara County Superior Court (*Santa Maria Valley Water Conservation District vs City of Santa Maria, et al.*, Case no. 770214), as further described below.

Table 3-1 summarizes the current and planned water supplies available to GSWC for the Orcutt System that will meet their projected water demands in normal water years.

This water supply information, and this UWMP, are based on the Stipulation resulting from resolution of the basin adjudication, *Santa Maria Valley Water Conservation District vs. City of Santa Maria, et al.*, and data provided by CCWA and Santa Maria.

The GSWC's water supply portfolio for this system is expected to reliably meet the projected demands through 2030. There is no direct recycled water supply planned for this system, although other water suppliers within the region do use, and plan to increase their use of recycled water in lieu of local groundwater which, in effect, improves the overall reliability of GSWC's groundwater supplies.

It should be noted that the water supplies available to the Orcutt System are greater than the supplies needed to meet the projected demands. A detailed description of the available supplies to the System is presented in the Reliability section below.

Table 3-1
Current and Planned Water Supplies for the Orcutt System in ac-ft/yr

	Year					
Source	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**
Purchased Water from SWP	209	209	209	209	209	209
Purchased/Assigned Water from Santa Maria	415	415	415	746	981	1,216
Groundwater(3)	9,263	9,660	9,660	9,660	9,660	9,660
Twitchell Augmented Yield/Commingled Groundwater	0	10,000	10,000	10,000	10,000	10,000
Return flows from SWP water(1)	0	191	191	191	191	191
Recycled water	0	0	0	0	0	0
Total(2)	9,887	20,475	20,475	20,806	21,041	21,276

Notes
1. Pursuant to the Stipulation, GSWC is entitled to recapture 45% of its SWP use in the Basin. The planned supply of return flows from SWP water is based on the total volume imported by GSWC's Tanglewood and Orcutt Systems
2. See Reliability section for details on these supplies
3. Groundwater supplies are based on appropriative rights in Santa Maria Groundwater Basin as defined in the Stipulation
4. Table format based on DWR Guidance Document Table 4

GSWC's water supply is projected to increase by about 22 percent from 2005 to 2030 to meet the associated projected water demands. GSWC is expected to have a total available supply in excess of the projected demands through 2030. Water demand projections are documented in Chapter 4. Details of the imported water, return flows, Twitchell Yield, and native groundwater supplies are presented in the following section followed by a discussion of the reliability of all sources of water supply.

Imported Water

GSWC, Santa Maria and the City of Guadalupe ("Guadalupe") each have SWP contracts through CCWA. Pursuant to the Stipulation, Santa Maria will import and use within the basin no less than 10,000 ac-ft/yr of available SWP water, or the full amount of available SWP water if the amount available is less than 10,000 ac-ft in a given year. Both GSWC and Guadalupe will import and use within the Basin all their available SWP water.

It is projected that the Tanglewood System will have demands of SWP water of approximately 215 ac-ft/yr through 2030. The remainder of the imported water is available to meet demands of the Orcutt System.

In addition, through application of the OCP and the Stipulation, GSWC will obtain rights (through assignment from new GSWC customers) to obtain additional imported water from Santa Maria, either through pumping return flows (see below) or obtaining additional water through the Santa Maria – GSWC interconnection.

SWP water originates within the Feather River watershed, is captured in Lake Oroville, and flows via the Sacramento-San Joaquin Delta, the California Aqueduct and the Coastal Branch Extension into CCWA's treatment and conveyance facilities.

Return Flows

Under the Stipulation, Santa Maria, Guadalupe and GSWC are entitled to a fixed percentage of the annual amount of SWP water each uses within the Basin. The fixed percentage for GSWC is 45 percent, based on a rolling average of the prior 5 years of imported water use. These "return flows" augment the yield in the Basin through the recharge that occurs when these sources are used within the Basin.

Groundwater

Groundwater for the Orcutt System is supplied by eleven wells in the Santa Maria River Valley Groundwater Basin. The Basin has a surface area of approximately 184,000 acres (287.5 square miles). The Basin is bounded by the San Luis and Santa Lucia Ranges on the north, by the San Rafael Mountains on the east, by the Solomon Hills on the south, by the Casmalia Hills on the southwest, and by the Pacific Ocean on the west.

The water-bearing units are alluvium, dune sands, and the Orcutt, Paso Robles, Pismo, and Careaga Formations. The alluvium consists of unconsolidated lenticular bodies of gravel, sand, silt, and clay (DWR, 2003). The dune sands consist of well-rounded, fine- to coarse-grained sand. The Orcutt Formation consists of sand interbedded with coarse gravel with minor amounts of silt and clay restricted to the upper parts of the unit (DWR, 2003). The Paso Robles Formation consists of unconsolidated to poorly consolidated gravel, sand, silt, and clay (DWR, 2003). The Careaga Formation consists of unconsolidated fine- to medium-grained marine sand with some silt and unconsolidated to well consolidated coarse- to fine-grained sand, gravel, silty sand, silt, and clay (DWR, 2003). The Pismo formation consists of coarse- to fine-grained sand interbedded with discontinuous layers of silt and clay (DWR, 2003). Groundwater is generally unconfined, except in the coastal portions were it is confined (DWR, 2003).

Sources of native (natural) water to the groundwater basin include the following: infiltration of precipitation, inflow from adjacent areas, return flows from applied water (irrigation), percolation of water from streams flowing across the Basin, especially the Arroyo Grande on the north and Santa Maria and Sisquoc Rivers in the south.

Groundwater discharges from the Basin include: consumptive use of groundwater pumped by agricultural users, municipal and industrial users (e.g., cities and the oil industry for secondary recovery of oil), and groundwater discharge to the ocean. Some natural groundwater flow (discharge) to the ocean is required to prevent seawater intrusion into the Basin.

The total groundwater storage capacity of the Basin is approximately 4,000,000 ac-ft (DWR, 2003). The large volume of groundwater in storage in the basin provides a buffer to drought conditions in the Basin.

Developed Basin Supplies

In addition to the natural recharge of the Basin as described above, two reservoirs, the Lopez Reservoir on the Arroyo Grande in the north and the Twitchell Reservoir on the Cuyama River, a tributary to the Santa Maria River in the south, provide additional, non-native supplies to the Basin.

Water from the Lopez Reservoir is used directly by the coastal communities of Arroyo Grande, Pismo Beach, Grover Beach, and Oceano Community Services District. Some return flow from local irrigation of these supplies also augments the groundwater recharge locally. Also, reservoir releases are made to provide for groundwater recharge through the bed of the Arroyo Grande into the groundwater basin underlying the Arroyo Grande area.

The Twitchell Reservoir is operated as a flood control and water conservation reservoir. Releases are controlled from Twitchell Reservoir to maximize recharge of the Basin through percolation along the Santa Maria River bed. The Stipulation sets the Twitchell yield at 32,000 ac-ft/yr.

Since 1997, SWP water has been imported to the Basin by Oceano Community Services District and Pismo Beach in the north, and the City of Guadalupe, City of Santa Maria, and Golden State Water Company in the south. The importation of this water has reduced the stress on the Basin through a reduction in groundwater pumping by those entities relying instead on SWP water. Groundwater recharge is also augmented by the return flows of imported applied waters through irrigation and wastewater discharges to percolation ponds.

Stipulation and Water Rights

In 1997, the Santa Maria Valley Water Conservation District filed a lawsuit to adjudicate water rights in the Basin -- (*Santa Maria Valley Water Conservation District vs City of Santa Maria, et al.,* (Superior Court, County of Santa Clara, Case no. 770214). The court divided the trial of the case into phases and issued three Orders/Decisions: 1) Phase 1 - An Order dated January 9, 2001 establishing the Outermost Boundaries of the Basin, 2) Phase 2 - An Order dated December 21, 2001 establishing the area constituting the Basin for purposes of the adjudication, and 3) Phase 3 - A Decision dated May 5, 2004 regarding the hydrologic conditions in the Basin. As part of its Phase 3 Decision, the court reserved jurisdiction over remaining water rights issues and management of the Basin.

Subsequent to the Phase 3 trial, a number of parties to the lawsuit negotiated a settlement Agreement (Stipulation) that set forth terms and conditions for a physical solution concerning the overall management of Basin water resources, including rights to use groundwater, SWP water and associated return flows, the developed groundwater yield resulting from the operation of Twitchell and Lopez reservoirs, use of Basin storage space, and the ongoing monitoring and management of these resources, consistent with common law water rights priorities.

The Stipulation subdivides the Basin into three Management Areas: the Northern Cities Management Area, Nipomo Mesa Management Area, and the Santa Maria Valley Management Area (see Appendix I for a map of the location of these management areas). The delineation of these areas was based on historical development and use of Basin water resources, as further delineated in the Stipulation and the court record. This Stipulation is provided in Appendix I.

As noted above, the Stipulation provides GSWC certain rights to water in the Basin. These rights include: a recognition of GSWC's highest historical use of groundwater from the Basin; the right to recapture a preset portion of the return flows from GSWC's use of SWP in the Basin; and a 10,000 ac-ft/yr share of the developed groundwater yield resulting from Twitchell Reservoir operations.

In addition, GSWC may access additional supplies through the transfer of rights to the commingled groundwater originating from the Twitchell Yield. Also, return flows from SWP water are assignable in whole or part.

The Stipulation also establishes certain preset water shortage response measures in anticipation of reduced availability of groundwater. Although the court has approved the Stipulation, not all parties to the adjudication have agreed to it. The court has scheduled further proceedings to litigate the rights of the non-settling parties. This further litigation is not expected to alter the terms of the Stipulation, or GSWC's rights granted therein.

Existing and Projected Groundwater Use

Table 3-2 shows GSWC's wells and current well capacities for the Orcutt System. The Orcutt System has a total active normal year well capacity of 10,461 gpm (16,863 ac-ft/yr).

Table 3-2
Wells and Well Capacity in the Orcutt System

Well Name	Design Well Capacity (gpm)	Design Well Capacity (ac-ft/yr)	Normal Year Well Capacity (gpm)	Normal Year Well Capacity (ac-ft/yr)	Status
Crescent No. 1	1,000	1,613	709	1,143	Active
Evergreen No. 1	550	887	376	606	Active
Evergreen No. 2	1,000	1,613	900	1,451	Inactive
Kenneth No. 1	1,100	1,774	949	1,530	Active
Mira Flores No. 1	1,050	1,693	647	1,043	Active
Mira Flores No. 2	850	1,371	830	1,338	Active

Table 3-2
Wells and Well Capacity in the Orcutt System

Well Name	Design Well Capacity (gpm)	Design Well Capacity (ac-ft/yr)	Normal Year Well Capacity (gpm)	Normal Year Well Capacity (ac-ft/yr)	Status
Mira Flores No. 3	500	806	427	688	Inactive
Mira Flores No. 4	700	1,129	626	1,009	Active
Mira Flores No. 5	1,000	1,613	895	1,443	Active
Mira Flores No. 6	850	1,371	753	1,214	Active
Mira Flores No. 7	1,300	2,097	1,170	1,886	Active
Oak No. 1	1,020	1,645	1,110	1,789	Active
Orcutt No. 1	800	1,290	589	949	Active
Sunrise No. 1	600	968	750	1,209	Inactive
Woodmere No. 1	1,100	1,774	872	1,406	Active
Woodmere No. 2	980	1,581	935	1,507	Active
Total Capacity	14,400	23,225	12,538	20,211	
Active Capacity	12,300	19,838	10,461	16,863	

Table 3-3 shows the pumping history of the Orcutt System for calendar years (January 1 – December 31) 2000 to 2004. The groundwater was pumped from thirteen wells located in the Santa Maria Groundwater Basin.

Table 3-3
Groundwater Pumping History by Orcutt System (2000 to 2004) in ac-ft

	Year				
Location	**2000**	**2001**	**2002**	**2003**	**2004**
Santa Maria River Valley	8,810	8,440	8,827	8,507	8,786
Percent of Total Water Supply	100	100	100	100	100

Notes
1. Years are reported in calendar years (January 1 – December 31)
2. Table format based on DWR Guidance Document Table 6

Table 3-4 shows the projected groundwater pumping amounts for the Orcutt System. The water will be pumped from the thirteen wells currently being pumped or from new or replacement wells as may be required in the future to meet existing and projected demands. The groundwater pumping amounts presented in Table 3-4 include water sources described in the Stipulation. These sources consist of Twitchell Yield, native groundwater, and return

flows from imported SWP water. The GSWC's projected total water demands are presented in Chapter 4.

Table 3-4
Projected Groundwater Pumping Amounts by Orcutt System to 2030 in ac-ft

	Year					
Basin Name	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**
Santa Maria Valley	8,639	9,240	9,711	9,851	9,851	9,851
Percent of Total Water Supply	93	94	94	91	89	87

Notes
1. Years are reported in calendar years (January 1 – December 31)
2. Table format based on DWR Guidance Document Table 7
3. Groundwater pumped from the Santa Maria Groundwater Basin consists of Twitchell Yield, native groundwater, and return flows from imported SWP water. The quantities do not include purchased return flows from Santa Maria that will be pumped from the Santa Maria Basin. See Table 3-1 for the projected water sources available to GSWC.

Reliability of Supply

Currently, the Orcutt System has the available water discussed above to meet the projected demands. Groundwater (including the commingled supply from Twitchell Yield) is pumped from the Basin and the imported supplies from the SWP are obtained via CCWA. In addition, GSWC can pump a percentage of the imported water supply as return flows. These return flows are pumped from GSWC's wells and are in addition to their groundwater supplies. Because GSWC's supplies are derived both from local water conservation projects and the SWP, the conditions in local and distant areas can impact the reliability of supplies. The following discussion summarizes the reliability of GSWC's water supply sources. In general, GSWC's supply is expected to be 100 percent reliable through 2030. This reliability is a result of, 1) the projected reliability of imported water and associated return flows, and 2) reliable groundwater in the Basin. Following is a summary of the basis of this reliability.

CCWA's Water Supply Reliability

As mentioned earlier, CCWA's sole water supply is imported water from the SWP. The amount of SWP water available to be delivered varies from year to year based on a combination of hydrologic conditions, water available in SWP storage reservoirs, and environmental regulations in the San Francisco Bay/Sacramento-San Joaquin River Delta. SWP water deliveries are subject to reduction when dry conditions occur in northern California.

CCWA is a SWP contractor (through Santa Barbara County Flood Control and Water Conservation District) with an annual contractual amount of 45,486 ac-ft. Each contractor annually submits by October 1st of each year a request to DWR for water delivery in the following calendar year, in any amount up to the contractor's full amount. Per CCWA's 2005 UWMP, CCWA concludes it will obtain its full contract entitlement of 45,486 ac-ft/yr from 2005 to 2030.

The State Water Project Delivery Reliability Report (May 2003) concluded that the SWP, using existing facilities operated under current regulatory conditions, and with all contractors asking for their full allotted amount, could deliver 76 percent of total allotted amounts on a long-term average basis (CCWA, 2005). Based on updated reliability analysis the SWP could deliver 77 percent of the allotted amounts on a long-term average basis. These most recent analyses also project that SWP deliveries during multiple-dry year periods would be about 25 to 40 percent of the allotted amounts, and possibly as low as 5 percent of the allotted amounts during an unusually dry single year. During wetter years, or about 25 percent of the time, 100 percent of full amounts are projected to be available.

However, some contractors have never requested delivery of their allotted amounts as a result of factors such as less-than-planned water demand, availability of other water supplies, and water conservation efforts that have held demand below initial projections for full contract amounts (CCWA, 2005).

Reliability of Return Flows

Based on projected demands, GSWC will import their full allotment of 550 ac-ft/yr of SWP water. Under the Stipulation, GSWC may also pump 45 percent of the return flows (an estimated 250 ac-ft/yr) of the SWP water. In addition, GSWC may also pump return flows based on the imported SWP water from Santa Maria. As mentioned above, the return flow water will also be impacted by the reliability of SWP water. Over the long-term, the return flows are expected to be 77 percent reliable; however, during single-dry years and multiple-dry years, those are expected to be about 5 percent and 33 percent reliable, respectively.

The City of Santa Maria Water Supply Reliability

Santa Maria has provided projections of its water supply reliability in their 2005 Draft UWMP. The Draft UWMP incorporates the projected demands of the Orcutt System in the 2005 Draft UWMP. Santa Maria has agreed to supply GSWC with the amounts of water shown in Table 3-1. Santa Maria projects the supplies to the Orcutt system will be 100 percent reliable through 2030. This reliability is based on the terms provided in the Stipulation and projected deliveries to Santa Maria of SWP water.

GSWC's Groundwater Supply Reliability

The Basin, especially the Santa Maria Valley Management Area, is a very reliable source of water for the Orcutt System. This reliability is based on GSWC's water rights in the Basin and agreements with Santa Maria and Guadalupe regarding use of return flows from imported SWP water. In addition, the Basin has large volume of groundwater in storage to buffer drought conditions, as has been demonstrated historically.

As a part of the Stipulation, GSWC, along with Santa Maria and Guadalupe, has preferential appropriative rights to surplus native groundwater. Therefore, these parties may pump groundwater without limitation unless a Severe Water Shortage Condition exists, as defined and provided in the Stipulation. The four conditions that serve as the basis for determination of the existence of a Severe Water Shortage Condition are described below. In the event of a Severe Water Shortage Condition, the Court may order GSWC, along with Santa Maria and Guadalupe, to limit their pumping to their respective shares of groundwater derived from the Twitchell Yield, return flows, and any assigned rights.

The Stipulation has requirements for monitoring and management to ensure that water supplies continue to be sufficient to support water uses in the Basin. Annual monitoring will be implemented to report on water demands and water supplies. The Stipulation includes provisions to avoid Severe Water Shortage Conditions and a procedure to deal with Severe Water Shortage Conditions. Given the historic reliability of Basin supplies, Severe Water Shortage Conditions shall be found to exist only when the Management Area Engineer, based on ongoing monitoring, finds the following: 1) groundwater levels in the Management Area are in a condition of chronic decline over a period of not less than five years, 2) the groundwater decline has not been caused by drought, 3) there has been material increase in groundwater use during the five-year period, and 4) monitoring wells indicated that groundwater levels in the Santa Maria Valley Management Area are below the lowest recorded levels. The procedure for addressing Severe Water Shortage Conditions is described in the Stipulation, which may include limitations on groundwater use.

The Stipulation also has provisions for the management and administration of the Twitchell Project. These provisions are designed to provide for funding and operation of the Twitchell Project, to maintain this water supply to the Basin.

GSWC operates four water systems in the Santa Maria Valley Management Area, including, Orcutt, Tanglewood, Lake Marie, and Sisquoc. The Tanglewood and Lake Marie systems use a combined average 573 ac-ft/yr of water based on historical uses. These systems are not expected to grow materially, so their water demand is fixed. The Sisquoc system is a relatively small system that is expected to have a maximum water demand at build-out of about 67 ac-ft/yr. This leaves all of GSWC's water supplies, except for 640 ac-ft/yr, available to meet water demands in the Orcutt System.

As noted, GSWC has rights to rely on its highest historical use of groundwater, plus 10,000 ac-ft/yr of groundwater derived from the Twitchell Project, its SWP return flows, and any additional rights to return flows assigned to GSWC through agreements with Santa Maria. GSWC may also access rights to additional SWP return flows through the Santa Maria Valley Public Water Purveyor Water Management Agreement to ensure reliability of its supplies in the future, as demands grow.

In conclusion, GSWC has firm access to native groundwater, the additional 10,000 ac-ft/yr of groundwater derived from the Twitchell Project, SWP entitlement, plus the five-year average of SWP water return flows to meet its water demands in the Orcutt System. This reliability could be reduced in the event that initial court response to a Severe Water Shortage Condition requires imposition of limitations on groundwater use. However, there are many options available to GSWC to avoid such limitations, such as temporary transfers of rights to pump native groundwater or other actions that might be approved by the court.

Orcutt System's Water Supply Reliability

Reliability for the Orcutt System depends upon the reliability of imported water, groundwater production, and maintenance of the Twitchell Project, as discussed above. As presented in Table 3-1, a sufficient water supply exists to meet the projected water demands in the Orcutt System. It should be noted that available supplies exceed supplies needed to meet the projected demands (Table 3-5). This supply buffer (excess available supply) serves to increase reliability of supplies.

Purchased water supplies from the SWP project are estimated by incorporating the average supply reliability of SWP water to CCWA. Applying 77 percent reliability to the 550 ac-ft/yr SWP water provides 424 ac-ft/yr of reliable SWP supplies to GSWC for the Tanglewood and Orcutt Systems. After subtracting the Tanglewood water demands (215 ac-ft/yr constant through 2030), the remaining 209 ac-ft/yr of supplies are available to the Orcutt System through 2030. Given the applied CCWA SWP reliability factor, this remaining supply is expected to be 100 percent reliable.

The return flows are calculated by multiplying the imported water by the return flow factors in the Stipulation. GSWC may extract 45 percent of their total imported water supply as return flows. Santa Maria may extract 65 percent of their imported water supply as return flows. The available assigned rights (return flows or SWP obtained through the Orcutt-Santa Maria interconnection) from Santa Maria are estimated to range from 415 ac-ft/yr in 2010 to 1,216 ac-ft/yr in 2030, as shown in Table 3-5. Again, these estimated supplies are expected to be 100 percent reliable.

Table 3-5
Available Water Supplies for the Orcutt System in ac-ft/yr

Source	2005	2010	2015	2020	2025	2030
Purchased Water from SWP	209	209	209	209	209	209
Purchased/Assigned Water from Santa Maria	415	415	415	746	981	1,216
Groundwater(3)	9,263	9,660	9,660	9,660	9,660	9,660
Twitchell Augmented Yield/Commingled Groundwater	0	10,000	10,000	10,000	10,000	10,000
Return flows from SWP water(1)	0	191	191	191	191	191
Recycled water	0	0	0	0	0	0
Total(2)	9,887	20,475	20,475	20,806	21,041	21,276

Notes
1. Pursuant to the Stipulation, GSWC is entitled to recapture 45% of its SWP use in the Basin. The planned supply of return flows from SWP water is based on the total volume imported by GSWC's Tanglewood and Orcutt Systems
2. See Reliability section for details on these supplies
3. Groundwater supplies are based on appropriative rights in Santa Maria Groundwater Basin as defined in the Stipulation
4. Table format based on DWR Guidance Document Table 4

Supply reliability for the Orcutt System depends upon the reliability of imported water and local groundwater supplies, as discussed above.

Table 3-6 presents water supply projections from purchased water, groundwater, and return flows during a normal year, single-dry year and multiple-dry years for the Orcutt System. The normal year supply represents the expected supply under average hydrologic conditions, the dry-year supply represents the expected supply under the single driest hydrologic year, and the multiple-dry year supply represents the expected supply during a period of three consecutive dry years.

As described above, imported water supplies from the SWP are expected to be 77 percent (based on a long-term average basis) reliable for the normal years. However, the SWP deliveries during the multiple-dry year periods could be about 25 to 40 percent of the

allotted amounts and possibly as low as 5 percent of the allotted amount during an unusually dry single year. The available water supplies for 2030 are calculated accordingly and are presented in Table 3-6. Any water demand which cannot be met with the SWP water (and the associated return flows) is expected to be met by groundwater supplies in accordance with the Stipulation. As described in the Stipulation, the Management Area Engineer is responsible for monitoring water conditions and recommending water supply projects and programs to ensure water supplies are available to each Management Area under all hydrologic conditions.

Table 3-6
Supply Reliability for the Orcutt System for Year 2030 in ac-ft/yr

Source	Normal Water Year	Single-Dry Water Year	Multiple-Dry Water Years		
			Year 1	Year 2	Year 3
Imported Water from SWP(4)	209	0	0	0	0
Purchased/Assigned water from City of Santa Maria	1,216	1,216	1,216	1,216	1,216
Groundwater(1)	9,660	9,869	9,869	9,891	9,913
Twitchell Augmented Yield/Commingled Groundwater(5)	10,000	10,000	10,000	10,000	10,000
Return flows from SWP water(2,3)	191	191	191	169	147
Recycled water	0	0	0	0	0
Total	21,276	21,276	21,276	21,276	21,276
Percent of Normal		100	100	100	100

Notes
1. Long-term operation of the groundwater basin and return flows from the SWP will allow increased groundwater production in years where imported water supplies are limited.
2. Return flows are based on five-year rolling average of imported water. Single-dry year impacts will not affect availability of return flows for previous five-year average.
3. Multiple-dry year reliability of return flows considers the previous five-year rolling average of SWP imports. These projections assume five years of normal water years before the beginning of the multiple-dry year period.
4. According to CCWA, single-dry year and multiple-dry year reliability for imported water is 5 percent and 33 percent, respectively, of contracted total. During these dry periods, water received from the SWP may be preferentially allocated to GSWC's Tanglewood system.
5. Granted under the Stipulation, subject to and adjustments that could be ordered by the Court
6. Table format based on DWR Guidance Document Table 8

Table 3-7 lists single-dry year and multiple-dry year periods for both groundwater and purchased water supplies. The single-dry year and multiple-dry year periods are based on CCWA's (which are based on SWP) analysis of the lowest average precipitation for a single year and the lowest average precipitation for a consecutive multiple-year period, respectively.

Based on historical records from 1876 to 2004, SWP has indicated that 1977 is the single-dry year and the years of 1931-1934 are representative of driest four consecutive SWP supplies (CCWA, 2005). A normal water year is based on the long-term average basis. Using existing facilities operated under current regulatory conditions, and with all contractors asking for

their full amounts in most years, SWP would be able to deliver 77 percent of the total supplies during a normal water year. The dry-year water supply from SWP would be about 33 percent of normal during multiple-dry years and about 5 percent during a single-dry year. In other words, 100 percent reliable water supplies from SWP could be estimated for CCWA's water supplies using 77, 33 and 5 percent for the normal, multiple-dry and a single-dry water year demands, respectively.

Therefore, with those amounts, CCWA has determined that they can meet their projected water demands for imported water for these years, so the supply is equal to the projected demands. In addition, there are other mechanisms that could augment the reliability of supplies during a dry period. For example, water available through exchanges with other contractors, purchases of water through DWR dry year water purchase programs, short term water transfers through DWR's Turnback Pool programs and groundwater recharge programs operated by some CCWA project participants. The water demands from several CCWA project participants may not be critical because they have invested in water reclamation (recycling) projects, desalination, water transfers, exchanges, conservation measures and conjunctive use projects to increase the reliability of their overall water portfolios. In any given year, additional water can be made available through the SWP system for the incremental cost of purchasing or exchanging the water from others in the SWP.

For the groundwater reliability analysis, local precipitation data from 1949 through 2004 were reviewed. Data for the water year basis were obtained by the Western Regional Climate Center (WRCC) at Santa Maria, CA. Precipitation data was evaluated from Water Year (WY) 1948-49 (October 1, 1948 - September 30, 1949) through WY 2003-04 (October 1, 2003 - September 30, 2004). Water year 1971-72 was the single driest year with 4.26-inches of precipitation. The normal water year was based on DWR's description of the median water year over the period of record. The median annual precipitation between WY 1949 and WY 2004 at Santa Maria was 12.07-inches. Based on the median precipitation, the normal water year was 1988. The multiple dry year period of WY 1970 through WY 1972 recorded the lowest 3-year total of precipitation.

Table 3-7
Basis of Water Year Data

Water Year Type	Base Year(s)	Historical Sequence
	Purchased Water (CCWA/SWP)(1)	
Normal Water Year	N/A (2)	1876-2004
Single-Dry Water Year	1977	
Multiple-Dry Water Years	1931-1934	
	Groundwater (3)	
Normal Water Year (4)	1988	1949-2004
Single-Dry Water Year	1972	1949-2004
Multiple-Dry Water Years	1970-1972	1949-2004

Notes
1. DWR SWP Delivery Reliability Report (May 2005) presents data on historic hydrology
2. N/A – Not Applicable. Average of the entire hydrologic period
3. Record of precipitation from Western Regional Climate Center (WRCC) at Santa Maria, CA.
4. Normal Water Year calculated from median precipitation from WY 1949-WY 2004
5. Table format based on DWR Guidance Document Table 9

Factors Resulting in Inconsistency of Supply

Table 3-8 presents factors resulting in inconsistency of supply for the Orcutt System.

Table 3-8
Factors Resulting in Inconsistency of Supply

Name of Supply	Legal	Environmental	Water Quality	Climatic
Groundwater, Santa Maria Groundwater Basin	The Court retains jurisdiction over management of the Basin and may limit pumping under Severe Water Shortage Conditions as presented in the Stipulation. The Management Area Engineer will monitor groundwater conditions and report to the Court.		None	
Purchased Water from SWP and Associated Return Flows	N/A	N/A	N/A	Reliability of imported water supply may vary based on SWP annual water supply

Notes
1. Table format based on DWR Guidance Document Table 10
2. N/A – Not applicable or not available

Transfers and Exchanges

The Stipulation establishes a framework for both permanent and temporary transfers of water rights within the Basin. The Stipulation allows permanent or temporary transfer of the groundwater yield associated with the operation of the Twitchell Project. The Stipulation also allows temporary transfers of agricultural pumping rights (fallowing programs) during Severe Water Shortage Conditions. Finally, each new development within the Orcutt Community Plan will transfer (assign) to GSWC a source of supplemental water to offset the demand associated with the new project. As of 2006, 415 ac-ft/yr has been assigned to GSWC under this program. It is expected that these assignments will continue as new development takes place in the Orcutt system. The projected transfer amounts of water from Santa Maria have been included in Table 3-1. These assignments are summarized in Table 3-9.

Table 3-9
Transfer and Exchange Opportunities

Source Transfer Agency	Transfer or Exchange	Short Term	Proposed Quantities	Long term	Proposed Quantities
Santa Maria(4)	Transfer	N/A	N/A	Y	1,216
Twitchell Management Authority(3)	TBD	TBD	TBD	TBD	TBD
Agricultural Entities(3)	TBD	TBD	TBD	TBD	TBD

Notes
1. Table format based on DWR Guidance Document Table 11
2. N/A = Not applicable. At this time, there are no short term agreements between GSWC and Santa Maria for transfer or exchange of water rights.
3. TBD = to be determined. Transfers and exchanges under these programs will occur on an as needed basis and as provided in the Stipulation.
4. Under an existing purchase order agreement, Santa Maria has agreed to supply GSWC with returns from their use of SWP water, which currently is projected to be 1,216 ac-ft/yr in 2030. These amounts of purchased water are included in Table 3-1.

Planned Water Supply Projects and Programs

There are no specifically identified water supply projects and programs in the Orcutt System at this time; therefore, Table 3-10 has been left blank. GSWC, as a part of its normal maintenance and operations, will construct new wells, pipelines, and treatment systems as needed as a part of its ongoing Capital Improvement Program to maintain its supply and meet distribution system requirements.

Table 3-10
Future Water Projects Supply in ac-ft

Project Name	Normal Year	Single Dry Year	Multiple Dry Years		
			Year 1	Year 2	Year 3
N/A	N/A	N/A	N/A	N/A	N/A

Notes
1. This table is based on the DWR Guidebook Table 17.
2. N/A – Not applicable
3. Unit of measure: ac-ft/yr

Wholesale Agency Supply Data

Table 3-11 provides CCWA's and Santa Maria's existing and planned water sources available to the Orcutt System under normal years. The supplies shown are equal to the total amount of water potentially available to the Orcutt System under the agreements with CCWA and Santa Maria. CCWA and Santa Maria have projected these supplies will be available under normal conditions in their respective 2005 UWMPs (CCWA, 2005; Santa Maria, 2006).

Table 3-11
Existing and Planned Water Sources Available to the Orcutt System as Identified by CCWA and Santa Maria in ac-ft/yr

Wholesaler Sources	2010		2015		2020		2025		2030	
	Existing	Planned	Existing	Planned	Existing	Planned	Existing	Planned	Existing	Planned
CCWA and Santa Maria (Purchased Water)	624	N/A	624	N/A	955	N/A	1,190	N/A	1,425	N/A

Notes
1. Table format based on DWR Guidance Document Table 20
2. N/A – Not applicable

Table 3-12 provides information on the supplies available to the Orcutt System under single-dry and multiple-dry year conditions for 2030. It is expected that if available SWP supplies are limited in dry periods, GSWC will pump groundwater, in accordance with the Stipulation, to meet the demands. Santa Maria's 2005 UWMP projects that planned supplies for the Orcutt System will be 100 percent reliable through 2030. The total available supplies are projected to be 100 percent reliable to meet the water demand through 2030.

Table 3-12
Reliability of Wholesale Supply for Year 2030 in ac-ft/yr

		Multiple-Dry Water Years		
Wholesaler	**Single-Dry**	**Year 1**	**Year 2**	**Year 3**
CCWA and Santa Maria (Purchased Water)	1,216	1,216	1,216	1,216

Notes
1. Table format based on DWR Guidance Document Table 21

Table 3-13 lists factors affecting wholesale supply for the Orcutt System. The supplies to the Orcutt System are expected to be 100 percent reliable.

Table 3-13
Factors Affecting Wholesale Supply

Name of Supply	Legal	Environmental	Water Quality	Climatic
CCWA	N/A	N/A	N/A	Reliability of imported water supply may vary based on SWP annual water supply
City of Santa Maria	N/A	N/A	N/A	Santa Maria has guaranteed the reliability of the supplies assigned to GSWC, irrespective of the annual variability of SWP deliveries

Notes
1. N/A - Not applicable
2. Table format based on DWR Guidance Document Table 22

Chapter 4. Water Use

Section 10631 (e) of the Act requires that an evaluation of water use be performed for the Orcutt System. The Act states the following:

Section 10631

(e)

(1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water- use sectors including, but not necessarily limited to, all of the following uses:

(A) Single-family residential

(B) Multifamily

(C) Commercial

(D) Industrial

(E) Institutional and governmental

(F) Landscape

(G) Sales to other agencies

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof

(I) Agricultural.

(2) The water-use projections shall be in the same five-year increments described in subdivision (a).

In addition, Section 10631 (k) directs urban water suppliers to provide existing and projected water-use information to wholesale agencies from which water deliveries are obtained. The Act states the following:

Section 10631

(k) Urban water suppliers that rely upon a wholesale agency for a source of water, shall provide the wholesale agency with water-use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c), including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

As part of the Urban Water Management Plans, California regulation requires water suppliers to quantify past and current water use and to project the total water demand for the water system. Projections of future water demand allow a water supplier to analyze if future water supplies are adequate, as well as help the agency when sizing and staging future water facilities. Water use and production records, combined with population and employment projections, provide the basis for estimating future water requirements. This chapter presents an analysis of water use data and the resulting projections for future water needs in the Orcutt System.

Historical and Projected Water Use

Historical water use data from 1980 to 2004 was analyzed to estimate the future water demands for the Orcutt System. Projections for the number of service connections and future water use were calculated for the year 2005 through 2030 in five-year increments. Future water demands were estimated using two different methods, a population-based approach and a historical-trend approach, to present a projection range. The range established between these two approaches is intended as supplemental information; all recommendations are based on the population-based projections. The historical-trend projections are provided as ancillary information only. Detailed descriptions of how the population-based and historical-trend projections were calculated are provided below. Figure 4-1 shows the historical and projected number of metered service connections for the Orcutt System from 1980 through 2030. Figure 4-2 shows the historical and projected water use for the Orcutt System from 1984 until 2030.

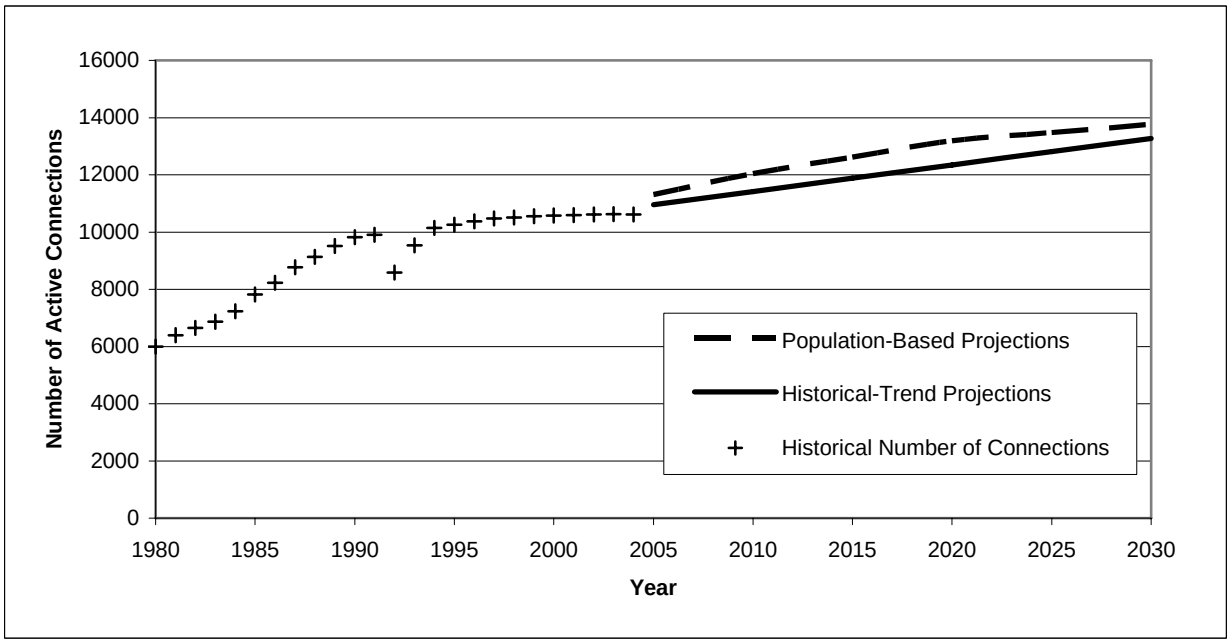

Figure 4-1. Historical and Projected Number of Metered Service Connections

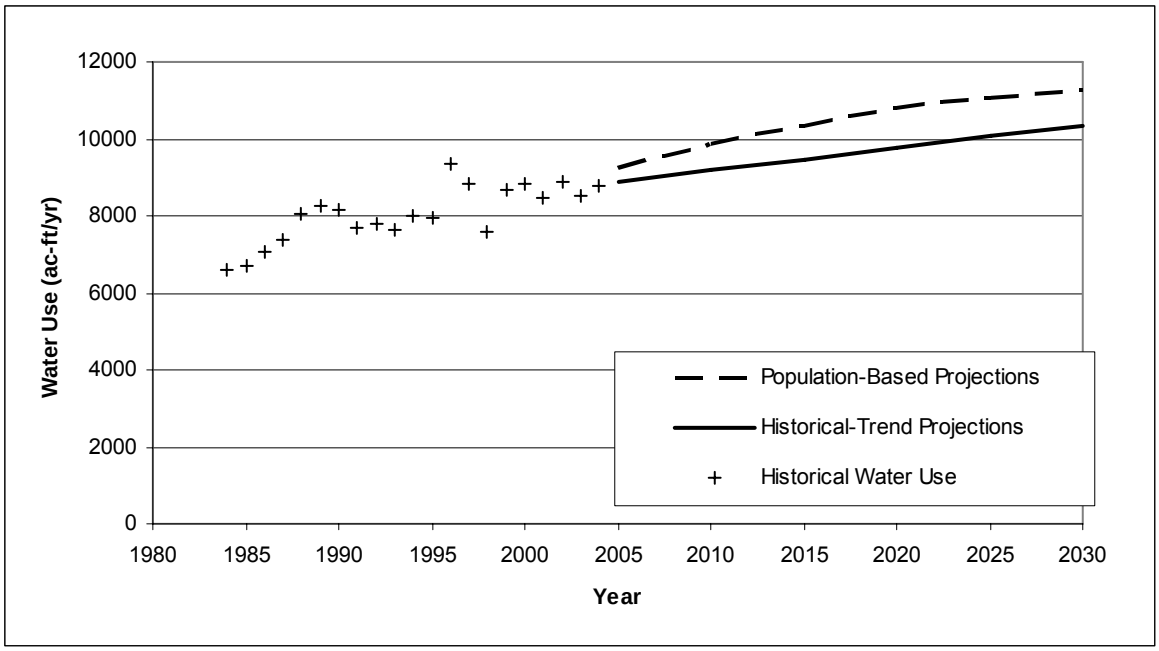

Figure 4-2. Historical Water Use and Future Water Use Projections

To generate estimates of future water demands, historical water use records from 1984 through 2004 were analyzed. The customer billing data for the system consists of annual water sales data. The water sales data was sorted by customer type using the assigned North American Industry Classification System (NAICS) codes. Then the sorted water sales data was further grouped into the following 8 categories: single family, multi-family, industrial, commercial, institutional/government, landscape, agriculture, and others.

For each category, a water use factor was calculated in order to quantify the average water used per metered connection. For a given customer type, the unit water use factor is calculated as the total water sales for the category divided by the number of active service connections for that category. The unit water use factors for each customer type were averaged over the data range from 1999 through 2004 in order to obtain a representative water use factor that can be used for water demand projections by customer type.

The population-based water use projections are based on the population, housing, and employment projections developed for the Orcutt System using the Orcutt Community Plan (OCP) data developed by the County of Santa Barbara. The methodology used in the derivation of population projections for the Orcutt System is discussed in more detail in Chapter 2.

OCP household projections were used to determine the growth in single-family and multi-family service connections for the years 2005, 2010, 2015, 2020, 2025, and 2030. For example, the ratio between the household projections for the year 2015 and the year 2000 was multiplied by the number of service connections in 2000 to obtain a projection of the number of connections in the year 2015. Similarly, total population growth projections were used to determine the growth for commercial, industrial, institutional/government, landscape, and agriculture service connections. The population-based projected water use was then

calculated by multiplying the number of active service connections for each customer category with the corresponding customer average water use factor calculated above.

The historical-trend water use projections are not based on OCP projections but are instead based on a linear projection of the historical number of metered service connections. To establish the historical trend, the data from 1989 through 2004 was used because the growth rate in number of connections decreased after 1989 (refer to Figure 4-1).

The average growth rate established by this historical trend was applied to the number of connections in each customer category to project the future number of service connections. The historical-trend projected water use was then calculated by multiplying the number of active service connections for each customer category with the corresponding customer average water use factor calculated above.

Figure 4-3 shows the average of the population-based and historical-trend water use projections by customer type, as well as the total water demand. The error bars provide the range of the total water demand projections for that year. The population-based and historical-trend projections of the number of service connections, and the resulting water demand, are provided in Table 4-1 and Table 4-2, respectively.

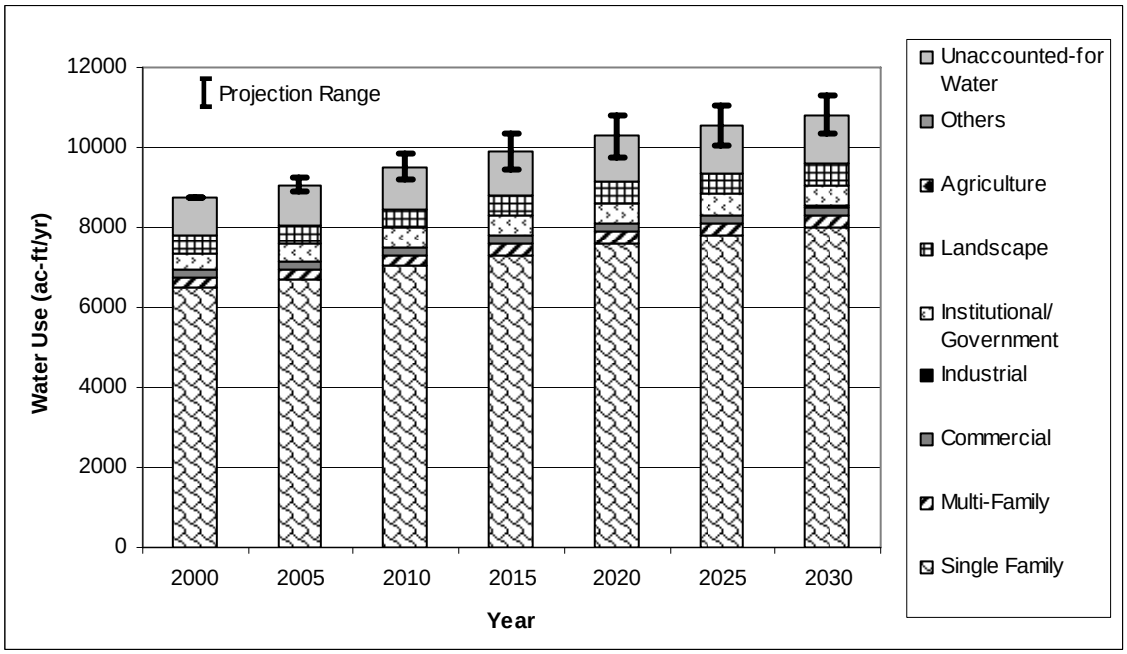

Figure 4-3. Water Use by Customer Type

Table 4-1
Population-Based and Historical-Trend Projections of the Number of Metered Service Connections for the Orcutt System

		Accounts by Type								
Year	**Projection Type**	**Single Family**	**Multifamily**	**Commercial**	**Industrial**	**Institutional/ Government**	**Landscape**	**Agriculture**	**Other[3]**	**Total**
2000[2]	*N/A*	10,190	117	77	21	60	95	3	13	10,576
2005	*Population-Based*	10,899	125	82	22	64	102	3	14	11,312
	Historical-Trend	10,457	120	79	22	62	97	3	13	10,853
2010	*Population-Based*	11,606	133	88	24	68	108	3	15	12,046
	Historical-Trend	10,800	124	82	22	64	101	3	14	11,209
2015	*Population-Based*	12,161	140	92	25	72	113	4	16	12,621
	Historical-Trend	11,143	128	84	23	66	104	3	14	11,565
2020	*Population-Based*	12,715	146	96	26	75	119	4	16	13,197
	Historical-Trend	11,487	132	87	24	68	107	3	15	11,922
2025	*Population-Based*	12,992	149	98	27	76	121	4	17	13,484
	Historical-Trend	11,830	136	89	24	70	110	3	15	12,278
2030	*Population-Based*	13,267	152	100	27	78	124	4	17	13,770
	Historical-Trend	12,173	140	92	25	72	113	4	16	12,634

Notes
1. This table is based on the DWR Guidebook Table 12.
2. Based on calendar year.
3. Other accounts for any service connections not included in any other category, including idle or inactive connections.

Table 4-2
Population-Based and Historical-Trend Projections of Water Deliveries for Service Connections for the Orcutt System in ac-ft/yr

		Accounts by Type								
Year	**Projection Type**	**Single Family**	**Multifamily**	**Commercial**	**Industrial**	**Institutional/ Government**	**Landscape**	**Agriculture**	**Other[3]**	**Total**
2000[2]	*N/A*	6,503	243	182	15	425	419	1	2	7,792
2005	*Population-Based*	6,842	272	167	27	456	458	2	8	8,231
	Historical-Trend	6,565	261	160	26	437	440	1	8	7,897
2010	*Population-Based*	7,287	290	177	29	485	488	2	9	8,766
	Historical-Trend	6,780	270	165	27	452	454	1	8	8,157
2015	*Population-Based*	7,635	304	186	30	508	511	2	9	9,184
	Historical-Trend	6,996	278	170	27	466	469	2	8	8,416
2020	*Population-Based*	7,983	317	194	31	532	535	2	9	9,603
	Historical-Trend	7,211	287	176	28	480	483	2	8	8,675
2025	*Population-Based*	8,156	324	199	32	543	546	2	10	9,812
	Historical-Trend	7,427	295	181	29	495	497	2	9	8,934
2030	*Population-Based*	8,329	331	203	33	555	558	2	10	10,020
	Historical-Trend	7,642	304	186	30	509	512	2	9	9,194

Notes
1. This table is based on the DWR Guidebook Table 12.
2. Based on calendar year.
3. Other accounts for any service connections not included in any other category, including idle or inactive connections.

Sales to Other Agencies

There are no sales to other agencies for the Orcutt System; therefore, Table 4-3 has intentionally been left blank.

Table 4-3
Sales to Other Agencies in ac-ft/yr

Water Distributed	2000 (2)	2005	2010	2015	2020	2025	2030
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes
1. This table is based on the DWR Guidebook Table 13.
2. Based on calendar year.

Other Water Uses and Unaccounted-for Water

In order to accurately predict total water demand, other water uses, as well as any water lost during conveyance, must be added to the customer demand. California regulation requires water suppliers to quantify any additional water uses not included as a part of water use by customer type (Table 4-4). There are no other water uses in addition to those already reported in the Orcutt System.

Unaccounted-for water must be incorporated when projecting total water demand. Unaccounted-for water is defined as the difference between annual production and supply and annual sales. Included in the unaccounted-for water are system losses (due to leaks, reservoir overflows, or inaccurate meters), and water used in operations. In the Orcutt System, from 1999 through 2004, unaccounted-for water has averaged 11.13% of the total production. Table 4-4 provides a summary of unaccounted-for water in the Orcutt System.

Table 4-4
Additional Water Uses and Losses in ac-ft/yr

Water-Use Type	2000 (2)	2005	2010	2015	2020	2025	2030
Other Water Uses	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Unaccounted-for System Losses(3)	976	1,031	1,098	1,151	1,203	1,229	1,255
Total	976	1,031	1,098	1,151	1,203	1,229	1,255

Notes
1. This table is based on the DWR Guidebook Table 14.
2. Based on calendar year.
3. Unaccounted-for water includes system losses due to leaks, reservoir overflows, and inaccurate meters, as well as water used in operations.

Total Water Demand

As mentioned above, other water uses, as well as any water lost during conveyance, must be added to the customer demand to project water demand for the Orcutt System. Although there are no other water uses contributing to the total water demand in the Orcutt System, unaccounted-for water must be incorporated into the total water demand (refer to the section above for a definition of unaccounted-for water). Table 4-5 summarizes the projections of water sales, unaccounted-for water, and total water demand through the year 2030. The projected water sales in the remainder of the analysis, including Table 4-5, are calculated using the population-based projections for water use.

The water demand projections below do not include any reduction due to future implementation of Demand Management Measures (DMM). More information regarding the status of demand reduction measures is available in Chapter 5.

Table 4-5
Projected Water Sales, Unaccounted-for System Losses, and Total Water Demand in ac-ft/yr

Year	Projected Water Sales	Unaccounted-for System Losses	Total Water Demand
2000[(2)]	7,792	976	8,768
2005	8,231	1,031	9,263
2010	8,766	1,098	9,864
2015	9,184	1,151	10,335
2020	9,603	1,203	10,806
2025	9,812	1,229	11,041
2030	10,020	1,255	11,276

Notes
1. This table is based on the DWR Guidebook Table 15.
2. Based on calendar year.

Data Provided to Wholesale Agency

GSWC provided the following projected water use data to the City of Santa Maria and the State Water Project (SWP), its wholesale water suppliers for the Orcutt System, as summarized in Table 4-6.

Table 4-6
Summary of Orcutt System Data Provided to the City of Santa Maria and SWP in ac-ft/yr

Wholesaler	2010	2015	2020	2025	2030
City of Santa Maria	415	415	746	981	1,216
SWP	209	209	209	209	209

Notes
1. This table is based on the DWR Guidebook Table 19.

Chapter 5. Demand Management Measures

The evaluation of Demand Management Measures (DMMs) occupies a significant portion of the Act. The Act states as follows:

Section 10631

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

(A) Water survey programs for single-family residential and multifamily residential customers.

(B) Residential plumbing retrofit.

(C) System water audits, leak detection, and repair.

(D) Metering with commodity rates for all new connections and retrofit of existing connections.

(E) Large landscape conservation programs and incentives.

(F) High-efficiency washing machine rebate programs.

(G) Public information programs.

(H) School education programs.

(I) Conservation programs for commercial, industrial, and institutional accounts.

(J) Wholesale agency programs.

(K) Conservation pricing.

(L) Water conservation coordinator.

(M) Water waste prohibition.

(N) Residential ultra-low-flush (ULF)toilet replacement programs.

(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.

(2) Include a cost-benefit analysis, identifying total benefits and total costs.

(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(j) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that Council in accordance with the ''Memorandum of Understanding Regarding Urban Water Conservation in California,'' dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

Section 10631.5. The department shall take into consideration whether the urban water supplier is implementing or scheduled for implementation, the water demand management activities that the urban water supplier identified in its urban water management plan, pursuant to Section 10631, in evaluating applications for grants and loans made available pursuant to Section 79163. The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities.

This chapter presents a summary of Golden State Water Company's (GSWC) past, current and future water conservation activities for the Orcutt System in compliance with the above listed sections of the Act.

The water conservation practices, as defined by the Act, are comprised of 14 DMMs. The DMMs are functionally equivalent to urban water conservation best management practices (BMPs) administered by the California Urban Water Conservation Council (Council). Table 5-1 lists the BMPs.

The Council was formed as part of an effort by the Department of Water Resources (DWR) working jointly with water utilities, environmental organizations, and other interested groups to develop and administer urban best management practices (BMPs) for conserving water. In 1991 the Council issued a Memorandum of Understanding Regarding Urban Water Conservation in California (MOU) which formalized the agreement to implement BMPs to reduce the consumption of California's water resources. As a signatory of the MOU, GSWC has agreed to implement the BMPs that are determined to be cost beneficial to its ratepayers and to complete such implementation in accordance with the schedule assigned to each BMP. GSWC files bi-annual reports with the Council on BMPs implementation progress.

Table 5-1
Water Conservation Best Management Practices

1	Water Survey Programs for Single-Family Residential and Multifamily Residential Customers
2	Residential Plumbing Retrofits
3	System Water Audits, Leak Detection, and Repair
4	Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections
5	Large-Landscape-Conservation Programs and Incentives
6	High-Efficiency-Washing-Machine Rebate Programs
7	Public Information Programs (1)
8	School Education Programs (1)
9	Conservation Program for Commercial, Industrial, Institutional (CII) Accounts
10	Wholesale-Agency Assistance Programs (1)
11	Conservation Pricing (1)
12	Water Conservation Coordinator (1)
13	Water Waste Prohibition (1)
14	Residential Ultra-Low-Flush-Toilet (ULFT) Replacement Programs

Notes
1. Economic benefits of these BMPs are considered nonquantifiable.

BMP Implementation Status

GSWC implements water conservation programs by district or customer service area (CSA) rather than for each individual system. Because of this, water conservation was evaluated for the entire Santa Maria CSA, which includes the Orcutt System.

The BMP implementation status was assessed based on information provided in BMP activity reports for the years 2001 to 2004 that were filed with the Council. Historically, the BMP forms for the Santa Maria CSA have been 100 percent complete, including the reports filed for 2001 to 2004. In addition, the BMP coverage reports were used to assess whether the target implementation schedule, as defined by the Council, for each BMP is met. The 2004 Activity Report and Coverage Report are included in Appendix E. Based on Section 10631 (j), the Council reports meet the requirements of Water Code Section 10631 (f) and (g). A summary of these reports is presented in Table 5-2 and Table 5-3.

Table 5-2 presents a summary of the past water conservation activities in the Santa Maria CSA. It should be noted GSWC takes credit for water conservation activities completed under programs jointly offered by GSWC and other agencies in its service area.

Table 5-3 presents a description of the offered programs and implementation status in the Santa Maria CSA for all BMPs. GSWC is currently not meeting coverage requirements as defined by the Council for BMPs 2, 3, 5, and 14. In order to determine if implementation of these BMPs for the Santa Maria CSA should continue, a benefit-cost analysis was performed on these BMPs.

Table 5-2
Summary of Past Water Conservation Activities [1]

Year	BMP 1: Residential Surveys	BMP 2: Residential Retrofits	BMP 3: Pre-Screening System Water Audit	BMP 5: Large Landscape Surveys	BMP 6: High Efficiency Washing Machine Rebate	BMP 7: Public Information Programs	BMP 8: School Programs Students Reached	BMP 9: CII Surveys	BMP 14: Residential ULFT
Pre 2000	995	13660		4		Yes	2400	7	
2000	215	1100				Yes			
2001	215	1100		3		Yes			
2002	215	1100		3		Yes	307		
2003	225	1100				Yes			
2004	225	1100				Yes		35	
Meeting Coverage Requirements	Yes [2]	No	No	No	Yes	Yes	Yes	Yes [2]	No

Notes
1. BMPs 4, 11, 12, and 13 are fully implemented. BMP 10 is not applicable as this system does not provide wholesale water to other agencies.
2. GSWC is on track to meet the 10-year coverage requirements.

Table 5-3
Summary of Best Management Practice Implementation

	BMP	Summary of Activities	Coverage Implementation [2] Status
1	Residential Water Surveys	GSWC completes surveys of high billing customers and distributes Water Saving Kits in response to high billing investigations.	On track to meeting the 10-year coverage requirements.
2	Residential Plumbing Retrofits	GSWC distributes Water Saving Kits that include easy install devices for kitchen taps, bathroom taps and showers. Rebates for Residential Plumbing retrofits are currently not offered.	Coverage requirements are not met.
3	System Water Audits, Leak Detection, and Repair	Program currently not implemented.	Coverage requirements are not met.
4	Metering	All accounts in the Santa Maria CSA are metered and are billed by volume.	Fully implemented.
5	Large-Landscape-Conservation Program	GSWC participates in Large Landscape Conservation Programs offered through Santa Barbara County Water Agency, who provides information, training and demonstrations of sustainable landscaping practices including water efficient landscape design and maintenance strategies, and completes audits.	Coverage requirements are not met.
6	High-Efficiency-Washing-Machine Rebate Program	Rebates for high-efficiency washers are currently not offered by local energy providers.	Coverage requirements are being met.
7	Public Information Program[1]	Santa Maria CSA has a public information program. GSWC partners with Santa Barbara County on advertising in the media. The GSWC also educates customers by including informational pamphlets with bills, printing messages on bills, investigating high bills, and providing flyers on conservation from its counter.	Coverage requirements are being met.
8	School Education Program[1]	GSWC participates in school education programs offered through Santa Barbara County Water Agency, who provide outline curriculum, teacher workshops, print materials and in-class presentations that focus on water resources and water efficiency.	Coverage requirements are being met.
9	Conservation Program CII Accounts	GSWC offers surveys for CII accounts that include site visit, evaluation of water using components and recommendations on improving efficiency.	On track to meeting the Combined Coverage requirements.
10	Wholesale-Agency Program[1]	Not applicable.	Not applicable
11	Conservation Pricing[1]	GSWC has adopted conservation pricing, including using water rates that are developed to recover the cost of providing service and billing customers for metered water use. GSWC has uniform water rate structure (i.e. no rate increase/decrease based on the quantity of water used).	Fully implemented.
12	Water Conservation Coordinator [1]	GSWC has a part time water conservation coordinator on staff for all of Region I service areas.	Coverage requirements are being met.
13	Water Waste Prohibition[1]	There is a water waste prohibition ordinance in effect in the Santa Maria CSA (CPUC Rule No. 11.B.3 and Rule No. 14.1).	Fully implemented.
14	Residential-Ultra-Low-Flush-Toilet-Replacement Program	This program is currently not offered.	Coverage requirements are not met.

Notes
1. Benefits of these DMM's are considered non-quantifiable.
2. "Implementation" means achieving and maintaining the staffing, funding, and priority levels necessary to achieve the level of activity required to satisfy the target commitment as described in the MOU.

Cost Benefit Analysis

A benefit-cost economic analysis was completed for the quantifiable BMPs that are not meeting coverage requirements (BMP 2, 3, 5, and 14). The benefit-cost analysis was completed with the consideration of economic factors. Noneconomic factors, including environmental, social, health, customer impacts, and new technology, are not believed to be significant and were not considered in the analysis.

The basis and assumptions used in the economic analysis of each BMP, as well as detailed calculations are included in Appendix D. Common assumption for all BMPs is the value of conserved water. Based on information provided by GSWC, the value of water for the Santa Maria CSA is $135 per acre-foot (ac-ft). This value represents the total water supply expenses based on groundwater supply. The real discount rate of 6.71 percent was used. The analysis assumes that BMPs 1 and 2 (Residential Water Surveys and Plumbing Retrofits) would be done concurrently. Other assumptions with supporting references are described in Table D-1 (Appendix D).

The economic analysis was performed using a spreadsheet program developed by the Council. A separate, customized worksheet for each BMP is presented in Table D-2 (Appendix D). Each BMP economic analysis spreadsheet projects on an annual basis the number of interventions and the dollar values of the benefits and costs that would result from fully implementing a particular BMP. The definition of terms and formulas that are common to all worksheets are presented in Table D-3 (Appendix D).

Table 5-4 summarizes the results of the economic analysis. The table presents the total discounted costs and benefits, the benefit-cost ratio, the simple pay-back period, the discounted cost per ac-ft of water saved, and the net present value (NPV) per ac-ft of water saved for each BMP.

The economic analysis shows that BMP 5 yields a benefit-cost ratio greater than one, which indicates that the Large Landscape Conservation Measures are cost effective. Based on this, GSWC should continue efforts to implement BMP 5 that appear to be cost effective.

BMPs 2 (Residential Plumbing Retrofits), 3 (System Water Audits and Leak Repair), and 14 (Residential ULFT) result in slightly higher costs when compared to the value of water that is saved, and benefit cost ratio of less than one. This result is to some extent driven by the low value of water in the Santa Maria CSA. Signatories of the MOU are not required to implement BMPs that are not cost beneficial. Therefore, GSWC is not required to continue implementation of BMPs 2, 3, and 14, and should pursue an exemption from implementing these measures with the Council.

Based on the results of the benefit-cost analysis, an implementation program was developed for the cost effective BMPs.

Table 5-4
Results of Economic Analysis for BMPs Currently not Meeting Coverage Requirements

	BMP Description	Total Discounted Cost (1)	Total Discounted Benefits (2)	Total Water Saved (ac-ft) (3)	Benefit/ Cost Ratio (4)	Simple Payback Analysis (years) (5)	Discounted Cost/Water Saved ($/ac-ft) (6)	Net Present Value/ Water Saved ($/ac-ft) (7)
2	Residential Plumbing Retrofits	$238,687	$79,923	515	0.3	35	$463	-$308
3	System Water Audits and Leak Repair	$467,283	$272,603	2525	0.6	33	$185	-$77
5	Large Landscape Conservation Programs and Incentives	$57,435	$80,421	428	1.4	6	$134	$54
14	Residential ULFT	$1,120,483	$538,936	5361	0.5	51	$209	-$108

Notes
1. Present value of the sum of financial incentives and operating expenses - using discount rate of 6.71%.
2. Present value of the sum of avoided energy and purchased water costs - using discount rate of 6.71%.
3. Achieved water savings for the implemented BMP.
4. Total discounted benefits divided by total discounted costs.
5. Time horizon in years required for benefits to pay back costs of the BMP.
6. Total discounted costs divided by total water saved.
7. Total of discounted benefits less discounted costs divided by total water saved.

Recommended Conservation Program

GSWC should continue efforts to implement BMPs that are assessed to be cost beneficial (benefit-cost ratio equal or greater than one), and to achieve the target implementation coverage by the end of the implementation period assigned to each BMP.

BMP 5 was identified as cost beneficial in the Santa Maria CSA; therefore, an implementation program was developed for this BMP. The program is based on achieving the target coverage requirements, as per the MOU.

Table 5-5 presents the proposed implementation program, including the number of annual interventions required for each BMP to comply with defined coverage requirements; the total annual expenditures necessary to support the interventions; and the estimated annual water savings. The expenditures for BMPs take into consideration the existing programs offered by other agencies in the service area, and reflect only the incremental cost to GSWC to implement BMPs to meet the coverage requirements.

BMPs 7, 8, 10, 11, 12, and 13 were not included in the proposed implementation program because they are considered non-quantifiable. These BMPs have no specific level of effort defined in the MOU, therefore water savings and costs associated with these BMPs were not included in the analysis. The cost for BMP 12 is contained in GSWC overhead. BMPs 4 and 11 are already implemented, and, therefore, have no additional cost associated with them. BMP 13 has no associated cost unless initiated by a water shortage condition.

When implementing water conservation programs, GSWC is subject to economic and legal constraints that need to be considered as they may affect the proposed BMPs implementation schedule.

Economic Considerations

As a private utility, GSWC is subject to the rules and regulations of the California Public Utilities Commission (CPUC). The CPUC approve GSWC's water rate structure and the capital and operating budget, including the budget for implementation of water conservation measures. GSWC is often constrained in the funding available to implement programs. GSWC implements cost effective water conservation programs that have been approved by the CPUC.

While GSWC is fully committed to optimizing its available water resources and implementation of BMP's and DMM's, the Company is currently limited in its ability to do so by certain ratesetting practices of the CPUC. As noted above, the CPUC's draft "Water Action Plan" has as one of its major objectives strengthening water conservation programs to a level comparable to those of energy utilities. While implementation measures have not yet been identified by the CPUC, GSWC has proposed specific changes to current CPUC rate setting practices which will, as a practical matter, support implementation of the WAP conservation objectives and greatly enhanced DMM's.

The cost of water is an important economic factor that needs to be considered when implementing conservation programs. Higher cost of water increases the attractiveness of BMPs implementation. Currently there are no water projects planned in the Santa Maria District system that would result in higher unit cost of water, thus increasing the feasibility of implementing water conservation measures.

Legal Considerations

GSWC has the legal authority to implement cost beneficial BMPs that were approved by the CPUC in its capital/operating budget. When developing programs that advance water conservation, GSWC can offer financial incentives, information or educational programs in its service area; however, GSWC has no legal authority to enforce urban codes or plumbing codes for new or existing connections that pertain to implementation of efficient devices, or reduction of water use.

Ordinances that prohibit water waste (BMP 13) are jointly developed by CPUC and GSWC. Ordinances are enacted by the CPUC only during water shortage. As a water retailer, GSWC has no legal authority to enact or enforce waste water prohibition ordinances without CPUC approval.

Cost Share Partners

In an effort to expand the breadth of offered programs GSWC partners with local water agencies, energy utilities, and other agencies that support conservation programs. Joint participation offers opportunity for cost sharing and development of more effective conservation strategies.

GSWC participates in regional water efficiency programs offered by the Santa Barbara County Water Agency. The agency has a mandate to provide public information about local

water resources, and conduct a countywide water efficiency programs. Currently the following programs are offered in the Santa Maria CSA:

- Public Information Programs (BMP 7)
- School Education Programs (BMP 8)
- Large Landscape Education and Audits (BMP 5)

The GSWC participates in these programs by providing additional funding or resources to implement offered programs. The additional funding may include additional rebate offers, program advertising, or sharing of costs related to organizing events in its service area.

GSWC is committed to continue efforts to implement cost effective BMPs that are approved by the CPUC, and to achieve, to the extent possible, target implementation coverage by the end of the implementation period assigned to each BMP.

Table 5-5
Summary of Required Interventions, Implementation Cost and Estimated Water Saved for BMPs Not Meeting Coverage Requirements

	BMP 5: Large Landscapes			Total		
Year	Interven-tions	Water Saved (ac-ft/yr)	Cost ($/yr)	Interven-tions	Water Saved (ac-ft/yr)	Cost ($/yr)
2006	59	53	$31,055	59	53	$31,055
2007	59	106	$31,055	59	106	$31,055
2008	3	106	$497	3	106	$497
2009	3	107	$497	3	107	$497
2010	1	54	$191	1	54	$191
2011	1	1	$191	1	1	$191
2012	0	0	$0	0	0	$0
2013	0	0	$0	0	0	$0
2014	0	0	$0	0	0	$0
2015	0	0	$0	0	0	$0
2016	0	0	$0	0	0	$0
2017	0	0	$0	0	0	$0
2018	0	0	$0	0	0	$0
2019	0	0	$0	0	0	$0
2020	0	0	$0	0	0	$0
2021	0	0	$0	0	0	$0
2022	0	0	$0	0	0	$0
2023	0	0	$0	0	0	$0
2024	0	0	$0	0	0	$0
2025	0	0	$0	0	0	$0
2026	0	0	$0	0	0	$0
2027	0	0	$0	0	0	$0
2028	0	0	$0	0	0	$0
2029	0	0	$0	0	0	$0
2030	0	0	$0	0	0	$0
Total	126	428	$63,487	126	428	$63,487

Chapter 6. Desalination

The Act requires that desalination opportunities be discussed in the UWMP. The Act states:

Section 10631

(i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

Per requirements of California Water Code section 10631(i), this chapter presents opportunities to use desalinated water as a future water supply source for the Orcutt System. The reliability of water supply for the Orcutt System could be further augmented by the desalination of brackish water and seawater plans of the Central Coast Water Authority (CCWA). The following discussion summarizes the brackish water and seawater desalination plans of CCWA.

Brackish or Groundwater Desalination. As mentioned in the CCWA's 2005 UWMP, neither CCWA's mission nor the route of its pipeline and facilities lend themselves to brackish or groundwater desalination projects. However CCWA, and its project participants could team up with other SWP Contractors and provide financial assistance in construction of other regional groundwater desalination facilities in exchange for SWP supplies. The desalinated water would be supplied to users in communities near the desalination plant and a similar amount of SWP supplies would be exchanged and allocated to CCWA from the SWP Contractors. A list summarizing the groundwater desalination plans of other SWP Contractors is not available; however, CCWA would begin this planning effort should the need arise.

In addition, should an opportunity emerge with a local agency other than an SWP Contractor, an exchange of SWP deliveries would most likely involve a third party, such as Metropolitan Water District of Southern California (Metropolitan). Most local groundwater desalination facilities would be projects implemented by retailers of SWP Contractors and if an exchange program was implemented, would involve coordination and wheeling of water through the Contractor's facilities to CCWA (CCWA, 2005).

Seawater Desalination. CCWA's mission is to import SWP water (CCWA, 2005). At this time, its Board of Directors does not consider desalination to be a cost effective method of increasing the reliability of imported water. Two CCWA project participants, however, have constructed desalination facilities. The City of Morro Bay intermittently operates an 830,000 gallons per day (gpd) desalination facility and the City of Santa Barbara maintains a decommissioned desalination facility for emergency use.

Similar to the brackish water and groundwater desalination opportunities described above, CCWA and its project participants could provide financial assistance to its project participants or to other SWP Contractors in the use and/or construction of their seawater desalination facilities in exchange for SWP supplies.

CCWA has been following the existing and proposed seawater desalination projects along California's Coast. The "Seawater Desalination and the California Coastal Act" provides a summary and status of the existing and proposed seawater desalination plants along the California's Coast. Currently, most of those existing and proposed seawater desalination facilities are/would be operated by agencies that are not SWP Contractors (see CCWA's 2005 UWMP for details).

There are no specific opportunities identified for using desalinated water as a source of water supply for the Orcutt System. Therefore, Table 6-1, has been left blank.

Table 6-1
Summary of Opportunities for Water Desalination

Source of Water	Yield (ac-ft/yr)	Start Date	Type of Use	Other
N/A	N/A	N/A	N/A	N/A

Notes
1. Table format based on DWR Guidance Document Table 18
2. N/A – Not available

Chapter 7. Water Shortage Contingency Plan

Section 10632 of the Act details the requirements of the water-shortage contingency analysis. The Act states the following:

Section 10632. The plan shall provide an urban water-shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:

(a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions, which are applicable to each stage.

(b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.

(c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.

(d) Additional, mandatory prohibitions against specific water-use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

(e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water-use reduction consistent with up to a 50 percent reduction in water supply.

(f) Penalties or charges for excessive use, where applicable.

(g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

(h) A draft water shortage contingency resolution or ordinance.

(i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

This chapter documents GSWC's Water Shortage Contingency Plan for the Orcutt System per requirements of Section 10632 of the Act. The Water Shortage Contingency Plan is based on Rule No. 14.1 Mandatory Water Conservation, Restrictions and Ratings Program adopted by GSWC. Appendix F contains the full text of the rule.

The purpose of the Water Shortage Contingency Plan is to provide a plan of action to be followed during the various stages of a water shortage. The plan includes the following elements: action stages, estimate of minimum supply available, actions to be implemented during a catastrophic interruption of water supplies, prohibitions, penalties and consumption reduction methods, revenue impacts of reduced sales, and water use monitoring procedures.

Action Stages

The Act requires documentation of actions to be undertaken during a water shortage. GSWC has developed actions to be undertaken in response to water supply shortages, including up to a 50 percent reduction in water supply. Implementation of the actions is dependent upon approval of the California Public Utilities Commission (CPUC), especially for implementing mandatory water use restriction. CPUC has jurisdiction over GSWC because GSWC is an investor-owned water utility. Section 357 of the California Water Code requires that suppliers that are subject to regulation by the CPUC secure its approval before imposing water consumption regulations and restrictions required by water supply shortage emergencies. GSWC has proposed that the CPUC support implementation of water shortage allocation policies by amending Commission Rule 14.1 to (a) adopt specific rationing rates and restrictor valve removal fees; and (b) provide for a shortened authorization period to implement emergency measures such as mandatory conservation and rationing in order to effectively manage water shortages.

GSWC has grouped the actions to be taken during a water shortage into four stages, I through IV, that are based on the water supply conditions. Table 7-1 describes the water supply shortage stages and conditions. The stages will be implemented during water supply shortages according to shortage level, ranging from 5 percent shortage in Stage I to 50 percent shortage in Stage IV. The stage determination and declaration during a water supply shortage will be made by the Regional Vice President-Customer Service.

Table 7-1
Water Supply Shortage Stages and Conditions

Stage No.	Water Shortage Supply Conditions	Shortage Percent
I	Minimum	5 -10
II	Moderate	10 - 20
III	Severe	20 – 35
IV	Critical	35 - 50

Notes
This table is based on the DWR Guidebook Table 23.

The actions to be undertaken during each stage include, but are not limited to, the following:

Stage I (5 - 10 percent shortage) - Water alert conditions are declared and voluntary conservation is encouraged. The drought situation is explained to the public and governmental bodies. GSWC explains the possible subsequent water shortage stages in order to forecast possible future actions for the customer base. The activities performed by GSWC during this stage include, but are not limited to:

- Public information campaign consisting of distribution of literature, speaking engagements, bill inserts, and conversation messages printed in local newspapers
- Educational programs in area schools

- Conservation Hotline, a toll free number with trained Conservation Representatives to answer customer questions about conservation and water use efficiency

Stage II (10 - 20 percent shortage) – Stage II will include actions undertaken in Stage I. In addition, GSWC may propose voluntary conservation allotments and/or require mandatory conservation rules. The severity of actions depends upon the percent shortage. The level of voluntary or mandatory water use reduction requested from the customers is also based on the severity. It needs to be noted that prior to implementation of any mandatory reductions, GSWC must obtain approval from CPUC. If necessary, GSWC may also support passage of drought ordinances by appropriate governmental agencies.

Stage III (20 - 35 percent shortage) – Stage III is a severe shortage that entails or includes allotments and mandatory conservation rules. This phase becomes effective upon notification by the GSWC that water usage is to be reduced by a mandatory percentage. GSWC implements mandatory reductions after receiving approval from CPUC. Rate changes are implemented to penalize excess usage. Water use restrictions are put into effect, i.e. prohibited uses can include restrictions of daytime hours for watering, excessive watering resulting in gutter flooding, using a hose without a shutoff device, use of non-recycling fountains, washing down sidewalks or patios, unrepaired leaks, etc. GSWC monitors production weekly for compliance with necessary reductions. Use of flow restrictors is implemented, if abusive practices are documented.

Stage IV (35 - 50 percent shortage) – This is a critical shortage that includes all steps taken in prior stages regarding allotments and mandatory conservation. All activities are intensified and production is monitored daily by GSWC for compliance with necessary reductions.

Minimum Supply

The Act requires an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for GSWC's water supply.

Table 7-2 summarizes the minimum volume of water available from each source during the next three years based on multiple-dry water years and normal water year. The water supply quantities for 2006 to 2008 are based on the Stipulation, and data provided by CCWA and Santa Maria. The return flows under multiple-dry year conditions are calculated based on the quantities available to the Orcutt System under the Stipulation and the percentage (provided in CCWA's 2005 UWMP) that yields 100 percent reliable supplies. The water supply obtained from new development derived from Santa Maria is also presented below.

GSWC's supply is expected to be 100 percent reliable from 2005 to 2008. This reliability is a result of: 1) the projected reliability of imported water and associated return flows, and 2) reliable groundwater in the Santa Maria Groundwater Basin (see Chapters 3 and 10 for details).

Table 7-2
Three-Year Estimated Minimum Water Supply in ac-ft/yr

Source	2006	2007	2008	2005 Average year
Purchased Water from SWP[3]	0	0	0	209
Water Derived from Santa Maria	415	415	415	415
Groundwater	9,660	9,682	9,704	9,263
Twitchell Augmented Yield/Commingled Groundwater[4]	10,000	10,000	10,000	0
Return flows from SWP water[2]	191	169	147	191
Recycled water	0	0	0	0
Total	20,266	20,266	20,266	10,078

Notes
1. Long-term operation of the groundwater basin and return flows from the SWP will allow increased groundwater production in years where imported water supplies are limited.
2. Return flows are based on five-year rolling average of imported water. Single-dry year impacts will not affect availability of return flows for previous five-year average.
3. According to CCWA, single-dry year and multiple-dry year reliability for imported water is 5 percent and 33 percent, respectively, of contracted total. During these dry periods, water received from the SWP may be preferentially allocated to GSWC's Tanglewood system.
4. Granted under the Stipulation, subject to and adjustments that could be ordered by the Court
5. This table is based on the DWR Guidebook Table 24

Catastrophic Supply Interruption Plan

The Act requires documentation of actions to be undertaken by the water supplier to prepare for, and implement during a catastrophic interruption of water supplies. A catastrophic interruption constitutes a proclamation of a water shortage and could be any event (either natural or man-made) that causes a water shortage severe enough to classify as either a Stage III or Stage IV water supply shortage condition.

To prepare for catastrophic events, GSWC has prepared an Emergency Response Plan (ERP) in accordance with other state and federal regulations. The purpose of this plan is to design actions necessary to minimize the impacts of supply interruptions due to catastrophic events.

The ERP coordinates overall company response to a disaster in any and all of its districts. In addition, the ERP requires each district to have a local disaster plan that coordinates emergency responses with other agencies in the area. The ERP also provides details on actions to be undertaken during specific catastrophic events. Table 7-3 provides a summary of actions cross-referenced against specific catastrophes for three of the most common possible catastrophic events: regional power outage, earthquake, and malevolent acts.

In addition to specific actions to be undertaken during a catastrophic event, GSWC performs maintenance activities, such as annual inspections for earthquake safety, and budgets for spare items, such as auxiliary generators, to prepare for potential events.

Table 7-3
Summary of Actions for Catastrophic Events

Possible Catastrophe	Summary of Actions
Regional power outage	• Isolate areas that will take the longest to repair and/or present a public health threat. Arrange to provide emergency water. • Establish water distribution points and ration water if necessary. • If water service is restricted, attempt to provide potable water tankers or bottled water to the area. • Make arrangements to conduct bacteriological tests, in order to determine possible contamination. • Utilize backup power supply to operate pumps in conjunction with elevated storage.
Earthquake	• Assess the condition of the water supply system. • Complete the damage assessment checklist for reservoirs, water treatment plants, wells and boosters, system transmission and distribution. • Coordinate with OES utilities group or fire district to identify immediate fire fighting needs. • Isolate areas that will take the longest to repair and/or present a public health threat. Arrange to provide emergency water. • Prepare report of findings, report assessed damages, advise as to materials of immediate need and identify priorities including hospitals, schools and other emergency operation centers. • Take actions to preserve storage. • Determine any health hazard of the water supply and issue any “Boil Water Order” or “Unsafe Water Alert” notification to the customers, if necessary. • Cancel the order or alert information after completing comprehensive water quality testing. • Make arrangements to conduct bacteriological tests, in order to determine possible contamination.
Malevolent acts	• Assess threat or actual intentional contamination of the water system. • Notify local law enforcement to investigate the validity of the threat. • Get notification from public health officials if potential water contamination • Determine any health hazard of the water supply and issue any “Boil Water Order” or “Unsafe Water Alert” notification to the customers, if necessary. • Assess any structural damage from an intentional act. • Isolate areas that will take the longest to repair and or present a public health threat. Arrange to provide emergency water.

Notes
1. This table is based on the DWR Guidebook Table 25.

Prohibitions, Penalties, and Consumption Reduction Methods

The Act requires an analysis of mandatory prohibitions, penalties, and consumption reduction methods against specific water use practices which may be considered excessive during water shortages. Given that GSWC is an investor owned entity, it does not have the authority to pass any ordinances enacting specific prohibitions or penalties. In order to enact or rescind any prohibitions or penalties, GSWC would seek approval from CPUC to enact or rescind Rule No. 14.1, Mandatory Conservation and Rationing, which is presented in Appendix F. When Rule No. 14.1 has expired or is not in effect, mandatory conservation and rationing measures will not be in force.

Rule No. 14.1 details the various prohibitions and sets forth water use violation fines, charges for removal of flow restrictors, as well as establishes the period during which mandatory conservation and rationing measures will be in effect. The prohibitions on various wasteful water uses, include, but are not limited to, the hose washing of sidewalks and driveways using potable water, and cleaning for filling decorative fountains. Table 7-4 summarizes the various prohibitions and the stages during which the prohibition becomes mandatory.

Table 7-4
Summary of Mandatory Prohibitions

Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
Uncorrected plumbing leaks	II, III, IV
Watering which results in flooding or run-off in gutters, waterways, patios, driveway, or streets	II, III, IV
Washing aircraft, cars, buses, boats, trailers, or other vehicles without a positive shut-off nozzle on the outlet end of the hose	II, III, IV
Washing buildings, structures, sidewalks, walkways, driveways, patios, parking lots, tennis courts, or other hard-surfaced areas in a manner which results in excessive run-off	II, III, IV
Irrigation of non-permanent agriculture	II, III, IV
Use of water for street watering with trucks or for construction purposes unless no other source of water or other method can be used	II, III, IV
Use of water for decorative fountains or the filling or topping off of decorative lakes or ponds	II, III, IV
Filling or refilling of swimming pools	II, III, IV

Notes
1. This table is based on the DWR Guidebook Table 26.

In addition to prohibitions during water supply shortage events requiring a voluntary or mandatory program, GSWC will make available to its customers water conservation kits as required by GSWC's Rule No. 20. GSWC will notify all customers of the availability of conservation kits.

In addition to prohibitions, Rule No. 14.1 provides penalties and charges for excessive water use. The enactment of these penalties and charges is contingent on approval of Rule 14.1 implementation by the CPUC. When the rule is in effect, violators receive one verbal and one written warning after which a flow-restricting device may be installed in the violator's service for a reduction of up to 50 percent of normal flow or 6 ccf per month, whichever is greater. Table 7-5 summarizes the penalties and charges and the stage during which they take effect.

Table 7-5
Summary of Penalties and Charges for Excessive Use

Penalties or Charges	Stage When Penalty Takes Effect
Penalties for not reducing consumption	III, IV
Charges for excess use	III, IV
Flat fine; Charge per unit over allotment	III, IV
Flow restriction	III, IV
Termination of Service	III, IV

Notes
1. This table is based on the DWR Guidebook Table 28.

In addition to prohibitions and penalties, GSWC can use other consumption reduction methods to reduce water use up to 50 percent. Based on the requirements of the Act, Table 7-6 summarizes the methods that can be used by GSWC in order to enforce a reduction in consumption, where necessary.

Finally, GSWC has requested that the CPUC support implementation of water shortage allocation policies by amending Commission Rule 14.1 to (a) adopt specific rationing rates and restrictor valve removal fees; and (b) provide for a shortened authorization period to implement emergency measures such as mandatory conservation and rationing in order to effectively manage water shortages.

Table 7-6
Summary of Consumption Reduction Methods

Consumption Reduction Method	Stage When Method Takes Effect	Projected Reduction Percentage
Demand reduction program	All Stages	N/A
Reduce pressure in water lines; Flow restriction	III, IV	N/A
Restrict building permits; Restrict for only priority uses	II, III, IV	N/A
Use prohibitions	II, III, IV	N/A
Water shortage pricing; Per capita allotment by customer type	II, IV	N/A
Plumbing fixture replacement	All Stages	N/A

Table 7-6
Summary of Consumption Reduction Methods

Consumption Reduction Method	Stage When Method Takes Effect	Projected Reduction Percentage
Voluntary rationing	II	N/A
Mandatory rationing	III, IV	N/A
Incentives to reduce water consumption; Excess use penalty	III, IV	N/A
Water conservation kits	All Stages	N/A
Education programs	All Stages	N/A
Percentage reduction by customer type	III, IV	N/A

Notes
1. This table is based on the DWR Guidebook Table 27.
2. N/A – Data not available at this time.

Revenue Impacts of Reduced Sales

Section 10632(g) of the Act requires an analysis of the impacts of each of the actions taken for conservation and water restriction on the revenues and expenditures of the water supplier. Because GSWC is an investor owned water utility and, as such, is regulated by the CPUC, the CPUC authorizes it to establish memorandum accounts to track expenses and revenue shortfalls caused by both mandatory rationing and voluntary conservation efforts. Utilities with CPUC-approved water management plans are authorized to implement a surcharge to recover revenue shortfalls recorded in their drought memorandum accounts. Table 7-7 provides a summary of actions with associated revenue reductions; while Table 7-8 provides a summary of actions and conditions that impact expenditures. Table 7-9 summarizes the proposed measures to overcome revenue impacts. Table 7-10 provides a summary of the proposed measures to overcome expenditure impacts.

Table 7-7
Summary of Actions and Conditions that Impact Revenue

Type	Anticipated Revenue Reduction
Reduced sales	Reduction in revenue will be based on the decline in water sales and the corresponding quantity tariff rate
Recovery of revenues with CPUC approved surcharge	Higher rates may result in further decline in water usage and further reduction in revenue

Notes
1. This table is based on a DWR Guidebook table on page 59.

Table 7-8
Summary of Actions and Conditions that Impact Expenditures

Category	Anticipated Cost
Increased staff cost	Salaries and benefits for new hires required to administer and implement water shortage program
Increased O&M[2] cost	Operating and maintenance costs associated with alternative sources of water supply
Increased cost of supply and treatment	Purchase and treatment costs of new water supply

Notes
1. This table is based on a DWR Guidebook table on page 59.
2. Operations and maintenance.

Table 7-9
Proposed Measures to Overcome Revenue Impacts

Names of Measures	Summary of Effects
Obtain CPUC approved surcharge	Allows for recovery of revenue shortfalls brought on by water shortage program
Penalties for excessive water use	Obtain CPUC approval to use penalties to offset portion of revenue shortfall

Notes
1. This table is based on the DWR Guidebook Table 29.

Table 7-10
Proposed Measures to Overcome Expenditure Impacts

Names of Measures	Summary of Effects
Obtain CPUC approved surcharge	Allows for recovery of increased expenditures brought on by water shortage program
Penalties for excessive water use	Obtain CPUC approval to use penalties to offset portion of increased expenditures

Notes
1. This table is based on the DWR Guidebook Table 30.

Water-Use Monitoring Procedures

The Act asks for an analysis of mechanisms for determining actual reduction in water use when the Water Shortage Contingency Plan is in effect. Table 7-11 lists the possible mechanisms used by GSWC to monitor water use and the quality of data expected.

Table 7-11
Water-Use Monitoring Mechanisms

Mechanisms for Determining Actual Reductions	Type and Quality of Data Expected
Customer meter readings	Hourly/daily/monthly water consumption data for a specific user depending on frequency of readings
Production meter readings	Hourly/daily/monthly water production depending on frequency of readings; correlates to water use plus system losses

Notes
1. This table is based on the DWR Guidebook Table 31.

In addition to the specific actions that GSWC can undertake to verify level of conservation, GSWC can monitor long-term water use through regular bi-monthly meter readings, which gives GSWC the ability to flag exceptionally high usage for verification of water loss or abuse.

Chapter 8. Recycled Water Plan

Section 10633 details the requirements of the Recycled Water Plan to be included in the Act. The Act states the following:

Section 10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area and shall include all of the following:

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(c) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(d) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(e) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(f) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

Coordination

Table 8-1 summarizes the role of the agencies that participated in the development of recycled water plans that affect the Orcutt System of the Golden State Water Company (GSWC).

Table 8-1
Role of Participating Agencies in the Development of the Recycled Water Plan

Participating Agencies	Role in Plan Development
Water agencies	GSWC works with the Laguna County Sanitation District in providing data for planning a potential recycled water distribution system and identifying potential recycled water customers. The Laguna County Sanitation District, acting as the recycled water wholesaler, would lead the way in implementing the recycled water plan and distribution network.
Wastewater agencies	The Laguna County Sanitation District provides a reliable supply of recycled water that meets California recycled water quality standards set forth in Title 22 of the California Code of Regulations.
Groundwater agencies	Not applicable for this system.
Planning agencies	GSWC, the City of Santa Maria, in conjunction with the County of Santa Barbara and the Laguna County Sanitation District, all play key roles in conducting data and customer assessments, as well as analyzing community and economic impacts.

Notes
1. This table is based on the DWR Guidebook Table 32.

Wastewater Quantity, Quality, and Current Uses

Wastewater within the Orcutt System is collected by a network of gravity sewers, lift stations, and force mains. Collected wastewater is then transported to the Laguna County Sanitation District's (LCSD) wastewater treatment plant (WWTP).

The WWTP provides tertiary treatment for an average dry weather flow (DWF) of 2.4 million gallons of wastewater per day (mgd). The WWTP has a design capacity of 3.7 mgd and treats all wastewater to meet recycled water standards. The WWTP has reused treated wastewater for agricultural uses since the plant was originally built in 1959. Reuse after upgrading to tertiary treatment processes began in June of 2005. Current uses of recycled water are primarily agricultural. Recycled water not used at the time of treatment is stored in ponds owned and operated by LCSD. This water is reused when demand for recycled water exceeds that available through daily treatment plant flows, which generally coincides with agricultural irrigation from late spring through early fall.

Because the WWTP treats wastewater for a larger population than is accounted for in the Orcutt System, an estimated per capita wastewater generation factor was used to calculate the volume of wastewater generated by the customers in the system. According to LCSD, the per capita wastewater generation for its service area is 80 gallons per day (gpd). This per capita wastewater generation factor was used to estimate the existing and projected volumes of wastewater collected and treated in the Orcutt System (refer to Table 8-2). Because all of the effluent from the WWTP is treated to meet Title 22 recycled water standards, 100 percent of the treated effluent is included in Table 8-2 as meeting such standards.

Currently, LCSD reuses all of the available recycled water. Therefore, Table 8-3 is not applicable for this system and has intentionally been left blank since all wastewater treated by the LCSD is reused.

Table 8-4 was also left blank as there are no existing uses of recycled water by the GSWC customers served by LCSD.

Table 8-2
Estimates of Existing and Projected Wastewater Collection and Treatment in ac-ft/yr (mgd) for the Orcutt System

	2000[2]	2005	2010	2015	2020	2025	2030
Projected population in service area	27,682	29,189	30,696	32,738	34,779	34,779	34,779
Wastewater collected & treated in service area	2487 (2.2 mgd)	2622 (2.3 mgd)	2757 (2.5 mgd)	2941 (2.2 mgd)	3124 (2.8 mgd)	3124 (2.8 mgd)	3124 (2.8 mgd)
Quantity that meets recycled water standard	2487 (2.2 mgd)	2622 (2.3 mgd)	2757 (2.5 mgd)	2941 (2.6 mgd)	3124 (2.8 mgd)	3124 (2.8 mgd)	3124 (2.8 mgd)

Notes
1. This table is based on the DWR Guidebook Table 33.
2. Based on actual year.
3. Values of wastewater collected and treated are estimated. For a description of the methodology, refer to the text.

Table 8-3
Estimates of Existing and Projected Disposal of Wastewater In ac-ft/yr (mgd) for the Orcutt System

Method of Disposal	Treatment Level	2000	2005	2010	2015	2020	2025	2030
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A.	N/A.

Notes
1. This table is based on the DWR Guidebook Table 34.

Table 8-4
Existing Recycled Water Use in the Orcutt System

Type of Use	Treatment Level	2004 Use (ac-ft/yr)
N/A	N/A	N.A.

Notes
1. This table is based on the DWR Guidebook Table 35a.

Potential and Projected Use

There are no existing recycled water customers in the Orcutt System. LCSD is currently negotiating with new potential users, including industry and landscape irrigation, as a

result of upgrading to tertiary treatment; however, none of these potential customers are GSWC customers. LCSD does not have plans to extend the distribution of recycled water to the Orcutt System in the next 25 years.

Therefore, Table 8-5 and Table 8-6 have intentionally been left blank since no potential or projected future recycled water uses have been identified by LCSD within the Orcutt System. In the Urban Water Management Plan for the Orcutt System (2000), projections of recycled water within the Orcutt System by the year 2005 were not included. Therefore, Table 8-7 is not applicable for this system and has been intentionally left blank.

Table 8-5
Potential Future Recycled Water Uses in ac-ft/yr

Type of Use	Treatment Level	2010	2015	2020	2025	2030
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes
1. This table is based on the DWR Guidebook Table 35b.

Table 8-6
Projected Future Recycled Water Use in Service ac-ft/yr

Type of Use	2010	2015	2020	2025	2030
N/A	N/A	N/A	N/A	N/A	N/A

Notes
1. This table is based on the DWR Guidebook Table 36.

Table 8-7
Comparison of Recycled Water Uses—Year 2000 Projections versus 2005 Actual

Type of Use	2000 Projection for 2005	2005 Actual Use
N/A	N/A	N/A

Notes
1. This table is based on the DWR Guidebook Table 37.

Optimization and Incentives for Recycled Water Use

LCSD is responsible for determining the technical and economic feasibility of increasing supplies of recycled water to the area as the owner and operator of the local wastewater treatment plant. Extension of the recycled water lines within the Orcutt System is also the responsibility of LCSD.

Because LCSD has no plans in place to provide recycled water to the Orcutt System, there are no actions in place at this time by which GSWC is encouraging the use of recycled water in the system. Therefore, Table 8-8 is not applicable for this system and has been intentionally left blank. However, if and when LCSD decides to extend recycled water

distribution to the Orcutt System, where possible, GSWC will encourage the use the recycled water by its customers.

Table 8-8
Methods to Encourage Recycled Water Use and the Resulting Projected Use in ac-ft/yr

Actions	2010	2015	2020	2025	2030
N/A	N/A	N/A	N/A	N/A	N/A

Notes
1. This table is based on the DWR Guidebook Table 38.

Chapter 9. Water Quality

Section 10634 of the Act requires an analysis of water quality issues and their impact to supply reliability. The Act states as follows:

Section 10634. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631 and the manner in which water quality affects water management strategies and supply reliability.

Current and Proposed Water Quality Regulations

Environmental Protection Agency (EPA) and the State of California have established, or will develop, the following key primary water quality regulations under the Safe Drinking Water Act (SDWA). The Current and proposed water quality regulations listed below are discussed in the following paragraphs. These regulations apply to community and non-community water systems, which includes those of Golden State Water Company (GSWC) and may affect the GSWC water treatment facilities, treatment processes used, and monitoring requirements. See Table 9-1 for the status of current and proposed water quality regulations.

- Total Coliform Rule (TCR)
- Surface Water Treatment Rules
  - Surface Water Treatment Rule (SWTR)
  - *Cryptosporidium* Action Plan
  - Interim Enhanced SWTR (IESWTR)
  - Long Term 1 Enhanced SWTR (LT1ESWTR)
  - Long Term 2 Enhanced SWTR (LT2ESWTR)
- Disinfectant/Disinfection By-Product Rules
  - Total Trihalomethanes (TTHMs) Rule
  - Disinfectant/Disinfection By-Product (D/DBP) Rule Stage 1
  - Disinfectant/Disinfection By-Product (D/DBP) Rule Stage 2
- Volatile Organic, Synthetic Organic and Inorganic Chemical Rules
  - Volatile Organic Chemicals Rule
  - Phase IIA Fluoride Rule
  - Phase IIA Synthetic Organic Chemicals and Inorganic Chemicals Rule
  - Phase V Synthetic Organic Chemicals and Inorganic Chemicals Rule
- Groundwater Rule
- Filter Backwash Rule
- Lead and Copper Rule
- Arsenic Rule
- Radionuclide Rule

- Radon Rule
- Drinking Water Candidate Contaminant List

Safe Drinking Water Act (SDWA)

Under the federal SDWA of 1974, EPA established drinking water regulations for 23 contaminants. The SDWA Amendments of 1986 required EPA to set maximum contaminant levels (MCLs) for 83 specific constituents and to set MCLs for an additional 25 constituents every 3 years, indefinitely. The 1996 SDWA amendments retained the requirement to regulate the 83 contaminants imposed by the 1986 amendments but removed the requirement for 25 additional contaminants every 3 years and established a different process for selecting contaminants for regulation.

Under the 1996 SDWA amendments, EPA must:

- Publish a list of contaminants that may require regulation under the SDWA no later than February 6, 1998, and every 5 years thereafter
- Consult with the scientific community, including the Science Advisory Board, when preparing the list
- Provide notice and opportunity for public comment on the list
- Establish an occurrence database to be considered when EPA makes decisions to regulate contaminants that are known or anticipated to occur in public water systems
- Decide whether to regulate no fewer than five listed contaminants, no later than August 6, 2001, and every 5 years thereafter

To regulate a contaminant, EPA must find that the contaminant has an adverse effect on human health, that it occurs or is likely to occur in public water systems at a frequency and at concentrations of public health concern, and that regulation of the contaminant presents a meaningful opportunity to reduce health risks for those served by public water systems.

The status of the regulations, including the final rules and those that are still being formulated, are discussed below and summarized in Table 9-1. The current national primary drinking water standards, which are those standards related to health, are shown in Table 9-2. EPA considers compliance with secondary standards, which are those standards related to the aesthetic quality of water, to be optional; but, in California, secondary standards are mandatory unless the population served consents otherwise. The California secondary drinking water standards are shown in Table 9-3

Primacy

EPA has delegated primary enforcement responsibility for drinking water program implementation and enforcement to the state of California. To maintain primacy (authority to enforce drinking water regulations) under the SDWA, the state must adopt drinking water regulations at least as stringent as the federal regulations and meet other relevant criteria. State drinking water regulations may be more stringent than the federal regulations, but not less stringent. In California, the California Department of Health Services (CDHS) is the primacy agency for drinking water regulations.

Table 9-1
Status of Drinking Water Regulations

Regulation	Contaminants	Status
Final Rules		
NIPDWR	18 original contaminants	Rule final 1975
Interim Radionuclides	4 additional radionuclides	Rule final 1976
Total Trihalomethanes	Sum of four trihalomethanes	Rule final 1979
Revised Fluoride	Fluoride	Rule final 1986
VOCs (Phase I)	8 VOCs	Rule final 1987
SWTR	Treatment tech. (*Giardia* and viruses)	Rule final 1989
TCR	Total coliforms, fecal coliforms, *E. coli*	Rule final 1989
Lead and Copper Rule	Lead, copper	Rule final 1991
SOCs, IOCs (Phase II)	36 IOCs, SOCs, and pesticides	MCLs final 1991
SOCs, IOCs (Phase IV)	5 IOCs, 18 SOCs	MCLs final 1992
D/DBP Rule Stage 1	Disinfectants, disinfection by-products	Rule final 1998
IESWTR	Treatment Tech. (*Cryptosporidium*)	Rule final 1998
Radionuclides	Radionuclides (other than Radon)	Rule final 2000
Arsenic [(1)]	Arsenic	Rule final 2001, new MCL of 10 µg/L effective January 23, 2006
LT1ESWTR	Extends IESWTR to small utilities	Rule final 2001
Filter Backwash Rule	Regulate Filter Backwash recycle	Rule final 2001
Methyl Tertiary Butyl Ether	MTBE	Rule final 2001
Drinking Water Contaminant Candidate List [(1)]	No less than 5 Contaminants	Decision to regulate in 2001, revised DWCCL in 2003 and every 5 years thereafter
Proposed Rules		
LT2ESWTR [(1)]	Revision of IESWTR to control *Cryptosporidium*	Proposed August 2003, missed May 2002 SDWA deadline. Final rule expected 2005
D/DBP Rule Stage 2 [(1)]	Revision of D/DBP Rule Stage 1 for distribution system monitoring	Proposed August 2003, missed May 2002 SDWA deadline. Final rule expected 2005
Groundwater Rule [(1)]	Virus, groundwater disinfection	Proposed May 2000, missed May 2002 SDWA deadline. Final rule expected 2005
Future Rules		
Radon [(1)]	Radon	Proposed November 1999, EPA has not indicated a final schedule for promulgation
TCR Revisions [(1)]	Distribution System Issues	Potentially proposed mid-2006, final rule by 2008

Notes
1. Regulation with potential future impact to GSWC.

Table 9-2
Current Federal Drinking Water Standards

Parameter	mg/L (except as noted)
Inorganic Contaminants	**MCL**
Antimony	0.006
Arsenic [(1)]	0.05
Asbestos	7×10^6 Fibers/L
Barium	2
Beryllium	0.004
Bromate	0.010
Cadmium	0.005
Chlorite	0.8
Chromium	0.1
Cyanide	0.2
Fluoride	4
Mercury	0.002
Nickel	0.1
Nitrate (as N)	10
Nitrite (as N)	1
Nitrate plus Nitrite (both as N)	10
Selenium	0.05
Thallium	0.002
Inorganic Contaminants	**Treatment Technique**
Copper	1.3 (Action Level)
Lead	0.015 (Action Level)
Organic Contaminants	**MCL**
Alachlor	0.002
Benzene	0.005
Benzo (a) pyrene	0.0002
Carbon Tetrachloride	0.005
Carbonfuran	0.04
Chlordane	0.002
2,4-D	0.07
Dalapon	0.2
Di (2-ethylhexyl) adipate	0.4
Di (2-ethylhexyl) phthalate	0.006
1,2-Dibromo-3-chloropropane (DBCP)	0.0002
p-Dichlorobenzene	0.075
o-Dichlorobenzene	0.6
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
cis-1,2-Dichloroethylene	0.07
trans-1,2-Dichloroethylene	0.1
Dichloromethane	0.005

Table 9-2
Current Federal Drinking Water Standards

Parameter	mg/L (except as noted)
1,2-Dichloropropane	0.005
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Endrin[h]	0.002
Ethylbenzene	0.7
Ethylene Dibromide	0.00005
Glyphosate	0.7
Haloacetic Acids (sum of 5 [HAA%])	0.060
Heptachlor	0.0004
Heptachlor epoxide	0.0002
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Lindane	0.0002
Methoxychlor	0.04
Monochlorobenzene	0.1
Oxamyl (vydate)	0.2
Pentachlorophenol	0.001
Picloram	0.5
Polychlorinated biphenyls (PCBs)	0.0005
Simazine	0.004
Styrene	0.1
2,3,7,8-TCDD (dioxin)	5×10^{-8}
Tetrachloroethylene	0.005
Toluene	1
Toxaphene (revised)[f]	0.003
2,4,5-TP (silvex)	0.05
1,2,4-Trichlorobenzene	0.07
1,1,1-Trichloroethane	0.20
1,1,2-Trichlororethane	0.005
Trichloroethylene	0.005
Trihalomethanes (sum of 4 [TTHM])	0.080
Vinyl Chloride	0.002
Xylenes (total)	10
Organic Contaminants	**Treatment Technique**
Acrylamide	Restrictions in polymer use
Epichlorohydrin	Restrictions in material use
Microorganisms	**Standard**
Cryptosporidium	Treatment Tech (99% removal/inactivation)
Escherichia coli	Treatment Tech (0 cfu/100 mL)
Fecal Coliforms	Treatment Technique (0 cfu/100 mL)

Table 9-2
Current Federal Drinking Water Standards

Parameter	mg/L (except as noted)
Giardia lamblia	Treatment Tech (99.9% removal/inactivation)
Heterotrophic Bacteria	Treatment Tech (500 cfu/mL at end of distribution system or measurable chlorine residual)
Legionella	Treatment Tech
Total Coliforms	5% (presence/absence)
Turbidity	Performance Std (0.3 NTU, 95%)
Viruses	Treatment Tech (99.99% removal/inactivation)
Radionuclides	**MCL**
Beta-particle and photon emitters	4 mrem
Alpha emitters	15 pCi/L
Radium 226 + 228	5 pCi/L
Uranium	0.030

Notes
1. Arsenic has been proposed at 10 µg/L in the new rule that is currently being reviewed.

Table 9-3
Current State Secondary Drinking Water Regulations

Parameter	mg/L (except as noted)		
Contaminants	**SMCL or SMCL Ranges**		
Aluminum	0.2		
Color	15 Color Units		
Copper	1.0		
Corrosivity	Noncorrosive		
Foaming Agents (MBAs)	0.5		
Iron	0.3		
Manganese	0.05		
Methyl tertiary butyl ether (MTBE)	0.005		
Odor	3 Threshold Odor Number		
Silver	0.1		
Thiobencarb (Bolero)	0.001		
Turbidity	5 units		
Zinc	5		
	Recommended	**Upper**	**Short Term**
Total Dissolved Solids	500	1,000	1,500
Specific Conductance, micromhos	900	1,600	2,200
Chloride	250	500	600
Sulfate	250	500	600

Total Coliform Rule (TCR)

The TCR is the latest version of one of the oldest drinking water regulations. Coliform bacteria are organisms that have one or more biochemical reactions similar to Esherichia coli (E. coli). E. coli are bacteria that are commonly found in the digestive tract of warm-blooded animals. The total coliform test, then, is a test for bacteria, with similar biochemistry to E. coli, but which are capable of growing at 35 degrees Celsius (°C). The total coliform group includes several genera of bacteria belonging to the family Enterobacteriaciae. Some of these bacteria are not pathogenic. Total coliform testing is commonly used in drinking water treatment to determine the effectiveness of source water, treatment, and distribution system barriers to bacterial contamination.

The TCR was promulgated by the EPA in 1989 and DHS enacted its companion TCR that became effective on June 30, 1992. The TCR changed the basic principle of regulating bacterial quality. Instead of having an MCL based on average concentrations, total coliforms are now regulated based on presence/absence. For systems that collect 40 or more samples per month (more than 33,000 population) to be in compliance, no more than 5 percent of the samples taken for coliforms in a month can be coliform positive. A sample is considered positive if 1 of the 10 tubes is positive.

Other significant provisions of the TCR are:

- In the event of a coliform-positive sample, the utility must resample that location as well as the nearest upstream and downstream services for coliforms the following day and continue to analyze on consecutive days until either all three samples are negative, or the TCR is violated.
- Coliform-positive samples must be further examined for the presence of fecal coliforms or *E. coli*.
- If two consecutive samples from the same sample point are positive and one of those samples is positive for fecal coliforms, the system is out of compliance for that month.

All distribution system zones must be included in the routine sampling program, and some of the sample locations must be rotated throughout the year.

TCR Potential Revisions and Distribution System Requirements

The 1996 amendments to the SDWA require EPA to review and revise, as appropriate, each national primary drinking water regulation at least every 6 years. EPA published as part of its National Primary Drinking Water Regulation (NPDWR) Review its decision to revise the TCR in July, 2003.

EPA is in the process of reviewing available data and research on distribution system risks. These efforts will result in the review and possible revision of the TCR, as well as the potential for requirements for finished water quality in the distribution system. The potential rule revisions could be proposed in 2006 with the rule final by 2008.

EPA has been working with distribution system experts to compile existing information regarding potential health risks that may be associated with distribution systems in "white papers" on the following nine distribution system issues:

- Intrusion
- Cross-connection control
- Aging infrastructure and corrosion
- Permeation and leaching
- Nitrification
- Biofilms/growth
- Covered storage
- Decay in water quality over time
- New or repaired water mains

EPA is also involved in the development of a series of ten TCR issue papers on the following issues:

- Distribution system indicators of water quality
- The effectiveness of disinfectant residuals in the distribution system
- Analysis of compliance and characterization of violations of the TCR
- Evaluating HACCP strategies for distribution system monitoring, hazard assessment and control
- Inorganic contaminant accumulation in distribution systems
- Distribution system inventory and condition assessment
- Optimization of distribution system monitoring strategies
- Effect of treatment on nutrient availability
- Causes of Total Coliform positive samples and contamination events in distribution systems
- Total Coliform sample invalidation

Distribution system white papers and TCR issue papers are intended to inform EPA and stakeholders of areas of potential TCR revisions and distribution system requirements.

Surface Water Treatment Rules

A series of rules has been or is currently being developed to provide control of microbial contaminants from surface water or groundwater that is under the direct influence of surface water.

The Surface Water Treatment Rule (SWTR)

The SWTR is primarily a microbiological regulation and codified the use of the multiple barrier concept for control of pathogenic organisms. The SWTR became effective in June 1993, and required all but the most pristine water sources to provide filtration of their surface water (or groundwater under the direct influence of surface water). It also required all systems having a surface water source to provide some level of disinfection.

In further defining the physical barrier of filtration, the SWTR reduced the MCL for finished water turbidity from 1 NTU to 0.5 NTUs (95 percent of the monthly samples, measured daily), and set a limit of 5 NTUs on the maximum finished water turbidity.

For disinfection, the SWTR required 99.9 percent (3 logs) for the combination of removal and inactivation of *Giardia* cysts and 99.99 percent (4 logs) for the combination of removal and inactivation of enteric viruses. The SWTR gave credit for 99.7 percent (2½ logs) removal

of *Giardia* cysts and 99 percent (2 logs) removal of viruses in a "well-operated" conventional surface water treatment plant. The SWTR, then, required an additional ½-log of inactivation of *Giardia* cysts and an additional 2 logs of inactivation of viruses. Credit for the inactivation (or disinfection) requirements for *Giardia* and viruses was given for chlorine, chloramines, ozone, and chlorine dioxide. The credit was based upon achieving the product of disinfectant concentration and contact time, known as CT. The concentration (C) used was normally the concentration exiting the reactor used for primary disinfection and the time (T) was the time it took for 10 percent of the influent flow to exit the reactor (T_{10}). T_{10} was to be determined using tracer testing in the plants using different flow rates. Tables of CT required for each of the disinfectants at different temperatures, and in some cases, different pH values were published in the *Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources* (American Water Works Association, Denver, CO, 1991).

As an additional barrier to organisms, the SWTR required that a measurable disinfectant residual be present or heterotrophic plate counts be less than 500 colony-forming units at the farthest ends of the distribution system. The measurable residual was defined as a minimum of 0.2 mg/L of free or combined chlorine.

Cryptosporidium Action Plan

In April 1995, the California DHS adopted a *Cryptosporidium* Action Plan that is intended to facilitate comprehensive compliance with the SWTR. The plan does not include any requirements beyond the existing regulations but, instead, clarifies the existing requirements to optimize the treatment process and reduce the risk of a waterborne illness outbreak. The plan includes six elements:

1. Conduct watershed sanitary surveys
2. Submission of available data to CDHS
3. Review of alternative technologies
4. Prepare operations plan/optimized treatment
5. Prepare reliable removal treatment processes
6. Inform the public

The plan acknowledges that seasonal raw water turbidity and coliform data are a necessary part of any watershed sanitary survey. If cattle, sheep, or other livestock are allowed on a watershed, the survey must identify their location and number as well as steps that are taken to prevent contamination from the animal waste. Measures that will prevent runoff from any animal containment site reaching the water source should also be identified.

As part of the plan, the DHS completed a comprehensive review of the operations by water systems that use an alternative treatment system. The review focused on compliance with the turbidity standard during normal operations and after backwashing or other interruptions in service. It also included a review of the engineering report required 60 days after the first year of operation.

The *Cryptosporidium* Action Plan states that DHS "agrees with and endorses" the American Water Works Association (AWWA) goal of 0.1 NTU for effluent turbidity from all surface water treatment plants. The plan recommends that all water systems with a surface water supply "adopt a philosophy of always optimizing their surface water treatment plant

operations in a manner designed to achieve the maximum turbidity removal." CDHS believes that, by striving to meet these goals, water systems will be minimizing their customers' risk of exposure to pathogens, including *Cryptosporidium*. The plan identifies the following elements that should be included in the operations plan of a system for treatment optimization:

- Including a statement at the beginning of the operations plan stating that it is the goal of the water utility to optimize plant performance and maximize turbidity removal.
- Monitoring all unit processes closely and responding immediately to any malfunction.
- Operating unit processes at hydraulic loading rates to meet optimization goals.
- Establishing procedures to optimize coagulation, flocculation, and sedimentation to enable maximum turbidity removal in the pretreatment units with a turbidity goal of 1 to 2 NTUs in the sedimentation basin effluent at all times. The proper pretreatment chemical and dose should be determined from results of jar tests or particle counters.
- Expanding turbidity monitoring of individual filters on both a continuous basis and intermittent grab samples and, if possible, turbidity monitoring of all sedimentation processes.
- Calibrating turbidimeters frequently.
- Establishing procedures for optimizing filter operations to avoid turbidity spikes after service interruptions and attempting to achieve turbidity values of 0.3 NTU or less after backwash.
- Operating the plant to avoid sudden increases in flow through a filter.
- Optimizing the performance of backwash water recovery systems. Establishing a goal of less than 2.0 NTUs for the reclaimed backwash water and sludge reclamation system effluent.

The *Cryptosporidium* Action Plan states that all water treatment plants should install a continuous turbidity analyzer and chart recorder to monitor the plant effluent. The monitor should be inspected and standardized regularly. Additionally, all water utility systems should be capable of quickly replacing or repairing failed equipment including:

- Filter media and filter underdrains
- Backwash pumps and surface wash systems
- Pretreatment chemical feed and mixing facilities
- Turbidity monitoring units

Finally, the CDHS suggests that water utilities should provide an informational notification to its customers if they do not have a treatment process in place that provides for physical removal of pathogens. Those plants that are hydraulically overloaded or unable to achieve the effluent turbidity goals until improvements are made may also inform the customers of the system.

Interim Enhanced Surface Water Treatment Rule

The two main purposes of the IESWTR are to improve control of microbial pathogens in drinking water, particularly for the protozoan, *Cryptosporidium*, and to guard against significant increases in microbial risk that might otherwise occur when systems implement the Stage 1 D/Disinfectant By-Product (DBP) Rule (discussed below). The IESWTR was finalized in December 1998, but enforcement began in 2002.

Because of the resistance of *Cryptosporidium* oocysts to inactivation by chlorine and chloramine and a lack of data concerning other disinfectants, the IESWTR concentrated its efforts on improving the physical barrier (filtration). This was done by further reducing the MCL for finished water turbidity from 0.5 NTU to 0.3 NTU and the maximum single sample finished water turbidity limit was reduced to 1 NTU. A facility is deemed to be in compliance with the MCL if 95 percent of the daily values per month are at or below 0.3 NTU. Since the limit is 0.3 NTU and not 0.30 NTU, the plant is in compliance as long as the values stay at or below 0.34 NTU. Additionally, individual filter monitoring was required and exception reports to the state are required for:

- Any individual filter with a turbidity level greater than 1.0 NTU based on two consecutive measurements 15 minutes apart, and
- Any individual filter with a turbidity greater than 0.5 NTU at the end of the first 4 hours of filter operation based on the two consecutive measurements 15 minutes apart

Also, if an individual filter turbidity level is greater than 1.0 NTU, based on two consecutive measurements 15 minutes apart at any time in each of 3 consecutive months, the system must provide an exceptions report (within 30 days of the exceedance) and conduct a self-assessment of the filter (according to the EPA guidance for Comprehensive Performance Evaluation). And, if an individual filter has turbidity greater than 2.0 NTU, based on two consecutive measurements 15 minutes apart at any time in each of 2 consecutive months, the system must provide an exceptions report (within 30 days of the exceedance) and arrange for a Comprehensive Performance Evaluation (CPE) by the state or a third party approved by the state.

To guard against an increase in microbial risk due to implementation of the DBP Rule, disinfectant profiling and benchmarking are required. Systems having total trihalomethane (TTHM) concentrations exceeding 0.064 mg/L or total haloacetic acid (HAA5) concentrations exceeding 0.048 mg/L are required to produce disinfectant profiles for 3 years of existing data showing the CT that was actually achieved, divided by the CT required for inactivation of *Giardia* and viruses. If the data do not exist, the system was required to collect 1 year of data by March 16, 2000. The data were analyzed; and the month having the lowest ratio of CT to CT required became the "critical period," and the average value of the ratio became the "benchmark." Systems have to consult with the state before changing disinfection practices, which could result in a log inactivation less than the benchmark value.

Long Term 1 Enhanced Surface Water Treatment Rule

The LT1ESWTR extends the IESWTR to systems serving fewer than 10,000 people.

Long Term 2 Enhanced Surface Water Treatment Rule

The LT2ESWTR is also designed to control risk from *Cryptosporidium*. An Agreement in Principle was reached by the Federal Advisory Committee for this rule and the Disinfectant/Disinfection By-Product Rule Stage 2 (discussed below) in August 2003. In this Agreement, the major microbial issues were addressed as follows:

- Monitoring for Bin Classification. A two year monitoring program is required for systems serving 10,000 or more people for *Cryptosporidium*, *E. coli*, and turbidity. The water system will be classified into a bin for *Cryptosporidium* risk based upon this monitoring.
- Action Bins. Table 9-4 illustrates the bin classification system for *Cryptosporidium* risk.
- Toolbox. A toolbox approach was recommended that would receive log-credit given in Table 9-5.
- Reassessment and Future Monitoring. Systems that provide a total of 2.5 logs of treatment (99.7 percent) for *Cryptosporidium* in addition to conventional treatment are exempt from reassessment and future monitoring. Six years after initial bin characterization, another round of monitoring will be held.
- Unfiltered Systems. Unfiltered systems must continue to meet filtration avoidance criteria, provide 4-log virus inactivation, 3-log *Giardia* inactivation, and 2-log *Cryptosporidium* inactivation.

Table 9-4
Bin Requirements Table (from Microbial/Disinfection Byproducts [M/DBP] Federal Advisory Committee Stage 2 M-DBP Agreement in Principle)

Bin Number	Average *Cryptosporidium* Concentration	Additional treatment requirements for systems with conventional treatment that are in full compliance with the IESWTR
1	*Cryptosporidium* <0.075/L	No Action
2	0.075/L ≤ *Cryptosporidium*< 1.0/L	1-log treatment (systems may use any technology or combination of technologies from toolbox as long as total credit is at least 1 log)
3	1.0/L ≤ *Cryptosporidium* < 3.0/L	2.0-log treatment (systems must achieve at least 1 log of the required 2-log treatment using ozone, chlorine dioxide, UV, membranes, bag/cartridge filters, or in-bank filtration)
4	*Cryptosporidium* ≥ 3.0/L	2.0-log treatment (systems must achieve at least 1 log of the required 2.5-log treatment using ozone, chlorine dioxide, UV, membranes, bag/cartridge filters, or in-bank filtration)

Disinfectant/Disinfection By-Product Rules

Total Trihalomethanes (TTHM) Rule

The TTHM Rule was the first rule to recognize that a risk of cancer may be connected to the use of chlorine to inactivate pathogenic organisms. The TTHM Rule was effective in 1981.

Chlorine reacts with naturally occurring organic matter (NOM) present in water to form chlorinated organic compounds. Four of these—chloroform, dichlorobromo-methane, dibromochloromethane, and bromoform—were selected to serve as indicators for the cancer risk due to chlorinated disinfection by-products. The MCL for the total of these four compounds was set at 0.1 mg/L. This historic rule changed the manner in which many water plants in the U.S. performed disinfection. Prior to the rule, chlorine was added liberally to raw water to improve plant operations which maximized contact time available through the treatment plant. After this rule took effect, many utilities changed to applying chlorine after much of the NOM had been removed through coagulation, flocculation, and sedimentation. Also, the use of chloramines, which limit the formation of trihalomethanes, was increased as a disinfectant for the distribution system.

Table 9-5
Microbial Toolbox Components (from Microbial/Disinfection Byproducts [M/DBP] Federal Advisory Committee Stage 2 M-DBP Agreement in Principle)

	Potential Log Credit			
APPROACH	**0.5**	**1**	**2**	**>2.5**
Watershed Control				
Watershed Control Program [1]	X			
Reduction in oocyst concentration [3]		As Measured		
Reduction in viable oocyst concentration [3]		As Measured		
Alternative Source				
Intake Relocation [3]		As Measured		
Change to Alternative Source of Supply [3]		As Measured		
Mgmt. of Intake to Reduce Capture of Oocysts in Source Water [3]		As Measured		
Managing Timing of Withdrawal [3]		As Measured		
Managing Timing of Withdrawal in Water Column [3]		As Measured		
Pretreatment				
Off-Stream Raw Water Storage w/Detention ~ X days [1]	X			
Off-Stream Raw Water Storage w/Detention ~ Y weeks [1]		X		
Presettling Basin w/Coagulant [1]	X	--►		
Lime Softening [1]	----------►			
In-Bank Filtration [1]		X	---------►	
Improved Treatment				
Lower Finished Water Turbidity (0.15 NTU 95%tile Combined Filter Effluent)	X			
Slow Sand Filters [1]				X
Roughing Filters [1]	X	----------►		
Membranes (MF, UF, NF, RO) [1]				X
Bag Filters [1]		X	---------►	
Cartridge Filters [1]			X	
Improved Disinfection				
Chlorine Dioxide [2]	X	X		
Ozone [2]	X	X	X	
UV [2]				X
Peer Review/Other Demo./Validation or System Performance				
Peer Review Program (ex. Partnership Phase IV)		X		
Performance Studies demonstrating reliable specific log removals for technologies not listed above. This provision does not supersede other inactivation requirements.		As demonstrated		

Notes

X indicates potential log credit based on proper design and implementation in accordance with EPA guidance. Arrow indicates estimation of potential log credit based on site-specific or technology-specific demonstration of performance.

1. Criteria to be specified in guidance to determine allowed credit.
2. Inactivation dependent on dose and source water characteristics
3. Additional monitoring for *Cryptosporidium* after this action would determine new bin classification and whether additional treatment is required.

Disinfectant/Disinfection By-Product (D/DBP) Rule Stage 1

Stage 1 of the D/DBP Rule was enacted to reduce the health risk due to disinfection practice. To accomplish this, the Rule reduced the MCL for TTHM, enacted MCLs for haloacetic acids (HAA5) (Table 9-6), bromate (an ozone by-product), and chlorite (a chlorine dioxide by-product), enacted maximum residual disinfectant levels (MRDLs) for chlorine, chloramines, and chlorine dioxide (Table 9-7), and enacted a treatment technique called "enhanced coagulation" (EC) to limit the amount of unknown by-products that may be formed during chlorination.

Table 9-6
Disinfection By-Product MCLs from Stage 1 of the D/DBP Rule

Compound or Group	MCL, mg/L
Trihalomethanes (TTHM)	0.08
Haloacetic Acids (HAA5)	0.06
Bromate	0.01
Chlorite	1.0

Table 9-7
Disinfectant MRDLs from Stage 1 of the D/DBP Rule

Compound or Group	MCL, mg/L
Chlorine	4.0
Chloramines	4.0
Chlorine Dioxide	0.8

EC defines a requirement for removal of total organic carbon (TOC) in the coagulation, flocculation, sedimentation portion of the conventional treatment plant. A system does not have to implement enhanced coagulation if any of the following are true:

1. Source water TOC is less than 2.0 mg/L.
2. Treated water TOC is less than 2.0 mg/L.
3. Source water TOC < 4.0 mg/L, raw water alkalinity > 60 mg/L as $CaCO_3$, distribution system TTHM and HAA5 concentrations are less than or equal to 40 mg/L and 30 mg/L, respectively.
4. Distribution system TTHM and HAA5 concentrations are less than or equal to 40 mg/L and 30 mg/L, respectively, and the system uses only free chlorine for disinfection.
5. Source-water-specific ultraviolet absorbance (SUVA) is less than 2.0 L/mg-m. SUVA is calculated by dividing UV absorbance (m^{-1}) at 254 nm by the concentration (mg/L) of dissolved organic carbon (DOC).

6. Treated water SUVA is less than 2.0 L/mg-m.

If none of these conditions are met, Step 1 of EC takes effect. Step 1 establishes targets for additional precursor removals to be achieved based on raw water TOC and alkalinity. These targets are shown in Table 9-8. If a utility can satisfy the TOC percent removals specified in Step 1, the EC criterion for Stage 1 is satisfied.

Table 9-8
Required Removal of TOC by Enhanced Coagulation, Step 1

Source Water TOC mg/L	Source Water Alkalinity , mg/L as $CaCO_3$		
	0 to 60	>60 to 120	>120
>2.0 to 4.0	35	25	15
>4.0 to 8.0	45	35	25
>8.0	50	40	30

If a system is unable to meet the Step 1 TOC removal requirements, an alternative percent TOC removal requirement may be selected by Step 2 procedures as follows:

1. Bench or pilot tests are performed in which alum or an equivalent dose of ferric coagulant is added in 10mg/L increments until the pH is lowered to the target pH value. The target pH values are given in Table 9-9 for varying source water alkalinity.
2. Once the bench or pilot test is complete, the TOC removal (mg/L) is then plotted versus coagulant dose (mg/L).
3. The alternative TOC removal percentage is set at the point on the TOC versus coagulant dose plot where the slope changes from greater than 0.3 mg TOC/L/10 mg alum/L to less than 0.3/10 and remains less than 0.3/10.

If the TOC removal versus coagulant dose plot does not reach this point of diminishing returns, the water is considered not amenable to enhanced coagulation; and a waiver from the enhanced coagulation requirements must be obtained from the state.

Table 9-9
Target pH Values for Enhanced Coagulation, Step 2 Bench Testing

Raw Water Alkalinity, mg/L as $CaCO_3$	Target pH
0 to <60	5.5
60 to <120	6.3
120 to <240	7.0
240	7.5

D/DBP Rule Stage 2

Stage 2 of the D/DBP Rule is designed to reduce DBP occurrence peaks in the distribution system. An Agreement in Principle was reached by the Federal Advisory Committee for this rule and the Long Term 2 Enhanced Surface Water Treatment Rule (discussed above) in August 2003. This rule is expected to be finalized in 2005. In this Agreement, the major DBP issues were addressed as follows:

- Compliance monitoring will be preceded by an initial distribution system monitoring study to select optimal sampling points for capturing peaks.
- Compliance with each MCL (TTHM and HAA5) will be determined based upon a Locational Running Annual Average (a running annual average calculated at each sample location).
- Systems will comply with the Stage 2 D/DBP Rule in two phases—3 years after promulgation all systems must comply with a 120 μg/L TTHM / 100 μg/L HAA5 locational running annual average based on Stage 1 monitoring sites and continue to comply with the 80 μg/L TTHM / 60 μg/L HAA5 system running annual average from Stage 1.
- Six years after rule promulgation (with an additional 2-year extension available for systems requiring capital improvements) large and medium systems must comply with an 80 μg/L TTHM / 60 μg/L HAA5 based upon the new sample sites identified in the initial distribution system monitoring described above.
- Small systems must comply with the 80 μg/L TTHM / 60 μg/L HAA5 locational running annual average in either 7.5 or 8.5 years (with an additional 2-year extension available for systems requiring capital improvements) depending upon whether the system is required to do *Cryptosporidium* monitoring as part of the LT2ESWTR.
- The bromate MCL will remain at 0.010 mg/L. EPA commits to review the bromate MCL as part of the 6-year review to determine whether the bromate MCL should be reduced to 0.005 mg/L or a lower concentration.

Volatile Organic, Synthetic Organic and Inorganic Chemical Rules

Volatile Organic Chemicals Rule

The Phase I Volatile Organic Chemicals (VOCs) Rule established MCLGs and MCLs for eight VOCs. The rule was promulgated in July 1987 and became effective in January 1989. All public water systems (PWS) were required to complete initial VOC monitoring by December 1991. Monitoring requirements include sampling at each entry point to the distribution system. If no VOCs were detected during the initial monitoring, repeat monitoring is required every three to five years, depending on the vulnerability of the source. If VOCs are detected, quarterly samples must be analyzed. Compliance requires that VOC levels be lower than the MCLs, based on the annual average of quarterly samples.

The Phase I VOC Rule also required monitoring of 51 additional unregulated VOCs. All systems were required to complete the initial monitoring for these contaminants by December 1991. Repeat monitoring is required every five years; however, USEPA revises

the list of unregulated contaminants thereby changing the constituents to be monitored. Monitoring requirements for Phase I contaminants were revised in the Phase II Synthetic Organic Chemicals and Inorganic Chemicals Rule (Phase II SOC/IOC Rule) to conform with the standardized monitoring.

The Phase IIA Fluoride Rule applies to all public water systems. The rule was finalized in April 1986 and became effective in October 1987. The primary purpose of the Phase IIA Fluoride Rule was to protect the public from crippling skeletal fluorosis. The rule established an MCLG and MCL for fluoride at 4 mg/L. A secondary contaminant level (SMCL) of 2 mg/L was established to protect against dental fluorosis. Monitoring of fluoride concentration is required yearly for surface water sources and every three years for groundwater sources. For systems practicing fluoridation, daily monitoring of fluoride at the entrance to the distribution system is recommended.

Phase II Synthetic Organic Chemicals and Inorganic Chemicals Rule

The Phase II SOC/IOC Rule applies to all public water systems. The rule was promulgated in June 1991 (33 contaminants) and July 1991 (5 contaminants). This rule established MCLs and treatment techniques for 38 contaminants. Monitoring for the Phase II contaminants occurs in a standardized 3 year cycle, which began in January 1993. Compliance with the Phase II MCLs is based on the average of quarterly samples.

Phase V Synthetic Organic Chemicals and Inorganic Chemicals Rule

The Phase V Rule was promulgated in July 1992 and set MCLGs and MCLs for 23 contaminants. Compliance monitoring for these contaminants follows the same standardized monitoring framework introduced with the Phase II rule. Some of the Phase V contaminants were previously on the unregulated contaminants monitoring (UCM) lists under other rules. To eliminate duplication, these contaminants were withdrawn from the UCM lists.

Groundwater Rule

The EPA is currently in the process of developing the Groundwater Rule (GWR), formerly known as the Groundwater Disinfection Rule. The rule name was changed to reflect a more holistic regulatory approach to addressing ground water issues. The rule applies to public ground water systems and to systems that mix surface water and ground water if the ground water is added directly to the distribution system and provided to consumers without treatment. This includes untreated stand-alone ground water wells and untreated ground water plants that have their own entry points to the distribution system as well as untreated groundwater blended with treated surface water prior to the entry point to the distribution system. Treatment in this case is defined as 4-log inactivation/removal of viruses.

The proposed Groundwater Rule was published in the Federal Register on May 10, 2000. The final rule is expected in late 2005. Specific requirements proposed in the rule include:

1. System sanitary surveys conducted by the state and identification of significant deficiencies.
2. Hydrogeologic sensitivity assessments for undisinfected systems.

3. Source water microbial monitoring by systems that do not disinfect and draw from hydrogeologically sensitive aquifers or have detected fecal indicators within the system's distribution system.
4. Corrective action by any system with significant deficiencies or positive microbial samples indicating fecal contamination.
5. Compliance monitoring for systems which disinfect to ensure that they reliably achieve 4-log inactivation or removal of viruses.

EPA missed the May 2002 deadline to promulgate, and the final rule was expected in early 2005, but was withdrawn for further review. The schedule for the release of the final GWR is uncertain at this time.

Filter Backwash Rule

The Filter Backwash Rule is a regulation for filtered surface water supplies that recycle some or all of filter backwash into the plant. The purpose of the rule is to require systems to review their recycle practices and, where appropriate, work with the State to make any necessary changes to current practices that may compromise microbial control. The proposed rule was published in April 2000, with the final rule promulgated in April 2001. It will apply to all systems that use filter recycle streams. The final rule contained the following key provisions:

1. Return of all recycle flows prior to the point of the primary coagulant addition.
2. Direct filtration plants to provide information to the state on their current recycle practice.
3. A requirement for systems meeting criteria to perform a one-time self assessment of their recycle practice and consult with their primacy agency to address and correct high risk recycle operations.

The first element would require that all systems using surface water or groundwater under the direct influence of surface water return all recycle flows to the process prior to the point of the primary coagulant addition. Waivers to this requirement would be available from state primacy agencies for unique treatment conditions.

The second element would require all direct filtration plants to report to the state primacy agency whether flow equalization or treatment is provided for recycle flow prior to its return to the treatment process. The state would use that information to determine the plants that need to change their current recycle practice in order to provide additional public health protection.

The third element would require that all plants using 20 or fewer filters and directly recycling flows to the treatment process without any form of treatment on the recycle flow complete a self-assessment. The self-assessment would be used to determine the effect of untreated recycle flows to the plant process. The State primacy agency would use the results of the self-assessment to determine the appropriate level of treatment of recycle flows.

Systems were to notify the State of their recycle practices by October 2003, modify their recycle return location as required by June 2004, and complete the necessary capital improvements to comply with all rule requirements by June 2006.

Lead and Copper Rule

The Lead and Copper Rule was promulgated in June 1991 and went into effect in December 1992, with minor revisions released in April 2000. The rule applies to all community and non-transient non-community water systems. The rule developed MCLGs and action levels for both lead and copper in drinking water. The major difference between this regulation and most others is that the water is to be monitored at the customer's tap, not the treatment plant discharge point. Lead and copper must be monitored at the customer's taps every 6 months and twice each calendar year at the highest risk locations. The highest risk locations are defined as:

- Piping with lead solder installed after 1982,
- Lead water service lines,
- Lead interior piping.

For compliance, the samples at the customer’s tap must not exceed the following action levels:

- Lead concentration of 0.015 mg/L detected in the 90th percentile of all samples.
- Copper concentration of 1.3 mg/L detected in the 90th percentile of all samples.

If action levels are exceeded, water systems must collect source water samples and submit all data to the state with a treatment recommendation to reduce concentrations below the action level. In addition, the water system must also provide a public education program to its customers within 60 days of the action level exceedance. The education program must be continued until the samples are found to be below the lead action levels.

All water systems that exceed the lead or copper action levels are also required to conduct a corrosion control study. Corrosion control studies must compare the effectiveness of pH and alkalinity adjustment, calcium adjustment, and addition of a phosphate or silica-based corrosion inhibitor. Large and medium systems are also required to monitor many other water quality parameters at the plant discharge and customer's tap.

After a corrosion control study is completed, a water system must develop a corrosion control program and submit it for approval to the primacy agency. Once approval of the plans is received, water systems have 24 months to install and implement the treatment methods for corrosion control and 12 additional months to collect follow-up samples. After this time, the water system must comply with the action levels for both lead and copper.

In 2000, minor revisions to the lead and copper rule were promulgated to streamline requirements and reduce some burdens on water systems. No changes to the MCLs or the MCLGs were made. Small changes were made to reduce the frequency of monitoring for systems with low lead and copper tap levels and to update the analytical methods used for compliance. Further revisions to the lead and copper rule are expected to be proposed in late 2005, but no information as to what will be included in the potential revisions to the rule has been released.

Arsenic Rule

The original arsenic MCL of 50 µg/L was set by the EPA in 1975 based on Public Health Service Standard originally published in 1942. A new proposed Arsenic Rule was released in June 2000. The EPA was originally under a court-imposed deadline to promulgate this rule by November 1992. However, the EPA has received extensions to examine health effects and occurrence data. EPA succeeded in finalizing the Arsenic Rule on January 16, 2001, during the final days of the Clinton administration. The final rule was published in the Federal Register on January 22, 2001 and became effective on February 22, 2002.

The following is a summary of the major provisions and requirements of the rule:

- A MCLG for arsenic in drinking water is set at zero.
- The MCL for arsenic is revised from 50 µg/L down to 10 µg/L by January 23, 2006.
- Beginning with Consumer Confidence Reports (CCRs) due by July 1, 2002, all community water systems (CWSs) will begin providing health information and arsenic concentrations in the annual reports for water that exceeds 5 µg/L (one half of the MCL).
- Both CWSs and non-transient non-community water systems (NTNCWSs) are required to meet the revised arsenic standard.
- Two compliance requirements for inorganic contaminants (IOCs), volatile organic contaminants (VOCs), and synthetic organic contaminants (SOCs). Specifically, when a system fails to collect the required number of samples, compliance averages will be based on the actual number of samples collected. Also, new public water systems and systems using new sources of water must demonstrate compliance within state-specified time and sampling frequencies. These provisions apply to arsenic.

All CWSs and NTNCWSs that exceed the MCL of 10 µg/L are required to come into compliance 5 years after the publication of the final rule.

Radionuclide Rule

The original Radionuclide Rule was proposed in July 1991, but court action delayed its final promulgation. The final Radionuclides Rule was published in the Federal Register on December 7, 2000. The rule became effective in December 2003. New monitoring requirements have been phased-in the publication date of the final rule and the beginning of the next Standardized Monitoring Framework period on December 31, 2007. "Phased-in monitoring" refers to the fact that States will require some fraction of water systems to complete their initial monitoring requirements each year of the period between the effective date (December 8, 2003) and the beginning of the new cycle (December 31, 2007). Water systems will determine initial compliance under the new monitoring requirements using the average of four quarterly samples or, at state discretion, using appropriate grandfathered data. Compliance will be determined immediately based on the annual average of the quarterly samples for that fraction of systems required by the state to monitor in any given year or based on the results from the grandfathered data. Water systems with existing radionuclides monitoring data demonstrating that the system is out of compliance with new provisions will be out of compliance on the effective date of December 8, 2003.

In the final rule, EPA set the MCL for uranium at 30 micrograms per liter (µg/L), using its authority under the SDWA for the first time to set a standard at a higher than the feasible level based on cost-benefit considerations. The standard for combined radium-226/228 remains at 5 picoCuries per liter (pCi/L). However, the rule requires improved monitoring for radium. The final rule retains the interim standards for gross alpha particles at 15 pCi/L and for beta and photon emitters at 4 millirems (mrem).

A summary of the final Radionuclides Rule is provided below. Table 9-10 also lists the existing (1979) and the revised MCLs of the final Radionuclide Rule.

- Affected Systems: Community Water Systems (CWSs); non-CWSs, including transient and non-transient, are exempt.
- MCL Goals (MCLGs) for radionuclides: MCLGs of zero; includes combined radium-226/228; gross alpha, beta particle and photon radioactivity, and uranium
- Radium MCL: Combined Ra-226 and Ra-228 MCL of 5 pCi/L; based on new risk levels.
- Beta/Photon Radioactivity MCL:
  - ≤ 4 mrem/yr to the total body or any given internal organ except for H-3 and Sr-90
  - H-3 = 20,000 pCi/L; Sr-90 = 8 pCi/L
  - Total dose from co-occurring beta/photon emitters must be ≤ 4 mrem/yr to the total body of any internal organ;
  - This MCL will be reviewed within 2 to 3 years based on a need for further re-evaluation of the risk management issues.
- Gross alpha MCL: 15 pCi/L excluding uranium and radon, but including Ra-226; maintain current MCL.
- Uranium MCL: 30 µg/L; new MCL.
- Polonium-210: Part of gross alpha; monitoring required under the UCMR rule; further action may be proposed at a later date.
- Lead-210: Not regulated; monitoring required under the UCMR rule; further action may be proposed at a later date.

Table 9-10
Existing and Revised MCLs for Radionuclides

Contaminant	1979 MCLs	2000 Radionuclide Rule MCLs
Radium 226/228	5 piC/L	5 piC/L
Uranium	N/A	30 piC/L
Gross Alpha	15piC/L	15 piC/L
Beta Particles and Photon Emitters	4 mrems	4 mrem

Radon Rule

Radon is a naturally occurring, carcinogenic, radioactive gas. Radon in drinking water increases risk to public health, primarily from inhalation of radon discharged through normal household use, such as showering, but also from ingestion of water. The proposed Radon Rule applies to all community water systems that use groundwater or mixed groundwater and surface water supply sources.

On November 2, 1999, the long anticipated and heavily debated Radon Rule was formally proposed, but EPA missed the SWDA deadline of August 2000 promulgation. EPA has not indicated a final schedule for the promulgation of the Radon Rule at this time.

The rule includes a two-option approach that allows states and water suppliers to reduce radon risks in indoor air while protecting public health from the highest levels of radon in drinking water. The proposed rule includes the following provisions:

- MCLG zero
- MCL 300 pCi/L
- Alternative MCL (AMCL) 4,000 pCi/L

The AMCL provision of the rule applies to water systems that adopt and comply with a multimedia mitigation (MMM) program aimed at reducing household indoor/air health risks from the soil as well as the tap water. The AMCL of 4,000 pCi/L is based on the National Research Council recommended estimate of 10,000 to 1 as the transfer factor from water to air and the national average outdoor radon concentration of 0.4 pCi/L in air. Thus, an estimate of 0.4 pCi/L in air would be equivalent to 4,000 pCi/L in water.

If a state develops an MMM program that is approved by the EPA, public water systems in that state will be able to comply with the AMCL rather than the MCL. Alternatively, if a state chooses not to adopt its own MMM program or a state's MMM program does not meet EPA approval, an individual public water supplier can submit an MMM program for approval. The 1996 SDWA Amendments require that the EPA evaluate MMM programs every 5 years.

Drinking Water Contaminant Candidate List

As amended in 1996, the SWDA requires the EPA to establish a list of contaminants that are known or anticipated to occur in public water systems and may require regulation under the SWDA. The first Contaminant Candidate List (CCL) was published in the Federal Register in March 1998 and included 60 contaminants under consideration for regulation. A second version of the CCL was published in February 2005. The second version of the CCL carries forward 51 of the original 60 unregulated contaminants from the first version of the CCL. The CCL includes both microbiological and chemical contaminants. The CCL published in February 2005 includes 42 chemical contaminants and 9 microbiological contaminants/contaminant groups. Table 9-11 lists the contaminants published in the CCL in February 2005.

Contaminants included in the CCL are studied to develop analytical methods for detecting the contaminants, determine whether they occur in drinking water, and evaluate treatment technologies to remove them from drinking water. In addition, the health effects of the

contaminants are studied to help determine if actions such as drinking water guidance, health advisories, or regulation need to be developed. The CCL alone does not impose any requirements on public water system.

Table 9-11
Contaminant Candidate List (CCL)

Microbiological Contaminants
Adenoviruses
Aeromonas hydrophila
Caliciviruses
Coxsackieviruses
Cyanobacteria (blue-green algae), other freshwater algae, and their toxins
Echoviruses
Helicobacter pylori
Microsporidia (Enterocytozoon & Septata)
Mycobacterium avium intracellulare (MAC)
Chemical Contaminants
1,2,2,2-tetrachloroethane
1,2,4-trimethylbenzene
1,1-dichloroethane
1,1-dichloropropene
1,2-diphenylhydrazine
1,3-dichloropropane
1,3-dichloropropene
2,4,6-trichlorophenol
2,2-dichloropropane
2,4-dichlorophenol
2,4-dinitrophenol
2,4-dinitrotoluene
2,6-dinitrotoluene
2-methyl-Phenol (o-cresol)
Acetochlor
Alachlor ESA & other acetanilide pesticide degradation products
Aluminum
Boron
Bromobenzene

Table 9-11
Contaminant Candidate List (CCL)

DCPA mono-acid degradate
DCPA di-acid degradate
DDE
Diazinon
Disulfoton
Diuron
EPTC (s-ethyl-dipropylthiocarbamate)
Fonofos
p-Isopropyltoluene (p-cymene)
Linuron
Methyl bromide
Methyl-t-butyl ether (MTBE)
Metolachlor
Molinate
Nitrobenzene
Organotins
Perchlorate
Prometon
RDX
Terbacil
Terbufos
Triazines and degradation products of triazines (including, but not limited to Cyanazine, and atrazine-desethyl)
Vanadium

Water Quality Issues

Surface Water Quality

The Orcutt System purchases a small volume of treated surface water, less than 1% of total supply, from Santa Maria, which in turn, purchases water from the Central Coast Water Authority (CCWA). The CCWA obtains its water supply from the coastal reach of the SWP California Aqueduct. The source water of the State Water Project originates in northern California's mountains, rivers and streams, and flows through the Sacramento-San Joaquin Delta before entering the State Water Project's 444-mile California Aqueduct.

The coastal reach of the SWP consists of a 101-mile long aqueduct from Kern County to Vandenberg Air Force Base in Santa Barbara County and a 42-mile long CCWA pipeline from Vandenberg AFB to Lake Cachuma. Water is pumped from the West Branch of the SWP through a series of four pumping stations and ultimately delivered to the Polonial Pass Filtration Plant where the water is treated by conventional surface water filtration techniques. The Polonial Plant is located in the Cholame Hills at an elevation of approximately 1400 feet. This elevation allows the plant to distribute water from the plant to the Santa Ynez Pumping facility in Santa Barbara County, which is approximately 120 miles away. Typically, there is no other treatment of the purchased surface water, other than the treatment received at the Polonial Pass Plant. The interconnection, thorough which Santa Maria accepts water from CCWA, is located downstream of Polonial Pass Plant and upstream of the Santa Ynez Pumping Plant.

The main water quality concerns for the surface water purchased from CCWA are related to the water supply source. The water quality is generally excellent; however, it is affected by seawater intrusion and agricultural drainage from peat soil islands in the Bay Delta area. The water quality parameters that are of particular importance include total organic carbon (TOC) and bromide. An increase in TOC and bromide concentrations may result in an increased production of disinfection byproducts.

Two actions that are implemented to protect Bay-Delta Fisheries have made controlling TOC and Bromide levels difficult. The SWP diversions for fishery protection are now scheduled for the fall season, instead of spring. The fall season is the time of year when TOC and Bromide levels are at their highest. In addition, selected cross Delta Channels are closed at certain times of the year to protect migrating fish. This degrades the overall quality of water that enters the SWP California Aqueduct because the closure of the Cross Delta Channel reduces the volume of higher quality water from the Sacramento River entering the SWP system.

Due to the low volume of purchased surface water accepted into the Orcutt System, the water quality issues discussed above are not anticipated to be problematic. Since the vast majority of the water supplied to the Orcutt System is groundwater, disinfection byproducts are expected to be very low or non-detect. The large quantity of groundwater will serve to mitigate any potential disinfectant byproduct issues when surface water is introduced into the system.

Groundwater Quality

The primary source of water supply for the Orcutt System is groundwater. The system operates 13 active groundwater wells which extract groundwater from the Santa Maria Valley Groundwater Basin. This basin primarily underlies the Santa Maria Valley but also underlies the Nipomo and Tri-Cities Mesas, Arroyo Grande Plain and the Nipomo, Arroyo Grande and Pismo Creek Valleys. The Basin is triangularly shaped and opens towards the west and extends offshore into the Pacific Ocean. The San Rafael Mountains bound the basin to the north and the Santa Ynez Mountains of the Coastal Traverse Range bound the basin to the south. The basin is an alluvial basin and is bounded by consolidated impermeable rock formations that outcrop along the inland periphery of the basin. The unconsolidated water bearing deposits can range in thickness up to 2,800 feet and average 1,000 feet in

thickness. The water bearing formations of the basin include alluvium, dune sands and the Orcutt, Paso Robles, Pismo and Careaga formations.

In general, the mineral content of the groundwater in the basin has historically increased in concentration from east to west, with the highest levels of total dissolved solids (TDS), sulfate, chloride and nitrate observed in the area between Santa Maria and Guadalupe, which are located west of the Orcutt System. There are also areas of high nitrate concentration in the Sisquoc area, which is in the southeast portion of the basin and east of the Orcutt System. In addition, it is generally believed that all shallow wells in the basin are considered at high risk for nitrate contamination.

The operation of the Twitchell Reservoir, importation of SWP water into the basin and the reverse osmosis operation at the Laguna Seca Wastewater Treatment Facility have all contributed towards improving the water quality of the basin. However, although there are active measured in place to improve the overall quality of water in the basin, the most northern wells of the Orcutt System have experienced significant increases in TDS, sulfate, chloride and nitrate in recent years.

The Evergreen Well #1 and #2, the Sunrise Well #1 and the Mira Flores Well #1 have all exceeded the nitrate MCL of 45 mg/L. The increase in nitrate concentrations observed in these wells has also been accompanied by increases in TDS, sulfate and chloride. The high chloride and sulfate levels have made nitrate treatment by ion exchange treatment difficult due to the high selectivity of sulfate and associated chloride release from the treatment process. The lack of brine disposal facilities also contributes to increasing costs of nitrate treatment. If sulfate, chloride and TDS concentrations continue to increase in the northern wells, ion exchange treatment may no longer be able to produce water that will meet the upper secondary MCL standards for TDS and chloride.

The southern water supply wells of the Orcutt System have had low nitrate concentrations and no recent detections of iron or manganese. Consequently, the groundwaters produced from these wells receive no special treatment, other than wellhead chlorination, prior to distribution within the Orcutt System. However, the southern wells produce water that exceeds the “recommended” secondary MCL standard for total dissolved solids of 500 mg/L. The southern wells have TDS concentrations that range from 550 to 630 mg/L. The groundwater from these wells is also considered hard water as the hardness levels have ranged from 370 to 430 mg/L.

Table 9-12 summarizes water quality issues and recommendations for wells within the Orcutt System.

Table 9-12
Summary of Assessment

Well	Normal Year Well Capacity (gpm)	Status	Water Quality Issue/Concern	Existing Treatment	Recommendations
Crescent Well #1	709	Active		Chlorination	
Kenneth Well #1	949	Active		Chlorination	
Mira Flores #1	647	Active	Elevated nitrate, TDS, sulfate, chloride	Chlorination, blending for nitrate control	
Mira Flores #2	830	Active		Chlorination	
Mira Flores #3	427	Inactive		Chlorination	
Mira Flores #4	626	Active		Chlorination	
Mira Flores #5	895	Active		Chlorination	
Mira Flores #6	753	Active		Chlorination	
Mira Flores #7	1,170	Active		Chlorination	
Oak Well #1	1,110	Active		Chlorination	
Orcutt Well #1	589	Active		Chlorination	
Woodmere Well #1	872	Active		Chlorination	
Woodmere Well #2	935	Active		Chlorination	
Evergreen Well #1	376	Active	High nitrate, TDS, sulfate, chloride	Chlorination, nitrate ion exchange treatment.	Consider replacement due to impact of rising sulfate/chloride levels in well on ion exchange treatment
Evergreen Well #2	900	Inactive	High nitrate, TDS, sulfate, chloride	None, physically isolated from system.	Evaluate cost effectiveness of adding wellhead treatment
Sunrise Well #1	750	Inactive	High nitrate, TDS, sulfate, chloride	None, physically isolated from system.	Option of blending with purchased water from CCWA

Projected Impact of Water Quality

As discussed previously, the northern groundwater wells have been impacted by increasing nitrate, TDS, chloride and sulfate concentrations. The Sunrise Well #1 and the Evergreen Well #1 and 2 were first impacted in the mid-1990's and later Mira Flores Well #1 in 2001. If this trend continues, there is the potential for impact to the wells further south of the Mira Flores Well #1. The closest wells south of Mira Flores Well #1 are the Woodmere Wells #1 and #2.

Based on a hydrogeologic review (Cleath and Associates, Hummel Lane Test Hole, 2001) of the area between the Woodmere Wells and the Mira Flores Well #1, the deeper Paso Robles formation found in the Woodmere Well vicinity may rise in elevation towards the Evergreen Wells, to the north, and be contiguous with the shallow Paso Robles Formation that is known to contain high nitrate levels. Given certain assumptions, it was estimated that the elevated nitrate levels seen in Mira Flores Well #1 may reach the Woodmere Wells in approximately 10 years or by 2011. However, the hydraulic gradient in the vicinity of Mira Flores Well #1 and the Woodmere Wells may not be completely clear. There are two significant activities that may play a role in influencing the hydraulic gradient in the area near Mira Flores Well #1 and the Woodmere Wells.

First, the Twitchell Reservoir discharges water into the Santa Maria River at the confluence of the Cuyama and Sisquoc Rivers to recharge the Santa Maria Groundwater Basin. The confluence is approximately 5 miles due east of Mira Flores Well #1 and Woodmere Wells, and the Santa Maria River runs in a northwesterly direction, never getting closer than 5 miles from the Mira Flores Well #1 site. The recharge operation has a significant impact on the regional hydraulic gradient. Therefore, if there is a change in the operation of the Twitchell Reservoir, the hydraulic gradient may change as well.

Second, historically, there has been a pumping depression located beneath the Santa Maria Airport due to the pumping in that area. However, groundwater levels in the area have increased by 50 to 60 feet between spring 1993 and spring 2001 (Cleath 2001) and Santa Maria, which operated the majority of the wells in the airport area, no longer relies on groundwater wells as their primary source of water supply. Santa Maria utilizes SWP water for its primary source of water supply and only utilizes the wells during planned outages of the CCWA source. Therefore, the pumping depression may decrease with time due to the importation of surface water to the basin and the reduction in groundwater pumping. This may result in a change in the hydraulic gradient in the area of Mira Flores Well #1 and the Woodmere Wells.

Since the nitrate levels in the Mira Flores Well and the Woodmere Wells have been somewhat stable since 2001 to 2005, it is assumed that the Woodmere Wells will not be significantly impacted in the future due to rising nitrate levels. Due to the high levels of TDS, sulfate, chloride and nitrate, it is assumed that the Evergreen Well operation, with ion exchange treatment, will be replaced by the use of the Sunrise interconnection with Santa Maria. The ion exchange treatment may not be able to produce water that will meet the upper secondary MCL for Chloride and TDS.

Table 9-13 summarizes the projected impact on water supply due to water quality issues with wells in the Orcutt System.

Table 9-13
Summary of Projected Water Supply Changes Due to Water Quality Issues

Water Source	2005	2010	2015	2020	2025	2030
Crescent Well #1	0	0	0	0	0	0
Kenneth Well #1	0	0	0	0	0	0
Mira Flores #1	0	0	0	0	0	0
Mira Flores #2	0	0	0	0	0	0
Mira Flores #3	0	0	0	0	0	0
Mira Flores #4	0	0	0	0	0	0
Mira Flores #5	0	0	0	0	0	0
Mira Flores #6	0	0	0	0	0	0
Mira Flores #7	0	0	0	0	0	0
Oak Well #1	0	0	0	0	0	0
Orcutt Well #1	0	0	0	0	0	0
Woodmere Well #1	0	0	0	0	0	0
Woodmere Well #2	0	0	0	0	0	0
Evergreen Well #1	0	-100%	0	0	0	0
Evergreen Well #2	0	0	0	0	0	0
Sunrise Well #1	0	0	0	0	0	0
City of Santa Maria	0	+100%	0	0	0	0

Distribution System Water Quality

The Orcutt System has implemented a number of monitoring programs to ensure that the water quality remains within acceptable ranges. The water quality parameters that are monitored, pursuant to plans approved by the Department of Health Services, include general physical parameters, presence of coliform bacteria, disinfectant and disinfection by-product levels, and corrosivity of the water by monitoring lead and copper levels at customers' water taps. All monitoring parameters and levels currently meet drinking water standards. The ability to continue to meet these standards is not expected to change in the foreseeable future.

In addition to the monitoring programs, the Orcutt System has implemented a number of operational programs that are designed to maintain water quality within acceptable criteria. The system actively flushes its distribution system on a routine basis as a means to remove built up sediment within the mains as well as to ensure that aged water is removed from the system. The system also has an active backflow and cross connection prevention program in place to reduce the risk of backflow conditions from a service connection into the distribution system. Also, security measures are in place to protect the distribution system

from tampering by unauthorized personnel. All of these programs are designed to assist with maintaining the water quality within the distribution system and provide some of the tools needed to respond to a water quality emergency

Emerging Water Quality Issues

In 2000, there was significant interest in the detection and possible health effects of chromium 6 in drinking water supplies throughout the state. In 2001, the OEHHA withdrew their previously established Public Health Goal (risk assessment level) of 2.5 µg/L for total chromium. The current MCL enforced by CDHS is 50 µg/L for total chromium, and OEHHA is in the process of establishing a specific Public Health Goal for chromium 6. Total chromium in the Orcutt System is less than 1.0 µg/l to 1.9 µg/l and chromium 6 ranges from less than 1.0 µg/l to 1.8 µg/l.

Source water protection is important for all of California. A requirement from USEPA called for all utilities to complete a Source Water Assessment for all sources. A source water assessment was conducted for each of the 13 groundwater wells serving the customers of the Orcutt System, in December 2002.

One of the 13 groundwater well sources, Mira Flores #1, is considered most vulnerable to irrigated crops and fertilizer/pesticide/herbicide application, as the nitrate concentration in water produced by this well is near the drinking water standard of 45 mg/L as nitrate. Although the nitrate concentration is near the drinking water standard, all water produced from this groundwater well is blended with other water sources, pursuant to a Department of Health Services approved blending plan, prior to delivery to the distribution system. The blending operation ensures that all drinking water standards are continuously attained in the delivered water.

All 13 groundwater well sources are considered most vulnerable to one or more of the following possible contaminating activities. Contaminants associated with these activities have not been detected in the water supply: Gasoline station, high density housing, apartments/condominiums, parks, fire stations, water supply wells, storm drain discharge points, storm water detention facilities, oil wells, and roads/streets.

Until recently, MTBE was the primary oxygenate in virtually all gasoline used in California. It was introduced to surface water bodies from motor exhaust of recreational watercraft, and into groundwater supplies by leaking underground storage tanks. The CDHS adopted a primary MCL of 13 µg/L for MTBE based on carcinogenicity studies in animals. They also established a secondary MCL for MTBE at 5 µg/L, based upon taste and odor concerns. MTBE has been non-detectable in all water sources serving the water system to date.

CPUC Interface. One of the four key principles of the CPUC draft Water Action Plan is to provide safe, high quality water to all regulated water utility customers. Water Plan objectives include maintaining the highest standards of water quality, and, promoting infrastructure investment including investments to protect water quality. Specific proposed actions to support water plan objectives include strengthening inter-agency relations between the CPUC and Department of Health Services, and, developing funding mechanisms to address water quality concerns. GSWC has suggested additional steps that

can be taken by the CPUC to ensure water quality including assurances of timely recovery of water pollution clean-up costs.

Chapter 10. Water Service Reliability

Section 10635 of the Act requires that an assessment of water service reliability for various climatic conditions be undertaken. The Act states:

Section 10635

(a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

This chapter provides a water supply and demand assessment for the Orcutt System for a normal year, a single-dry year, and multiple-dry years. The following is a summary of the water supply sources and reliability of those sources for the Orcutt System. The details of water supply sources and the reliability of these supplies are provided in Chapter 3. Water demand projections are documented in Chapter 4.

As noted, the Orcutt System has several available water supplies to meet the projected demands. Groundwater is pumped from the Basin and the imported supplies from the SWP are obtained via CCWA facilities. In addition, GSWC can pump a percentage of the imported water supply as return flows. These return flows are pumped from GSWC's wells and are in addition to their groundwater supplies. GSWC also has a dedicated right to pump up to 10,000 ac-ft/yr derived from the yield resulting from the operation of the Twitchell Project. Finally, GSWC has and will continue to receive assignment of rights to pump return flows attributable to Santa Maria's use of imported water within the Basin (or take direct delivery of Santa Maria's SWP through the interconnection), as a result of new development projects within the Orcutt System. Because these supplies are dependent on both local and state supplies, the conditions in local and distant areas can impact the reliability of supplies. The following discussion summarizes the reliability of GSWC's water supply sources. In general, GSWC's supply is expected to be 100 percent reliable through 2030. This reliability is a result of: 1) the projected reliability of imported water and associated return flows, and 2) reliable native and developed groundwater in the Basin.

CCWA's sole water supply is imported water from the SWP. Imported water supplies from the SWP are expected to be 77 percent (based on a long-term average basis) reliable for the normal years. However, during a wet year, the SWP may be 100 percent reliable. In contrast, the SWP deliveries during the multiple-dry year periods could be about 25 to 40 percent of the allotted amounts and possibly as low as 5 percent of the allotted amount during an unusually dry single year. Various mechanisms could augment the reliability of supplies during a dry period. For example, water available through exchanges with other contractors, purchases of water through DWR dry year water purchase programs, short term water transfers through DWR's Turnback Pool programs and groundwater recharge programs operated by some CCWA project participants.

The Santa Maria Groundwater Basin, especially the Santa Maria Valley Management Area, is a very reliable source of water for the Orcutt System. This reliability is based on GSWC's water rights in the Basin and Agreements with the City of Santa Maria (Santa Maria) and the City of Guadalupe (Guadalupe) regarding use of return flows from imported State Water Project water. In addition, the Santa Maria Groundwater Basin has large volume of groundwater in storage to buffer drought conditions, as has been demonstrated historically.

As a part of the Stipulation, GSWC, along with Santa Maria and Guadalupe has preferential appropriative rights to surplus native groundwater: therefore, these parties may pump groundwater without limitation unless a Severe Water Shortage Condition persist within the Santa Maria Valley Management Area. The four criteria for determination of a Severe Water Shortage Condition are described below. In the event of a Severe Water Shortage Condition, the Court may order GSWC, along with Santa Maria and Guadalupe, to limit their pumping to their developed water at that time.

The Stipulation has requirements for monitoring and management to ensure that water supplies continue to be sufficient to support water uses in the Basin. Annual monitoring will be implemented to report on water demands and water supplies. The Stipulation includes provisions to avoid water shortage conditions and a procedure to deal with Severe Water Shortage Conditions.

As provided in the Stipulation, Severe Water Shortage Conditions exist when the Management Area Engineer, based on ongoing monitoring, finds the following: 1) groundwater levels in the Management Area are in a condition of chronic decline over a period of not less than five years, 2) the groundwater decline has not been caused by drought, 3) there has been material increase in groundwater use during the five-year period, and 4) monitoring wells indicate that groundwater levels in the Santa Maria Valley Management Area are below the lowest recorded levels. The procedure for addressing Severe Water Shortage Conditions is described in the Stipulation, which may include limitations on groundwater use.

The Stipulation also has provisions for the management and administration of the Twitchell Project. These provisions are designed to provide for funding and operation of the Twitchell Project, to maintain this water supply to the Basin so that the likelihood that Severe Water Shortage Conditions might develop is very low.

As provided in the Stipulation, GSWC has rights to pump its highest historical use of groundwater from the Basin, an additional right to 10,000 ac-ft/yr of groundwater yield

derived from the Twitchell Project, return flows from SWP use, and additional return flows that GSWC is assigned through new development projects with its Orcutt System.

GSWC may access rights to additional SWP return flows through the Santa Maria Valley Public Water Purveyor Water Management Agreement to ensure reliability of its pumped groundwater in the future as demands grow.

Any demand which cannot be met with the SWP water (and the associated return flows) are expected to be met by groundwater supplies in accordance with the Stipulation.

As presented in the Stipulation, the Management Area Engineer is responsible for monitoring water conditions and recommending water supply projects and programs to ensure water supplies are available to each Management Area under all hydrologic conditions.

The following sections present the normal water year, single-dry year, multiple-dry year water supply and demand assessments.

Normal Water Year Analysis

The Orcutt System's projected water supply consists of imported/purchased water, native groundwater, Twitchell Yield, and return flows of imported water in normal water years (see Chapter 3 for details). The Orcutt System's normal year water supply is projected to be 21,276 ac-ft/yr in 2030. As discussed above and in Chapter 3, any demands which cannot be met with SWP water (and associated return flows) are expected to be met by native groundwater supplies, Twitchell Yield, or transfers of water rights, in accordance with the Stipulation. Table 10-1 provides the projected water supply as the supply needed to meet projected demands. These demands include projected water use within the Orcutt System and unaccounted for water).

Table 10-1
Projected Normal Water Year Supply

	2010	2015	2020	2025	2030
Total Water Supply (ac-ft/yr) (2)	9,864	10,335	10,806	11,041	11,276
Percent of Year 2005(4)	106	112	117	119	122

Notes
1. Table format based on DWR Guidance Document Table 40.
2. Total water supply includes imported water and associated return flows, Twitchell Yield, and native groundwater.
3. Total water supplies to the Orcutt System are 21,276 ac-ft/yr.
4. Year 2005 supplies needed to meet demands are 9,263 ac-ft/yr.

Table 10-2 provides water demand projections in normal water year (see Chapter 4 for details).

Table 10-2
Summary of Projected Normal Water Year Demands

	2010	2015	2020	2025	2030
Total Water Demand (ac-ft/yr)	9,864	10,335	10,806	11,041	11,276
Percent of Year 2005	106	112	117	119	122

Notes
1. Table format based on DWR Guidance Document Table 41

Table 10-3 summarizes the service reliability assessment for a normal water year based on water supply and water demand projections. As described in Chapter 3, local groundwater from the Santa Maria Groundwater Basin and the total purchased water are expected to be 100 percent reliable to meet the projected demands through 2030.

Table 10-3
Comparison of Projected Normal Year Supply and Demand

	2010	2015	2020	2025	2030
Water Supply Total (ac-ft/yr)	9,864	10,335	10,806	11,041	11,276
Water Demand Total (ac-ft/yr)	9,864	10,335	10,806	11,041	11,276
Difference (supply minus demand)	0	0	0	0	0
Difference as Percent of Supply	0	0	0	0	0
Difference as Percent of Demand	0	0	0	0	0

Notes
1. Table format based on DWR Guidance Document Table 42

Single Dry-Year Analysis

There are various water transfer mechanisms that could augment the reliability of imported supplies during a dry period. For example, water available through exchanges with other contractors, purchases of water through DWR dry year water purchase programs, short term water transfers through DWR's Turnback Pool programs and groundwater recharge programs operated by some CCWA project participants. In addition, the long-term water in storage in the Basin will increase as a result of return flows from importing SWP water. As noted earlier, the single-dry year supplies for imported water may be significantly reduced to about 5 percent reliability. Any water demand which cannot be met with the SWP water (and the associated return flows) will be met by groundwater supplies in accordance with the Stipulation.

Table 10-4 presents projected single-dry year water supplies. It is assumed that the single-dry year supplies will meet or exceed projected demands through 2030 because local groundwater supplies will offset the deficit in imported water supplies in single-dry years.

Table 10-4
Projected Single-Dry Year Water Supply

	2010	2015	2020	2025	2030
Water Supply (ac-ft/yr)	9,864	10,335	10,806	11,041	11,276
Percent of Year 2005	106	112	117	119	122

Notes
1. Table format based on DWR Guidance Document Table 43
2. Total water supply includes imported water and associated return flows, Twitchell Yield, and native groundwater.
3. Total water supplies to the Orcutt System are 21,276 ac-ft/yr.

Table 10-5 provides projected single-dry year water demand.

Table 10-5
Summary of Projected Single-Dry Year Demands

	2010	2015	2020	2025	2030
Water Demand in ac-ft/yr	9,864	10,335	10,806	11,041	11,276
Percent of Year 2005	106	112	117	119	122

Notes
1. Table format based on DWR Guidance Document Table 44

Table 10-6 demonstrates the reliability of water supplies to meet projected annual water demands for the Orcutt System in a single-dry year.

Table 10-6
Comparison of Projected Supply and Demand for Single Dry Year

	2010	2015	2020	2025	2030
Supply Total (ac-ft/yr)	9,864	10,335	10,806	11,041	11,276
Demand Total (ac-ft/yr)	9,864	10,335	10,806	11,041	11,276
Difference (supply minus demand)	0	0	0	0	0
Difference as Percent of Supply	0	0	0	0	0
Difference as Percent of Demand	0	0	0	0	0

Notes
1. Table format based on DWR Guidance Document Table 45

Multiple Dry-Year Analysis

Table 10-7 presents the projected multiple-dry year water supply and demand assessment. It is assumed that the multiple-dry year water supplies are the same as those for the normal years because a combination of groundwater and purchased water will meet projected

water demands under multiple-dry years. As discussed above, the total water supply available to the Orcutt System is projected to be 21,276 ac-ft/yr.

As noted earlier, the multiple-dry year supplies for imported water are about 100 percent reliable at 33 percent of available supplies under normal water years. Any water demand, which cannot be met with the SWP water (and the associated return flows) are expected to be met by groundwater supplies in accordance with the Stipulated Agreement. The third year of the multiple-dry year water supply projection represents the end of each 3-year multiple-dry year period as required for the multiple-dry year analysis. It is assumed that the water demand for the preceding two years (of the 3-year multiple-dry year period) will be the same as those in the third year. For example, the water demand projection for 2010 has been used as the water demands projected in 2009 and 2008.

Table 10-7 demonstrates that the water supplies are sufficient to meet the projected water demand for each multiple-dry year period because groundwater and purchased water can supply reliable water through 2030. As a result, the total water supplies to meet the demands under multiple-dry years are expected to be 100 percent reliable.

In summary, water supplies from local groundwater and purchased water along with the supply from return flows ensure that the total water demands can be met under normal, single-dry year, and multiple-dry years.

Table 10-7
Projected Multiple-Dry Year Water Supply and Demand Assessment

Year	Supply (ac-ft/yr)	Demand (ac-ft/yr)	Difference	Difference as Percent of Supply	Difference as Percent of Demand
2006					
2007					
2008	9,864	9,864	0	0	0
2009	9,864	9,864	0	0	0
2010	9,864	9,864	0	0	0
2011					
2012					
2013	10,335	10,335	0	0	0
2014	10,335	10,335	0	0	0
2015	10,335	10,335	0	0	0
2016					
2017					
2018	10,806	10,806	0	0	0
2019	10,806	10,806	0	0	0
2020	10,806	10,806	0	0	0
2021					
2022					
2023	11,041	11,041	0	0	0
2024	11,041	11,041	0	0	0
2025	11,041	11,041	0	0	0
2026					
2027					
2028	11,276	11,276	0	0	0
2029	11,276	11,276	0	0	0
2030	11,276	11,276	0	0	0

Notes
1. Table format based on DWR Guidance Document Tables 47 through 57
2. Total water supply includes imported water and associated return flows, Twitchell Yield, and native groundwater.
3. Total water supplies to the Orcutt System are 21,276 ac-ft/yr.
4. This assessment is based on the 3-year multiple-dry year period ending in 2010, 2015, 2020, 2025, and 2030

Chapter 11. References

California Department of Water Resources. California's Groundwater: Bulletin 118-2003.

California Department of Water Resources. Draft 2005 State Water Project Delivery Reliability Report, May 25, 2005.

California Department of Water Resources. Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan. January 18, 2005.

California Urban Water Management Council (Council). Memorandum of Understanding Regarding Urban Water Conservation in California. As Amended March 10, 2004.

Central Coast Water Authority (CCWA). 2005. Draft Urban Water Management Plan.

OCP, 2004, "Orcutt community General Plan, Santa Barbara County Planning and Development Comprehensive Planning Division"

UWMP, 2000, Orcutt Urban Water Management Plan, Brown and Caldwell.

Appendix A
2005 Urban Water Management Planning Act

Established: AB 797, Klehs, 1983
Amended: AB 2661, Klehs, 1990
AB 11X, Filante, 1991
AB 1869, Speier, 1991
AB 892, Frazee, 1993
SB 1017, McCorquodale, 1994
AB 2853, Cortese, 1994
AB 1845, Cortese, 1995
SB 1011, Polanco, 1995
AB 2552, Bates, 2000
SB 553, Kelley, 2000
SB 610, Costa, 2001
AB 901, Daucher, 2001
SB 672, Machado, 2001
SB 1348, Brulte, 2002
SB 1384 Costa, 2002
SB 1518 Torlakson, 2002
AB 105, Wiggins, 2003
SB 318, Alpert, 2004

CALIFORNIA WATER CODE DIVISION 6
PART 2.6. URBAN WATER MANAGEMENT PLANNING
CHAPTER 1. GENERAL DECLARATION AND POLICY

10610. This part shall be known and may be cited as the "Urban Water Management Planning Act."

10610.2. (a) The Legislature finds and declares all of the following:
(1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.
(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
(9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.
(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.
10610.4. The Legislature finds and declares that it is the policy of the state as follows:
(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.
(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.
(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

CHAPTER 2. DEFINITIONS
10611. Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.
10611.5. "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.
10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.
10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.
10614. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.
10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.
10616. "Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.
10616.5. "Recycled water" means the reclamation and reuse of wastewater for beneficial use.
10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water

supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

CHAPTER 3. URBAN WATER MANAGEMENT PLANS

Article 1. General Provisions

10620.

(a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d)(1) An urban water supplier may satisfy the requirements of this part by participation in area wide, regional, watershed, or basin wide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

10621.

(a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero.

(b) Every urban water supplier required to prepare a plan pursuant to this part shall notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

(c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

Article 2. Contents of Plans

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

(1) An average water year.

(2) A single dry water year.

(3) Multiple dry water years.

For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e)(1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors including, but not necessarily limited to, all of the following uses:

(A) Single-family residential.
(B) Multifamily.
(C) Commercial.
(D) Industrial.
(E) Institutional and governmental.
(F) Landscape.
(G) Sales to other agencies.
(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
(I) Agricultural.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:
(A) Water survey programs for single-family residential and multifamily residential customers.
(B) Residential plumbing retrofit.
(C) System water audits, leak detection, and repair.
(D) Metering with commodity rates for all new connections and retrofit of existing connections.
(E) Large landscape conservation programs and incentives.
(F) High-efficiency washing machine rebate programs.
(G) Public information programs.
(H) School education programs.
(I) Conservation programs for commercial, industrial, and institutional accounts.
(J) Wholesale agency programs.
(K) Conservation pricing.
(L) Water conservation coordinator.
(M) Water waste prohibition.
(N) Residential ultra-low-flush toilet replacement programs.

(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower

incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.

(2) Include a cost-benefit analysis, identifying total benefits and total costs.

(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

(j) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

(k) Urban water suppliers that rely upon a wholesale agency for a source of water , shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water -year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

10631.5. The department shall take into consideration whether the urban water supplier is implementing or scheduled for implementation, the water demand management activities that the urban water supplier identified in its urban water management plan, pursuant to Section 10631, in evaluating applications for grants and loans made available pursuant to Section 79163. The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities.

10632. The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:
(a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.
(b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.
(c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.
(d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.
(e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.
(f) Penalties or charges for excessive use, where applicable.
(g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.
(h) A draft water shortage contingency resolution or ordinance.
(i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.
10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:
(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
(b) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.
(c) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.
(d) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(e) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
(f) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.
10634. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

Article 2.5 Water Service Reliability
10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.
(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.
(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.
(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

Article 3. Adoption and Implementation of Plans
10640. Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.
10641. An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.
10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to

Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.
10643. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.
10644. (a) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.
(b) The department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part. The report prepared by the department shall identify the outstanding elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has filed its plan with the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.
10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

CHAPTER 4. MISCELLANEOUS PROVISIONS
10650. Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:
(a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.
(b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.
10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.
10652. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.
10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the "Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.
10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.
10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.
10657. (a) The department shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with Section 10631, as amended by the act that adds this section, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.
(b) This section shall remain in effect only until January 1, 2006, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.

Appendix B
Public Hearing Notice and Meeting Minutes

Notice of Public Hearing

In conformance with the California Urban Water Management Planning Act, Golden State Water Company (formerly Southern California Water Company) is hosting a public hearing on Tuesday, December 6, 2005 at 10:00 a.m. at the Center for Employment Training, 509 W. Morrison Avenue, Santa Maria, CA 93458, to solicit comments on the Urban Water Management Plan (UWMP) for the Orcutt water system. The UWMP is available for public review prior to the public hearing and can be reviewed during normal business hours at:

Santa Maria Customer Service Office
Golden State Water Company
3070 Skyway, Suite 103
Santa Maria, CA 93455

Golden State
Water Company
A Subsidiary of American States Water Company

PROOF OF PUBLICATION
(2015.5 C.C.P.)

STATE OF CALIFORNIA,

SANTA MARIA TIMES

ENGINEERING & PLANNING
GOLDEN STATE WATER COMPANY
3035 PROSPECT PARK DR STE 60
RANCHO CORDOVA CA 95670

REFERENCE: 125368
206380 ORCUTT PUB HEARING

I AM THE PRINCIPAL CLERK OF THE PRINTER OF THE SANTA MARIA TIMES, NEWSPAPER OF GENERAL CIRCULATION, PRINTED AND PUBLISHED IN THE CITY OF SANTA MARIA, COUNTY OF SANTA BARBARA, AND WHICH NEWSPAPER HAS BEEN ADJUDGED A NEWSPAPER OF GENERAL CIRCULATION BY THE SUPERIOR COURT OF THE COUNTY OF SANTA BARBARA, STATE OF CALIFORNIA, ADJUDICATION #463687.

THAT THE NOTICE OF WHICH THE ANNEXED IS A PRINTED COPY (SET IN TYPE NOT SMALLER THAT NONPAREIL), HAS BEEN PUBLISHED IN EACH REGULAR AND ENTIRE ISSUE OF SAID NEWSPAPE AND NOT IN ANY SUPPLEMENT THEREOF ON THE FOLLOWING DATES, TO-WIT:

I CERTIFY (OR DECLARE) UNDER PENALTY OF PERJURE THAT THE FOREGOING IS TRUE AND CORRECT.

PUBLISHED ON: 11/22 11/29

TOTAL COST: 43.95
FILED ON: 11/29/05

DATED AT SANTA MARIA, CA, THIS 15 DAY OF Dec, 2005

SIGNATURE

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Legal No. 206380 Pub Dates Nov 22, 29, 2005

Golden State
WATER COMPANY
A Subsidiary of American States Water Company

Urban Water Management Plan: Orcutt System

Public Hearing
Tuesday, December 6, 2005
Center for Employment Training

SIGN-IN SHEET

Name	Address	Phone Number	E-Mail
Kathy Lawson	GSWC	(916) 853-3638	klawson@scwater.com
WARREN MORGAN	GSWC	(805) 528-6157	wwmorgan@scwater.com

No Meeting Minutes were taken since there was no attendance by the public.

Appendix C
Public Comments on the Draft UWMP

No Public Comments received during Public Review Period.

Appendix D
Economic Analysis of Selected Demand Management Measures

Santa Maria Customer Service Area
Table D-1. Assumptions Used for Economic Analysis

BMP 2 – Residential Plumbing Retrofit

Assumptions:

1. Plumbing retrofit devices will be installed at a minimum of 10% of residences per reporting period until it can be demonstrated that 75% of pre-1992 single-family residences and 75% of pre-1992 multi-family residences have low flow showerheads (LFSHs).

MOU, page 19.

2. 22.5% of single-family and 22.5% of multi-family residences have low-water-use fixtures.

Based on professional judgement.

3. Average number of fixtures per residence includes: 1.6 showers, 2.4 toilets, and 3.6 faucets (1 kitchen faucet and 2.6 other faucets).

4. Water savings from one low-flow showerhead = 5.5 gpd

A & N Technical Services report (2003, page 2-38).

5. Water savings from one faucet aerator = 1.5 gpd

A & N Technical Services report (2003, page 2-38).

6. Water savings from one toilet flapper = 8 gpd; assume 20 percent of toilets leak.

A & N Technical Services report (2003, page 2-38).

7. Water savings from kitchen "flip" faucet aerator = 3.0 gpd.

Based on GSWC data.

8. Indoor water savings = 19.5 gpd/unit

We used the following equation to calculate indoor water savings, based on assumptions 4 through 8:

(1.6*5.5) + (1.0*3.0) + (2.6*1.5) + (2.4*8*0.20).

9. The BMP will cost an average of $48 per residence.

Based on information provided by GSWC.

10. The life span of the retrofit devices is four years.

A & N Technical Services report (2003, page 2-38) gives life spans for a various components of a water survey. Four years selected as a reasonable average value.

11. Base year dwelling units include 11,202 single-family and 1,455 multi-family units.

Santa Maria Customer Service Area
Table D-1. Assumptions Used for Economic Analysis

BMP 3 – System Water Audits, Leak Detection and Repair
Assumptions: **1.** 20% of the distribution system will be surveyed and repaired each year. 2. Leak repairs will result in annual savings of approximately 0.6 acre-feet of water per mile of pipe. Based on information provided by Southern California Water Company 3. System water audits, leak detection and leak repair will cost approximately $1000 per mile of pipe. Based on information provided by GSWC.

Santa Maria Customer Service Area
Table D-1. Assumptions Used for Economic Analysis

BMP 5 – Large Landscape Conservation Programs and Incentives

Assumptions:

1. Develop Eto-based water use budgets for 90 percent of the CII accounts with dedicated irrigation meters and provide irrigation water use surveys to15 percent of CII accounts with mixed use meters.

MOU (Page 28)

2. Base year values include 123 dedicated landscape and 170 CII mixed use accounts.

Based on GSWC account summary data.

3. Dedicated landscape accounts are an average size of 1.3 acres

CII mixed use account landscape areas are assumed to be an average of 0.1 acre in size

4. Water use prior to the survey is 4.9 ft per year.

Irrigation allocation is equal to 100 percent of local evapotranspiration (ETo), and the MOU estimates that surveys will reduce water usage by 15 percent. Based on California Irrigation Management Information System data.

5. Surveys will reduce water usage by 15%.

MOU, page 30.

6. The life span of the large landscape water surveys is four years.

A & N Technical Services report (2003) gives a life span of four years for turf audits (page 2-34). Water

surveys for large landscapes are assumed to have a similar life span.

7. Each survey will cost $425 per acre. Minimum cost is $150 per account.

The estimate includes labor, administration, evaluation and overhead.

Santa Maria District Customer Service Area
Table D-1. Assumptions Used for Economic Analysis

BMP 14 – Residential ULFT Replacement Programs
Assumptions: *1.* Water savings from ULFTs are 44.6 gpd/unit for single-family residences and 45 gpd/unit for multi-family residences *MOU, Exhibit 6, Table 1 and Table 2.* 2. Homes constructed after 1991 already have ULFTs. As of January 1992, California legislation requires that ULFTs be installed in all newly constructed homes. 3. Natural toilet replacement rate is 4% per year. MOU, page 79. 4. The cost of toilets, advertising, administration, overhead, and toilet recycling is $134 per ULFT. The cost does not include installation, which will be covered by the customer. Based on GSWC cost data.

Table D-2 Santa Maria Customer Service Area
BMP 2. Residential Plumbing Retrofit

	Water Saving Calculations							Benefits ($)					Costs ($)					
Calendar Year	Single-Family Intervention	Multi-Family Intervention	Percent Units Surveyed Single-Family	Percent Units Surveyed Multi-Family	Incremental Water Savings (ac-ft/yr)		Annual Water Savings	Avoided Capital Costs	Avoided Variable Costs	Avoided Purchase Costs	Total Undiscounted Benefits	Total Discounted Benefits	Capital Costs	Financial Incentives	Operating Expenses	Total Undiscounted Costs	Total Discounted Costs	New present Value
Pre 2005			23%	23%														
2006	560	73	5.0%	5.0%	12.3	12.3	12.3	$0	$1,140	$1,655	$2,796	$2,796	$0	$0	$30,377	$30,377	$30,377	-$27,581
2007	560	73	5.0%	5.0%	12.3	12.3	24.5	$0	$2,281	$3,311	$5,591	$5,240	$0	$0	$30,377	$30,377	$28,467	-$23,227
2008	560	73	5.0%	5.0%	12.3	12.3	36.8	$0	$3,421	$4,966	$8,387	$7,365	$0	$0	$30,377	$30,377	$26,677	-$19,311
2009	560	73	5.0%	5.0%	12.3	12.3	49.0	$0	$4,561	$6,621	$11,183	$9,203	$0	$0	$30,377	$30,377	$24,999	-$15,796
2010	560	73	5.0%	5.0%	12.3	12.3	49.0	$0	$4,561	$6,621	$11,183	$8,624	$0	$0	$30,377	$30,377	$23,427	-$14,803
2011	560	73	5.0%	5.0%	12.3	12.3	49.0	$0	$4,561	$6,621	$11,183	$8,082	$0	$0	$30,377	$30,377	$21,954	-$13,872
2012	560	73	5.0%	5.0%	12.3	12.3	49.0	$0	$4,561	$6,621	$11,183	$7,574	$0	$0	$30,377	$30,377	$20,574	-$13,000
2013	560	73	5.0%	5.0%	12.3	12.3	49.0	$0	$4,561	$6,621	$11,183	$7,098	$0	$0	$30,377	$30,377	$19,280	-$12,182
2014	560	73	5.0%	5.0%	12.3	12.3	49.0	$0	$4,561	$6,621	$11,183	$6,651	$0	$0	$30,377	$30,377	$18,068	-$11,416
2015	560	73	5.0%	5.0%	12.3	12.3	49.0	$0	$4,561	$6,621	$11,183	$6,233	$0	$0	$30,377	$30,377	$16,932	-$10,698
2016	280	36	2.5%	2.5%	6.1	6.1	42.9	$0	$3,991	$5,794	$9,785	$5,111	$0	$0	$15,188	$15,188	$7,933	-$2,822
2017							30.7	$0	$2,851	$4,138	$6,989	$3,421	$0	$0	$0	$0	$0	$3,421
2018							18.4	$0	$1,711	$2,483	$4,194	$1,924	$0	$0	$0	$0	$0	$1,924
2019							6.1	$0	$570	$828	$1,398	$601	$0	$0	$0	$0	$0	$601
2020																		
2021																		
2022																		
2023																		
2024																		
2025																		
2026																		
2027																		
2028																		
2029																		
2030																		
Totals	5881	764	75%	75%	129		515	$0	$47,895	$69,525	$117,419	$79,923	$0	$0	$318,956	$318,956	$238,687	-$158,764

Percent of Residences Having Low-Water-Use Fixtures		
Year	Single-Family	Multi-Family
Pre-2005	23%	23%
Annual Replacement		
2006	5%	5%
2007	5%	5%
2008	5%	5%
2009	5%	5%
2010	5%	5%
2011	5%	5%
2012	5%	5%
2013	5%	5%
2014	5%	5%
2015	5%	5%
2016	2%	2%
2017	0%	0%
2014	0%	0%

Value of conserved water ($/ac-ft) =	135
Discount rate (real) =	6.71%
Water savings (gpd/unit) =	17.3
Conservation measue unit cost ($) =	48
Percent units receiving retrofits =	5%
1991 Single family units =	11,202
1991 Multi-family units =	1,455
Life span of retrofit devices (years) =	4
Energy savings ($/ac-ft) =	93

Benefit cost ratio =	0.33
Simple pay-back period (years) =	35
Discounted cost/water saved ($acre-feet) =	463
NPV/ water saved (acre-feet) =	-308

Table D-2 Santa Maria Customer Service Area
BMP 3. System Water Audits, Leak Detection, and Repair

	Water Savings		Benefits ($)					Costs ($)					
Calendar Year	Length of Pipe Surveyed (miles)	Annual Water Savings	Avoided Capital Costs	Avoided Variable Costs	Avoided Purchase Costs	Total Undiscounted Benefits	Total Discounted Benefits	Capital Costs	Financial Incentives	Operating Expenses	Total Undiscounted Costs	Total Discounted Costs	New present Value
Pre 1998													
2006	36.6	22.0	$0	$2,042	$2,965	$5,007	$5,007	$0	$0	$36,600	$36,600	$36,600	-$31,593
2007	36.6	43.9	$0	$4,085	$5,929	$10,014	$9,384	$0	$0	$36,600	$36,600	$34,299	-$24,914
2008	36.6	65.9	$0	$6,127	$8,894	$15,021	$13,191	$0	$0	$36,600	$36,600	$32,142	-$18,951
2009	36.6	87.8	$0	$8,169	$11,858	$20,028	$16,482	$0	$0	$36,600	$36,600	$30,121	-$13,639
2010	36.6	109.8	$0	$10,211	$14,823	$25,034	$19,307	$0	$0	$36,600	$36,600	$28,227	-$8,920
2011	36.6	109.8	$0	$10,211	$14,823	$25,034	$18,093	$0	$0	$36,600	$36,600	$26,452	-$8,359
2012	36.6	109.8	$0	$10,211	$14,823	$25,034	$16,955	$0	$0	$36,600	$36,600	$24,789	-$7,833
2013	36.6	109.8	$0	$10,211	$14,823	$25,034	$15,889	$0	$0	$36,600	$36,600	$23,230	-$7,341
2014	36.6	109.8	$0	$10,211	$14,823	$25,034	$14,890	$0	$0	$36,600	$36,600	$21,769	-$6,879
2015	36.6	109.8	$0	$10,211	$14,823	$25,034	$13,954	$0	$0	$36,600	$36,600	$20,400	-$6,446
2016	36.6	109.8	$0	$10,211	$14,823	$25,034	$13,076	$0	$0	$36,600	$36,600	$19,117	-$6,041
2017	36.6	109.8	$0	$10,211	$14,823	$25,034	$12,254	$0	$0	$36,600	$36,600	$17,915	-$5,661
2018	36.6	109.8	$0	$10,211	$14,823	$25,034	$11,484	$0	$0	$36,600	$36,600	$16,789	-$5,305
2019	36.6	109.8	$0	$10,211	$14,823	$25,034	$10,761	$0	$0	$36,600	$36,600	$15,733	-$4,972
2020	36.6	109.8	$0	$10,211	$14,823	$25,034	$10,085	$0	$0	$36,600	$36,600	$14,744	-$4,659
2021	36.6	109.8	$0	$10,211	$14,823	$25,034	$9,451	$0	$0	$36,600	$36,600	$13,817	-$4,366
2022	36.6	109.8	$0	$10,211	$14,823	$25,034	$8,856	$0	$0	$36,600	$36,600	$12,948	-$4,092
2023	36.6	109.8	$0	$10,211	$14,823	$25,034	$8,299	$0	$0	$36,600	$36,600	$12,134	-$3,834
2024	36.6	109.8	$0	$10,211	$14,823	$25,034	$7,778	$0	$0	$36,600	$36,600	$11,371	-$3,593
2025	36.6	109.8	$0	$10,211	$14,823	$25,034	$7,289	$0	$0	$36,600	$36,600	$10,656	-$3,367
2026	36.6	109.8	$0	$10,211	$14,823	$25,034	$6,830	$0	$0	$36,600	$36,600	$9,986	-$3,155
2027	36.6	109.8	$0	$10,211	$14,823	$25,034	$6,401	$0	$0	$36,600	$36,600	$9,358	-$2,957
2028	36.6	109.8	$0	$10,211	$14,823	$25,034	$5,998	$0	$0	$36,600	$36,600	$8,769	-$2,771
2029	36.6	109.8	$0	$10,211	$14,823	$25,034	$5,621	$0	$0	$36,600	$36,600	$8,218	-$2,597
2030	36.6	109.8	$0	$10,211	$14,823	$25,034	$5,268	$0	$0	$36,600	$36,600	$7,701	-$2,434
Totals	915	2,525	$0	$234,862	$340,929	$575,791	$272,603	$0	$0	$915,000	$915,000	$467,283	-$194,679

Value of conserved water ($/ac-ft) =	135
Discount rate (real) =	6.71%
Annual water savings (ac-ft/mile) =	0.6
Conservation measue unit cost ($) =	1000
Percent of pipe surveyed =	20%
Total length of pipe in system (miles) =	183
Life span of leak repairs (years) =	5
Energy savings ($/ac-ft) =	93

Benefit cost ratio =	0.6
Simple pay-back period (years) =	33
Discounted cost/water saved ($acre-feet) =	185
NPV/ water saved (acre-feet) =	-77

Table D-2 Santa Maria Customer Service Area
BMP 5. Large Landscape Conservation Programs and Incentives

	Water Saving Calculations						Benefits					Costs					
Calendar Year	CII Accounts w/Dedicated Irr. Meters Interventions	CII Accounts w/Mixed Use Meters Offered Surveys	CII Accounts w/Mixed Use Meters % Surveyed	CII Accounts w/Mixed Use Meters Interventions	Incremental Water Savings (ac-ft/Yr)	Cumulative Water Savings (ac-ft/Yr)	Avoided Capital Costs	Avoided Variable Costs	Avoided Purchase Costs	Total Undiscounted Benefits	Total Discounted Benefits	Capital Costs	Financial Incentives	Operating Expenses	Total Undiscounted Costs	Total Discounted Costs	Net Present Value
			5.88%	10													
2005	0	0	0.00%	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2006	55	17	1.86%	3	53	53	$0	$4,940	$7,171	$12,111	$11,350	$0	$0	$31,055	$31,055	$29,102	-$17,753
2007	55	17	1.86%	3	53	106	$0	$9,880	$14,342	$24,222	$21,272	$0	$0	$31,055	$31,055	$27,272	-$6,000
2008	0	17	1.95%	3	0	106	$0	$9,903	$14,375	$24,278	$19,980	$0	$0	$497	$497	$409	$19,571
2009	0	17	1.95%	3	0	107	$0	$9,925	$14,408	$24,333	$18,766	$0	$0	$497	$497	$383	$18,383
2010		17	0.75%	1	0	54	$0	$4,994	$7,250	$12,244	$8,849	$0	$0	$191	$191	$138	$8,711
2011		17	0.75%	1	0	1	$0	$63	$91	$154	$104	$0	$0	$191	$191	$130	-$25
2012		17	0.00%	0	0	0	$0	$40	$58	$98	$62	$0	$0	$0	$0	$0	$62
2013		17	0.00%	0	0	0	$0	$17	$25	$43	$25	$0	$0	$0	$0	$0	$25
2014		17	0.00%	0	0	0	$0	$9	$13	$21	$12	$0	$0	$0	$0	$0	$12
2015																	
2016																	
2017																	
2018																	
2019																	
2020																	
2021																	
2022																	
2023																	
2024																	
2025																	
2026																	
2027																	
2028																	
2029																	
2030																	
Totals:	111	153	15%	26	107	428	$0	$39,772	$57,733	$97,505	$80,421	$0	$0	$63,487	$63,487	$57,435	$22,986

Credit Table for Prevoiusly Performed Surveys

Year	# of Surveys	% Credit	Credits
Prior to 7/1/96 with follow up inspection		100%	0
Prior to 7/1/96 without follow up inspection		50%	0
ac-ftter 7/1/96	10	100%	10
TOTAL			10

Value of Conserved Water ($/ac-ft) =	$135
Discount Rate (Real) =	6.71%
Acres/CII accounts with dedicated irrigation meters =	1.3
Acres/CII accounts with mixed use meters =	0.1
Annual water use (ac-ft/acre) =	4.9
Water Savings =	15%
Conservation Measure Unit Cost ($/Acre) =	$425
Minimum Conservation Measure Unit Cost ($/Account) =	$150
Number of CII accounts with dedicated irrigation meters in 1997 =	123
Number of CII accounts with mixed use meters in 1997 =	170
Lifespan of Benefit (Years) =	4
Energy savings ($/ac-ft) =	93

Benefit Cost Ratio:	1.4
Simple Pay-Back Period (years):	5.7
Discounted Cost / Water Saved ($/ac-ft):	$134
NPV / Water Saved ($/ac-ft):	$54

Table D-2 Santa Maria Customer Service Area
BMP 14. Residential ULFT Replacement Programs (page 1 of 3)

	Determination of Water Conservation Goal: Single-Family Units										
Calendar Year	Single-Family Units	SF Units Naturally Retrofited	SF Toilets Naturally Retrofited	Water Savings from Natural Replacement SF (ac-ft/yr)	Single-Family Units	Single-Family Retrofitted	Single-Family Turnover	Combined SF Homes Retrofitted	Combined SF Toilets Retrofitted	Water Savings from Natural Replacement and Turnover SF (ac-ft/yr)	Water Savings from Natural Turnover SF (ac-ft/yr)
1998	8418	0	0	0	8418	0	0	0	0	0	0
1999	8081	337	842	17	7812	337	269	606	1,515	31.1	14
2000	7758	323	808	17	7249	312	250	562	1,406	28.9	12
2001	7447	310	776	16	6727	290	232	522	1,305	26.8	11
2002	7150	298	745	15	6243	269	215	484	1,211	24.8	10
2003	6864	286	715	15	5793	250	200	449	1,124	23.1	8
2004	6589	275	686	14	5376	232	185	417	1,043	21.4	7
2005	6325	264	659	14	4989	215	172	387	968	19.9	6
2006	6072	253	633	13	4630	200	160	359	898	18.4	5
2007	5830	243	607	12	4297	185	148	333	833	17.1	5
2008	5596	233	583	12	3987	172	137	309	773	15.9	4
2009	5373	224	560	11	3700	159	128	287	718	14.7	3
2010	5158	215	537	11	3434	148	118	266	666	13.7	3
2011	4951	206	516	11	3187	137	110	247	618	12.7	2
2012	4753	198	495	10	2957	127	102	229	574	11.8	2
2013	4563	190	475	10	2744	118	95	213	532	10.9	1
2014	4381	183	456	9	2547	110	88	198	494	10.1	1
2015	4205	175	438	9	2363	102	81	183	458	9.4	0
2016	4037	168	421	9	2193	95	76	170	425	8.7	0
2017	3876	161	404	8	2035	88	70	158	395	8.1	0
2018	3721	155	388	8	1889	81	65	147	366	7.5	0
2019	3572	149	372	8	1753	76	60	136	340	7.0	0
Totals		4,846	12,115	249		3,703		6,665	16,663	342	95

Credit Table for Previously Installed ULFT

Year	Single Family	Multi-family	Incremental Total Water Savings (ac-ft/Yr)	Cumulative Total Water Savings (ac-ft/Yr)
1995			0	0
1996			0	0
1997			0	0
1998			0	0
1999			0	0
2000			0	0
2001			0	0
2002			0	0
2003			0	0
2004			0	0
Total	0	0	0	0

Table D-2 Santa Maria Customer Service Area
BMP 14. Residential ULFT Replacement Program (page 2 of 3)

	Determination of Water Conservation Goal: Multi-Family Units												Conservation Goal - Combined		
Calendar Year	Multi-Family Units	MF Units Naturally Retrofited	MF Toilets Naturally Retrofited	Water Savings from Natural Replacement MF (ac-ft/yr)	Multi-Family Units	MF Units Naturally Retrofited	Multi-Family Turnover	Combined MF Homes Retrofitted	Combined MF Toilets Retrofitted	Water Savings from Natural Replacement and Turnover	Water Savings from Natural Turnover MF (ac-ft/yr)		Annual Water Savings fromTurnover (ac-ft/yr)		Cummulative Water Savings fromTurnover (ac-ft/yr)
1998	1093	0	0	0	1093	0	0	0	0	0	0	0	0	0	0
1999	1050	44	66	2	1049	44	1	45	67	2.5	0	14	14	14	14
2000	1008	42	63	2	1006	42	1	43	64	2.4	0	12	26	26	40
2001	967	40	60	2	964	40	1	41	62	2.3	0	11	37	37	77
2002	929	39	58	2	925	39	1	40	59	2.2	0	10	47	47	124
2003	891	37	56	2	887	37	1	38	57	2.1	0	8	55	55	179
2004	856	36	53	2	850	35	1	36	55	2.0	0	7	63	63	242
2005	822	34	51	2	816	34	1	35	52	1.9	0	6	69	69	310
2006	789	33	49	2	782	33	1	33	50	1.8	0	5	74	74	385
2007	757	32	47	2	750	31	1	32	48	1.8	0	5	79	79	464
2008	727	30	45	2	719	30	1	31	46	1.7	0	4	83	83	547
2009	698	29	44	2	690	29	1	29	44	1.6	0	3	86	86	633
2010	670	28	42	2	662	28	1	28	42	1.6	0	3	89	89	722
2011	643	27	40	1	634	26	1	27	41	1.5	0	2	91	91	813
2012	617	26	39	1	608	25	1	26	39	1.4	0	2	93	93	905
2013	593	25	37	1	583	24	1	25	37	1.4	0	1	94	94	999
2014	569	24	36	1	560	23	1	24	36	1.3	0	1	95	95	1094
2015	546	23	34	1	537	22	1	23	34	1.3	0	0	95	95	1189
2016	524	22	33	1	515	21	1	22	33	1.2	0	0	95	95	1284
2017	503	21	31	1	494	21	1	21	32	1.2	0	0	95	95	1379
2018	483	20	30	1	473	20	0	20	30	1.1	0	0	95	95	1474
2019	464	19	29	1	454	19	0	19	29	1.1	0	0	95	95	1569
Totals	16,199	629	944	34.5		624		639	959	35	0.6		1,569		14,444

Table D-2 Santa Maria Customer Service Area
BMP 14. Residential ULFT Replacement Programs (page 3 of 3)

	Water Savings							Benefits ($)					Costs ($)					
Calendar Year	No. of SF Toilets Required to be Replaced	Incremental Water Savings SF (ac-ft/yr)	No. of MF Toilets Required to be Replaced	Incremental Water Savings (ac-ft/yr)	Annual Water Savings (ac-ft/yr)	Incremental Total Water Savings (ac-ft/Yr)	Cumulative Total Water Savings (ac-ft/Yr)	Avoided Capital Costs	Avoided Variable Costs	Avoided Purchase Costs	Total Undiscounted Benefits	Total Discounted Benefits	Capital Costs	Financial Incentives	Operating Expenses	Total Undiscounted Costs	Total Discounted Costs	Net Present Value
2004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	2180	45	273	10	55	55	55	0	5,088	7,386	12,474	11,689	0	0	328,635	328,635	307,970	-296,281
2006	2180	45	273	10	109	109	164	0	10,176	14,771	24,947	21,908	0	0	328,635	328,635	288,605	-266,696
2007	2180	45	273	10	164	164	328	0	15,264	22,157	37,421	30,796	0	0	328,635	328,635	270,457	-239,661
2008	2180	45	273	10	219	219	547	0	20,352	29,543	49,894	38,480	0	0	328,635	328,635	253,451	-214,971
2009	0	0	0	0	219	219	766	0	20,352	29,543	49,894	36,060	0	0	0	0	0	36,060
2010	0		0	0	219	219	985	0	20,352	29,543	49,894	33,792	0	0	0	0	0	33,792
2011	0		0			219	1204		20,352	29,543	49,894	31,668	0	0	0	0	0	31,668
2012	0		0			219	1422		20,352	29,543	49,894	29,676	0	0	0	0	0	29,676
2013	0		0			219	1641		20,352	29,543	49,894	27,810	0	0	0	0	0	27,810
2014	0		0			219	1860		20,352	29,543	49,894	26,061	0	0	0	0	0	26,061
2015	0		0			219	2079		20,352	29,543	49,894	24,423	0	0	0	0	0	24,423
2016	0		0			219	2298		20,352	29,543	49,894	22,887	0	0	0	0	0	22,887
2017	0		0			219	2517		20,352	29,543	49,894	21,448	0	0	0	0	0	21,448
2018	0		0			219	2735		20,352	29,543	49,894	20,099	0	0	0	0	0	20,099
2019	0		0			219	2954		20,352	29,543	49,894	18,835	0	0	0	0	0	18,835
2020	0		0			219	3173		20,352	29,543	49,894	17,651	0	0	0	0	0	17,651
2021	0		0			219	3392		20,352	29,543	49,894	16,541	0	0	0	0	0	16,541
2022	0		0			219	3611		20,352	29,543	49,894	15,501	0	0	0	0	0	15,501
2023	0		0			219	3830		20,352	29,543	49,894	14,526	0	0	0	0	0	14,526
2024	0		0			219	4048		20,352	29,543	49,894	13,613	0	0	0	0	0	13,613
2025	0		0			219	4267		20,352	29,543	49,894	12,757	0	0	0	0	0	12,757
2026	0		0			219	4486		20,352	29,543	49,894	11,955	0	0	0	0	0	11,955
2027	0		0			219	4705		20,352	29,543	49,894	11,203	0	0	0	0	0	11,203
2028	0		0			219	4924		20,352	29,543	49,894	10,498	0	0	0	0	0	10,498
2029	0		0			219	5143		20,352	29,543	49,894	9,838	0	0	0	0	0	9,838
2030	0		0			219	5361		20,352	29,543	49,894	9,220	0	0	0	0	0	9,220
Totals	8,720	0	1,090	0	985	5,361	68,495	0	498,614	723,794	1,222,408	538,936	0	0	1,314,540	1,314,540	1,120,483	-581,547

Value of conserved water ($/ac-ft) =	135
Discount rate (real) =	6.71%
Natural toilet replacement rate =	4%
Annual single-family housing turnover rate =	3.2%
Annual multi-family housing turnover rate =	0.1%
Water savings due to toilet replacement at SF homes (gal/dwelling unit/day =	45.8
Water savings due to toilet replacement at MF homes (gal/dwelling unit/day =	49.0
Number of toilets per SF home =	2.5
Number of toilets per MF home =	1.5
Cost of conservation measure =	134
1991 single-family units =	11,202
1991 multi-family units =	1,455
Energy savings ($/ac-ft) =	93

Benefit cost ratio =	0.5
Simple pay-back period (years) =	51
Discounted cost/water saved ($acre-feet) =	209
NPV/ water saved (acre-feet) =	-108

Table D-3 Definitions of Terms Used in the Economic Analysis

Term	Definition	Comments
Benefits:		
Avoided Capital Costs	Capital costs that are avoided by implementing the BMP	Example is the cost of a well that would not have to be installed due to implementation of the BMP.
Avoided Variable Costs	Variable costs that are avoided by implementing the BMP.	Example is the cost of electricity that would be saved if the BMP were implemented.
Avoided Purchase Costs	Purchase costs that are avoided by implementing the BMP.	Example is the cost of purchasing water that would not be required due to implementation of the BMP.
Total Undiscounted Benefits	The sum of avoided capital, variable, and purchase costs.	
Total Discounted Benefits	The present value of the sum of avoided capital, variable, and purchase costs.	The discount rate is used to calculate the present value of avoided costs.
Costs:		
Capital Costs	Capital costs incurred by implementing the BMP.	
Financial Incentives	Financial incentives paid to customers.	Example is the rebate for purchasing low-flow plumbing devices.
Operating Expenses	Operating expenses incurred implementing the BMP.	Example is the administrative cost of conducting surveys.
Total Undiscounted Costs	The sum of capital, financial incentives and operating expenses.	
Total Discounted Costs	The present value of the sum of capital, financial incentives and operating expenses.	The discount rate is used to calculate the present value of incurred costs.
Results:		
Net Present Value	Total discounted benefits minus total discounted costs.	A value greater than zero indicates an economically justifiable BMP.
Benefit/Cost Ratio	The sum of the total discounted benefits divided by the sum of the total discounted costs.	A ratio greater than one indicates an economically justifiable BMP.
Simple Pay-Back Period	The sum of the total discounted costs divided by the average annual total discounted benefits.	Indicates the number of years required for the benefits to pay back the costs of the BMP.
Discounted Cost/Water Saved	The sum of the total discounted costs divided by the total acre-feet of water saved over the study period.	Indicates the present-value cost to save one acre-foot of water. A low value is considered economically attractive.
Net Present Value/Water Saved	The sum of the net present value divided by the total acre-feet of water saved over the study period.	Indicates the net value of saving one acre-foot of water. A high value is considered economically attractive.

Appendix E
Council Annual Reports for Demand Management Measures

CUWCC

Santa Maria

Annual Report 2004

CUWCC

Best Management Practices Report Filing

Logout

Reporting Unit: **So. California Water Company - California Cities - Santa Maria District**		Year: **2004**

The following forms have been submitted to CUWCC as of February 17, 2005 for the year 2004:

Accounts and Water Use
BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers
BMP 02: Residential Plumbing Retrofit
BMP 03: System Water Audits, Leak Detection and Repair
BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing
BMP 05: Large Landscape Conservation Programs and Incentives
BMP 06: High-Efficiency Washing Machine Rebate Programs
BMP 07: Public Information Programs
BMP 08: School Education Programs
BMP 09: Conservation Programs for CII Accounts
BMP 09a: CII ULFT Water Savings
BMP 11: Conservation Pricing
BMP 12: Conservation Coordinator
BMP 13: Water Waste Prohibition
BMP 14: Residential ULFT Replacement Programs

Thank you for participating in the CUWCC BMP reporting process! You may print this form as your receipt of submittal.

Continue

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Webmaster

Reported as of 2/17/05

Water Supply & Reuse

Reporting Unit:

Year:
2004

Water Supply Source Information

Supply Source Name	Quantity (AF) Supplied	Supply Type

Total AF:

Reported as of 2/17/05

Accounts & Water Use

Reporting Unit Name:	Submitted to	Year:
So. California Water Company - California Cities - Santa Maria District	CUWCC **02/17/2005**	**2004**

A. Service Area Population Information:

1. Total service area population 43000

B. Number of Accounts and Water Deliveries (AF)

Type	Metered		Unmetered	
	No. of Accounts	Water Deliveries (AF)	No. of Accounts	Water Deliveries (AF)
1. Single-Family	12357	8326	0	0
2. Multi-Family	182	335	0	0
3. Commercial	161	171	0	0
4. Industrial	3	2	0	0
5. Institutional	38	437	0	0
6. Dedicated Irrigation	108	452	0	0
7. Recycled Water	0	0	0	0
8. Other	0	0	0	0
9. Unaccounted	NA	0	NA	0
Total	12849	9723	0	0
	Metered		**Unmetered**	

Reported as of 2/17/05

BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers

Reporting Unit:	BMP Form Status:	Year:
So. California Water Company - California Cities - Santa Maria District	**100% Complete**	**2004**

A. Implementation

1. Based on your signed MOU date, 12/11/1991, your Agency STRATEGY DUE DATE is:	12/10/1993
2. Has your agency developed and implemented a targeting/ marketing strategy for SINGLE-FAMILY residential water use surveys?	no
a. If YES, when was it implemented?	
3. Has your agency developed and implemented a targeting/ marketing strategy for MULTI-FAMILY residential water use surveys?	no
a. If YES, when was it implemented?	

B. Water Survey Data

Survey Counts:	Single Family Accounts	Multi-Family Units
1. Number of surveys offered:	200	25
2. Number of surveys completed:	200	25
Indoor Survey:		
3. Check for leaks, including toilets, faucets and meter checks	yes	yes
4. Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, if necessary	no	no
5. Check toilet flow rates and offer to install or recommend installation of displacement device or direct customer to ULFT replacement program, as neccesary; replace leaking toilet flapper, as necessary	no	no
Outdoor Survey:		
6. Check irrigation system and timers	yes	yes
7. Review or develop customer irrigation schedule	no	no
8. Measure landscaped area (Recommended but not required for surveys)	no	no
9. Measure total irrigable area (Recommended but not required for surveys)	no	no
10. Which measurement method is typically used (Recommended but not required for surveys)	Odometer Wheel	
11. Were customers provided with information packets that included evaluation results and water savings recommendations?	no	no
12. Have the number of surveys offered and completed, survey results, and survey costs been tracked?	no	no
a. If yes, in what form are surveys tracked?	manual activity	
b. Describe how your agency tracks this information.		

Surveys are the result of investigating high billing inquiries.

C. Water Survey Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	600	600
2. Actual Expenditures	600	

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

Reported as of 2/17/05

BMP 02: Residential Plumbing Retrofit

Reporting Unit:	BMP Form Status:	Year:
So. California Water Company - California Cities - Santa Maria District	**100% Complete**	**2004**

A. Implementation

1. Is there an enforceable ordinance in effect in your service area requiring replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts?	no
a. If YES, list local jurisdictions in your service area and code or ordinance in each:	
2. Has your agency satisfied the 75% saturation requirement for single-family housing units?	no
3. Estimated percent of single-family households with low-flow showerheads:	%
4. Has your agency satisfied the 75% saturation requirement for multi-family housing units?	no
5. Estimated percent of multi-family households with low-flow showerheads:	%
6. If YES to 2 OR 4 above, please describe how saturation was determined, including the dates and results of any survey research.	

B. Low-Flow Device Distribution Information

1. Has your agency developed a targeting/ marketing strategy for distributing low-flow devices?	no
a. If YES, when did your agency begin implementing this strategy?	
b. Describe your targeting/ marketing strategy.	

Low-Flow Devices Distributed/ Installed	SF Accounts	MF Units
2. Number of low-flow showerheads distributed:	500	50
3. Number of toilet-displacement devices distributed:	500	50
4. Number of toilet flappers distributed:	0	0
5. Number of faucet aerators distributed:	0	0

6. Does your agency track the distribution and cost of low-flow devices?	yes
a. If YES, in what format are low-flow devices tracked?	Manual Activity
b. If yes, describe your tracking and distribution system :	

Number of water saving kits ordered each year.

C. Low-Flow Device Distribution Expenditures

	This Year	Next Year
1. Budgeted Expenditures	2400	2400
2. Actual Expenditures	2400	

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as"	No

variant of this BMP?

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

Reported as of 2/17/05

BMP 03: System Water Audits, Leak Detection and Repair

Reporting Unit:	BMP Form Status:	Year:
So. California Water Company - California Cities - Santa Maria District	**100% Complete**	**2004**

A. Implementation

1. Has your agency completed a pre-screening system audit for this reporting year?	no
2. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production:	
a. Determine metered sales (AF)	
b. Determine other system verifiable uses (AF)	
c. Determine total supply into the system (AF)	
d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required.	0.00
3. Does your agency keep necessary data on file to verify the values used to calculate verifiable uses as a percent of total production?	no
4. Did your agency complete a full-scale audit during this report year?	no
5. Does your agency maintain in-house records of audit results or the completed AWWA audit worksheets for the completed audit?	no
6. Does your agency operate a system leak detection program?	no
a. If yes, describe the leak detection program:	

B. Survey Data

1. Total number of miles of distribution system line.	183
2. Number of miles of distribution system line surveyed.	0

C. System Audit / Leak Detection Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

Reported as of 2/17/05

BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing

Reporting Unit:	BMP Form Status:	Year:
So. California Water Company - California Cities - Santa Maria District	**100% Complete**	**2004**

A. Implementation

1. Does your agency require meters for all new connections and bill by volume-of-use?	yes
2. Does your agency have a program for retrofitting existing unmetered connections and bill by volume-of-use?	no
a. If YES, when was the plan to retrofit and bill by volume-of-use existing unmetered connections completed?	
b. Describe the program:	
3. Number of previously unmetered accounts fitted with meters during report year.	0

B. Feasibility Study

1. Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	no
a. If YES, when was the feasibility study conducted? (mm/dd/yy)	
b. Describe the feasibility study:	
2. Number of CII accounts with mixed-use meters.	0
3. Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period.	0

C. Meter Retrofit Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	No
a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."	

E. Comments

Reported as of 2/17/05

BMP 05: Large Landscape Conservation Programs and Incentives

Reporting Unit:	BMP Form Status:	Year:
So. California Water Company - California Cities - Santa Maria District	**100% Complete**	**2004**

A. Water Use Budgets

1. Number of Dedicated Irrigation Meter Accounts:	117
2. Number of Dedicated Irrigation Meter Accounts with Water Budgets:	0
3. Budgeted Use for Irrigation Meter Accounts with Water Budgets (AF):	0
4. Actual Use for Irrigation Meter Accounts with Water Budgets (AF):	0
5. Does your agency provide water use notices to accounts with budgets each billing cycle?	no

B. Landscape Surveys

1. Has your agency developed a marketing / targeting strategy for landscape surveys?	no
a. If YES, when did your agency begin implementing this strategy?	
b. Description of marketing / targeting strategy:	
2. Number of Surveys Offered.	0
3. Number of Surveys Completed.	0
4. Indicate which of the following Landscape Elements are part of your survey:	
a. Irrigation System Check	yes
b. Distribution Uniformity Analysis	yes
c. Review / Develop Irrigation Schedules	yes
d. Measure Landscape Area	no
e. Measure Total Irrigable Area	no
f. Provide Customer Report / Information	no
5. Do you track survey offers and results?	no
6. Does your agency provide follow-up surveys for previously completed surveys?	no
a. If YES, describe below:	

C. Other BMP 5 Actions

1. An agency can provide mixed-use accounts with ETo-based landscape budgets in lieu of a large landscape survey program. Does your agency provide mixed-use accounts with landscape budgets?	no
2. Number of CII mixed-use accounts with landscape budgets.	0
3. Do you offer landscape irrigation training?	no
4. Does your agency offer financial incentives to improve landscape water use efficiency?	no

Type of Financial Incentive:	Budget	Number	Total

	(Dollars/ Year)	Awarded to Customers	Amount Awarded
a. Rebates	0	0	0
b. Loans	0	0	0
c. Grants	0	0	0

5. Do you provide landscape water use efficiency information to new customers and customers changing services? No

a. If YES, describe below:

6. Do you have irrigated landscaping at your facilities? yes

a. If yes, is it water-efficient? no

b. If yes, does it have dedicated irrigation metering? no

7. Do you provide customer notices at the start of the irrigation season? yes

8. Do you provide customer notices at the end of the irrigation season? yes

D. Landscape Conservation Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

E. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

F. Comments

Reported as of 2/17/05

BMP 06: High-Efficiency Washing Machine Rebate Programs

Reporting Unit:	BMP Form Status:	Year:
So. California Water Company - California Cities - Santa Maria District	**100% Complete**	**2004**

A. Implementation

1. Do any energy service providers or waste water utilities in your service area offer rebates for high-efficiency washers?	no
a. If YES, describe the offerings and incentives as well as who the energy/waste water utility provider is.	
2. Does your agency offer rebates for high-efficiency washers?	no
3. What is the level of the rebate?	0
4. Number of rebates awarded.	0

B. Rebate Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	no
a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."	

D. Comments

Reported as of 2/17/05

BMP 07: Public Information Programs

Reporting Unit:	BMP Form Status:	Year:
So. California Water Company - California Cities - Santa Maria District	**100% Complete**	**2004**

A. Implementation

1. Does your agency maintain an active public information program to promote and educate customers about water conservation? yes

a. If YES, describe the program and how it's organized.

Bill stuffers, flyers at front counter,messages on bills, high bill investigations. Partnership w/Santa Barbara County on advertising in the media

2. Indicate which and how many of the following activities are included in your public information program.

Public Information Program Activity	Yes/No	Number of Events
a. Paid Advertising	yes	1
b. Public Service Announcement	yes	1
c. Bill Inserts / Newsletters / Brochures	yes	3
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	yes	1
f. Special Events, Media Events	yes	1
g. Speaker's Bureau	no	
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

B. Conservation Information Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	6000	8000
2. Actual Expenditures	8600	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

Reported as of 2/17/05

BMP 08: School Education Programs

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

BMP Form Status:
100% Complete

Year:
2004

A. Implementation

1.Has your agency implemented a school information program to promote water conservation? yes

2. Please provide information on your school programs (by grade level):

Grade	Are grade-appropriate materials distributed?	No. of class presentations	No. of students reached	No. of teachers' workshops
Grades K-3rd	yes	0	0	0
Grades 4th-6th	yes	0	0	0
Grades 7th-8th	yes	0	0	0
High School	yes	0	0	0

3. Did your Agency's materials meet state education framework requirements? yes

4. When did your Agency begin implementing this program? 1/1/1990

B. School Education Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	1000	1000
2. Actual Expenditures	1000	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

Reported as of 2/17/05

BMP 09: Conservation Programs for CII Accounts

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

BMP Form Status: **100% Complete**

Year: **2004**

A. Implementation

1. Has your agency identified and ranked COMMERCIAL customers according to use?	yes
2. Has your agency identified and ranked INDUSTRIAL customers according to use?	no
3. Has your agency identified and ranked INSTITUTIONAL customers according to use?	no

Option A: CII Water Use Survey and Customer Incentives Program

4. Is your agency operating a CII water use survey and customer incentives program for the purpose of complying with BMP 9 under this option?	yes

CII Surveys	Commercial Accounts	Industrial Accounts	Institutional Accounts
a. Number of New Surveys Offered	27	0	8
b. Number of New Surveys Completed	27	0	8
c. Number of Site Follow-ups of Previous Surveys (within 1 yr)	0	0	0
d. Number of Phone Follow-ups of Previous Surveys (within 1 yr)	0	0	0

CII Survey Components	Commercial Accounts	Industrial Accounts	Institutional Accounts
e. Site Visit	yes	no	yes
f. Evaluation of all water-using apparatus and processes	yes	no	yes
g. Customer report identifying recommended efficiency measures, paybacks and agency incentives	yes	no	yes

Agency CII Customer Incentives	Budget ($/Year)	No. Awarded to Customers	Total $ Amount Awarded
h. Rebates	0	0	0
i. Loans	0	0	0
j. Grants	0	0	0
k. Others	0	0	0

Option B: CII Conservation Program Targets

5. Does your agency track CII program interventions and water savings for the purpose of complying with BMP 9 under this option?	no
6. Does your agency document and maintain records on how savings were realized and the method of calculation for estimated savings?	no
7. Estimated annual savings (AF/yr) from site-verified actions taken by agency since 1991.	0
8. Estimated annual savings (AF/yr) from non-site-verified actions taken by agency since 1991.	0

B. Conservation Program Expenditures for CII Accounts

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

Reported as of 2/17/05

BMP 09a: CII ULFT Water Savings

Reporting Unit:

So. California Water Company - California Cities - Santa Maria District	BMP Form Status: 100% Complete	Year: 2004

1. Did your agency implement a CII ULFT replacement program in the reporting year? If No, please explain why on Line B. 10.	No

A. Targeting and Marketing

1. What basis does your agency use to target customers for participation in this program? Check all that apply.

   a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.

2. How does your agency advertise this program? Check all that apply.

   a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.

B. Implementation

1. Does your agency keep and maintain customer participant information? (Read the Help information for a complete list of all the information for this BMP.)	no
2. Would your agency be willing to share this information if the CUWCC did a study to evaluate the program on behalf of your agency?	Yes
3. What is the total number of customer accounts participating in the program during the last year ?	0

CII Subsector	Number of Toilets Replaced			
4.	Standard Gravity Tank	Air Assisted	Valve Floor Mount	Valve Wall Mount
a. Offices				
b. Retail / Wholesale				
c. Hotels				
d. Health				
e. Industrial				
f. Schools: K to 12				
g. Eating				
h. Govern-ment				
i. Churches				
j. Other				

5. Program design.

6. Does your agency use outside services to implement this program? No

a. If yes, check all that apply.

7. Participant tracking and follow-up.

8. Based on your program experience, please rank on a scale of 1 to 5, with 1 being the least frequent cause and 5 being the most frequent cause, the following reasons why customers refused to participate in the program.

a. Disruption to business

b. Inadequate payback

c. Inadequate ULFT performance

d. Lack of funding

e. American's with Disabilities Act

f. Permitting

g. Other. Please describe in B. 9.

9. Please describe general program acceptance/resistance by customers, obstacles to implementation, and other isues affecting program implementation or effectiveness.

10. Please provide a general assessment of the program for this reporting year. Did your program achieve its objectives? Were your targeting and marketing approaches effective? Were program costs in line with expectations and budgeting?

N/A

C. Conservation Program Expenditures for CII ULFT

1. CII ULFT Program: Annual Budget & Expenditure Data

	Budgeted	Actual Expenditure
a. Labor		
b. Materials		
c. Marketing & Advertising		
d. Administration & Overhead		
e. Outside Services		
f. Total	0	0

2. CII ULFT Program: Annual Cost Sharing

a. Wholesale agency contribution	
b. State agency contribution	
c. Federal agency contribution	
d. Other contribution	
e. Total	0

D. Comments

Unable to implement a ULFT program due to restrictions on wastewater flows in community.

Reported as of 2/17/05

BMP 11: Conservation Pricing

Reporting Unit:	BMP Form Status:	Year:
So. California Water Company - California Cities - Santa Maria District	**100% Complete**	**2004**

A. Implementation

Rate Structure Data Volumetric Rates for Water Service by Customer Class

1. Residential	
a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	$4227800
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	$2635000
2. Commercial	
a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	$0
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	$0
3. Industrial	
a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	$0
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	$0
4. Institutional / Government	
a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	$0
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	$0
5. Irrigation	
a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	$0
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	$0
6. Other	
a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	$0

d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources $0

B. Conservation Pricing Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

Reported as of 2/17/05

BMP 12: Conservation Coordinator

Reporting Unit:	BMP Form Status:	Year:
So. California Water Company - California Cities - Santa Maria District	**100% Complete**	**2004**

A. Implementation

1. Does your Agency have a conservation coordinator?	yes
2. Is this a full-time position?	no
3. If no, is the coordinator supplied by another agency with which you cooperate in a regional conservation program ?	no
4. Partner agency's name:	
5. If your agency supplies the conservation coordinator:	
a. What percent is this conservation coordinator's position?	10%
b. Coordinator's Name	Roger Brett
c. Coordinator's Title	Superintendent
d. Coordinator's Experience and Number of Years	17
e. Date Coordinator's position was created (mm/dd/yyyy)	1/1/1994
6. Number of conservation staff, including Conservation Coordinator.	1

B. Conservation Staff Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	5000	5000
2. Actual Expenditures	5000	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

Reported as of 2/17/05

BMP 13: Water Waste Prohibition

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

BMP Form Status: **100% Complete**

Year: **2004**

A. Requirements for Documenting BMP Implementation

1. Is a water waste prohibition ordinance in effect in your service area? yes

   a. If YES, describe the ordinance:

   CPUC Rule No. 11 B 3 and Rule 14.1, both of which are available upon request.

2. Is a copy of the most current ordinance(s) on file with CUWCC? no

   a. List local jurisdictions in your service area in the first text box and water waste ordinance citations in each jurisdiction in the second text box:

   see CPUC Rule | 11 B 3 and 14.1

B. Implementation

1. Indicate which of the water uses listed below are prohibited by your agency or service area.

a. Gutter flooding	yes
b. Single-pass cooling systems for new connections	no
c. Non-recirculating systems in all new conveyor or car wash systems	no
d. Non-recirculating systems in all new commercial laundry systems	no
e. Non-recirculating systems in all new decorative fountains	no
f. Other, please name See CPUC Rule No. 14.1	no

2. Describe measures that prohibit water uses listed above:

   Greater than 10% water shortage. (Stage 2, 3, and 4 water shortage)

Water Softeners:

3. Indicate which of the following measures your agency has supported in developing state law:

a. Allow the sale of more efficient, demand-initiated regenerating DIR models.	no
b. Develop minimum appliance efficiency standards that:	
i.) Increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per pound of common salt used.	no
ii.) Implement an identified maximum number of gallons discharged per gallon of soft water produced.	no
c. Allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply.	no

4. Does your agency include water softener checks in home water audit programs? no

5. Does your agency include information about DIR and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models? no

C. Water Waste Prohibition Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

Reported as of 2/17/05

BMP 14: Residential ULFT Replacement Programs

Reporting Unit:	BMP Form Status:	Year:
So. California Water Company - California Cities - Santa Maria District	**100% Complete**	**2004**

A. Implementation

	Single-Family Accounts	Multi-Family Units
1. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	no	no

Number of Toilets Replaced by Agency Program During Report Year

Replacement Method	SF Accounts	MF Units
2. Rebate		
3. Direct Install		
4. CBO Distribution		
5. Other		
Total		

6. Describe your agency's ULFT program for single-family residences.

7. Describe your agency's ULFT program for multi-family residences.

8. Is a toilet retrofit on resale ordinance in effect for your service area? no

9. List local jurisdictions in your service area in the left box and ordinance citations in each jurisdiction in the right box:

B. Residential ULFT Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no

   a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

Reported as of 7/1

BMP 01 Coverage: Water Survey Programs for Single-Family and Multi-Family Residential Customers

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

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A Reporting Unit (RU) must meet three conditions to satisfy strict compliance for BMP 1.

Condition 1: Adopt survey targeting and marketing strategy on time

Condition 2: Offer surveys to 20% of SF accounts and 20% of MF units during report period

Condition 3: Be on track to survey 15% of SF accounts and 15% of MF units within 10 years of implementation start date.

Test for Condition 1

		Single-Family	Multi-Family
So. California Water Company - California Cities - Santa Maria District to Implement Targeting/Marketing Program by:	1999		
Year So. California Water Company - California Cities - Santa Maria District Reported Implementing Targeting/Marketing Program:			
So. California Water Company - California Cities - Santa Maria District Met Targeting/Marketing Coverage Requirement:		NO	NO

Test for Condition 2

			Single-Family	Multi-Family
Survey Program to Start by:	1998	Residential Survey Offers (%)	3.33%	3.36%
Reporting Period:	03-04	Survey Offers ≥ 20%	NO	NO

Test for Condition 3

	Completed Residential Surveys	
	Single Family	Multi-Family
Total Completed Surveys 1999 - 2004:	1,160	150
Past Credit for Surveys Completed Prior to 1999 (Implementation of Reporting Database):	689	91

Total + Credit	1,849	241
Residential Accounts in Base Year	11,999	1,488
So. California Water Company - California Cities - Santa Maria District Survey Coverage as % of Base Year Residential Accounts	15.41%	16.20%
Coverage Requirement by Year 7 of Implementation per Exhibit 1	7.90%	7.90%
So. California Water Company - California Cities - Santa Maria District on Schedule to Meet 10-Year Coverage Requirement	YES	YES

BMP 1 COVERAGE STATUS SUMMARY:
Water supplier has not met one or more coverage requirements for this BMP.

Reported as of 7/1

BMP 02 Coverage: Residential Plumbing Retrofit

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one of three conditions to satisfy strict compliance for BMP 2.

Condition 1: The agency has demonstrated that 75% of SF accounts and 75% of MF units constructed prior to 1992 are fitted with low-flow showerheads.

Condition 2: An enforceable ordinance requiring the replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts is in place for the agency's service area.

Condition 3: The agency has distributed or directly installed low-flow showerheads and other low-flow plumbing devices to not less than 10% of single-family accounts and 10% of multi-family units constructed prior to 1992 during the reporting period.

Test for Condition 1

		Single-Family		Multi-Family	
Report Year	Report Period	Reported Saturation	Saturation ≥ 75%?	Reported Saturation	Saturation ≥ 75%?
1999	99-00		NO		NO
2000	99-00		NO		NO
2001	01-02		NO		NO
2002	01-02		NO		NO
2003	03-04		NO		NO
2004	03-04		NO		NO

Test for Condition 2

Report Year	Report Period	So. California Water Company - California Cities - Santa Maria District has ordinance requiring showerhead retrofit?
1999	99-00	NO
2000	99-00	NO
2001	01-02	NO
2002	01-02	NO
2003	03-04	NO
2004	03-04	NO

Test for Condition 3

Reporting Period: 03-04

1992 SF Accounts	Num. Showerheads Distributed to SF Accounts	Single-Family Coverage Ratio	SF Coverage Ratio > 10%
11,202	1,000	8.9%	NO

1992 MF Accounts	Num. Showerheads Distributed to MF Accounts	Multi-Family Coverage Ratio	MF Coverage Ratio > 10%
1,455	100	6.9%	NO

BMP 2 COVERAGE STATUS SUMMARY:
Water supplier has not met one or more coverage requirements for this BMP.

Reported as of 7/1

BMP 03 Coverage: System Water Audits, Leak Detection and Repair

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one of two conditions to be in compliance with BMP 3:

Condition 1: Perform a prescreening audit. If the result is equal to or greater than 0.9 nothing more needs be done.

Condition 2: Perform a prescreening audit. If the result is less than 0.9, perform a full audit in accordance with AWWA's Manual of Water Supply Practices, Water Audits, and Leak Detection.

Test for Conditions 1 and 2

Report Year	Report Period	Pre-Screen Completed	Pre-Screen Result	Full Audit Indicated	Full Audit Completed
1999	99-00	NO	88.5%	Yes	NO
2000	99-00	NO			NO
2001	01-02	NO			NO
2002	01-02	NO			NO
2003	03-04	NO			NO
2004	03-04	NO			NO

BMP 3 COVERAGE STATUS SUMMARY:
Water supplier has not met one or more coverage requirements for this BMP.

Reported as of 7/1

BMP 04 Coverage: Metering with Commodity Rates for all New Connections and Retrofit of Existing

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?	No

An agency must be on track to retrofit 100% of its unmetered accounts within 10 years to be in compliance with BMP 4.

Test for Compliance

Total Meter Retrofits Reported through 2004	
No. of Unmetered Accounts in Base Year	
Meter Retrofit Coverage as % of Base Year Unmetered Accounts	
Coverage Requirement by Year 6 of Implementation per Exhibit 1	42.0%
RU on Schedule to meet 10 Year Coverage Requirement	YES

BMP 4 COVERAGE STATUS SUMMARY:
Water supplier is meeting coverage requirements for this BMP.

Reported as of 7/1

BMP 05 Coverage: Large Landscape Conservation Programs and Incentives

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet three conditions to comply with BMP 5.

Condition 1: Develop water budgets for 90% of its dedicated landscape meter accounts within four years of the date implementation is to start.

Condition 2: (a) Offer landscape surveys to at least 20% of its CII accounts with mixed use meters each report cycle and be on track to survey at least 15% of its CII accounts with mixed use meters within 10 years of the date implementation is to start OR (b) Implement a dedicated landscape meter retrofit program for CII accounts with mixed use meters or assign landscape budgets to mixed use meters.

Condition 3: Implement and maintain customer incentive program(s) for irrigation equipment retrofits.

Test for Condition 1

Year	Report Period	BMP 5 Implementation Year	No. of Irrigation Meter Accounts	No. of Irrigation Accounts with Budgets	Budget Coverage Ratio	90% Coverage Met by Year 4
1999	99-00	1	403			NA
2000	99-00	2	376			NA
2001	01-02	3	114			NA
2002	01-02	4	117			No
2003	03-04	5	117			No
2004	03-04	6	117			No

Test for Condition 2a (survey offers)

Select Reporting Period:	03-04
Large Landscape Survey Offers as % of Mixed Use Meter CII Accounts	
Survey Offers Equal or Exceed 20% Coverage Requirement	NO

Test for Condition 2a (surveys completed)

Total Completed Landscape Surveys Reported through	7
Credit for Surveys Completed Prior to Implementation of Reporting Database	3
Total + Credit	10
CII Accounts in Base Year	315
RU Survey Coverage as a % of Base Year CII Accounts	3.2%
Coverage Requirement by Year of Implementation per Exhibit 1	6.3%

RU on Schedule to Meet 10 Year Coverage Requirement	NO

Test for Condition 2b (mixed use budget or meter retrofit program)

Report Year	Report Period	BMP 5 Implementation Year	Agency has mix-use budget program	No. of mixed-use budgets
1999	99-00	1	NO	
2000	99-00	2	NO	
2001	01-02	3	NO	
2002	01-02	4	NO	
2003	03-04	5	NO	
2004	03-04	6	NO	

Report Year	Report Period	BMP 4 Implementation Year	No. of mixed use CII accounts	No. of mixed use CII accounts fitted with irrig. meters
1999	99-00	1	170	
2000	99-00	2		
2001	01-02	3		
2002	01-02	4		
2003	03-04	5		
2004	03-04	6		

Test for Condition 3

Report Year	Report Period	BMP 5 Implementation Year	RU offers financial incentives?	No. of Loans	Total Amt. Loans
1999	99-00	1	NO		
2000	99-00	2	NO		
2001	01-02	3	NO		
2002	01-02	4	NO		
2003	03-04	5	NO		
2004	03-04	6	NO		

Report Year	Report Period	No. of Grants	Total Amt. Grants	No. of rebates	Total Amt. Rebates
1999	99-00				
2000	99-00				
2001	01-02				
2002	01-02				
2003	03-04				
2004	03-04				

BMP 5 COVERAGE STATUS SUMMARY:
Water supplier has not met one or more coverage requirements for this BMP.

Reported as of 7/1

BMP 06 Coverage: High-Efficiency Washing Machine Rebate Programs

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one condition to comply with BMP 6.

Condition 1: Offer a cost-effective financial incentive for high-efficiency washers if one or more energy service providers in service area offer financial incentives for high-efficiency washers.

Test for Condition 1

Year	Report Period	BMP 6 Implementation Year	Rebate Offered by ESP?	Rebate Offered by RU?	Rebate Amount
1999	99-00	1	NO	NO	
2000	99-00	2	NO	NO	
2001	01-02	3	NO	NO	
2002	01-02	4	NO	NO	
2003	03-04	5	NO	NO	
2004	03-04	6	NO	NO	

Year	Report Period	BMP 6 Implementation Year	No. Rebates Awarded	Coverage Met?
1999	99-00	1		YES
2000	99-00	2		YES
2001	01-02	3		YES
2002	01-02	4		YES
2003	03-04	5		YES
2004	03-04	6		YES

BMP 6 COVERAGE STATUS SUMMARY:
Water supplier is meeting coverage requirements for this BMP.

Reported as of 7/1

BMP 07 Coverage: Public Information Programs

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one condition to comply with BMP 7.

Condition 1: Implement and maintain a public information program consistent with BMP 7's definition.

Test for Condition 1

Year	Report Period	BMP 7 Implementation Year	RU Has Public Information Program?
1999	99-00	2	YES
2000	99-00	3	YES
2001	01-02	4	YES
2002	01-02	5	YES
2003	03-04	6	YES
2004	03-04	7	YES

BMP 7 COVERAGE STATUS SUMMARY:
Water supplier is meeting coverage requirements for this BMP.

Reported as of 7/1

BMP 08 Coverage: School Education Programs

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one condition to comply with BMP 8.

Condition 1: Implement and maintain a school education program consistent with BMP 8's definition.

Test for Condition 1

Year	Report Period	BMP 8 Implementation Year	RU Has School Education Program?
1999	99-00	2	YES
2000	99-00	3	YES
2001	01-02	4	YES
2002	01-02	5	YES
2003	03-04	6	YES
2004	03-04	7	YES

BMP 8 COVERAGE STATUS SUMMARY:
Water supplier is meeting coverage requirements for this BMP.

Reported as of 7/1

BMP 09 Coverage: Conservation Programs for CII Accounts

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet three conditions to comply with BMP 9.

Condition 1: Agency has identified and ranked by use commercial, industrial, and institutional accounts.

Condition 2(a): Agency is on track to survey 10% of commercial accounts, 10% of industrial accounts, and 10% of institutional accounts within 10 years of date implementation to commence.
OR
Condition 2(b): Agency is on track to reduce CII water use by an amount equal to 10% of baseline use within 10 years of date implementation to commence.
OR
Condition 2(c): Agency is on track to meet the combined target as described in Exhibit 1 BMP 9 documentation.

Test for Condition 1

Year	Report Period	BMP 9 Implementation Year	Ranked Com. Use	Ranked Ind. Use	Ranked Inst. Use
1999	99-00	1	NO	NO	NO
2000	99-00	2	NO	NO	NO
2001	01-02	3	NO	NO	NO
2002	01-02	4	NO	NO	NO
2003	03-04	5	NO	NO	NO
2004	03-04	6	YES	NO	NO

Test for Condition 2a

	Commercial	Industrial	Institutional
Total Completed Surveys Reported through 2004	27	0	8
Credit for Surveys Completed Prior to Implementation of Reporting Databases	1		6
Total + Credit	28		14
CII Accounts in Base Year	300		15
RU Survey Coverage as % of Base Year CII Accounts	9.3%		93.3%
Coverage Requirement by Year 6 of Implementation per Exhibit 1	4.2%	4.2%	4.2%
RU on Schedule to Meet 10 Year Coverage Requirement	YES	NO	YES

Test for Condition 2a

Year	Report Period	BMP 9 Implementation Year	Performance Target Savings (AF/yr)	Performance Target Savings Coverage	Performance Target Savings Coverage Requirement	Coverage Requirement Met
1999	99-00	1			0.5%	NO
2000	99-00	2			1.0%	NO
2001	01-02	3			1.7%	NO
2002	01-02	4			2.4%	NO
2003	03-04	5			3.3%	NO
2004	03-04	6			4.2%	NO

Test for Condition 2c

Total BMP 9 Surveys + Credit	42
BMP 9 Survey Coverage	13.3%
BMP 9 Performance Target Coverage	
BMP 9 Survey + Performance Target Coverage	13.3%
Combined Coverage Equals or Exceeds Coverage Requirement?	YES

BMP 9 COVERAGE STATUS SUMMARY:
Water supplier has not met one or more coverage requirements for this BMP.

Reported as of 7/1

BMP 11 Coverage: Conservation Pricing

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

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An agency must meet one condition to comply with BMP 11.

Agency shall maintain rate structure consistent with BMP 11's definition of conservation pricing. Implementation methods shall be at least as effective as eliminating non-conserving pricing and adopting conserving pricing. For signatories supplying both water and sewer service, this BMP applies to pricing of both water and sewer service. Signatories that supply water but not sewer service shall make good faith efforts to work with sewer agencies so that those sewer agencies adopt conservation pricing for sewer service.

a) Non-conserving pricing provides no incentives to customers to reduce use. Such pricing is characterized by one or more of the following components: rates in which the unit price decreases as the quantity used increases (declining block rates);rates that involve charging customers a fixed amount per billing cycle regardless of the quantity used; pricing in which the typical bill is determined by high fixed charges and low commodity charges.

b) Conservation pricing provides incentives to customers to reduce average or peak use, or both. Such pricing includes: rates designed to recover the cost of providing service; and billing for water and sewer service based on metered water use. Conservation pricing is also characterized by one or more of the following components: rates in which the unit rate is constant regardless of the quantity used (uniform rates) or increases as the quantity used increases (increasing block rates); seasonal rates or excess-use surcharges to reduce peak demands during summer months; rates based upon the longrun marginal cost or the cost of adding the next unit of capacity to the system.

Test for Condition 1

Year	Report Period	RU Employed Non Conserving Rate Structure	RU Meets BMP 11 Coverage Requirement
1999	99-00	NO	YES
2000	99-00	YES	NO
2001	01-02	NO	YES
2002	01-02	NO	YES
2003	03-04	NO	YES
2004	03-04	NO	YES

BMP 11 COVERAGE STATUS SUMMARY:
Water supplier is meeting coverage requirements for this BMP.

Reported as of 7/1

BMP 12 Coverage: Conservation Coordinator

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

Agency shall staff and maintain the position of conservation coordinator and provide support staff as necessary.

Test for Compliance

Report Year	Report Period	Conservation Coordinator Position Staffed?	Total Staff on Team (incl. CC)
1999	99-00	YES	2
2000	99-00	YES	1
2001	01-02	YES	1
2002	01-02	YES	1
2003	03-04	YES	1
2004	03-04	YES	1

BMP 12 COVERAGE STATUS SUMMARY:
Water supplier is meeting coverage requirements for this BMP.

Reported as of 7/1

BMP 13 Coverage: Water Waste Prohibition

Reporting Unit:
So. California Water Company - California Cities - Santa Maria District

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

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An agency must meet one condition to comply with BMP 13.

Implementation methods shall be enacting and enforcing measures prohibiting gutter flooding, single pass cooling systems in new connections, non-recirculating systems in all new conveyer car wash and commercial laundry systems, and non-recycling decorative water fountains.

Test for Condition 1

Agency or service area prohibits:

Year	Gutter Flooding	Single-Pass Cooling Systems	Single-Pass Car Wash	Single-Pass Laundry	Single-Pass Fountains	Other	RU has ordinance that meets coverage requirement
1999	yes	no	no	no	no	no	NO
2000	yes	no	no	no	no	no	NO
2001	yes	no	no	no	no	no	NO
2002	yes	no	no	no	no	no	NO
2003	yes	no	no	no	no	no	NO
2004	yes	no	no	no	no	no	NO

BMP 13 COVERAGE STATUS SUMMARY:
Water supplier has not met one or more coverage requirements for this BMP.

Reported as of 7/1

BMP 14 Coverage: Residential ULFT Replacement Programs

Reporting Unit: **So. California Water Company - California Cities - Santa Maria District**

MOU Exhibit 1 Coverage Requirement

A Reporting Unit (RU) must meet one of the following conditions to be in compliance with BMP 14.

Condition 1: Retrofit-on-resale (ROR) ordinance in effect in service area.

Condition 2: Water savings from toilet replacement programs equal to 90% of Exhibit 6 coverage requirement.

An agency with an exemption for BMP 14 is not required to meet one of the above conditions. This report treats an agency with missing base year data required to compute the Exhibit 6 coverage requirement as out of compliance with BMP 14.

Status: Water supplier has not met one or more coverage requirements for this BMP. as of 2004

Coverage Year	BMP 14 Data Submitted to CUWCC	Exemption Filed with CUWCC	ROR Ordinance in Effect	Exhibit 6 Coverage Req'mt (AF)	Toilet Replacement Program Water Savings* (AF)
1998	Yes			20.56	
1999	Yes	No	No	59.01	
2000	Yes	No	No	112.98	
2001	Yes	No	No	180.34	
2002	Yes	No	No	259.21	
2003	Yes	No	No	347.90	
2004	Yes	No	No	444.92	
2005	No	No	No	548.92	
2006	No	No	No	658.73	
2007	No	No	No	773.29	

*NOTE: Program water savings listed are net of the plumbing code. Savings are cumulative (not annual) between 1991 and the given year. Residential ULFT count data from unsubmitted forms are NOT included in the calculation.

BMP 14 COVERAGE STATUS SUMMARY:

Water supplier has not met one or more coverage requirements for this BMP.

BMP 14 Coverage: Residential ULFT Replacement Programs

Reporting Unit: **So. California Water Company - California Cities - Santa Maria District**

BMP 14 Coverage Calculation Detail: Retrofit on Resale (ROR) Ordinance Water Savings

	Single Family	Multi-Family
1992 Housing Stock		
Average rate of natural replacement (% of remaining stock)	.04	.04
Average rate of housing demolition (% of remining stock)	.005	.005
Estimated Housing Units with 3.5+ gpf Toilets in 1997	9143.32	1187.60
Average resale rate	.032	.1
Average persons per unit		
Average toilets per unit		
Average savings per home (gpd; from Exhibit 6)	45.8	49

Single Family Housing Units

Coverage Year	Unretrofitted Houses	Houses Sold	Houses Unsold	Sold and Retrofitted	Sold and Already Retrofitted	Unsold and Retrofitted	Gross ROR Savings (AFY)	Nat'l Replacement Only Savings (AFY)	Net ROR Savings (AFY)
1998	8499.94	291.12	8806.48	291.12		352.26	138.60	124.27	14.34
1999	7901.83	289.67	8762.45	270.64	19.03	327.47	169.28	142.19	27.09
2000	7345.81	288.22	8718.64	251.59	36.63	304.43	197.80	159.40	38.40
2001	6828.91	286.78	8675.05	233.89	52.89	283.01	224.32	175.92	48.39
2002	6348.38	285.34	8631.67	217.43	67.91	263.09	248.97	191.79	57.17
2003	5901.67	283.92	8588.51	202.13	81.79	244.58	271.88	207.03	64.85
2004	5486.39	282.50	8545.57	187.91	94.59	227.37	293.18	221.66	71.52
2005	5100.33	281.09	8502.84	174.69	106.40	211.37	312.98	235.71	77.28
2006	4741.44	279.68	8460.33	162.39	117.29	196.50	331.39	249.19	82.20
2007	4407.80	278.28	8418.03	150.97	127.31	182.67	348.51	262.14	86.36

Multi Family Housing Units

Coverage Year	Unretrofitted Houses	Houses Sold	Houses Unsold	Sold and Retrofitted	Sold and Already Retrofitted	Unsold and Retrofitted	Gross ROR Savings (AFY)	Nat'l Replacement Only Savings (AFY)	Net ROR Savings (AFY)
1998	1026.90	118.17	1063.50	118.17		42.54	23.49	17.27	6.23
1999	887.94	117.58	1058.18	102.18	15.40	36.78	31.12	19.76	11.36
2000	767.78	116.99	1052.89	88.35	28.64	31.81	37.71	22.15	15.56
2001	663.89	116.40	1047.63	76.39	40.01	27.50	43.42	24.45	18.97
2002	574.05	115.82	1042.39	66.06	49.76	23.78	48.35	26.65	21.69
2003	496.37	115.24	1037.18	57.12	58.12	20.56	52.61	28.77	23.84
2004	429.20	114.67	1031.99	49.39	65.28	17.78	56.29	30.80	25.49
2005	371.12	114.09	1026.83	42.71	71.39	15.37	59.48	32.75	26.73
2006	320.90	113.52	1021.70	36.93	76.60	13.29	62.24	34.63	27.61

2007	277.48	112.95	1016.59	31.93	81.02	11.49	64.62	36.43	28.19

Appendix F
Rule No.14.1: Mandatory Water Conservation, Restrictions, and Rationing Program

Rule No. 14.1

MANDATORY WATER CONSERVATION, RESTRICTIONS AND RATIONING PROGRAM (N)

A. GENERAL INFORMATION:

If water supplies are projected to be insufficient to meet normal customer demand, and are beyond the control of the Company, the Company may elect to implement voluntary conservation using the portion of this plan set forth in Section C of this rule after notifying the Commission's Water Division of its intent. If, in the opinion of the Company, more stringent water measures are required, the Company shall request Commission authorization to implement the mandatory conservation and rationing measures set forth in Section D.

The Commission shall authorize mandatory conservation and rationing by approving Schedule No. 14.1, Mandatory Water Conservation and Rationing. When Schedule No. 14.1 has expired or is not in effect, mandatory conservation and rationing measures will not be in force. Schedule No. 14.1 will set forth water use violation fines, charges for removal of flow restrictors, and the period during which mandatory conservation and rationing measures will be in effect.

When the applicable Schedule No. 14.1 is in effect and the Company determines that water supplies are again sufficient to meet normal demands, and mandatory conservation and rationing measures are no longer necessary, the Company shall seek Commission approval to rescind Schedule No. 14.1 to discontinue rationing.

In the event of a water supply shortage requiring a voluntary or mandatory program, the Company shall make available to its customers water conservation kits as required by Rule No. 20. The Company shall notify all customers of the availability of conservation kits.

B. DEFINITIONS

As used in this water rationing plan, the word:

1. "Company" means the Southern California Water Company, California Cities Water, and Arden-Cordova Water Service;
2. "Persons" means an individual customer, resident, business, organizations including commercial, industrial, nonprofit, and government organizations or associations;
3. "Customer" means any person who uses water supplied by the Company;
4. "Water" means water supplied by the Company;

(N)

Rule No. 14.1

(N)

MANDATORY WATER CONSERVATION, RESTRICTIONS AND RATIONING PROGRAM
(Continued)

B. DEFINITIONS (Continued)

5. "Water shortage emergency" means the conditions which constitute a determination that deliveries of potable water supplies have reached a level such that continued unrestricted water use would be detrimental to the public welfare.

C. CONSERVATION – NON-ESSENTIAL OR UNAUTHORIZED WATER USE

No customer shall use Company–supplied water for non-essential or unauthorized uses as defined as follows:

1. Use of water through any connection when the Company has notified the customer in writing to repair a broken or defective plumbing, sprinkler, watering or irrigation system and the customer has failed to make such repairs within 5 days after receipt of such notice.
2. Use of water which results in flooding or run-off in gutters, waterways, patios, driveway, or streets.
3. Use of water for washing aircraft, cars, buses, boats, trailers or other vehicles without a positive shut-off nozzle on the outlet end of the hose. Exceptions include washing vehicles at commercial or fleet vehicle washing facilities operated at fixed locations where equipment using water is properly maintained to avoid wasteful use.
4. Use of water through a hose for washing buildings, structures, sidewalks, walkways, driveways, patios, parking lots, tennis courts, or other hard-surfaced areas in a manner which results in excessive run-off or waste.
5. Use of water for watering streets with trucks, except for initial wash-down for construction purposes (if street sweeping is not feasible), or to protect the health and safety of the public.
6. Use of water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used.
7. Use of water for more than minimal landscaping in connection with any new construction.
8. Use of water for outside plants, lawn, landscape, and turf areas more often than every other day, with even numbered addresses watering on even numbered days of the month and odd numbered addresses watering on the odd numbered days of the month, except that this provision shall not apply to commercial nurseries, golf courses and other water-dependent industries.
9. Use of water for watering outside plants, lawn, landscape and turf areas during certain hours if and when specified in the applicable Schedule No. 14.1 when the schedule is in effect.
10. Use of water for watering outside plants and turf areas using a hand-held hose without a positive shut-off valve.
11. Use of water for decorative fountains or the filling or topping off of decorative lakes or ponds. Exceptions are made for those decorative fountains, lakes, or ponds which utilize recycled water. (N)

(Continued)

Rule No. 14.1

(N)

MANDATORY WATER CONSERVATION, RESTRICTIONS AND RATIONING PROGRAM
(Continued)

C. CONSERVATION – NON-ESSENTIAL OR UNAUTHORIZED WATER USE (Continued)

12. Use of water for the filling or refilling of swimming pools.
13. Service of water by any restaurant except upon the request of the patron.

D. RATIONING OF WATER USE

In the event the conservation measures required by Section C are insufficient to control the water shortage, the Company shall, upon Commission approval, impose mandatory conservation and rationing. Rationing shall be in accordance with the conditions set forth in the applicable Schedule No. 14.1 as filed at the time such rationing is approved by the Commission.

Before mandatory conservation and rationing is authorized by the Commission, the Company shall hold public meetings and take all other applicable steps required by Sections 350 through 358 of the California Water Code.

E. ENFORCEMENT OF MANDATORY CONSERVATION AND RATIONING

1. The water use restrictions of the conservation program, in Section C of this rule, become mandatory when the rationing program goes into effect. These restrictions are applicable whether or not the customer exceeds the monthly water allocation.

2. The Company may, after one verbal and one written warning, install a flow-restricting device on the service line of any customer observed by Company personnel to be using water for any non-essential or unauthorized use as defined in Section C above.

3. A flow restrictor shall not restrict water delivery by greater than 50% of normal flow and shall provide the premise with a minimum of 6 Ccf/month. The restricting device may be removed only by the Company, only after a three-day period has elapsed, and only upon payment of the appropriate removal charge as set forth in the applicable Schedule No 14.1.

4. After the removal of the restricting device, if any non-essential or unauthorized use of water shall continue, the Company may install another flow-restricting device. This device shall remain in place until water supply conditions warrant its removal and until the appropriate charge for removal has been paid to the Company.

5. Each customer's water allocation shall be shown on the water bill. Water allocations may be appealed in writing as provided in Section F of this Rule. If a customer uses water in excess of the allocated amount, the utility may charge the excess usage penalty shown in the applicable Schedule No. 14.1.

(N)

(Continued)

Rule No. 14.1

(N)

MANDATORY WATER CONSERVATION, RESTRICTIONS AND RATIONING PROGRAM
(Continued)

E. ENFORCEMENT OF MANDATORY CONSERVATION AND RATIONING (Continued)

6. Any money collected by the Company through water use violation fines shall not be accounted for as income, but shall be accumulated by the Company in a separate account for disposition as directed or authorized from time to time by the Commission.

7. The charge for removal of a flow-restricting device shall be in accordance with the applicable Schedule No. 14.1.

F. APPEAL PROCEDURE

Any customer who seeks a variance from any of the provisions of this water conservation and rationing plan shall notify the Company in writing, explaining in detail the reason for such a variation. The Company shall respond to each such request.

Any customer not satisfied with the Company's response may file an appeal with the staff of the Commission. The customer and the Company will be notified of the disposition of such appeal by letter from the Executive Director of the Commission.

If the customer disagrees with such disposition, the customer shall have the right to file a formal complaint with the Commission. Except as set forth in this Section, no person shall have any right or claim in law or in equity, against the Company because of, or as a result of, any matter or thing done or threatened to be done pursuant to the provisions of this water conservation and rationing plan.

G. PUBLICITY

In the event the Company finds it necessary to implement this plan, it shall notify customers and hold public hearings concerning the water supply situation, in accordance with Chapter 3, Water Shortage Emergencies, Section 350 through 358, of the California Water Code. The Company shall also provide each customer with a copy of this plan by means of billing inserts or special mailings; notifications shall take place prior to imposing any fines associated with this plan. In addition, the Company shall provide customers with periodic updates regarding its water supply status and the results of customers' conservation efforts. Updates may be by bill insert, special mailing, poster, flyer, newspaper, television or radio spot/advertisement, community bulletin board, or other appropriate methods.

(N)

Appendix G
Rates Schedule

Schedule No. SM-1

Santa Maria District

GENERAL METERED SERVICE

APPLICABILITY

Applicable to all general metered water service.

TERRITORY

Within the established Santa Maria District, San Luis Obispo County and Santa Barbara County.

RATES

	Per Meter Per Month	
Quantity Rates:		
For all water delivered, per 100 cu. ft.	$ 0.9540	
Service Charge:		**Surcredit**
For 5/8 x 3/4-inch meter	$ 15.15	$1.15 (N)
For 3/4-inch meter	22.70	$1.75 (N)
For 1-inch meter	37.85	$2.60 (N)
For 1 1/2 inch meter	75.65	$5.60 (N)
For 2-inch meter	121.00	$8.90 (N)
For 3-inch meter	227.00	$16.70 (N)
For 4-inch meter	378.00	$28.30 (N)
For 6-inch meter	757.00	$56.65 (N)
For 8-inch meter	1,211.00	$90.70 (N)
For 10-inch meter	1,740.00	$130.35 (N)

The Service Charge is a readiness-to-serve charge applicable to all metered service and to which is added the charge for water used computed at the Quantity Rates.

SPECIAL CONDITIONS

1. All bills are subject to the reimbursement fee set forth on Schedule No. UF.

2. Due to the increase in energy purveyor rates granted by D. 01-01-018, a surcharge in the amount of $0.0272 per Ccf is to be added to the Quantity Rates beginning on the effective date of Advice Letter 1090-W, which is April 1, 2001.

3. Due to the increase in energy purveyor rates granted by D. 01-03-082, a surcharge in the amount of $0.0817 per Ccf is to be added to the Quantity Rates beginning on the effective date of Advice Letter 1095-WB, which is November 13, 2001.

4. Due to the overcollection in the Balancing-Type Memorandum Account for the period of November 29, 2001 through December 31, 2002, a surcredit will be applied to the service charges for a 12-month period. (N) (N) (N)

Schedule No. SM-3ML

Santa Maria District

LIMITED METERED IRRIGATION SERVICE

APPLICABILITY

Applicable to metered irrigation water service.

TERRITORY

The unincorporated area known as Lake Marie Ranches located in the former Lake Marie Service Area.

RATES

Quantity Rates:

	Per Meter Per Month
For all water delivered, per 100 cu. ft.....	$ 0.633

Service Charge:

			Surcredit
For	3/4-inch meter.....	$ 31.95	$1.35
For	1-inch meter.....	44.35	$2.25
For	3-inch meter.....	96.40	$13.50

The Service Charge is a readiness-to-serve charge applicable to all metered service and to which is added the charge for water used computed at the Quantity Rates.

SPECIAL CONDITIONS

1. A customer desiring to obtain water deliveries under this schedule must first obtain a written permit from the utility, with service limited to existing customers as of December 31, 1986.

2. The utility will supply only such water at such pressure as may be available from time to time as a result of its normal operations.

3. All bills are subject to the reimbursement fee set forth on Schedule No. UF

4. Due to the increase in energy purveyor rates granted by D. 01-01-018, a surcharge in the amount of $0.0272 per Ccf is to be added to the Quantity Rates beginning on the effective date of Advice Letter 1090-W, which is April 1, 2001.

5. Due to the increase in energy purveyor rates granted by D. 01-03-082, a surcharge in the amount of $0.0817 per Ccf is to be added to the Quantity Rates beginning on the effective date of Advice Letter 1095-WB, which is November 13, 2001.

6. Due to the overcollection in the Balancing-Type Memorandum Account for the period of November 29, 2001 through December 31, 2002, a surcredit will be applied to the service charges for a 12-month period. (N) (N) (N)

Appendix H
Responses to Public Comments

No Public Comments received during Public Review Period.

Appendix I
Groundwater Basin Water Rights Stipulation/Judgment

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SANTA CLARA

SANTA MARIA VALLEY WATER CONSERVATION DISTRICT, Plaintiff, v. CITY OF SANTA MARIA, et al., Defendants.	SANTA MARIA GROUNDWATER LITIGATION Lead Case No. CV 770214 (CONSOLIDATED FOR ALL PURPOSES) [Consolidated With Case Numbers: CV 784900; CV 785509; CV 785522; CV 787150; CV 784921; CV 785511; CV 785936; CV 787151; CV 784926; CV 785515; CV 786791; CV 787152; CV 036410]
AND RELATED CROSS-ACTIONS AND ACTIONS CONSOLIDATED FOR ALL PURPOSES	San Luis Obispo County Superior Court Case Nos. 990738 and 990739 [Assigned to Judge Jack Komar for All Purposes]

AMENDMENTS TO STIPULATION POSTED ON JUNE 23, 2005

The following changes have been made to the Stipulation posted on June 23, 2005 by Robert J. Saperstein of Hatch & Parent to the Santa Clara County Superior Court's Complex Litigation website (http://www.sccomplex.org/home/index.htm). A revised Stipulation containing the following changes has been posted concurrently with this document.

1. The title of the Stipulation has been changed to "Stipulation (June 30, 2005 version)".

2. Page 16, line 24:

   "of Groundwater" has been inserted between "use" and "to".

3. Page 20, lines 6-8:

   The text in Paragraph (g) has been deleted and replaced with:

   > "The cost of TMA-sponsored Extraordinary Project Operations and Capital Improvement Projects shall be divided among Twitchell Participants on the same basis as the allocation of their Twitchell Yield."

4. Page 21, lines 2-3:

   The text of Paragraph 3 has been deleted and replaced with:

   > "No modification of land use authority. This Stipulation does not modify the authority of the entity holding land use approval authority over the proposed New Urban Uses."

5. Page 24, line 19:

   A period has been added after "groups.yahoo.com/group/ NipomoCommunity/".

6. Exhibits. Page numbers have been placed at the bottom right-hand side of the exhibits.

7. Exhibit B. Page 7 of the January 17, 2002 Brief of Conoco, et al. has been included as the last page of Exhibit B.

8. Exhibit D. The entire description in the title page for Exhibit D has been deleted and replaced with:

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"I. Maps Identifying Those Lands as of January 1, 2005:

a. within the boundaries of a municipality or its sphere of influence, or within the process of inclusion in its sphere of influence; or

b. within the certificated service area of a publicly regulated utility.

II. List of selected parcels that are nearby the boundaries identified on the incorporated maps, which in addition to more distant parcels, are excluded from these new urban use areas."

9. Exhibit D. The list of selected excluded parcels has been physically placed after the maps.

10. Exhibit D. Parcel 129-210-017 has been added to the list of selected excluded parcels.

11. Exhibit F. A final form of the "Santa Maria Valley Public Water Purveyor Water Management Agreement" has replaced the draft agreement previously posted. This final agreement includes the following changes to the draft agreement:

a. Recital B. The phrase, "within its municipal boundaries" was deleted.

b. Recital C. The phrase "and is attached as Exhibit A" has been added to the end of the recital. Exhibit A and its own attached exhibits have now been included in the revised posting.

c. Correction of Section Numbering. Beginning with section 8 of the June 23, 2005 posting, the section numbers have been corrected into proper sequential order (e.g., old section 8 is now section 6, etc.)

d. Section 4.1. The allocations of Twitchell Yield for the City of Santa Maria and the City of Guadalupe have been inserted.

e. Section 5.3.2. "Exhibit A" has become "Exhibit B".

f. Section 6.1. The following has been added to the end of that section:

"The entities that have entered into the Reservation/ Purchase Agreements identified on Exhibit C to this Agreement and Exhibit B to the 2004 Agreement are deemed to

have satisfied the requirements of this Section and are exempt from the requirements of Section 6.2, below."

g. Section 6.2. The following changes have been made to section 6.2, as shown in the additions/deletions below:

"In addition to the fee paid to secure Supplemental Water pursuant to the 2004 Agreement, an additional 20% shall be charged to the SCWC Project Proponent by Santa Maria and shall be placed into either theTwitchell operational fund or the Twitchell capital fund. That incremental charge deposited in the ~~Twitchell operational~~ applicable fund, shall be deemed a SCWC contribution to offset any SCWC TMA funding requirements."

h. Section 7 (including sections 7.1 through 7.5), The "New Urban Uses – Guadalupe," provision has been added in its entirety:

"7.1 Guadalupe and Santa Maria agree that it is within their mutual interests to cooperate and coordinate their efforts to provide retail water service within their respective service areas.

7.2 Guadalupe and Santa Maria mutually acknowledge the benefits of importing SWP supplies to augment their use of local groundwater.

7.3 It is to the mutual advantage of Guadalupe and Santa Maria to have several alternatives for making use of their SWP Entitlements, Return Flows and Twitchell Yield to create flexibility, reliability, and cost effectiveness in their water supply systems. Santa Maria and Guadalupe shall each have the right to use the other's unused Twitchell Yield in any given year if needed.

7.4 Guadalupe and Santa Maria agree to work cooperatively to provide a reliable and cost effective mechanism through which Santa Maria and Guadalupe can maximize the use of their respective SWP supplies and Return Flows within the Basin. Santa Maria agrees not to oppose any effort by Guadalupe that is based on reliable data to increase the fixed percentage of Guadalupe's SWP Return Flow.

7.5 Santa Maria agrees to work cooperatively with Guadalupe to provide Guadalupe with additional SWP supplies. Guadalupe shall compensate Santa Maria through a specified dollar amount or through an exchange of water resources, as Guadalupe and Santa Maria deem appropriate. As further consideration, Santa Maria shall have a right of first refusal to purchase any SWP Return Flows that Guadalupe elects to sell from its existing SWP Entitlement, and any future SWP Entitlement, that are not for use within or adjacent to Guadalupe's service area."

i. Section 20. The word "only" was added between "This Agreement shall" and "be binding on…"

11. Exhibit H. The June 23, 2005 proposed versions of Exhibit H (two proposed forms) have been replaced in their entirety with two new forms. One form is intended to be used for recordation of notice of the Stipulation for properties located within Santa Barbara County, and the other form for properties located within San Luis Obispo County.

DATED: June 30, 2005

HATCH & PARENT

By_____

Robert J. Saperstein
Attorneys for Defendants, Cross-Complainants and Cross-Defendants, Southern California Water Company and Rural Water Company

PROOF OF SERVICE

I am a resident of the State of California, over the age of eighteen years, and not a party to the within action. My business address is HATCH & PARENT, 21 E. Carrillo Street, Santa Barbara, California 93101.

Pursuant to the Court's Order dated June 28, 2000, I, Gina Lane, did the following:

- Posted the following document at approximately 4:30 p.m. on June 30, 2005.

  AMENDMENTS TO STIPULATION POSTED ON JUNE 23, 2005

- Mailed a Notice of Availability to all parties (designating or defaulting to mail service) on the current website's service list.

I am readily familiar with the firm's practice of collection and processing correspondence for mailing. Under that practice it would be deposited with the U.S. Postal Service on that same day with postage thereon fully prepaid in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare under penalty of perjury under the laws of the State of California that the above is true and correct.

Executed on June 30, 2005, at Santa Barbara, California.

GINA M. LANE

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SANTA CLARA

SANTA MARIA VALLEY WATER CONSERVATION DISTRICT, Plaintiff, v. CITY OF SANTA MARIA, et al., Defendants. AND RELATED CROSS-ACTIONS AND ACTIONS CONSOLIDATED FOR ALL PURPOSES	SANTA MARIA GROUNDWATER LITIGATION Lead Case No. CV 770214 (CONSOLIDATED FOR ALL PURPOSES) [Consolidated With Case Numbers: CV 784900; CV 785509; CV 785522; CV 787150; CV 784921; CV 785511; CV 785936; CV 787151; CV 784926; CV 785515; CV 786791; CV 787152; CV 036410] San Luis Obispo County Superior Court Case Nos. 990738 and 990739 [Assigned to Judge Jack Komar for All Purposes]

STIPULATION (JUNE 30, 2005 VERSION)

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I. INTRODUCTION -- ALL MANAGEMENT AREAS

The Stipulating Parties hereby stipulate and agree to entry of judgment containing the terms and conditions of this Stipulation.

A. Parties and Jurisdiction

1. Plaintiff and Cross-Defendant Santa Maria Valley Water Conservation District ("District") is a water conservation district organized under California Water Code section 74000, *et seq*. The District does not pump Groundwater from the Basin.

2. Defendants, Cross-Complainants and Cross-Defendants the City of Santa Maria ("Santa Maria"), City of Guadalupe ("Guadalupe"), Southern California Water Company ("SCWC"), Nipomo Community Services District ("NCSD"), Rural Water Company ("RWC"), City of Arroyo Grande ("Arroyo Grande"), City of Pismo Beach ("Pismo Beach"), City of Grover Beach ("Grover Beach") and Oceano Community Services District ("Oceano") rely, in part, on Groundwater to provide public water service to customers within the Basin.

3. Cross-Defendant County of San Luis Obispo ("San Luis Obispo") is a subdivision of the State of California. Cross-Defendant San Luis Obispo County Flood Control and Water Conservation District ("SLO District") is a public entity organized pursuant to the laws of the State of California. Neither San Luis Obispo nor SLO District pumps Groundwater from the Basin.

4. Cross-Defendant County of Santa Barbara ("Santa Barbara") is a subdivision of the State of California. Santa Barbara does not pump Groundwater from the Basin.

5. Numerous other Cross-Defendants and Cross-Complainants are Overlying Owners. Many of these Overlying Owners pump Groundwater from the Basin, while others do not currently exercise their Overlying Rights. Those Overlying Owners who are Stipulating Parties are identified on Exhibit "A".

6. This action presents an *inter se* adjudication of the claims alleged between and among all Parties. This Court has jurisdiction over the subject matter of this action and over the Parties herein.

///

B. Further Trial

The Stipulating Parties recognize that not all Parties have entered into this Stipulation and that a trial will be necessary as to all non-Stipulating Parties. No Stipulating Party shall interfere or oppose the effort of any other Stipulating Party in the preparation and conduct of any such trial. All Stipulating Parties agree to cooperate and coordinate their efforts in any trial or hearing necessary to obtain entry of a judgment containing the terms and conditions of this Stipulation. No Stipulating Party shall have any obligation to contribute financially to any future trial.

C. Definitions

As used in this Stipulation, the following terms shall have the meanings herein set forth:

1. *Annual or Year* – That period beginning January 1 and ending December 31.

2. *Annual Report* – The report prepared and filed with the Court annually for each Management Area.

3. *Appropriative Rights* – The right to use surplus Native Groundwater for reasonable and beneficial use.

4. *Available State Water Project Water* – The amount of SWP Water an Importer is entitled to receive in a given Year based upon the California Department of Water Resources final Table A allocation.

5. *Basin* - The groundwater basin described in the Phase I and II orders of the Court, as modified, and presented in Exhibit "B".

6. *Developed Water* – Groundwater derived from human intervention as of the date of this Stipulation, which shall be limited to Twitchell Yield, Lopez Water, Return Flows, and recharge resulting from storm water percolation ponds.

7. *Groundwater* – Twitchell Yield, Lopez Water, Return Flows, storm water percolation, Native Groundwater and all other recharge percolating within the Basin.

8. *Importer(s)* – Any Party who brings Imported Water into the Basin. At the date of this Stipulation, the Importers are Santa Maria, SCWC, Guadalupe, Pismo Beach, and Oceano.

9. *Imported Water* – Water within the Basin, originating outside the Basin that absent human intervention would not recharge or be used in the Basin.

10. *Lopez Project* – Lopez Dam and Reservoir located on Arroyo Grande Creek, together with the associated water treatment plant, delivery pipeline and all associated facilities, pursuant to State Water Resources Control Board permit No. 12814 (A-18375) and pending application No. A-30826.

11. *Lopez Water* – Groundwater within the Basin derived from the operation of the Lopez Project.

12. *Management Areas* – The three areas within the Basin that have sufficient distinguishing characteristics to permit the water resources and facilities of each area to be individually managed. The Management Areas are: the Northern Cities Management Area, the Nipomo Mesa Management Area, and the Santa Maria Valley Management Area, as shown on Exhibit "C".

13. *Management Area Engineer* – The individual(s) or consulting firm(s) that are hired to prepare the Monitoring Plan(s) and Annual Report(s) for one or more of the Management Areas.

14. *Monitoring Parties* – Those Parties responsible for conducting and funding each Monitoring Program.

15. *Monitoring Program* – The data collection and analysis program to be conducted within each Management Area sufficient to allow the preparation of the Annual Report.

16. *Native Groundwater* – Groundwater within the Basin, not derived from human intervention, that replenishes the Basin through precipitation, stream channel infiltration, tributary runoff, or other natural processes.

17. *New Developed Water* – Groundwater derived from human intervention through programs or projects implemented after the date of this Stipulation.

18. *New Urban Uses* – Municipal and industrial use which may occur on land that, as of January 1, 2005, was located: 1) within the boundaries of a municipality or its sphere of influence, or within the process of inclusion in its sphere of influence; or 2) within the certificated

service area of a publicly regulated utility. The New Urban Use areas are identified in Exhibit "D". New Urban Uses does not include the current DJ Farms development within Guadalupe City limits (including Santa Barbara County APN 113-080-18, 113-080-24).

19. *Nipomo Mesa Management Area or NMMA* – That Management Area shown on Exhibit "C".

20. *Nipomo Mesa Management Area Technical Group* – The committee formed to administer the relevant provisions of the Stipulation regarding the Nipomo Mesa Management Area.

21. *Northern Cities Management Area* – That Management Area which is part of Zone #3 of the San Luis Obispo County Flood Control and Water Conservation District as shown on Exhibit "C".

22. *Northern Cities* – Arroyo Grande, Pismo Beach, Grover Beach and Oceano.

23. *Northern Parties* – The Northern Cities, the Overlying Owners within the Northern Cities Management Area, San Luis Obispo and the SLO District.

24. *Overlying Right* – The appurtenant right of an Overlying Owner to use Native Groundwater for overlying, reasonable and beneficial use.

25. *Overlying Owner(s)* – Owners of land overlying the Basin who hold an Overlying Right.

26. *Party* – Each Person in this consolidated action, whether a Stipulating Party or a non-Stipulating Party.

27. *Person* – Any natural person, firm, association, organization, joint venture, partnership, business, trust, corporation, or public entity.

28. *Public Hearing* – A hearing after notice to all Parties and to any other person legally entitled to notice.

29. *Return Flows* – Groundwater derived from use and recharge within the Basin of water delivered through State Water Project facilities.

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30. *Santa Maria Valley Management Area* – That Management Area shown on Exhibit "C".

31. *Severe Water Shortage Conditions* – Those conditions, as separately defined in a Severe Water Shortage Response Plan for each Management Area, that trigger certain discretionary and mandatory responses by the Stipulating Parties upon order of the Court.

32. *Severe Water Shortage Response Plan* – The discretionary and mandatory responses for each Management Area that are to be implemented when Severe Water Shortage Conditions exist.

33. *State Water Project Water* or *SWP Water* – Water imported through the State of California State Water Resources Development System pursuant to Division 6, Part 6, Chapter 8, of the California Water Code.

34. *Stipulating Party* – A Party that has signed this Stipulation, as listed in Exhibit "A", or its heirs, executors, administrators, trustees, successors, assigns, and agents.

35. *Storage Space* – The portion of the Basin capable of holding water for subsequent reasonable and beneficial uses.

36. *SWP Contract(s)* – Those series of contracts that entitle the Importers to use SWP facilities to bring Imported Water into the Basin.

37. *Twitchell Management Authority* or *TMA* – The committee formed to administer the relevant provisions of the Stipulation regarding the Santa Maria Valley Management Area.

38. *Twitchell Participants* – Those Stipulating Parties holding rights to Twitchell Yield.

39. *Twitchell Project* – Dam and reservoir authorized by Congress as the "Santa Maria Project" on September 3, 1954 (Public Law 774, 83d Congress, ch. 1258, 2d session, 68 Stat. 1190) and located on the Cuyama River, approximately six miles upstream from its junction with the Sisquoc River, pursuant to that certain License For Diversion And Use of Water, License No. 10416, issued by the State Water Resources Control Board.

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40. *Twitchell Water* – Groundwater derived from operation of the Twitchell Project.

41. *Twitchell Yield* – The total amount of Groundwater allocated annually to the Twitchell Participants.

II. EXHIBITS

The following Exhibits are attached to this Stipulation and incorporated herein:

1. *Exhibit "A"*, list identifying the Stipulating Parties and the parcels of land bound by the terms of this Stipulation.

2. *Exhibit "B"*, Phase I and II Orders, as modified, and the attached map depicting the Santa Maria Basin.

3. *Exhibit "C"*, map of the Basin and boundaries of the three Management Areas.

4. *Exhibit "D"*, map identifying those lands as of January 1, 2005: 1) within the boundaries of a municipality or its sphere of influence, or within the process of inclusion in its sphere of influence; or 2) within the certificated service area of a publicly regulated utility; and a list of selected parcels that are nearby these boundaries which are excluded from within these areas.

5. *Exhibit "E"*, 2002 Settlement Agreement between the Northern Cities and Northern Landowners.

6. *Exhibit "F"*, the agreement among Santa Maria, SCWC and Guadalupe regarding the Twitchell Project and the TMA.

7. *Exhibit "G"*, the Court's Order Concerning Electronic Service of Pleadings and Electronic Posting of Discovery Documents dated June 27, 2000.

8. *Exhibit "H"*, the form of memorandum of agreement to be recorded.

III. DECLARATION OF RIGHTS -- ALL MANAGEMENT AREAS

The terms and conditions of this Stipulation set forth a physical solution concerning Groundwater, SWP Water and Storage Space, consistent with common law water rights priorities.

///

A. Recognition of Priority of Overlying Rights

Except as expressly modified by the settlement agreement among the Northern Parties (Exhibit "E"), all Overlying Owners that are also Stipulating Parties have a prior and paramount Overlying Right, whether or not yet exercised.

B. Prescriptive Rights

As to the Stipulating Parties, no Party has proved prescriptive rights to any Native Groundwater. Future use by the Stipulating Parties will not be adverse and will not ripen into a prescriptive right as between the Stipulating Parties.

C. Appropriative Rights

Consistent with the specific provisions governing each Management Area, the Stipulating Parties owning and exercising Appropriative Rights have the right to the reasonable and beneficial use of Native Groundwater that is surplus to the reasonable and beneficial uses of the Stipulating Parties that are Overlying Owners. New appropriative uses shall be subordinate to existing appropriations and shall be prioritized on a first in time, first in right basis.

D. Developed Water Rights

The Stipulating Parties owning Developed Water or New Developed Water have the right to its reasonable and beneficial use, consistent with the specific provisions governing each Management Area. The right to use Developed Water is a right to use commingled Groundwater and is not limited to the corpus of that water.

E. Rights to Storage Space

The Court shall reserve jurisdiction over the use of the Storage Space, and any Party may apply to the Court for the approval of a project using Storage Space. The Court must approve any project using Storage Space before any Party can claim a right to stored water from that project. The Stipulating Parties agree that Groundwater derived from Developed Water is exempt from the Court approval requirements of this Paragraph.

F. Other Surface Water Rights

Nothing in this Stipulation affects or otherwise alters common law riparian rights or any surface water rights, unless expressly provided in this Stipulation.

IV. PHYSICAL SOLUTION – ALL MANAGEMENT AREAS

A. Authority

Pursuant to Article X, section 2 of the California Constitution, the Stipulating Parties agree that the Court has the authority to enter a judgment and physical solution containing the terms and conditions of this Stipulation. Unless the Court imposes this physical solution, potential changes in water use could affect Basin adequacy and integrity. The Declaration of Rights is a component of this physical solution.

B. Purposes and Objectives

The terms and conditions of this Stipulation are intended to impose a physical solution establishing a legal and practical means for ensuring the Basin's long-term sustainability. This physical solution governs Groundwater, SWP Water and Storage Space, and is intended to ensure that the Basin continues to be capable of supporting all existing and future reasonable and beneficial uses. This physical solution is: 1) a fair and equitable basis for the allocation of water rights in the Basin; 2) in furtherance of the mandates of the State Constitution and the water policy of the State of California; and 3) a remedy that gives due consideration to applicable common law rights and priorities to use Groundwater and Storage Space, without substantially impairing any such right.

C. Basin Management Areas

Development and use of Groundwater, SWP Water and Storage Space have historically been financed and managed separately in three Management Areas. For example, only the Northern Parties have paid for, managed, and benefited from the Lopez Project; whereas only Santa Maria Valley parties have paid for, managed, and benefited from the Twitchell Project. In contrast, the Nipomo Mesa parties have not been involved in the funding or management of either the Twitchell or Lopez Projects.

The Stipulating Parties agree that Groundwater, SWP Water and Storage Space can be more efficiently allocated and managed in three Management Areas, given the physical, geographical, political, economic, and historic conditions. The three Management Areas, as shown on Exhibit "C," are as follows: Northern Cities Management Area; Nipomo Mesa Management

Area; and Santa Maria Valley Management Area. The Stipulating Parties intend that management through three Management Areas will preserve the Basin's integrity.

D. Groundwater Monitoring

1. *Monitoring Program*. A Monitoring Program shall be established in each of the three Management Areas to collect and analyze data regarding water supply and demand conditions. Data collection and monitoring shall be sufficient to determine land and water uses in the Basin, sources of supply to meet those uses, groundwater conditions including groundwater levels and quality, the amount and disposition of Developed Water supplies, and the amount and disposition of any other sources of water supply in the Basin. The Northern Cities Management Area shall not be required to include in its Monitoring Program or Annual Reports quantification of groundwater recharge from the Lopez Project or storm water percolation ponds, unless the Court orders inclusion of this information.

Within one hundred and eighty days after entry of judgment, representatives of the Monitoring Parties from each Management Area will present to the Court for its approval their proposed Monitoring Program. The Management Area Engineers shall freely share available well data, groundwater models, and other products and tools utilized in monitoring and analysis of conditions in the three Management Areas, consistent with the confidentiality provisions of this Stipulation.

Absent a Court order to the contrary, all Stipulating Parties shall make available relevant information regarding groundwater elevations and water quality data necessary to implement the Monitoring Program approved for their respective Management Area. The Monitoring Parties shall coordinate with the Stipulating Parties to obtain any needed data on reasonable terms and conditions. Metering may only be imposed on Stipulating Parties upon a Court order following a showing that such data is necessary to monitor groundwater conditions in the Basin, and in the case of an Overlying Owner, that Overlying Owner has failed to provide information comparable to that provided by other Overlying Owners. The confidentiality of well data from individual owners and operators will be preserved, absent a Court order or written consent.

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2. *Monitoring Parties*. The Monitoring Parties are as follows:

(a) Santa Maria Valley Management Area – The Twitchell Management Authority.

(b) Northern Cities Management Area – The Northern Cities.

(c) Nipomo Mesa Management Area – The NMMA Technical Group.

3. *Annual Reports*. Within one hundred and twenty days after each Year, the Management Area Engineers will file an Annual Report with the Court. The Annual Report will summarize the results of the Monitoring Program, changes in groundwater supplies, and any threats to Groundwater supplies. The Annual Report shall also include a tabulation of Management Area water use, including Imported Water availability and use, Return Flow entitlement and use, other Developed Water availability and use, and Groundwater use. Any Stipulating Party may object to the Monitoring Program, the reported results, or the Annual Report by motion.

4. *Management Area Engineer*. The Monitoring Parties may hire individuals or consulting firms to assist in the preparation of the Monitoring Programs and the Annual Reports. Except as provided below for the Santa Maria Valley Management Area, the Monitoring Parties, in their sole discretion, shall select, retain and replace the Management Area Engineer.

E. New Developed Water

1. Stipulating Parties in each Management Area may prepare and implement plans to develop, salvage or import additional water supplies.

2. The Stipulating Parties that pay, or otherwise provide consideration, for New Developed Water are entitled to use it to the extent the New Developed Water augments the water supplies in that Management Area. If more than one Stipulating Party finances or participates in generating New Developed Water, rights to the supply of New Developed Water shall be proportional to each Stipulating Party's financial contribution or other consideration, or as otherwise mutually agreed to by the participating Stipulating Parties. This paragraph does not apply to Return Flows.

///

3. The Stipulating Parties who desire to claim New Developed Water supplies must bring a motion, and obtain an order from the Court, quantifying and allocating the rights to the New Developed Water, before they have the prior right to the New Developed Water.

F. Severe Water Shortage Response

This physical solution sets forth a Severe Water Shortage Plan for each Management Area which is intended to provide an effective response to Severe Water Shortage Conditions that may develop within each or all of the Management Areas. The specific Severe Water Shortage Plans for each Management Area are incorporated herein and made a part of the physical solution.

V. PHYSICAL SOLUTION: PROVISIONS SPECIFIC TO SANTA MARIA VALLEY MANAGEMENT AREA

As supplemented by the provisions of this Stipulation that apply to all Management Areas, the following terms govern rights to Groundwater, SWP Water and Storage Space in the Santa Maria Valley Management Area.

A. Water Rights to Sources of Supply

1. *Overlying Rights*. The Stipulating Parties who are Overlying Owners within the Santa Maria Valley Management Area each have the prior and paramount right to use Native Groundwater. Subject to Paragraph V(C)(2)(b)(vi), all Overlying Rights are appurtenant to the overlying land and cannot be assigned or conveyed separate or apart from those lands.

2. *Appropriative Rights*. The Parties listed in Exhibit "A" are the owners of Appropriative Rights exercised in the Santa Maria Valley Management Area. Each Appropriative Right is limited to Native Groundwater that is surplus to reasonable and beneficial uses of the Stipulating Parties that are Overlying Owners in the Santa Maria Valley Management Area. New appropriative uses shall be subordinate to existing Appropriative Rights and shall be prioritized on a first in time, first in right basis.

3. *Developed Water*. The Stipulating Parties owning Developed Water have the right to its reasonable and beneficial use, subject only to the Severe Water Shortage Plan. On an annual basis, the Stipulating Parties shall have the right to the reasonable and beneficial use of Developed Water that is surplus to the reasonable and beneficial uses of the owners of that

Developed Water. The right to use Developed Water is a right to use commingled Groundwater and is not limited to the corpus of that water.

(a) New Developed Water. The ownership and use of New Developed Water shall be subject to Court order.

(b) Twitchell Water.

(i) *Amount.* The Twitchell Project annually provides a variable amount of Developed Water that augments the Groundwater in the Santa Maria Valley Management Area. Twitchell Yield is thirty-two thousand acre-feet per year ("afy").

(ii) *Division of Twitchell Yield.* Twitchell Yield shall be divided as follows: 80% to Santa Maria, SCWC and Guadalupe, and 20% to the Overlying Owners within the District who are Stipulating Parties.

a. The Twitchell Yield allocated to Santa Maria, SCWC and Guadalupe is suballocated pursuant to the agreement among Santa Maria, SCWC and Guadalupe, as attached and incorporated herein as Exhibit "F".

b. The Twitchell Yield allocated to the Overlying Owners who are Stipulating Parties within the District shall be equally allocated to each acre of land within the District owned by these Stipulating Parties. Concurrently with the execution of this Stipulation, each of these Stipulating Parties shall report their acreage of overlying land within the District on a parcel specific basis. Within one hundred and twenty days of the effective date of this Stipulation, the Management Area Engineer shall create a list of all the Stipulating Parties and their respective allocation of the Twitchell Yield.

(iii) *Recapture of Twitchell Yield.* The right to use Twitchell Yield is a right to use commingled Groundwater and is not limited to the corpus of that water.

(iv) *Transfer of Twitchell Yield.* Twitchell Yield may be transferred, temporarily or permanently, only between Stipulating Parties and the transfer market shall be as open and competitive as practical. A memorandum of agreement summarizing each transfer shall be filed with the Court and provided to the TMA. Any such memorandum of agreement shall state the Parties to the transfer, the amount of Twitchell Yield transferred, the price per acre-

foot, and the Party responsible for the financial obligation associated with the Twitchell Yield.

(v) *Carryover*. Any portion of Twitchell Yield that is not used in a given Year shall not be carried over into the following Year.

(c) State Water Project Water.

(i) *Import and Use of State Water Project Water*. Santa Maria, SCWC and Guadalupe all have SWP Contracts. Santa Maria will import and use within the Santa Maria Valley Management Area not less than 10,000 acre-feet each Year of Available SWP Water, or the full amount of Available SWP Water if the amount physically available is less than 10,000 acre-feet in a given Year under Santa Maria's SWP Contract. Guadalupe will import and use within the Santa Maria Valley Management Area a minimum of 75% of its Available SWP Water. SCWC will import and use within the Basin all its Available SWP Water. Santa Maria, SCWC and Guadalupe will not voluntarily relinquish or terminate their current SWP Contracts, and shall seek renewal of these SWP Contracts.

(ii) *Return Flows*.

a. Fixed Amount. The Return Flows available to each Importer is fixed based on a percentage of the annual amount of SWP Water the Importer uses within the Basin. The fixed percentage for each importer is as follows: (a) Santa Maria 65%; (b) SCWC 45%; and (c) Guadalupe 45%. The percentage provided to SCWC and Guadalupe shall be adjusted through a Court order if: a) either entity increases its use of water imported into the Basin, b) the applicable method of wastewater treatment and discharge to the Basin is altered, or c) good cause is shown.

b. Recapture. The right to use Return Flows does not attach to the corpus of SWP water deliveries or the treated SWP wastewater discharged into the Basin but is a right to use the commingled Groundwater. The Importer's right to Return Flows is assignable in whole or in part, subject to necessary accounting.

c. Quantification of Return Flows. Return Flows equal the total amount of SWP Water used by the Importer in the prior five Years, divided by five, and then multiplied by the Importer's percentage as provided in Paragraph V(A)(3)(c)(ii)(a) above.

d. Carryover. Any portion of Return Flows that is not used in a given Year shall not be carried over into the following Year.

B. Monitoring and Management

1. *Status of Management Area*. Current Groundwater and SWP Water supplies are sustaining existing water uses. Changes in land and water use and demographic conditions can be expected to occur, possibly resulting in changes in water supply or demand requirements.

2. *Need for Monitoring*. Monitoring and reporting of changes in land and water use and demographic conditions are necessary to ensure that water supplies continue to be sufficient to support water uses.

3. *Monitoring Program*.

(a) Annual Report: Content and Processing.

The Annual Report shall include an analysis of the relationship between projected water demands and projected water supplies.

(i) The Annual Report shall be prepared and signed by the Management Area Engineer, and shall be simultaneously submitted to the Court and the TMA.

(ii) Within forty-five days of submission, the TMA shall hold a noticed public hearing to take comments on and consider for adoption the Annual Report. No later than forty-five days from the date of the public hearing, the TMA shall submit to the Court its recommendations regarding the Annual Report.

(iii) Within one hundred and twenty days of the date of the submission of the Annual Report to the Court, it shall conduct a noticed hearing on the Annual Report. Any Party may submit comments on the Annual Report. After the hearing, the Court shall accept the Annual Report or direct its modification.

(b) Management Area Engineer

(i) Absent the unanimous consent of the TMA, the Management Area Engineer shall not concurrently be employed by any Party holding rights to use Groundwater in the Santa Maria Valley Management Area.

(ii) The Management Area Engineer shall initially be the engineering firm of Luhdorff & Scalmanini. Luhdorff & Scalmanini shall be the Management Area Engineer for a minimum of the shorter of five years from the date of this Stipulation or the date upon which Mr. Joseph Scalmanini discontinues full time work for that firm.

(iii) The TMA shall employ the following process to replace the Management Area Engineer:

a. The TMA shall solicit candidates for Management Area Engineer through a public process. All submissions and candidate materials shall be available to any Party upon request. The TMA shall conduct its interview through a public process to the extent practical, and include District and Overlying Owner representatives in the candidate review process.

b. Once a short list of candidates (less than five) for Management Area Engineer is obtained, the TMA shall hold a noticed public hearing to take comments on and consider the candidates for Management Area Engineer. The TMA shall make a reasonable effort to select the Management Area Engineer with a unanimous vote. If the TMA unanimously endorses a candidate, that nominee shall be recommended to the Court. Otherwise, the short list of candidates shall be submitted.

c. The Court shall appoint the Management Area Engineer following a noticed hearing.

4. *Funding*. The TMA shall pay for the Monitoring Program for the Santa Maria Valley Management Area, which includes the cost of the Management Area Engineer and the Annual Report. The cost of the Monitoring Program shall be divided among the Twitchell Participants on the same basis as the allocation of their Twitchell Yield.

C. Response to Varying Conditions

1. *Early Response to Avoid Severe Water Shortage Conditions*. If the Management Area Engineer determines that projected demands are expected to materially exceed projected water supplies, then the Management Area Engineer may recommend programs and projects to augment the Management Area's water supplies. The Stipulating Parties will collabo-

rate on a response based upon current conditions, but absent Severe Water Shortage Conditions, implementation of programs and projects will not be mandated.

The Stipulating Parties may voluntarily participate in any recommended program or project, either through financial or other contributions. The Stipulating Parties that contribute to such a program or project shall have a priority to the water supplies generated by that program or project with Court approval. The Stipulating Parties agree to aggressively pursue New Developed Water sources, including necessary funding.

2. *Severe Water Shortage Conditions and Response*.

(a) Determination. Severe Water Shortage Conditions shall be found to exist when the Management Area Engineer, based on the results of the ongoing Monitoring Program, finds the following: 1) groundwater levels in the Management Area are in a condition of chronic decline over a period of not less than five Years; 2) the groundwater decline has not been caused by drought; 3) there has been a material increase in Groundwater use during the five-Year period; and 4) monitoring wells indicate that groundwater levels in the Santa Maria Valley Management Area are below the lowest recorded levels.

(b) Response.

(i) If the Management Area Engineer determines that Severe Water Shortage Conditions exist within the Santa Maria Valley Management Area, the Management Area Engineer shall file and serve, as part of its Annual Report, findings and recommendations to alleviate such shortage conditions or the adverse effects caused by such water shortage.

(ii) Upon the filing of the Annual Report, the Court shall hold a noticed hearing regarding the existence and appropriate response to the Severe Water Shortage Conditions. If, after that hearing, the Court finds that Severe Water Shortage Conditions exist in the Santa Maria Valley Management Area, the Court shall first order all use of Groundwater to be limited to: (a) for Guadalupe, Santa Maria and SCWC, their Developed Water; (b) entitled Stipulating Parties to their New Developed Water; and (c) for the Overlying Owners, the Native Groundwater plus any Developed Water to which individual Overlying Owners are entitled.

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(iii) The Court may also order Stipulating Parties to address specific adverse effects caused by the Severe Water Shortage Conditions. The responses may include, but are not limited to: (a) measures recommended in the Annual Report and the related Court proceedings; and (b) other measures intended to address localized problems in the Santa Maria Valley Management Area directly related to the Severe Water Shortage Conditions.

(iv) The Court may adjust the Groundwater use limitations imposed on any Stipulating Party(ies) who implement programs or projects providing additional water supplies within the Santa Maria Valley Management Area.

(v) If the Court finds that Management Area conditions have deteriorated since it first found Severe Water Shortage Conditions, the Court may impose further limitations on Groundwater use. If the Court imposes further limitations on Groundwater use, a Stipulating Party shall be exempt from those limitations to the extent: (a) the Stipulating Party can demonstrate that it has already implemented limitations in its Groundwater use, equivalent to those ordered by the Court; or (b) the Stipulating Party can demonstrate that further limitations would not avoid or reduce the deteriorating conditions.

(vi) During Severe Water Shortage Conditions, the Stipulating Parties may make agreements for temporary transfer of rights to pump Native Groundwater, voluntary fallowing, or the implementation of extraordinary conservation measures. Transfers of Native Groundwater must benefit the Management Area and be approved by the Court.

D. <u>Management and Administration of the Twitchell Project</u>

1. *<u>Operational Parameters</u>.* All Twitchell Project operations (operation and maintenance and capital projects) will be performed consistent with the following parameters (Operational Parameters):

(a) Maximize recharge of the Santa Maria Valley Management Area from Twitchell Water, including without limitation, the avoidance of impacts on recharge resulting from ongoing accumulation of silt to the maximum extent practical.

(b) Operate the Twitchell Project in accordance with the requirements of applicable law including, without limitation, the requirements of the Bureau of Reclamation

and Army Corps of Engineers.

(c) Operate the Twitchell Project in accordance with industry standards and best management practices.

2. *Twitchell Project Manual.*

(a) The TMA will hire and pay for a professional engineering consulting firm with expertise in dam and reservoir operations and maintenance, acceptable to the District and the TMA, to develop an integrated operation and maintenance procedure manual ("Twitchell Project Manual") and provide recommendations for capital and maintenance projects that are consistent with the Operational Parameters.

(b) The District shall hold one or more public hearings to solicit input regarding the content of the Twitchell Project Manual.

(c) Within eighteen months of entry of the judgment, the TMA and the District shall adopt a final Twitchell Project Manual.

(d) Any disagreement between the District and the TMA regarding the content of the final Twitchell Project Manual shall be presented for Court review and determination pursuant to the judicial review provisions provided in this Stipulation.

(e) The District will exercise its discretionary authority to conduct all its operation and maintenance activities for the Twitchell Project in accordance with the Twitchell Project Manual.

3. *Twitchell Project Funding.*

(a) District will maintain its current operation and maintenance (O&M) assessments. These funds will be used for District staff salaries, property, equipment, rent, expenses, and other day-to-day operations, and will be expended consistent with the Twitchell Project Manual to the extent it is applicable.

(b) The TMA will separately fund, administer, construct and manage any additional Twitchell Project expenses or projects, including Capital Improvement Projects (see below) and O&M, (Extraordinary Project Operations) consistent with the Twitchell Project Manual. The TMA and the District will make reasonable efforts to work cooperatively to imple-

ment Extraordinary Project Operations.

(c) Consistent with the provisions of this Paragraph V(D), the District and the TMA shall be responsible for ensuring the ongoing operational integrity of the Twitchell Project and the maintenance of the Twitchell Yield. The Stipulating Parties expect that this ongoing responsibility may involve significant expenditures. Within 120 days of the effective date of this Stipulation, and annually thereafter, the Twitchell Participants shall establish an operating budget for the TMA to fund its responsibilities set forth in this Stipulation. For the first five years following the PUC approval as provided below, the TMA's annual budget shall be established at an amount between $500,000 to $700,000. Following the initial budgeting period, the TMA shall set its budget in three- to five-year increments, as it deems necessary to meet its obligations to preserve the Twitchell Yield. Any unused revenues shall be segregated into a reserve account, for future funding needs of the Twitchell Project. The Stipulating Parties agree to cooperate and coordinate their efforts to enable the TMA to fulfill its responsibilities as provided in this Stipulation.

4. *Twitchell Management Authority*.

(a) The TMA shall be comprised of one representative of each of the following parties: Santa Maria, Guadalupe, Southern California Water Company, the District, and Overlying Landowners holding rights to Twitchell Yield.

(b) Only those parties holding an allocation of Twitchell Yield shall be voting members of the TMA. Voting shall be based on each party's proportionate allocation of Twitchell Yield.

(c) The TMA shall be responsible for all the Extraordinary Project Operations.

(d) The TMA shall be responsible for developing proposals for Capital Improvement Projects relating to the Twitchell Project. Capital Improvement Projects shall mean projects involving the expenditure of funds for the improvement or enhancement of the Twitchell Project, but shall not include normal operation, maintenance or repair activities.

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(e) Upon the development of a proposal for a Capital Improvement Project, the TMA shall, in cooperation with the District, hold one or more public hearings to solicit input.

(f) Following the public hearing process, the TMA may vote on whether to implement the Capital Improvement Project.

(g) The cost of TMA-sponsored Extraordinary Project Operations and Capital Improvement Projects shall be divided among Twitchell Participants on the same basis as the allocation of their Twitchell Yield.

(h) The District shall assume operation and maintenance responsibility for any TMA sponsored Capital Improvement Project to the extent practical within the District's day-to-day operations.

5. *Regulatory Compliance*. The TMA or the District shall provide advance notice to the Court and all Parties of the initiation of any regulatory proceeding relating to the Twitchell Project.

6. *Existing Contracts*. The Twitchell Reservoir Project will continue to be governed by and subject to the terms and conditions of the December 1955 agreement between the District and the Santa Barbara County Water Agency and nothing in this Stipulation is intended to modify the rights or obligations provided in that agreement. To the extent that the approval of Santa Barbara County Water Agency or the United States Bureau of Reclamation is required in connection with the implementation of this Stipulation, the Stipulating Parties agree to work cooperatively to obtain such approval(s).

E. New Urban Uses – Santa Maria Valley Management Area

1. New Urban Uses shall obtain water service from the local public water supplier. The local public water supplier shall provide water service on a reasonable and non-discriminatory basis.

2. New municipal and industrial uses on land adjacent to or within one-quarter mile of the boundary line depicted in Exhibit D shall comply with any applicable Corporations Code provisions and negotiate in good faith to obtain water service from the local

public water supplier, before forming a mutual water company to provide water service.

3. No modification of land use authority. This Stipulation does not modify the authority of the entity holding land use approval authority over the proposed New Urban Uses.

4. New Urban Uses shall provide a source of supplemental water to offset the water demand associated with that development. For the purposes of this section, supplemental water shall include all sources of Developed Water, except: i) Twitchell Water, ii) storm water percolation ponds existing as of the date of entry of the judgment, or iii) Overlying Owners' right to use of surplus Developed Water.

VI. PHYSICAL SOLUTION: PROVISIONS SPECIFIC TO NIPOMO MESA MANAGEMENT AREA

As supplemented by the provisions of this Stipulation that apply to all Management Areas, the following terms shall apply to the Nipomo Mesa Management Area.

A. Supplemental Water

1. *MOU*. NCSD has entered into a Memorandum of Understanding ("MOU") with Santa Maria which contemplates the wholesale purchase and transmission from Santa Maria to the NMMA of a certain amount of water each Year (the "Nipomo Supplemental Water"). All water delivered pursuant to the MOU for delivery by NCSD to its ratepayers shall be applied within the NCSD or the NCSD's sphere of influence as it exists at the time of the transmission of that water.

2. The NCSD agrees to purchase and transmit to the NMMA a minimum of 2,500 acre-feet of Nipomo Supplemental Water each Year. However, the NMMA Technical Group may require NCSD in any given Year to purchase and transmit to the NMMA an amount in excess of 2,500 acre-feet and up to the maximum amount of Nipomo Supplemental Water which the NCSD is entitled to receive under the MOU if the Technical Group concludes that such an amount is necessary to protect or sustain Groundwater supplies in the NMMA. The NMMA Technical Group also may periodically reduce the required amount of Nipomo Supplemental Water used in the NMMA so long as it finds that groundwater supplies in the NMMA are not

endangered in any way or to any degree whatsoever by such a reduction.

3. The Stipulating Parties agree to support (and, conversely, not to oppose in any way or to encourage or assist any other Person or party in opposing or challenging) the implementation of the MOU, which includes environmental and regulatory permits and approvals, the approval of a wholesale water supply agreement between Santa Maria and NCSD, and the alignment and construction of a pipeline and related infrastructure necessary to deliver the Nipomo Supplemental Water from Santa Maria to the NMMA ("Nipomo Supplemental Water Project"). ConocoPhillips retains the right to object to or provide input on the alignment of any pipelines associated with the Nipomo Supplemental Water Project if they might interfere with the location of existing ConocoPhillips pipelines. The Stipulating Parties retain their rights to be compensated for any interest or property acquired in implementing the Nipomo Supplemental Water Project.

4. NCSD and Santa Maria shall employ their best efforts to timely implement the Nipomo Supplemental Water Project, subject to their quasi-judicial obligations specified for administrative actions and in the California Environmental Quality Act.

5. The enforcement of the provisions of Paragraph VI(D) below is conditioned upon the full implementation of the Nipomo Supplemental Water Project, including the Yearly use of at least 2,500 acre-feet of Nipomo Supplemental Water (subject to the provisions of Paragraph VI(A)(2) above) within the NMMA. In the event that Potentially Severe Water Shortage Conditions or Severe Water Shortage Conditions are triggered as referenced in Paragraph VI(D) before Nipomo Supplemental Water is used in the NMMA, NCSD, SCWC, Woodlands and RWC agree to develop a well management plan that is acceptable to the NMMA Technical Group, and which may include such steps as imposing conservation measures, seeking sources of supplemental water to serve new customers, and declaring or obtaining approval to declare a moratorium on the granting of further intent to serve or will serve letters. In the event that it becomes apparent that the Nipomo Supplemental Water will not be fully capable of being delivered, any Stipulating Party may apply to the Court, pursuant to a noticed motion, for appropriate modifications to this portion of the Stipulation and the judgment entered based upon the

terms and conditions of this Stipulation, including declaring this Paragraph VI to be null and void, and of no legal or binding effect.

6. Once the Nipomo Supplemental Water is capable of being delivered, those certain Stipulating Parties listed below shall purchase the following portions of the Nipomo Supplemental Water Yearly:

NCSD - 66.68%

Woodlands Mutual Water Company - 16.66%

SCWC - 8.33%

RWC - 8.33%

B. <u>Rights to Use Groundwater</u>

1. ConocoPhillips and its successors-in-interest shall have the right to the reasonable and beneficial use of Groundwater on the property it owns as of the date of this Stipulation located in the NMMA ("ConocoPhillips Property") without limitation, except in the event the mandatory action trigger point (Severe Water Shortage conditions) described in Paragraph VI(D) (2) below is reached. Further, any public water supplier which provides water service to the ConocoPhillips Property may exercise that right subject to the limitation described in Paragraph VI(D)(2).

2. Overlying Owners that are Stipulating Parties that own land located in the NMMA as of the date of this Stipulation shall have the right to the reasonable and beneficial use of Groundwater on their property within the NMMA without limitation, except in the event the mandatory action trigger point (Severe Water Shortage Conditions) described in Paragraph VI(D)(2) below is reached.

3. The Woodlands Mutual Water Company shall not be subject to restriction in its reasonable and beneficial use of Groundwater, provided it is concurrently using or has made arrangements for other NMMA parties to use within the NMMA, the Nipomo Supplemental Water allocated to the Woodlands in Paragraph VI(A)(5). Otherwise, the Woodlands Mutual Water Company shall be subject to reductions equivalent to those imposed on NCSD, RWC and SCWC, as provided in Paragraph VI(D)(1-2).

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C. **NMMA Technical Group**

1. The NMMA Technical Group shall include representatives appointed by NCSD, SCWC, ConocoPhillips, Woodlands Mutual Water Company and an agricultural Overlying Owner who is also a Stipulating Party.

2. The NMMA Technical Group shall develop a Monitoring Program for the NMMA ("NMMA Monitoring Program"), which shall be consistent with the Monitoring Program described in Paragraph IV(D). The NMMA Monitoring Program shall also include the setting of well elevation and water quality criteria that trigger the responses set forth in Paragraph D below. The Stipulating Parties shall provide monitoring and other production data to the NMMA Technical Group at no charge, to the extent that such data has been generated and is readily available. The NMMA Technical Group shall adopt rules and regulations concerning measuring devices and production reports that are, to the extent feasible, consistent with the Monitoring Programs for other Management Areas. If the NMMA Technical Group is unable to agree on any aspect of the NMMA Monitoring Program, the matter may be resolved by the Court pursuant to a noticed motion.

3. The NMMA Technical Group meetings shall be open to any Stipulating Party. NMMA Technical Group files and records shall be available to any Stipulating Party upon written request. Notices of the NMMA Technical Group meetings, as well as all its final work product (documents) shall be posted to groups.yahoo.com/group/NipomoCommunity/

4. The NMMA Technical Group functions shall be funded by contribution levels to be negotiated by NCSD, SCWC, RWC, ConocoPhillips, and Woodlands Mutual Water Company. In-lieu contributions through engineering services may be provided, subject to agreement by those parties. The budget of the NMMA Technical Group shall not exceed $75,000 per year without prior approval of the Court pursuant to a noticed motion.

5. Any final NMMA Technical Group actions shall be subject to *de novo* Court review by motion.

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D. Potentially Severe and Severe Water Shortage Conditions

1. Caution trigger point (Potentially Severe Water Shortage Conditions)

(a) Characteristics. The NMMA Technical Group shall develop criteria for declaring the existence of Potentially Severe Water Shortage Conditions. These criteria shall be approved by the Court and entered as a modification to this Stipulation or the judgment to be entered based upon this Stipulation. Such criteria shall be designed to reflect that water levels beneath the NMMA as a whole are at a point at which voluntary conservation measures, augmentation of supply, or other steps may be desirable or necessary to avoid further declines in water levels.

(b) Responses. If the NMMA Technical Group determines that Potentially Severe Water Shortage Conditions have been reached, the Stipulating Parties shall coordinate their efforts to implement voluntary conservation measures, adopt programs to increase the supply of Nipomo Supplemental Water if available, use within the NMMA other sources of Developed Water or New Developed Water, or implement other measures to reduce Groundwater use.

2. Mandatory action trigger point (Severe Water Shortage Conditions)

(a) Characteristics. The NMMA Technical Group shall develop the criteria for declaring that the lowest historic water levels beneath the NMMA as a whole have been reached or that conditions constituting seawater intrusion have been reached. These criteria shall be approved by the Court and entered as a modification to this Stipulation or the judgment to be entered based upon this Stipulation.

(b) Responses. As a first response, subparagraphs (i) through (iii) shall be imposed concurrently upon order of the Court. The Court may also order the Stipulating Parties to implement all or some portion of the additional responses provided in subparagraph (iv) below.

(i) For Overlying Owners other than Woodlands Mutual Water Company and ConocoPhillips, a reduction in the use of Groundwater to no more than 110% of

the highest pooled amount previously collectively used by those Stipulating Parties in a Year, prorated for any partial Year in which implementation shall occur, unless one or more of those Stipulating Parties agrees to forego production for consideration received. Such forbearance shall cause an equivalent reduction in the pooled allowance. The base Year from which the calculation of any reduction is to be made may include any prior single Year up to the Year in which the Nipomo Supplemental Water is transmitted. The method of reducing pooled production to 110% is to be prescribed by the NMMA Technical Group and approved by the Court. The quantification of the pooled amount pursuant to this subsection shall be determined at the time the mandatory action trigger point (Severe Water Shortage Conditions) described in Paragraph VI(D)(2) is reached. The NMMA Technical Group shall determine a technically responsible and consistent method to determine the pooled amount and any individual's contribution to the pooled amount. If the NMMA Technical Group cannot agree upon a technically responsible and consistent method to determine the pooled amount, the matter may be determined by the Court pursuant to a noticed motion.

(ii) ConocoPhillips shall reduce its Yearly Groundwater use to no more than 110% of the highest amount it previously used in a single Year, unless it agrees in writing to use less Groundwater for consideration received. The base Year from which the calculation of any reduction is to be made may include any prior single Year up to the Year in which the Nipomo Supplemental Water is transmitted. ConocoPhillips shall have discretion in determining how reduction of its Groundwater use is achieved.

(iii) NCSD, RWC, SCWC, and Woodlands (if applicable as provided in Paragraph VI(B)(3) above) shall implement those mandatory conservation measures prescribed by the NMMA Technical Group and approved by the Court.

(iv) If the Court finds that Management Area conditions have deteriorated since it first found Severe Water Shortage Conditions, the Court may impose further mandatory limitations on Groundwater use by NCSD, SCWC, RWC and the Woodlands. Mandatory measures designed to reduce water consumption, such as water reductions, water restrictions, and rate increases for the purveyors, shall be considered.

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(v) During Severe Water Shortage Conditions, the Stipulating Parties may make agreements for temporary transfer of rights to pump Native Groundwater, voluntary fallowing, or the implementation of extraordinary conservation measures. Transfer of Native Groundwater must benefit the Management Area and be approved by the Court.

E. <u>New Urban Uses</u>

1. Within the sphere of influence or service area. New Urban Uses shall obtain water service from the local public water supplier. The local public water supplier shall provide water service on a reasonable and non-discriminatory basis.

2. Outside the sphere of influence or service area. New municipal and industrial uses on land adjacent to or within one quarter mile of the boundary line depicted in Exhibit D shall comply with any applicable Corporations Code provisions, including good faith negotiations with the local water purveyor(s), prior to forming a mutual water company to provide water service.

3. The ConocoPhillips property, owned as of the date of this Stipulation and located within the NMMA, is not in the sphere of influence or service area, nor is it in the process of being included in the sphere of influence, of a municipality or within the certificated service area of a publicly regulated utility as of the date of this Stipulation, nor is it adjacent to or in close proximity to the sphere of influence of a municipality or the certificated service area of a publicly regulated utility as of the date of this Stipulation, as those terms are used in Paragraphs VI(E)(1 and 2).

4. No modification of land use authority. This Stipulation does not modify the authority of the entity holding land use approval authority over the proposed New Urban Uses.

5. New Urban Uses as provided in Paragraph VI(E)(1) above and new municipal and industrial uses as provided in Paragraph VI(E)(2) above shall provide a source of supplemental water, or a water resource development fee, to offset the water demand associated with that development. For the purposes of this Paragraph, supplemental water shall include all sources of Developed Water or New Developed Water.

VII. PHYSICAL SOLUTION: PROVISIONS SPECIFIC TO NORTHERN CITIES MANAGEMENT AREA

These terms, supplemented by the provisions of this Stipulation that apply to all Management Areas, govern water rights and resources in the Northern Cities Management Area.

1. Groundwater Monitoring. Groundwater monitoring in the Northern Cities Management Area will be conducted by the Northern Cities in the manner described above.

2. Lopez Project. The Lopez Project will continue to be managed by the SLO District. The Northern Cities and Landowners will continue to bear costs of the Lopez Reservoir and no costs of the Twitchell Reservoir.

3. Independent Management Per Settlement Agreement.

(a) Existing Groundwater, SWP Water and Storage Space in the Northern Cities Management Area will continue to be allocated and independently managed by the Northern Parties in accordance with the Northern Cities and Northern Landowners' 2002 Settlement Agreement (Exhibit "E") for the purpose of preserving the long-term integrity of water supplies in the Northern Cities Management Area. That Settlement Agreement initially allocates 57% of the safe yield of groundwater in Zone 3 to the farmers and 43% to the cities; and it provides *inter alia* that any increase or decrease in the safe yield will be shared by the cities and landowners on a pro rata basis. That Settlement Agreement is reaffirmed as part of this Stipulation and its terms are incorporated into this Stipulation, except that the provisions regarding continuing jurisdiction (¶ 4), groundwater monitoring, reporting, and the Technical Oversight Committee (¶¶ 7-20) are canceled and superseded by the provisions of this Stipulation dealing with those issues.

(b) Without the written agreement of each of the Northern Cities, no party other than Northern Parties shall have any right to:

(i) pump, store, or use Groundwater or surface water within the Northern Cities Management Area; or

(ii) limit or interfere with the pumping, storage, management or usage of Groundwater or surface water by the Northern Parties within the Northern Cities

Management Area.

(c) For drought protection, conservation, or other management purposes, the Northern Parties may engage in contractual transfers, leases, licenses, or sales of any of their water rights, including voluntary fallowing programs. However, no Groundwater produced within the Northern Cities Management Area may be transported outside of the Northern Cities Management Area without the written agreement of each of the Northern Cities.

4. Current and future deliveries of water within the spheres of influence of the Northern Cities as they exist on January 1, 2005 shall be considered existing uses and within the Northern Cities Management Area.

VIII. INJUNCTION – ALL MANAGEMENT AREAS

A. Use Only Pursuant to Stipulation

Each and every Stipulating Party, their officers, agents, employees, successors and assigns, are enjoined and restrained from exercising the rights and obligations provided through this Stipulation in a manner inconsistent with the express provisions of this Stipulation.

B. Injunction Against Transportation From the Basin

Except upon further order of the Court, each and every Stipulating Party and its officers, agents, employees, successors and assigns, is enjoined and restrained from transporting Groundwater to areas outside the Basin, except for those uses in existence as of the date of this Stipulation; provided, however, that Groundwater may be delivered for use outside the Basin as long as the wastewater generated by that use of water is discharged within the Basin, or agricultural return flows resulting from that use return to the Basin.

C. No Third Party Beneficiaries

This Stipulation is intended to benefit the Stipulating Parties and no other Parties. Only a Stipulating Party may enforce the terms of this Stipulation or assert a right to any benefits of, or enforce any obligations contained in this Stipulation.

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IX. RESERVED JURISDICTION – ALL MANAGEMENT AREAS

A. Reserved Jurisdiction; Modifications, Cancellations, Amendments

Jurisdiction, power and authority are retained by and reserved to the Court as set forth in this Paragraph. Nothing in the Court's reserved jurisdiction shall authorize modification, cancellation or amendment of the rights provided under Paragraphs III; V(A, E); VI(A, B, D); VII(2, 3); VIII(A); IX(A, C); and X(A, D) of this Stipulation. Subject to this limitation, the Court shall make such further or supplemental orders as may be necessary or appropriate regarding the following:

1. enforcement of this Stipulation;
2. claims regarding waste/unreasonable use of water;
3. disputes between Stipulating Parties across Management Area boundaries;
4. interpretation and enforcement of the judgment;
5. consider the content or implementation of a Monitoring Program;
6. consider the content, conclusions, or recommendations contained in an Annual Report;
7. consider Twitchell Project operations, including, but not limited to: i) the content of the Twitchell Project Manual; ii) TMA or District compliance with the Twitchell Project Manual; iii) decisions to implement Extraordinary Project Operations; or iv) the maintenance of Twitchell Yield;
8. claims of localized physical interference between the Stipulating Parties in exercising their rights pursuant to this Stipulation; provided, however, rights to use Groundwater under this Stipulation shall have equal status; and
9. modify, clarify, amend or amplify the judgment and the Northern Parties Settlement Agreement; Provided, however, that all of the foregoing shall be consistent with the spirit and intent of this Stipulation.

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B. Noticed Motion

Any party that seeks the Court's exercise of reserved jurisdiction shall file a noticed motion with the Court. Any noticed motion shall be made pursuant to the Court's Order Concerning Electronic Service of Pleadings and Electronic Posting of Discovery Documents dated June 27, 2000, attached and incorporated as Exhibit "G". Any request for judicial review shall be filed within sixty days of the act or omission giving rise to the claim. Upon a showing of good cause, the Court may extend the sixty-day time limitation.

C. *De Novo* Nature of Proceeding

The Court shall exercise *de novo* review in all proceedings. The actions or decisions of any Party, the Monitoring Parties, the TMA, or the Management Area Engineer shall have no heightened evidentiary weight in any proceedings before the Court.

D. Filing and Notice

As long as the Court's electronic filing system remains available, all Court filings shall be made pursuant to Exhibit "G". If the Court's electronic filing system is eliminated and not replaced, the Stipulating Parties shall promptly establish a substitute electronic filing system and abide by the same rules as contained in the Court's Order.

X. MISCELLANEOUS PROVISIONS – ALL MANAGEMENT AREAS

A. Unenforceable Terms

The Stipulating Parties agree that if any provision of this Stipulation or the judgment entered based on this Stipulation is held to be invalid, void, or unenforceable, the remaining provisions shall nevertheless continue in full force and effect; provided, however, any order which invalidates, voids, deems unenforceable, or materially alters those Paragraphs enumerated in Paragraph IX(A) or any of them, shall render the entirety of the Stipulation and the judgment entered based on this Stipulation voidable and unenforceable, as to any Stipulating Party who files and serves a motion to be released from the Stipulation and the judgment based upon the Stipulation within sixty days of entry of that order, and whose motion is granted upon a showing of good cause.

///

B. Water Quality

Nothing in the Stipulation shall be interpreted as relieving any Stipulating Party of its responsibilities to comply with state or federal laws for the protection of water quality or the provisions of any permits, standards, requirements, or orders promulgated thereunder.

C. Duty to Cooperate

The Stipulating Parties agree not to oppose, or in any way encourage or assist any other party in opposing or challenging, any action, approval, or proceeding necessary to obtain approval of or make effective this Stipulation or the judgment to be entered on terms consistent with this Stipulation.

D. Stipulating Parties Under Public Utilities Commission Regulation

1. To the extent allowed by law, SCWC and RWC shall comply with this Stipulation, prior to obtaining California Public Utilities Commission ("PUC") approval. If the PUC fails to approve SCWC's and RWC's participation or fails to provide approval of the necessary rate adjustments so that SCWC and RWC may meet their respective financial obligations, including the participation in Developed Water projects, Monitoring Programs, TMA and as otherwise provided in this Stipulation, shall render the entirety of the Stipulation and those terms of any judgment based on this Stipulation invalid, void and unenforceable, as to any Stipulating Party who files and serves a notice of rescission within sixty days of notice by SCWC or RWC of a final PUC Order.

2. Any Party, or its successors or assigns, agreeing to become a new customer of SCWC or RWC, or an existing customer proposing to increase its water use through a change in land use requiring a discretionary land use permit or other form of land use entitlement, that has not executed reservation contracts for supplemental water as specified in Exhibit F will provide the following, once approved by the PUC:

(a) If in the Santa Maria Valley Management Area, a water resource development fee as specified in Exhibit F or a source of supplemental water sufficient to offset the consumptive demand associated with the new use as provided in Paragraph V(E); or

///

(b) If in the NMMA, a water resource development fee, or a source of supplemental water sufficient to offset the consumptive demand associated with the new use.

3. Any Person who is not engaged in a New Urban Use and who agrees to become a customer of SCWC or RWC shall retain its right to contest the applicable water resource development fee, should that fee ever become applicable to that Person.

E. Designation of Address, for Notice and Service

Each Stipulating Party shall designate the name, address and e-mail address, if any, to be used for purposes of all subsequent notices and service, either by its endorsement on the Stipulation for entry of judgment or by a separate designation to be filed within thirty days after execution of this Stipulation. This designation may be changed from time to time by filing a written notice with the Court. Any Stipulating Party desiring to be relieved of receiving notices may file a waiver of notice on a form approved by the Court. The Court shall maintain at all times a current list of Parties to whom notices are to be sent and their addresses for purposes of service. The Court shall also maintain a full current list of names, addresses, and e-mail addresses of all Parties or their successors, as filed herein. Copies of such lists shall be available to any Person. If no designation is made, a Stipulating Party's designee shall be deemed to be, in order of priority: i) the Party's attorney of record; ii) if the Party does not have an attorney of record, the Party itself at the address specified.

F. No Loss of Rights

Nothing in this Stipulation shall be interpreted to require or encourage any Stipulating Party to use more water in any Year than is actually required. As between the Stipulating Parties, failure to use all of the water to which a Stipulating Party is entitled hereunder shall not, no matter how long continued, be deemed or constitute an abandonment or forfeiture of such Stipulating Party's rights, in whole or in part.

G. Intervention After Judgment

Any Person who is not a Party or successor to a Party, who proposes to use Groundwater or Storage Space, may seek to become a Party to the judgment through a petition for intervention. The Court will consider an order confirming intervention following thirty days notice to the

Parties. Thereafter, if approved by the Court, such intervenor shall then be a Party bound by the judgment as provided by the Court.

H. Stipulation and Judgment Binding on Successors, Assigns, etc.

The Stipulating Parties agree that all property owned by them within the Basin is subject to this Stipulation and the judgment to be entered based upon the terms and conditions of this Stipulation. This Stipulation and the judgment will be binding upon and inure to the benefit of each Stipulating Party and their respective heirs, executors, administrators, trustees, successors, assigns, and agents. This Stipulation and the judgment to be entered based the terms and conditions of this Stipulation shall not bind the Stipulating Parties that cease to own property within the Basin, or cease to use Groundwater. As soon as practical after the effective date of this Stipulation, a memorandum of agreement referencing this Stipulation shall be recorded in Santa Barbara and San Luis Obispo Counties by Santa Maria, in cooperation with the Northern Cities and SCWC. The document to be recorded shall be in the format provided in Exhibit "H".

I. Costs

No Stipulating Party shall recover any costs or attorneys fees from another Stipulating Party incurred prior to the entry of a judgment based on this Stipulation.

J. Non-Stipulating Parties

It is anticipated that the Court will enter a single judgment governing the rights of all Parties in this matter. The Stipulating Parties enter into this Stipulation with the expectation that the Court will enter, as a part of the judgment, the terms and conditions of this Stipulation. This Stipulation shall not compromise, in any way, the Court's legal and equitable powers to enter a single judgment that includes provisions applicable to the non-Stipulating Parties that may impose differing rights and obligations than those applicable to the Stipulating Parties. As against non-Stipulating Parties, each Stipulating Party expressly reserves and does not waive its right to appeal any prior or subsequent ruling or order of the Court, and assert any and all claims and defenses, including prescriptive claims. The Stipulating Parties agree they will not voluntarily enter into a further settlement or stipulation with non-Stipulating Parties that provides those non-Stipulating Parties with terms and conditions more beneficial than those provided to similarly

situated Stipulating Parties.

K. Counterparts

This Stipulation may be signed in any number of counterparts, including counterparts by facsimile signature, each of which shall be deemed an original, but all of which shall together constitute one and the same instrument. The original signature pages shall be filed with Court.

L. Effective Date

This Stipulation shall be effective when signed by the Stipulating Parties listed on Exhibit "A" and accepted by the Court.

Party	**Signature, title, and date**	**Parcels Subject to Stipulation**
Attorney of Record	**Approved as to form:** By:_____ Date:_____	

PROOF OF SERVICE

I am a resident of the State of California, over the age of eighteen years, and not a party to the within action. My business address is HATCH & PARENT, 21 E. Carrillo Street, Santa Barbara, California 93101.

Pursuant to the Court's Order dated June 28, 2000, I, Gina Lane, did the following:

- Posted the following document at approximately 4:30 p.m. on June 30, 2005.

  STIPULATION (JUNE 30, 2005 VERSION)

- Mailed a Notice of Availability to all parties (designating or defaulting to mail service) on the current website's service list.

I am readily familiar with the firm's practice of collection and processing correspondence for mailing. Under that practice it would be deposited with the U.S. Postal Service on that same day with postage thereon fully prepaid in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare under penalty of perjury under the laws of the State of California that the above is true and correct.

Executed on June 30, 2005, at Santa Barbara, California.

Gina Lane

GINA M. LANE

EXHIBIT A

Stipulating Parties and Parcels of Land Bound by Terms of Stipulation

Santa Maria Valley Water Conservation District v. City of Santa Maria
Santa Clara County Superior Court Case No. CV 770214

Awaiting complete list of Stipulating Parties

EXHIBIT B

Phase I and II Orders (as modified) and Santa Maria Basin Map

Santa Maria Valley Water Conservation District v. City of Santa Maria
Santa Clara County Superior Court Case No. CV 770214

[ORIGINAL FILED ON 01-09-02001]

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF SANTA CLARA

DEPARTMENT 17

SANTA MARIA VALLEY WATER CONSERVATION DISTRICTS, A PUBLIC ENTITY,) NIPOMO COMMUNITY SERVICES Plaintiff,	) Case No. CV 770214
	) ORDER AFTER HEARING GRANTING
	) DISTRICT'S MOTION FOR SUMMARY ADJUDICATION
vs.	)
CITY OF SANTA MARIA, A MUNICIPAL CORPORATION, ET AL.	)
AND RELATED CROSS-ACTIONS.	)

The above-entitled matter came on regularly for hearing on January 8, 2001, at 1:30 p.m., the Honorable Conrad L. Rushing presiding. Counsel Robert Dougherty appeared on behalf of the Land Owner Group Parties and Steven Saxton, appeared on behalf of Plaintiffs and James Markman appeared on behalf of Nipomo Community Services District, Henry Weinstock appeared on behalf of Northern Cities and Ryan Bezzera appeared on behalf of Rancho Maria, et al. The Court, having read and considered the supporting and opposing papers, and having heard and considered the arguments of counsel, and good cause appearing therefor, makes the following order:

IT IS ORDERED THAT:

Nipomo Community Services District's Motion for Summary Adjudication is GRANTED. The Court grants all joinders. Based on the Land Owner Group's concession that the adoption of the "Foreman Line" is appropriate, as well as the concession offered by Mr. Slade that he does not disagree with Mr. Foreman on the "outermost" basin boundary, the Court finds that there is no triable issue of material fact as to the "outermost" basin boundary as articulated in the Declaration of Terry Foreman, dated December 8, 2000, and as depicted on Exhibit 1 thereto[1]. (See Nipomo's Statement of Material Fact #3, evidence in support and in opposition thereto.) Therefore, the moving parties are entitled to judgment on all affirmative defenses dealing with uncertainty of the basin boundaries.

The Court finds that the outermost lateral boundary of the Santa Maria Valley Groundwater Basin ("the Basin") lies along a type of material that does not readily transmit water, that is, for the purposes of this case, it is impermeable (impermeable is used here to mean only that the rocks, sediments and other materials do not *readily* transmit water). Thus, material (rock, sediments, sand, etc.) that do readily transmit water are within the basin.

Those that do not readily store and transmit water are the Foxen Formation or older, including the Franciscan Formation, the Knoxville Formation, the Monterey Formation, the Obispo Formation, and the Sisquoc Formation; and those that do readily store and transmit water are the Careaga Sandstone or younger, including the Careaga Formation, the Pismo Formation, the Paso Robles Formation, time-

[1]The boundary described herein is shown on that certain map marked Exhibit 1, by a black dash double dot line and said Exhibit is in evidence and a part of this Order.

equivalent Paso Robles Formation, Orcutt Formation, terrace deposits, young and old alluvium, and dune and sand deposits, with the following three exceptions:

a. The southern boundary along the Solomon Hills is located on the axis of antic lines where the Careaga Sandstone and Paso Robles Formation dip in the Basin on the north side of the axis and dip into a separate basin, the San Antonio Basin, on the south side of the axis;

b. Where the Basin boundary crosses tributary streams, the boundary is located across the mouth of each such stream to directly connect the closest bedrock contacts on each side of that stream; and,

c. The western boundary of the Basin is the Pacific Ocean.

The vertical boundary of the Basin is located at the contact between those rocks and sediments that readily store and transmit water (generally, the Careaga Formation and younger) and those rocks and sediments that do not readily store and transmit water (generally, the Foxen Formation and older) as described above in reference to the lateral boundary of the Basin, except that in the northeast portion of the area north of the Santa Maria River, the vertical Basin boundary extends to the base of the Obispo tuffs of the Obispo Formation. The Obispo tuffs underlie the alluvium of the Nipomo Valley, and extend beneath the Paso Robles Formation northerly to the Arroyo Grande Valley.

SO ORDERED.

Dated: January 9, 2001

[ORIGINAL SIGNED]
CONRAD L. RUSHING

CMS

FILED

DEC 21 2001

KIM TORRES
Chief Executive Officer
Superior Court of California, County of Santa Clara
BY _____ DEPUTY

SUPERIOR COURT OF CALIFORNIA

COUNTY OF SANTA CLARA

DEPARTMENT 17C

SANTA MARIA VALLEY WATER CONSERVATION DISTRICTS, a public entity, Plaintiff, vs. CITY OF SANTA MARIA , a municipal corporation, et al., Defendants, AND RELATED CROSS-ACTIONS	Case No. CV 770214 ORDER AFTER HEARING RE: TRIAL (PHASE II) Hearing Date: October 9, 2001 Time: 8:45 a.m. Dept.: 17C Judge: Hon. Conrad L. Rushing

Trial of Phase II of the above-entitled matter came on regularly on October 9, 2001, at 10:00 a.m., the Honorable Conrad L. Rushing presiding. The Court, having considered the testimony, declarations and exhibits, and good cause appearing therefor, issues the following decision and order:

Plaintiff's motion for an order establishing the geographic area constituting the Santa Maria Groundwater Basin (hereinafter "Basin"), for the purposes of this case, is hereby GRANTED.

The Court finds that the boundary of the Basin is that described on the map filed as Exhibit 5 with the Declaration of Robert C. Wagner dated November 20, 2001 (which can be found currently at http://www.sccomplex.org/docfiles/QD0CB28E06D5.pdf), hereinafter referred to as the

"Boundary Line." Each of the parties to the Phase II proceedings on October 9, 2001, stipulated to the Court's determining the Boundary Line of the Basin. The Basin shall also include for purposes of adjudication herein all those parcels of land, which are shown on the said Exhibit 5 and listed on Exhibit 6 to the said Declaration of Robert C. Wagner, which either touch or are intersected by the Boundary Line, to the full extent of the perimeter of such parcels. The Court has not at this time received full briefing as to whether there are legal issues as to such parcels which touch or are intersected by the Boundary Line, concerning whether owners of such parcels may appropriate water from the Basin for the use of the remainder of the subject parcels, whether the owners of such parcels are considered to be landowners or purveyors, or whether their rights to extract or export water are affected by their parcels not being fully within the Basin. Thus, at this time, until further order, the Court orders that those parcels are to be considered within the Basin.

The Court finds on the basis of the evidence presented that the Boundary Line demarcates the boundary of the Basin, and that the Basin constitutes the area beneath which groundwater exists in sufficient quantities to be meaningfully included in this lawsuit. The Court also finds that the area previously included in the "outermost basin boundary," but excluded by the Boundary Line, contains potentially water-bearing materials, but nevertheless lacks actual groundwater in amounts sufficient to justify including that area in this case for purposes of adjudicating the various claims to groundwater in the Basin. Owners of lands beneath which no significant groundwater supply exists do not have property right claims concerning such water that present a justiciable issue. Similarly, owners of lands beneath which no significant groundwater supply exists should not be permitted to assert, by virtue of their ownership of such lands, claims respecting groundwater supplies underlying adjacent or nearby lands.

The Court further finds that the Declaration of Robert C. Wagner dated November 20, 2001, attached to this Order, along with Mr. Wagner's map and table of parcels, attached as Exhibits 5 and 6, set forth sufficient detail regarding the specific parcels traversed by the Basin Boundary Line so as to apprise potentially affected landowners and other interested parties of the location of the Basin and Boundary Line fixed by this Order. A digital rendition of the map prepared by Mr. Wagner to depict affected parcels is posted for inspection on the Court's website.

The Court determines that only the lands, groundwater extraction claims and claims to groundwater storage rights within the Boundary Line shall be subject to claims in this lawsuit. The Court has considered the possibility that ground water charging and storage might extend the boundaries of the basin but finds at this point that there is insufficient evidence of that affecting the prospective orders to be made by this Court.

The motion of the Northern Cities (joined by other parties) that the Northern Cities Area be conditionally severed from this litigation, is denied. The Northern Cities Area is also shown on the map which is attached as Exhibit 5 to the Declaration of Wagner. That area shall remain within the Basin and Boundary Line fixed in this Order. The Court finds that a comprehensive judgment in this litigation is advisable and necessary, in that only such a comprehensive judgment would prevent later litigation of the same issues, prevent the risk of rulings which are inconsistent, and prevent erroneous rulings which may be affected by facts which would be adduced if the interests of all parties who may be affected by these rulings were represented and involved throughout this litigation. Cases cited by the proponents of severance can also be read as indicating that retaining the Northern Cities Area in the litigation is necessary to render an effective judgment. Orange County Water District v. City of Riverside (1959) 173 Cal.App.2d 137, 173 ("Undoubtedly the preferable course is, so far at least as is practicable, to 'have all owners of lands on the watershed and all appropriators who use water in court at the same time'"); City of Chino v. Superior Court (1967) 255 Cal.App.2d 747, 752 ("Because of the failure of OCWD in that earlier suit to join as defendants all claimants to prescriptive rights to water from the Upper and Middle Basins, many questions were left unanswered").

The Court has listened to the testimony and read the exhibits submitted, and additionally the supplemental memorandum of Richard C. Slade and supplemental declaration of Terry L. Foreman. The Court finds that there is no substantial controversy that the Northern Cities Area, the Nipomo Mesa and the Santa Maria Valley area all overlie one large groundwater basin. Each area is subject to the same general climatologic and hydrologic conditions. The Court concludes there are no geologic or hydrologic features that separate the Northern Cities Area from the remainder of the Basin encompassed by this litigation. The Court must consider that the water rights to be

determined in this litigation will apply to situations that might occur in other than a "best case' scenario. Future conditions could produce adverse impacts, such as drought, earthquake, failure of the Lopez Reservoir, or failure of the Northern Cities for other reasons to adhere to the so-called 'gentlemen's agreement" governing groundwater pumping in the Northern Cities Area. Representatives of the Northern Cities failed to stipulate to quieting title in other parties who have sued the Northern Cities for whatever rights they may possess, and failed to stipulate that they would desist from claiming water rights in the remainder of the Basin in such an eventuality. Indeed, it appears from the testimony that groundwater pumping in the Northern Cities area can potentially increase the flow of water to it from other parts of the Basin.

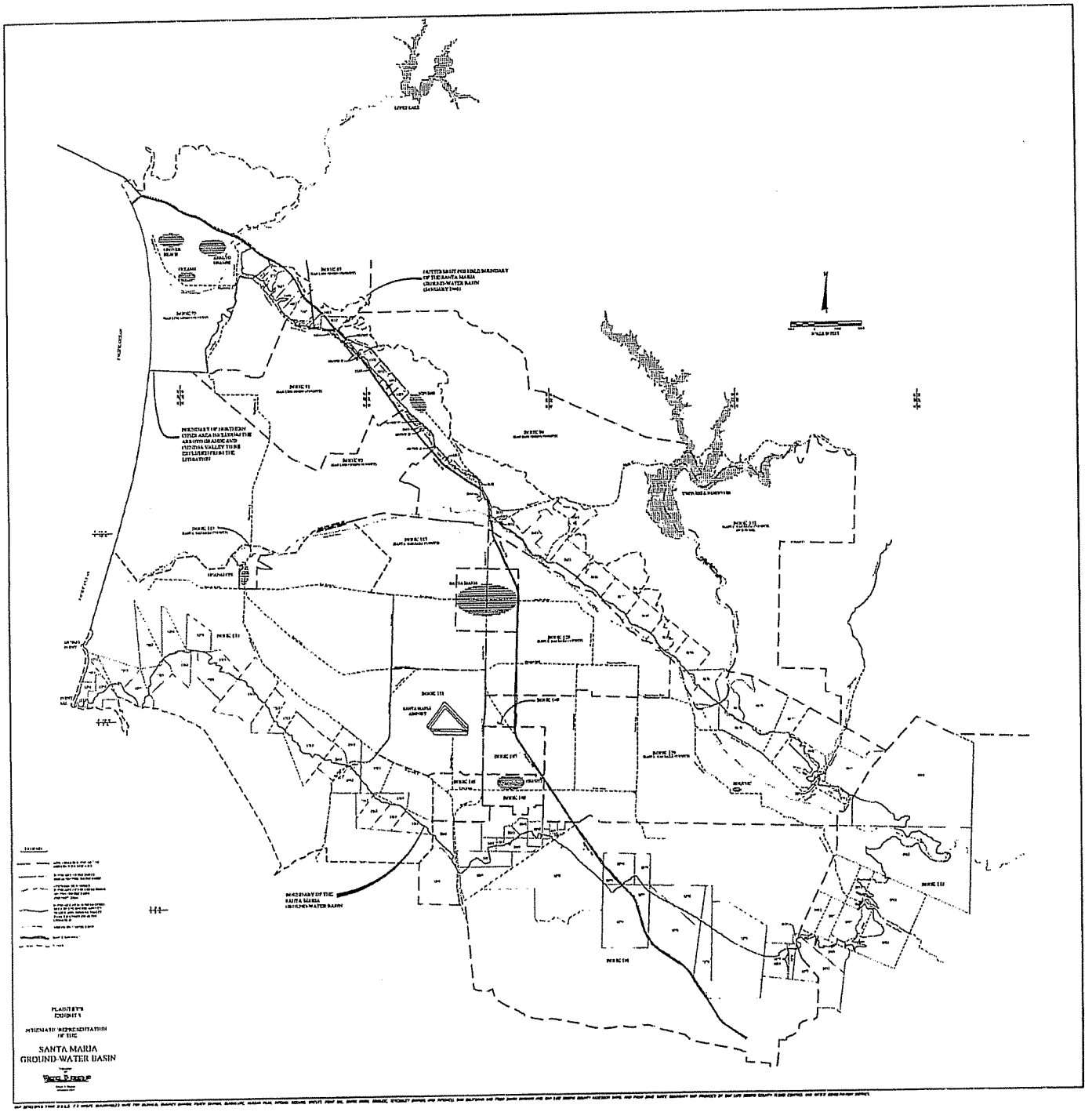
The parties reluctance to retain the Northern Cities area in the litigation appears to stem from the prospect of joining and serving all landowners in the Northern Cities area whose rights may potentially be affected. It may be possible, however, to obtain effective representation and due process for such landowners by means of a class action, after due notice is provided, in which such landowners are a defendant class. United States v. Truckee-Carson Irrigation District (D.Nev. 1975) 71 F.R.D. 10. The Court would entertain a motion to amend the cross-complaints or other pleadings to join the landowners in that area as a defendant class, represented by a handful of interested landowners who are similarly situated, in lieu of joinder of each owner. The Court would also entertain a motion, briefing and argument as to why it may be inappropriate or inconvenient to adjudicate the matter by means of a defendant class.

Any litigant now in the action who is asserting a quiet title claim concerning property outside of the Boundary Line must move for severance of that claim from this action and must file such a motion on or before thirty (30) days following service of this Order. Any such claims for which no motion to sever is filed will be dismissed without prejudice on motion of any party or by the Court on its own motion.

SO ORDERED.

Dated DEC 21 2001

CONRAD L. RUSHING
Judge of the Superior Court


PLAINTIFF'S
EXHIBIT A
SANTA MARIA
GROUND-WATER BASIN

ONS

FILED

JAN 25 2002

KIRI TORRE
Clerk-Executive Officer
Superior Court of California, County of Santa Clara
BY ROWENA DANIALKER DEPUTY

SUPERIOR COURT OF CALIFORNIA

COUNTY OF SANTA CLARA

DEPARTMENT 17C

SANTA MARIA VALLEY WATER CONSERVATION DISTRICTS, a public entity, Plaintiff, vs. CITY OF SANTA MARIA, a municipal corporation, et al., Defendants, AND RELATED CROSS-ACTIONS	Case No. CV 770214 ORDER WITH RESPECT TO BRIEF OF CONOCO, INC., NUEVO ENERGY COMPANY, AERA ENERGY LLC, TEXACO EXPLORATION AND PRODUCTION, INC. AND CHEVRON USA, INC.

IT IS HEREBY ORDERED:

The Court shall not be holding a hearing with respect to the brief of Conoco, Inc., Nuevo Energy Company, Aera Energy LLC, Texaco Exploration And Production Inc., and Chevron USA Inc., or request for clarification requested therein. The Court finds that the request for clarification found in the Conclusion section of the said Brief appears to restate what was intended by the Court's Order filed December 21, 2002. The parties may consider the Order to be so clarified if it aids in further proceedings in this matter.

SO ORDERED.

Dated: JAN 25 2002

CONRAD L. RUSHING
Judge of the Superior Court

TOTAL P.01

SCOTT K. KUNEY, Esq., SB# 111115
ERNEST A. CONANT, Esq., SB# 89111
STEVEN M. TORIGIANI, Esq., SB# 166773
LAW OFFICES OF YOUNG WOOLDRIDGE
1800 30th Street, Fourth Floor
Bakersfield, California 93301
(661) 327-9661

Attorneys for Cross-Defendants, Conoco Inc., Nuevo Energy Company, Aera Energy LLC and ChevronTexaco

ENDORSED
FILED
JAN 17 2002
BY Nell Gage

THE LAW OFFICES OF Young Wooldridge, LLP
A LIMITED LIABILITY PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS
Westchester Corporate Plaza • 1800 30th Street, Fourth Floor • Bakersfield, CA 93301-5298 • Telephone 661-327-9661 • Facsimile 661-327-1087 • http://www.youngwooldridge.com

SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF SANTA CLARA

SANTA MARIA VALLEY WATER CONSERVATION DISTRICT, a public entity, Plaintiff, vs. CITY OF SANTA MARIA, et al Defendants.	SANTA MARIA GROUNDWATER LITIGATION Lead Case No. CV 770214 Judge Conrad L. Rushing
AND RELATED CROSS-ACTIONS	

BRIEF OF CONOCO, INC., NUEVO ENERGY COMPANY, AERA ENERGY LLC, TEXACO EXPLORATION AND PRODUCTION INC., AND CHEVRON USA INC.

I.

INTRODUCTION

This Brief is filed on behalf of Defendants/Cross-Complainants Conoco Inc., Nuevo Energy Company, Aera Energy LLC and Texaco Exploration and Production Inc. and Chevron USA Inc,

(recently merged and hereinafter known as ChevronTexaco), (collectively referred to as ""Oil Group") parties.

On January 8, 2001, this Court entered its order after hearing granting the Santa Maria Valley Water Conservation District and Nipomo Community Service District's motion for summary judgment. The Oil Group joined in that motion as a moving party. The Court ruled that "the moving parties are entitled to judgment on all affirmative defenses dealing with uncertainty of the basin boundaries.[1] (Summary Judgment Order, page 2.) More particularly, this Court adjudged, declared and decreed in its January 9, 2001 Order that the "outermost lateral boundary of the Santa Maria Valley Groundwater Basin ("Basin") lies along a type of material that does not readily transmit water . . . [and that] material (rock, sediments, sand, etc.) that do readily transmit water are within the basin". (Id.) Further, that there was "no triable issue of material fact as to the `outermost' basin boundary as articulated in the Declaration of Terry Foreman, dated December 8, 2000, and as depicted on Exhibit 1 thereto". [2] (Id.)

The Court's Case Management Order No. 6, dated January 9, 2001, provided that "this Court ordered that the hydrogeological boundaries of the . . . Basin . . . be adjudicated separately as the Phase I; of this action. The Court now finds that there is need to determine the boundaries of the area to be adjudicated in this case in order to determine which parties should be excluded from or included in it." (Case Management Order No. 6, page 1) Further, that "Phase II, will decide the limits of the area that will be included in this groundwater adjudication and the areas . . . that may be excluded from this case . . .". (Id.)

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[1] The Oil Group parties alleged as a affirmative defense, as against each cross-complainant, that the Santa Maria Basin boundary as alleged in the cross-complaints were insufficiently described and were therefore insufficient on grounds of uncertainty. The Oil Group requests this Court to take judicial notice of such affirmative defenses alleged in each answer to the cross-complaints on file with this Court pursuant to Evidence Code Section 452(d).

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A LIMITED LIABILITY PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS
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This Court has now rendered its decision and order, in part providing, that the Santa Maria Valley Conservation District's motion for an order "establishing the geographic area constituting the . . . Basin . . . for the purposes of this case, is hereby GRANTED.". (Order, page 2) In sum, the Court stated that it "finds the boundary of the Basin is that described on the map field as Exhibit 5 with the Declaration of Robert C. Wagner, dated November 20, 2001." (Id.)

This brief is prepared pursuant to this Court's December 21, 2001 Order After Hearing Re: Trial (Phase II) ("Order") requesting receipt of full briefing as to whether there are legal issues raised with regard to parcels which touch or are intersected by the Boundary Line adjudicated as part of the Phase II proceedings. No other provision or issue addressed in the Order is addressed in this Brief.

Without waiving further objections, the Oil Group parties request this Court to reevaluate and correct its Decision and Order as stated in this Brief. California Code of Civil Procedure Section 128(a)(8); Darling, Hall & Rae v. Kritt (1999) 75 Cal.App. 4th 1148, 1156; Berstein v. Consolidated American Ins. Co. (1995) 37 Cal.App. 4th 763, 774; and Nave v. Taggart (1995) 34 Cal.App. 4th 1173, 1177.

II.

BRIEFING

With regard to that portion of the Court's Order determining the boundary of the Basin, the Court addressed two (2) separate and distinct issues. First, a determination of the boundary line of the Basin. Second, a conditional provision for potential further adjudication of certain parcels identified to be proximate to the boundary line of the Basin.

[2] The summary judgment order incorporated the map depicting the "outermost" boundary as part of that January 8, 2001 Order.

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Fundamentally, the Order finds and specifically determines that the boundary of the Basin is that line described in Mr. Wagner's Declaration and depicted as the solid magenta line on the incorporated map, Exhibit 5. In Mr. Wagner's Declaration he declared that,

> "The line identified as the boundary of the Santa Maria Ground-Water basin is based on geologic and hydrologic considerations and represents the extent of the aquifers comprising the groundwater basin. This line was developed in part during the meetings of the Technical Committee and to the extent that the boundary encompasses the water bearing sediments with the basin, represents the view of the Technical Committee and its members. This is the same line that was presented to the Court on October 9, 2001 on maps prepared by Mr. Joseph Scalmanini." (Emphasis added.)

Specifically, the Court has stated that it ". . . finds that the boundary of the Basin is that described on the map filed as Exhibit 5 . . . hereinafter referred to as the Boundary Line.". (Order, page 2) (Emphasis added.) More particularly, the ". . . Court finds on the basis of the evidence presented that the Boundary Line demarcates the boundary of the Basin, and that the Basin constitutes the area beneath which groundwater exists in sufficient quantities to be meaningfully included in this lawsuit." (Order, page 2.) "The Court determines that only the lands, groundwater extraction claims and claims to groundwater storage rights within the Boundary Line shall be subject to claims in this lawsuit." (Order, page 3.) (Emphasis added.) Finally with regard to issues of notice and due process the Court decreed that it ". . . finds that the Declaration of Robert C. Wagner . . . map and table to parcels, attached as Exhibits 5 and 6, set forth sufficient detail regarding the specific parcels traversed by the Basin Boundary Line so as to apprise potentially affected landowners and other interested parties of the location of the Basin and Boundary Line fixed by this Order." (Order, page 3.) (Emphasis added.) Based on

these specific findings and determinations, the Court has clearly held that the Basin boundary is that area interior to the solid magenta line depicted on Exhibit 5.

However, in that portion of the Order addressing those parcels which are touched or intersected by the adjudicated Boundary Line, the Court utilizes a significantly different definition. For example, the Order provides that the "Basin shall also include for purposes of adjudication herein all those parcels of land, which are shown on Exhibit 5 and listed on Exhibit 6 . . . to the full extent of the perimeter of such parcels." (Order, page 2). (Emphasis added.) "Thus, at this time, until further order, the Court orders that those parcels are to be considered within the Basin." (Order, page 2). (Emphasis added.) Under this definition, the Basin boundary could be construed to be that area interior to the solid orange line representative of the several Assessors' Parcel Lines depicted on the Exhibit 5 and not the solid magenta identified by Mr. Wagner and Mr. Scalmanini. Such a construction is directly contradicted by the Court's specific findings and determinations regarding the Basin Boundary and this Court's earlier order adjudicating the "outermost lateral boundary" of the Basin. (Summary Judgment Order, page 2.)

Further, such a construction is not consistent with the Court's stated rationale for conditionally including the entirety of such parcels in this adjudication. Specifically, the Court's Order provides that, at this time and pending further briefing and order from the Court, that such parcels should be included in the area adjudicated by this groundwater litigation. Importantly, the Court has indicated that, while not deciding any such matters, such parcels may raise further legal issues regarding the use of water from the Basin. Therefore, while the Court has held that the full extent of the perimeter of such parcels should, at this time, be included in the area the subject of this groundwater adjudication, not all such lands have been found by the Court to be within the limits of the adjudged Basin Boundary as depicted on Exhibit 5. Importantly, the

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Court has made no determination with regard to the rights of such parcels and landowners to the use of water from the Basin.

This Court has the ability, on its own motion, to reevaluate its own interim rulings, or to correct an erroneous ruling. Darling, Hall & Rae v. Kritt (1999) 75 Cal.App. 4th 1148, 1156; Berstein v. Consolidated American Ins. Co. (1995) 37 Cal.App. 4th 763, 774; California Code of Civil Procedure Section 128(a)(8). "Until entry of judgment, the court retains complete power to change its decision as the court may determine; it may change its conclusions of law or findings of fact". Nave v. Taggart (1995) 34 Cal.App. 4th 1173, 1177.

III.

CONCLUSION

In light of this Court's prior orders and decrees, the provisions of the Order, and the above-cited authorities, the Oil Group parties respectfully request confirmation from the Court that the December 21, 2001 order and decision provides, with regard to the issues raised in this Brief, as follows:

(1) That the boundary of the Basin is as depicted on the Exhibit 5 to the Declaration of Robert C. Wagner, dated November 20, 2001. Specifically, the boundary of the Basin is that line identified on the legend to the map as "boundary of the Santa Maria Ground-Water Basin" depicted on the map as a **solid magenta** colored line;

(2) That the Basin boundary is not that line identified on the legend to the map as the "Assessors' Parcel Lines" depicted on the map as a **solid orange** colored line;

(3) that those parcels identified on Exhibit 5, which either touch or are intersected by the Boundary Line, are until further order of this Court, provisionally included for purposes of adjudication in this case; and

THE LAW OFFICES OF
Young Wooldridge, LLP
A LIMITED LIABILITY PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS
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(4) that any further order of this Court regarding the adjudication of the rights and duties of such parcels will be determined in subsequent proceedings of this litigation following presentation of evidence and legal briefing on any such issues.

Dated: December 31, 2001

THE LAW OFFICES OF YOUNG WOOLDRIDGE LLP

By: _____

SCOTT K. KUNEY, Esq.
Attorneys for Cross-Defendants, Conoco, Inc., ChevronTexaco, Nuevo Energy Company, and Aera Energy LLC

THE LAW OFFICES OF
Young Wooldridge, LLP
A LIMITED LIABILITY PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS
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EXHIBIT C

Map of the Basin and Boundaries of the Three Management Areas

Santa Maria Valley Water Conservation District v. City of Santa Maria
Santa Clara County Superior Court Case No. CV 770214

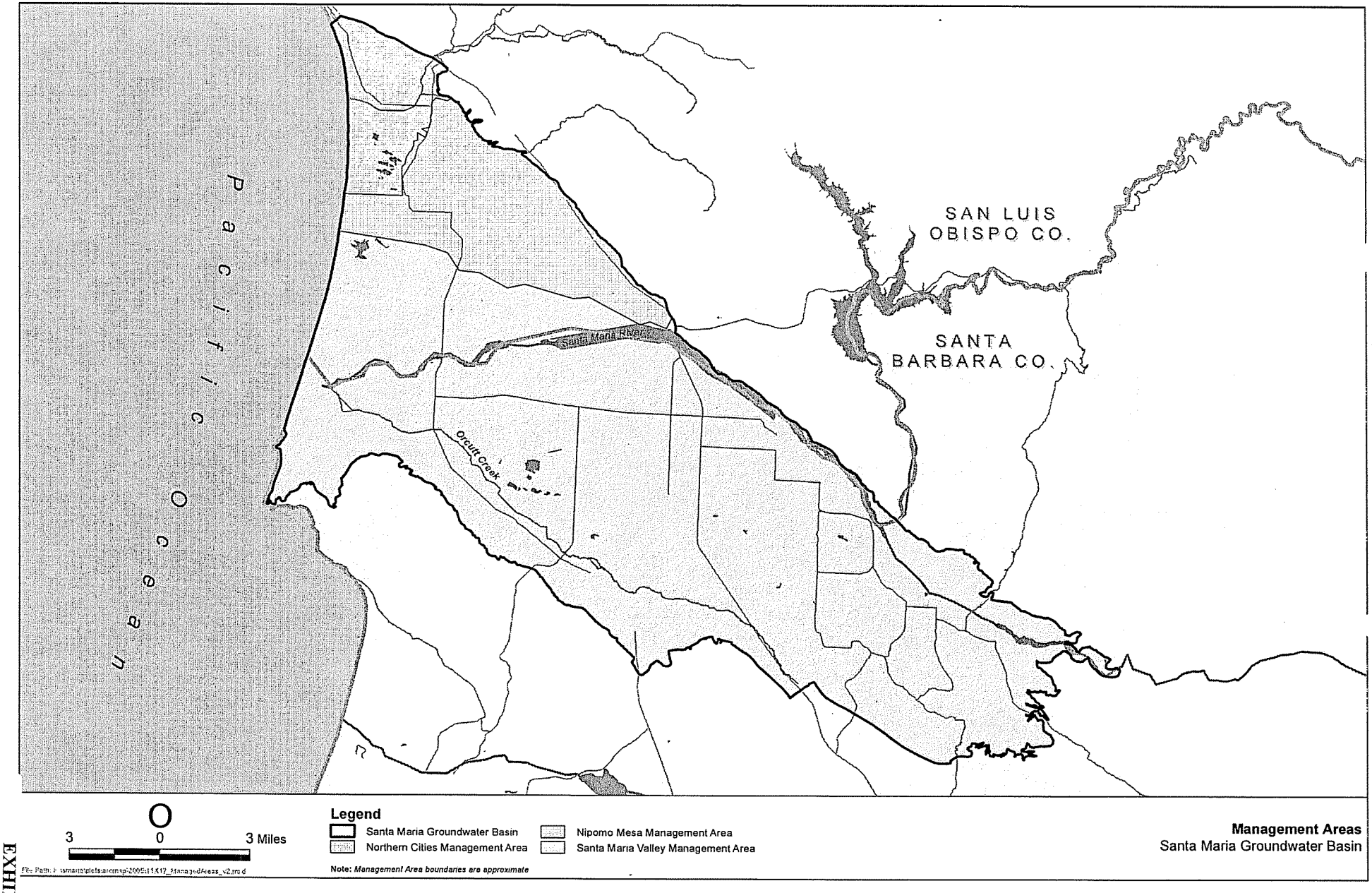


EXHIBIT C
Page 1 of 1

EXHIBIT D

Santa Maria Valley Water Conservation District v. City of Santa Maria
Santa Clara County Superior Court Case No. CV 770214

I. Maps Identifying Those Lands as of January 1, 2005:

a. within the boundaries of a municipality or its sphere of influence, or within the process of inclusion in its sphere of influence; or

b. within the certificated service area of a publicly regulated utility.

II. List of selected parcels that are nearby the boundaries identified on the incorporated maps, which in addition to more distant parcels, are excluded from these new urban use areas.

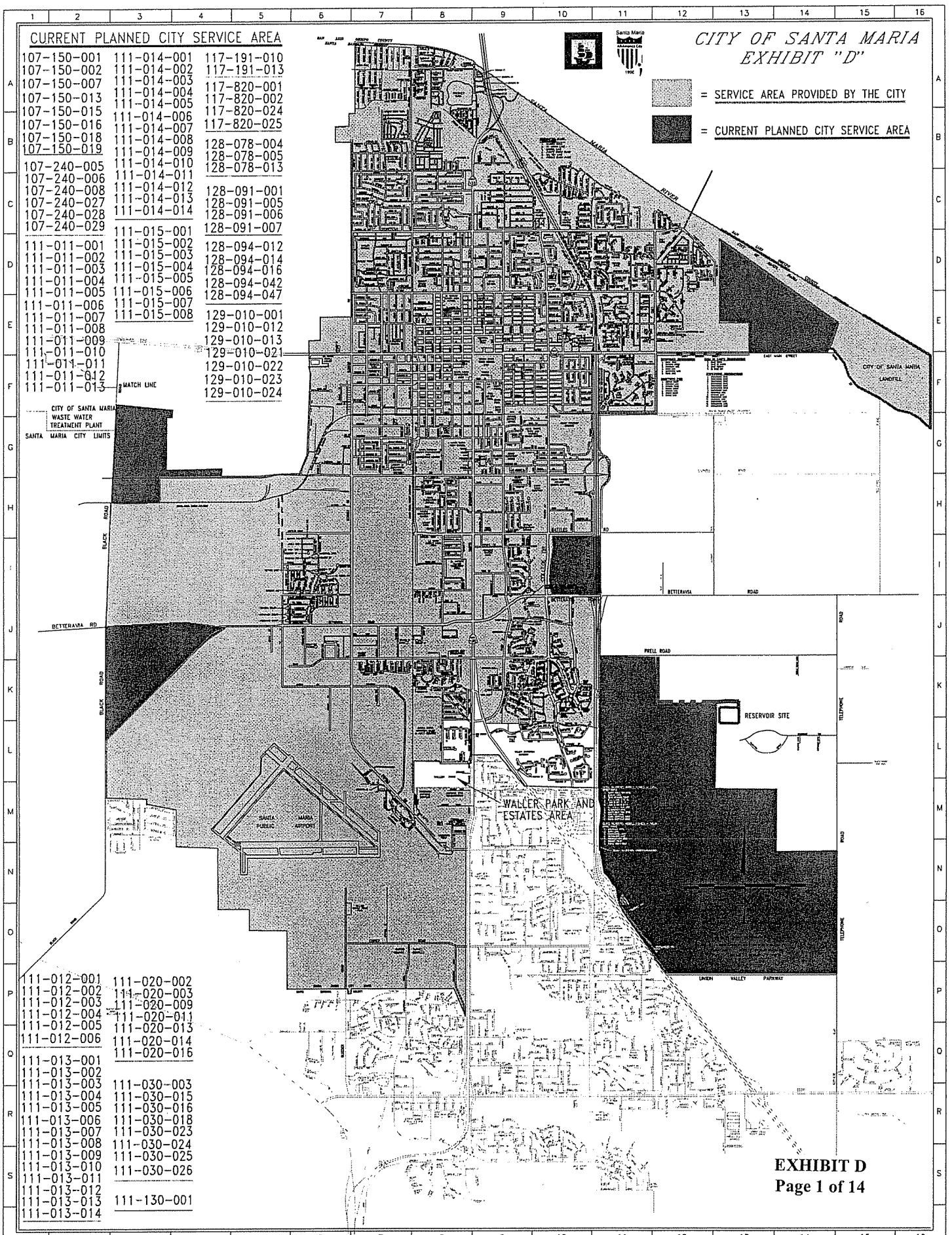
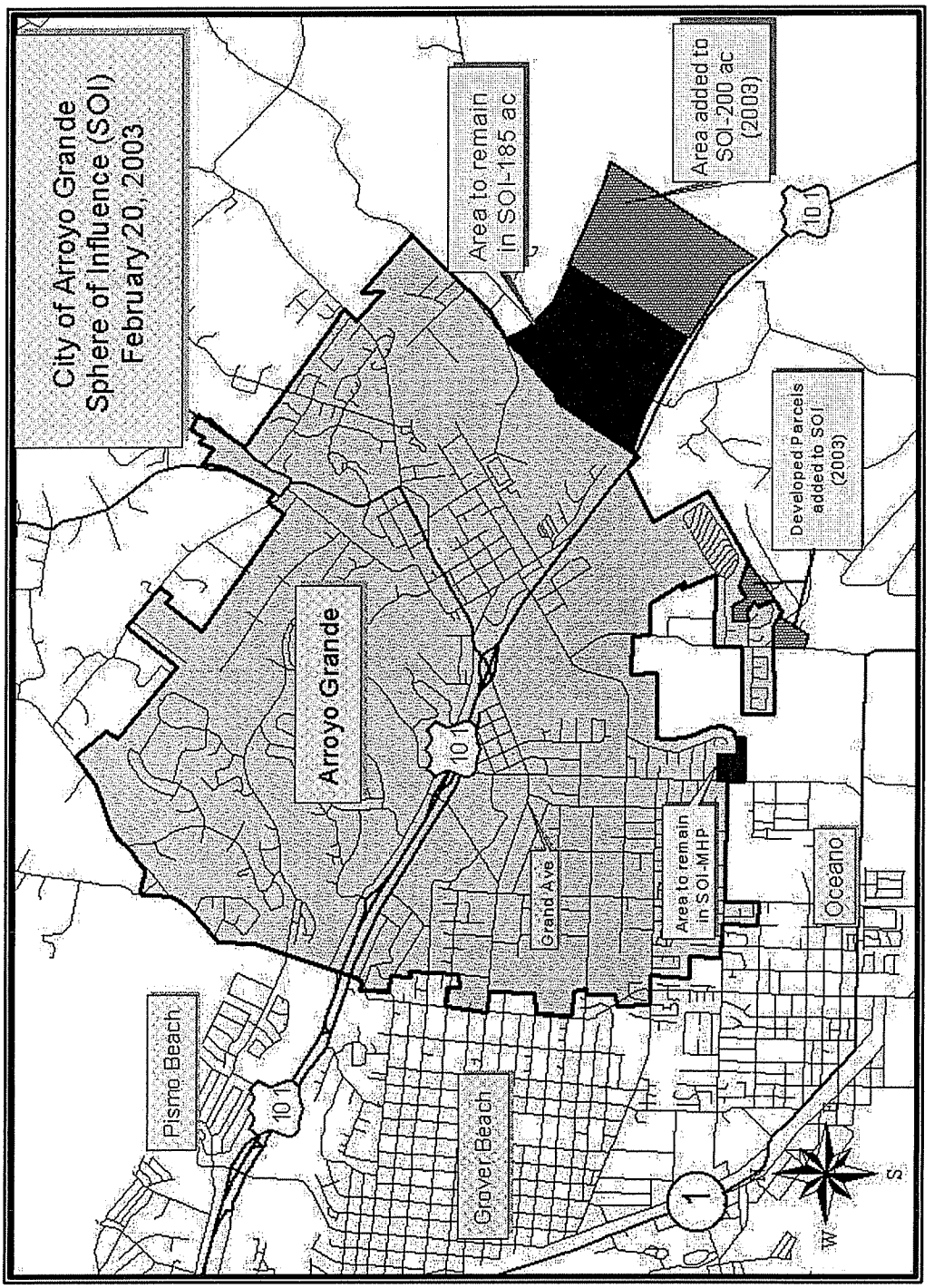


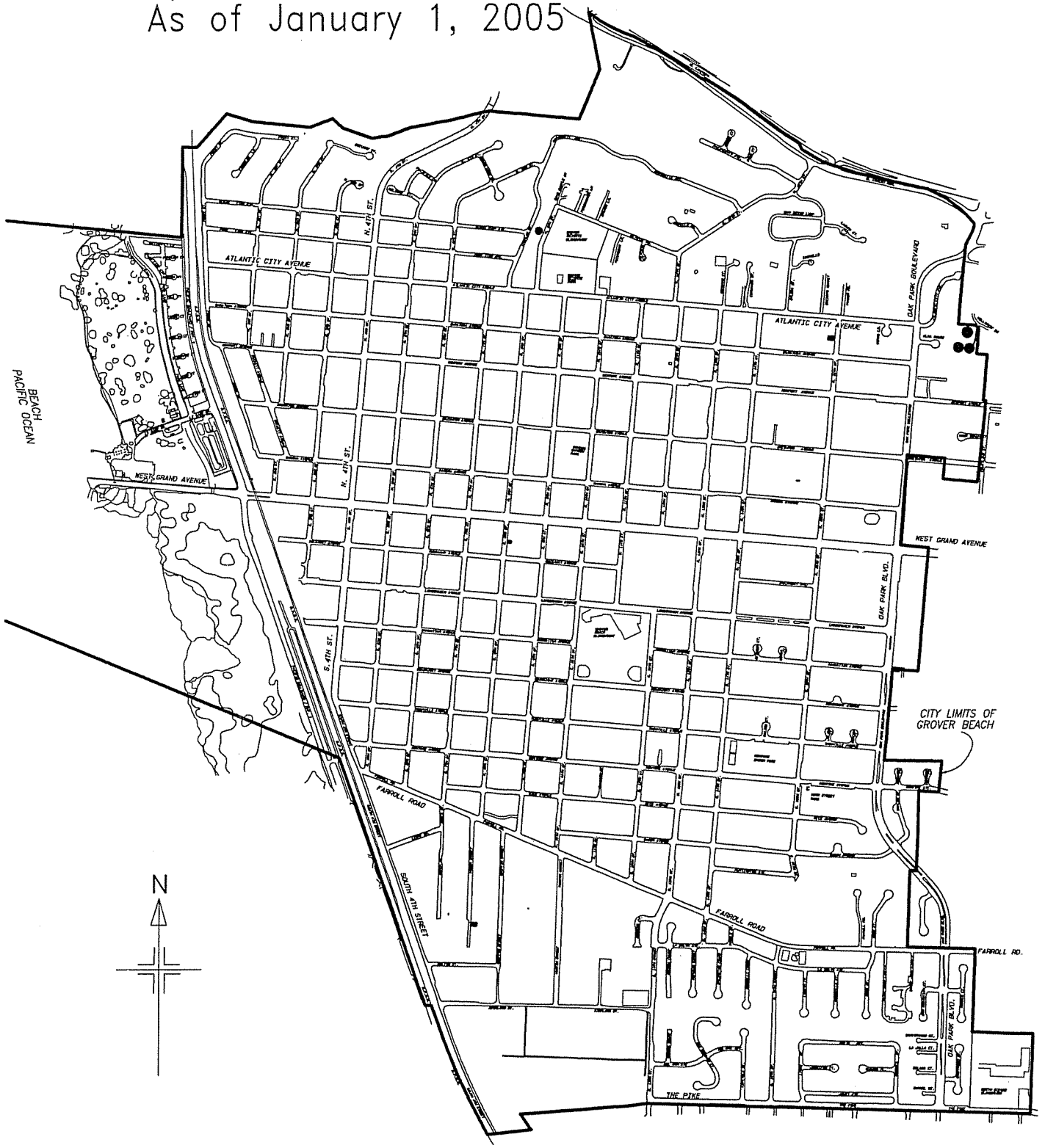
EXHIBIT D
Page 1 of 14

Figure 1 – Sphere of Influence

City of Arroyo Grande



CITY OF GROVER BEACH
Sphere of Influence and City Boundary
As of January 1, 2005



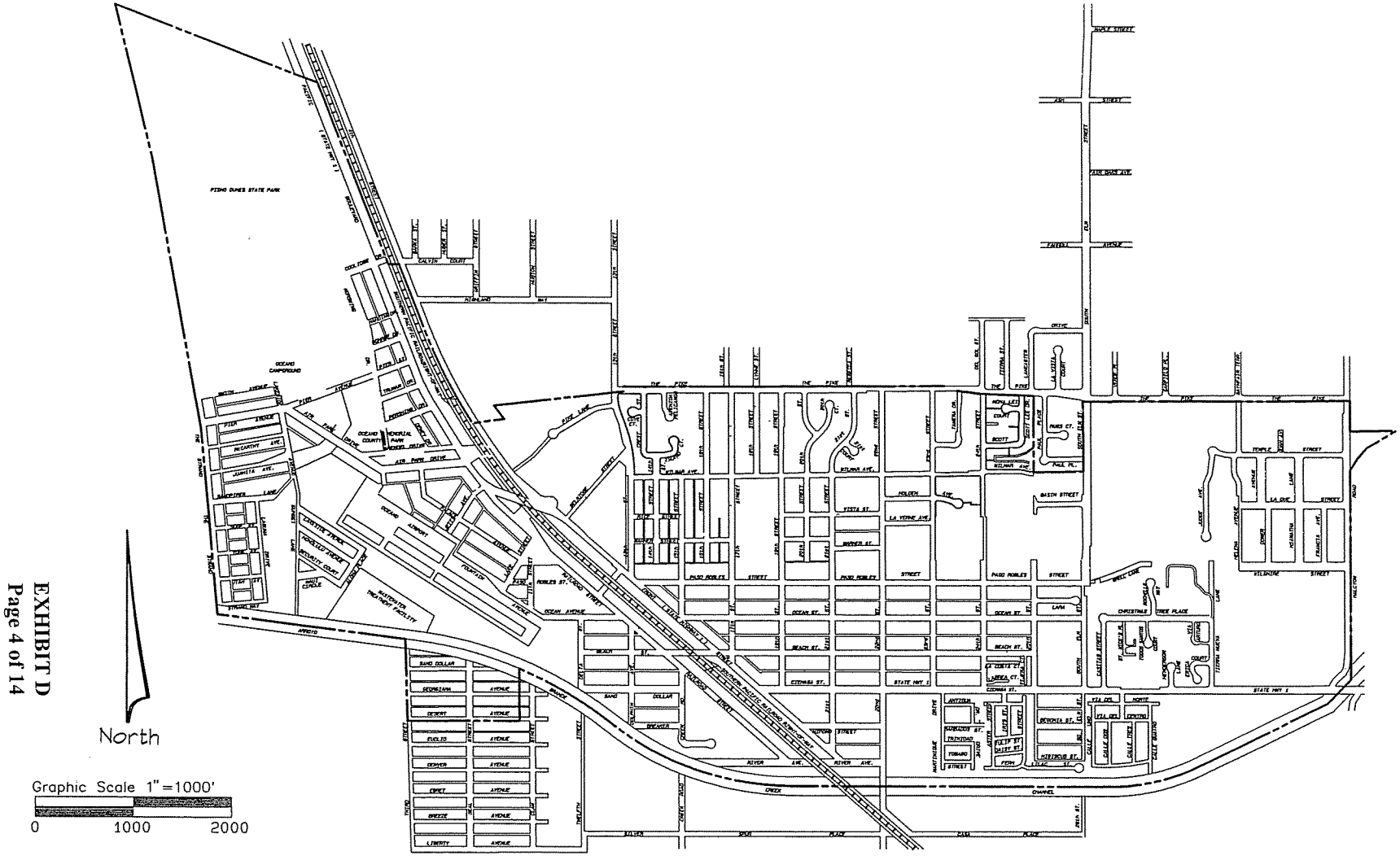


EXHIBIT D
Page 4 of 14

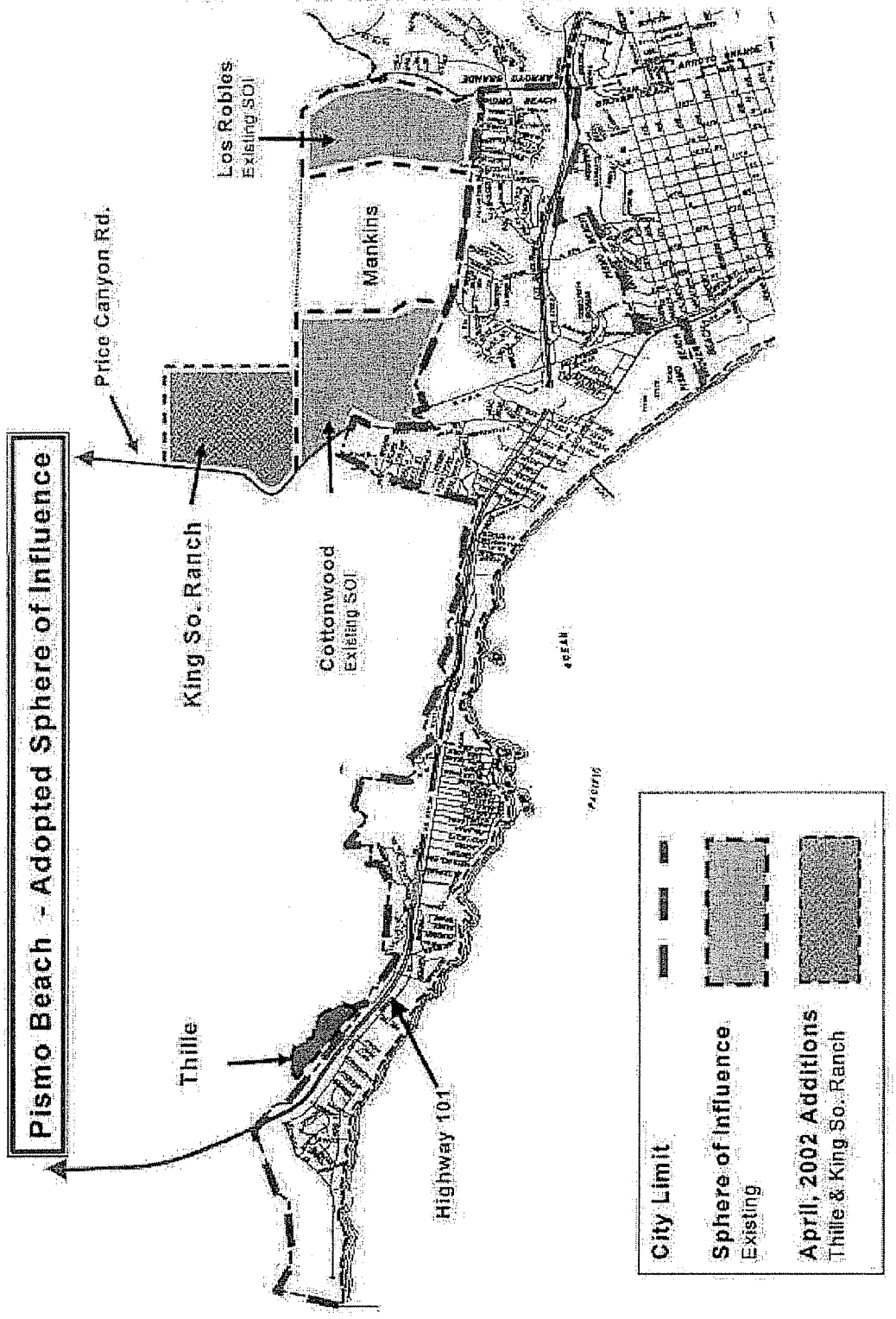
Oceano Community
Services District
P.O. Box 599
1655 Front Street
Oceano, CA 93445-0599
tel (805)481-6730

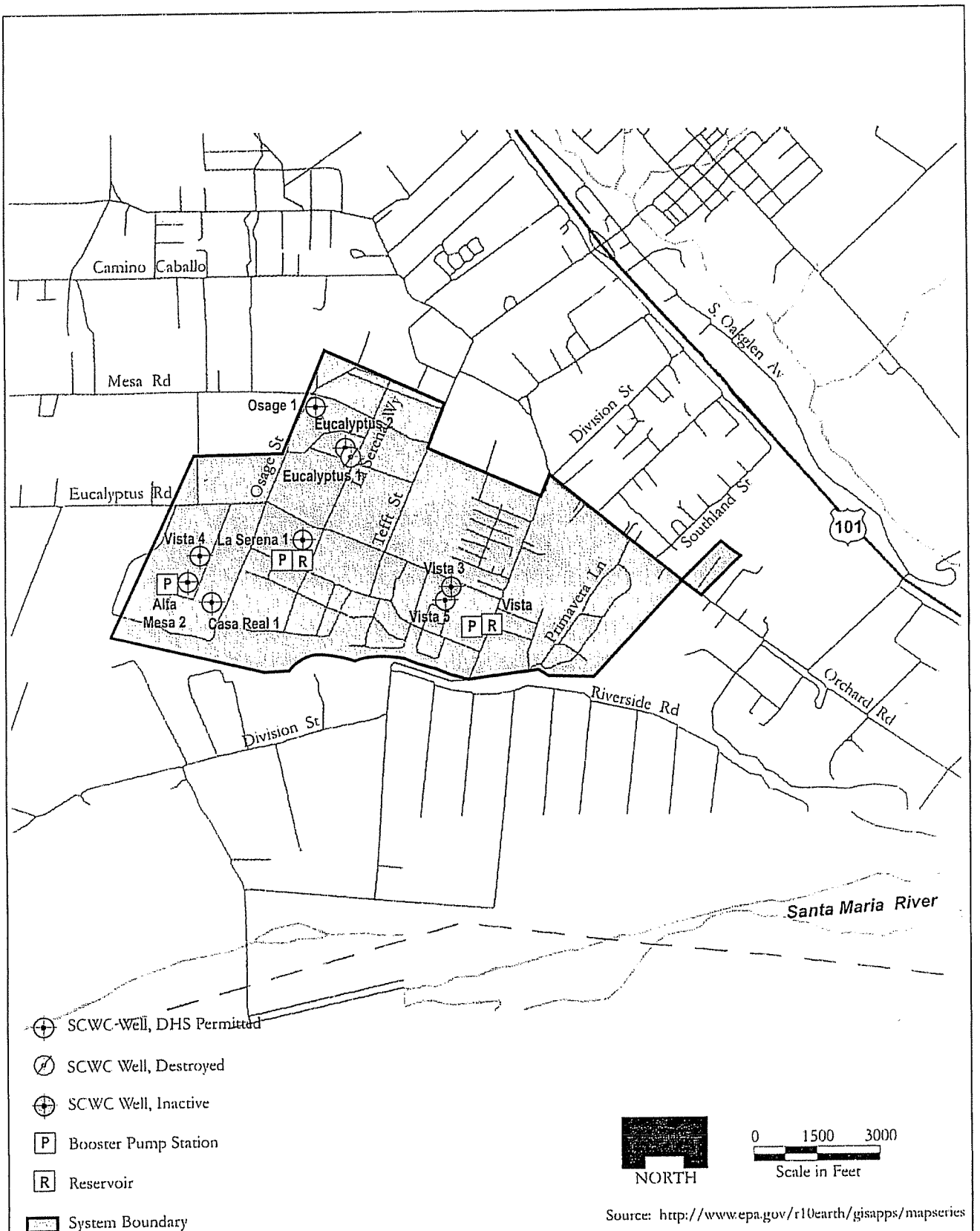
Service Area and Sphere of Influence January 1, 2005
OCEANO COMMUNITY SERVICES DISTRICT

Garing Taylor & Associates
Civil Engineering
Surveying
Project Development
141 South Elm Street
Arroyo Grande, CA 93420
805/489-1321

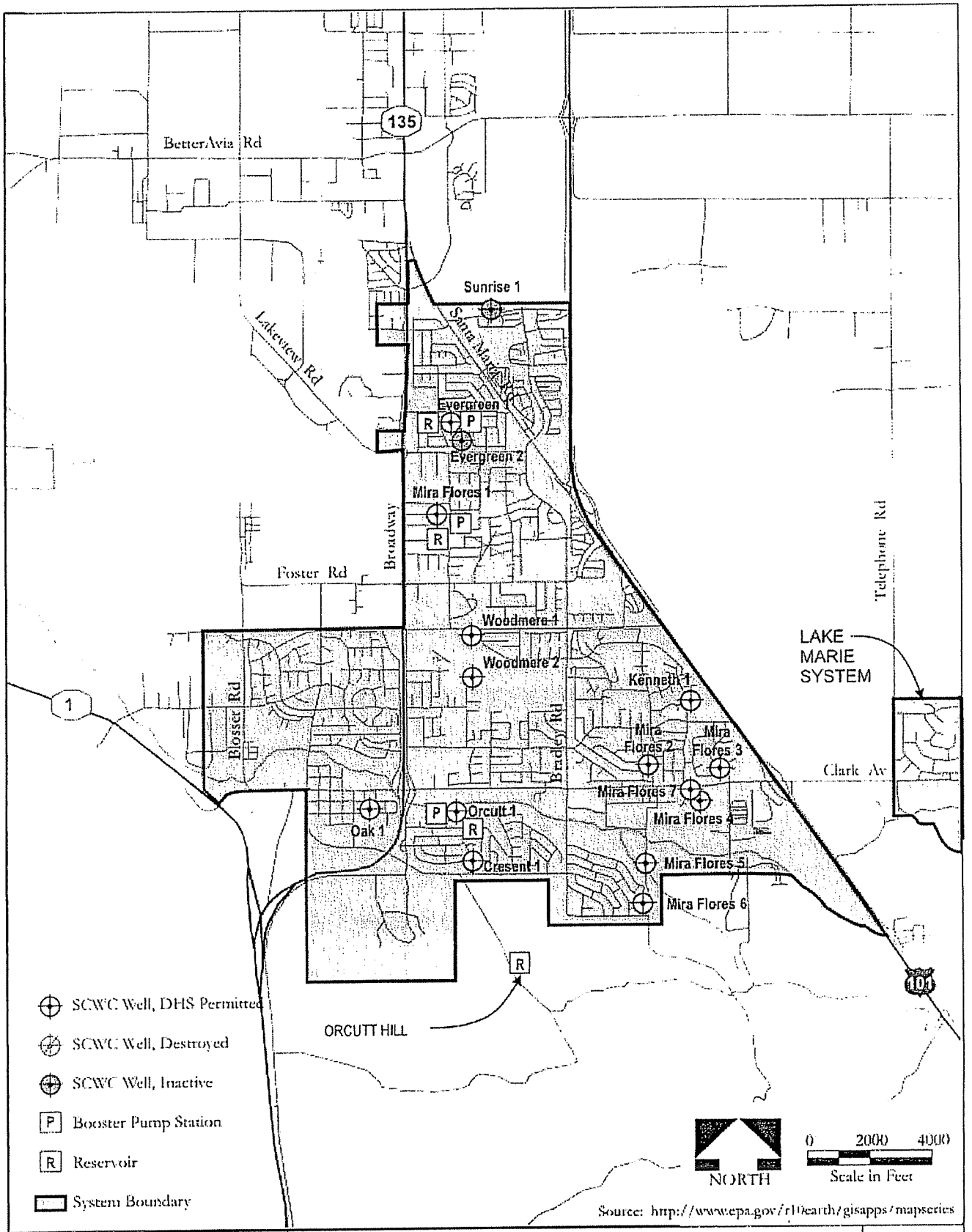
Scale: 1" = 1000'	
W.O. No. 0D01-007	
File Name OCSD_Boundary_and_SOI _01-01-2005.pro	
Plot date 6/20/2005	

Figure 1 – Existing SOI and Proposed Additions





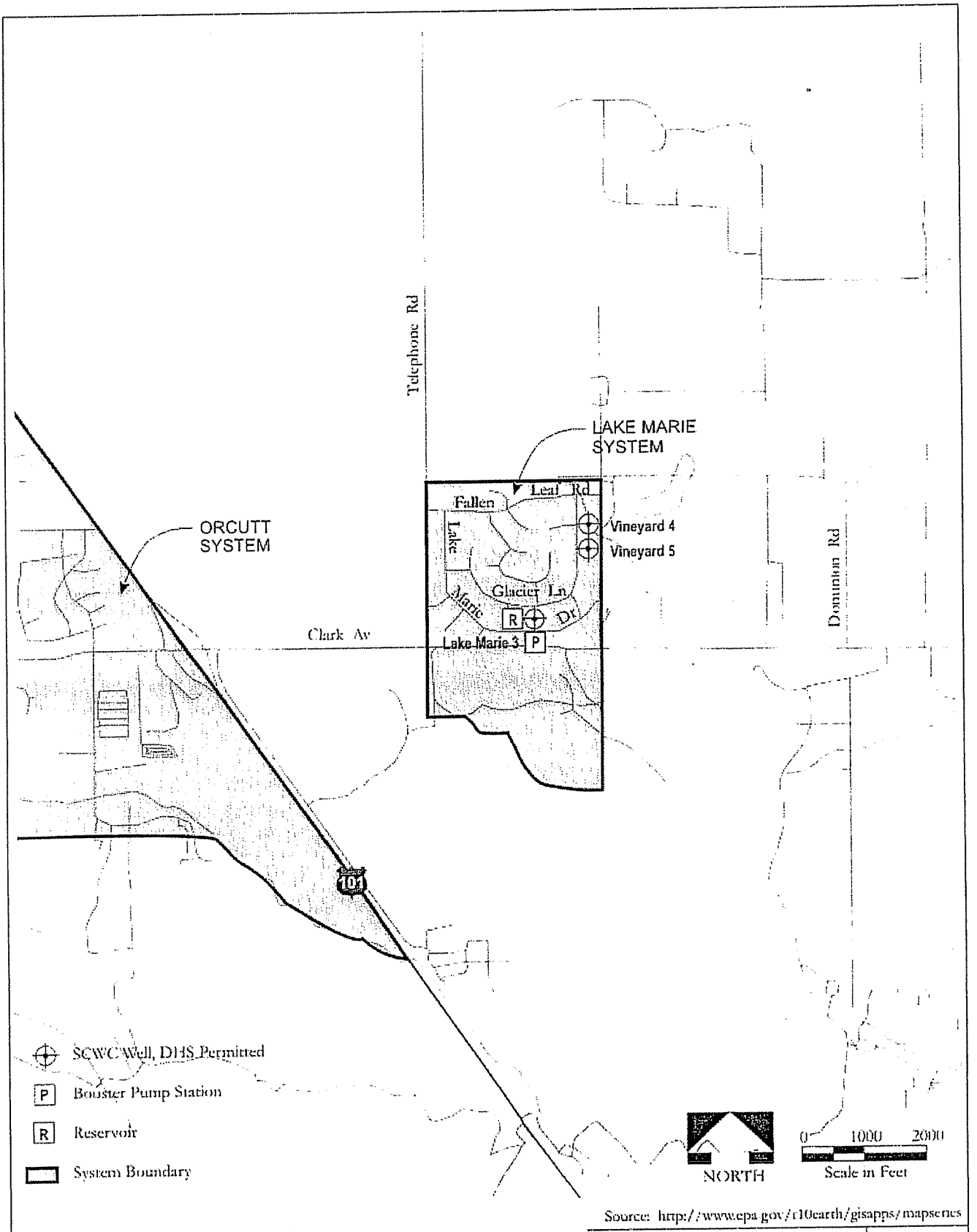
REVISED: 8/2004	Southern California Water Company
	Nipomo System



8/2004

Southern California Water Company

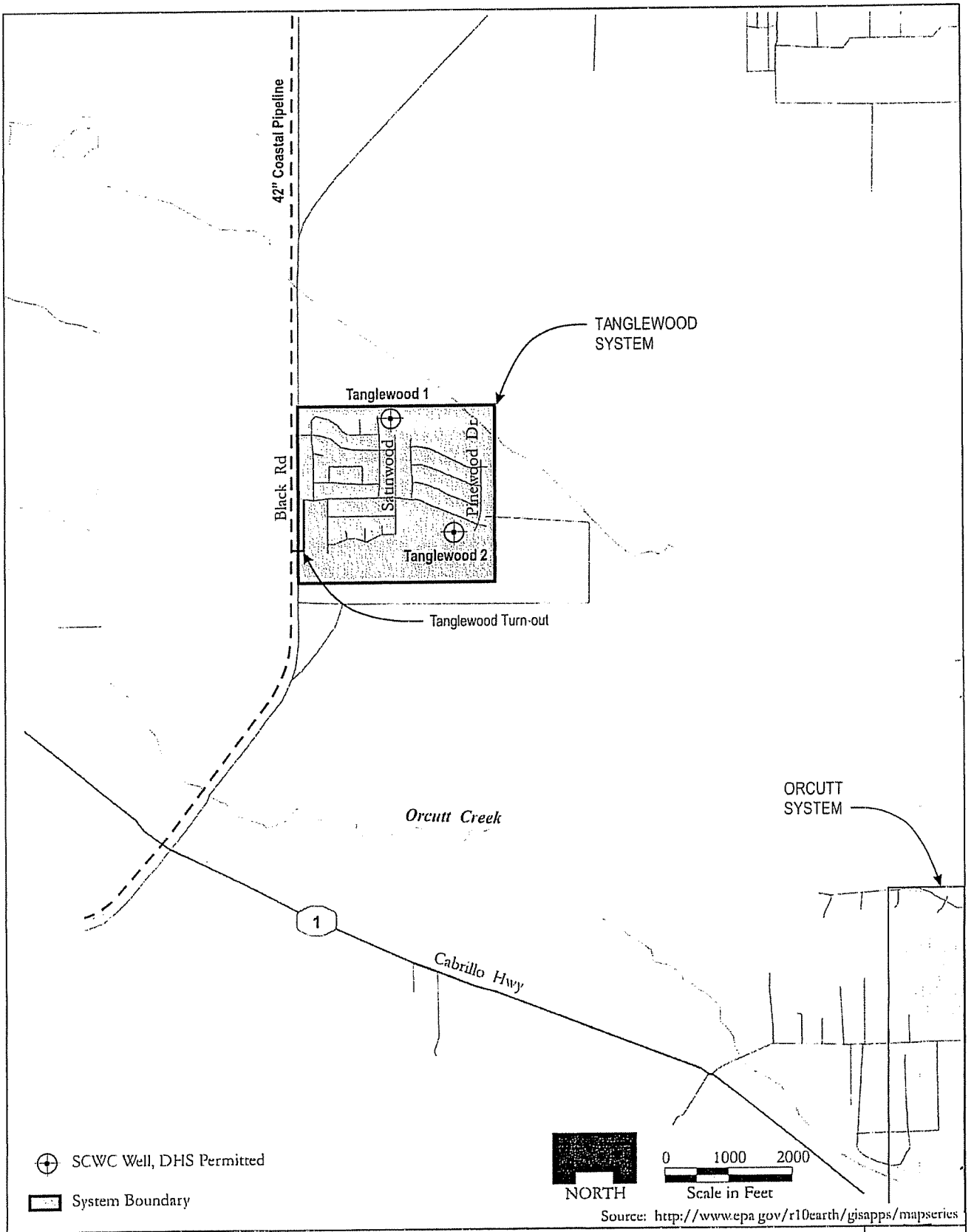
Orcutt System



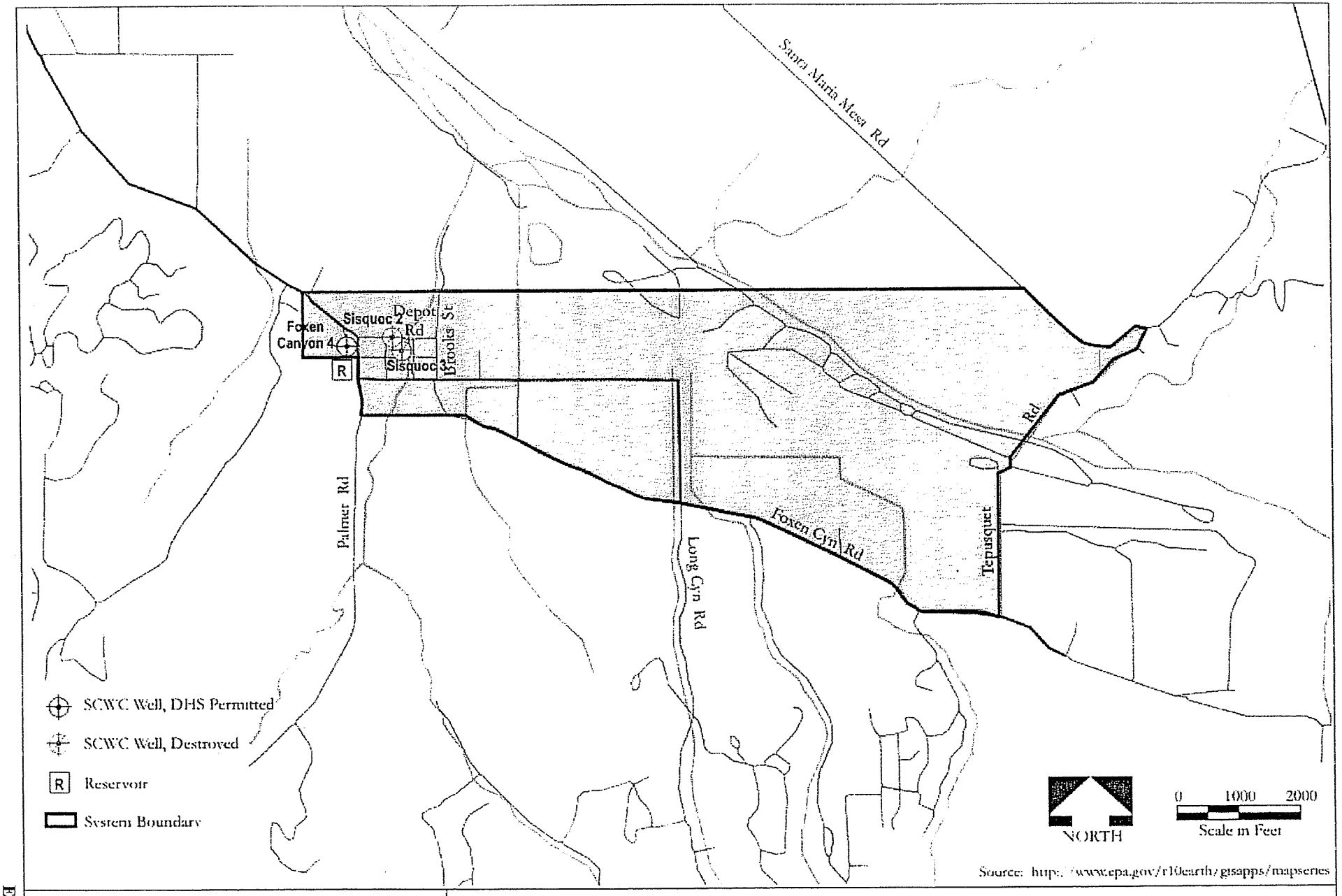
8/2004

Southern California Water Company

Lake Marie System



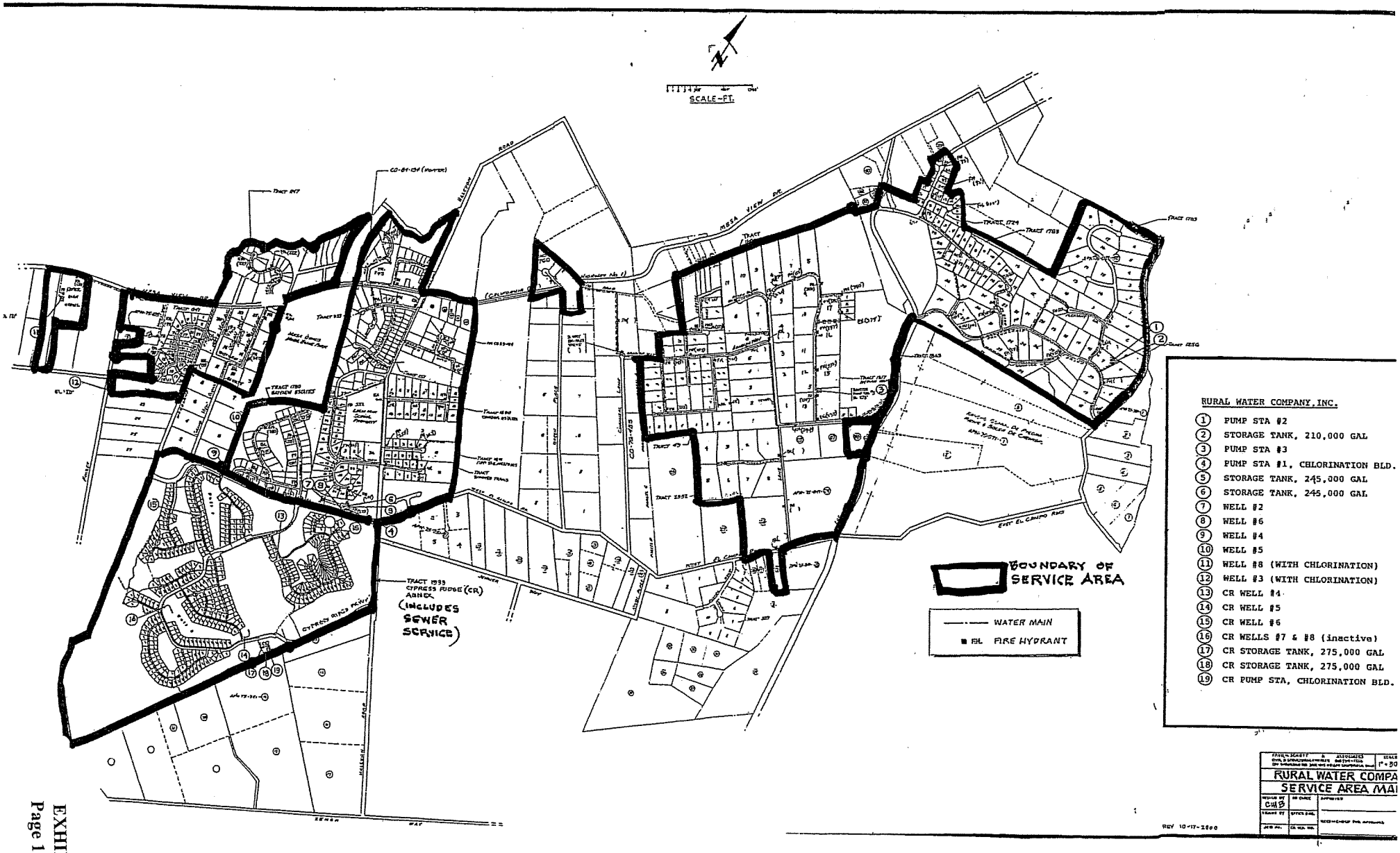
REVISED: 8/2004	Southern California Water Company	FIGURE
	Tanglewood System	

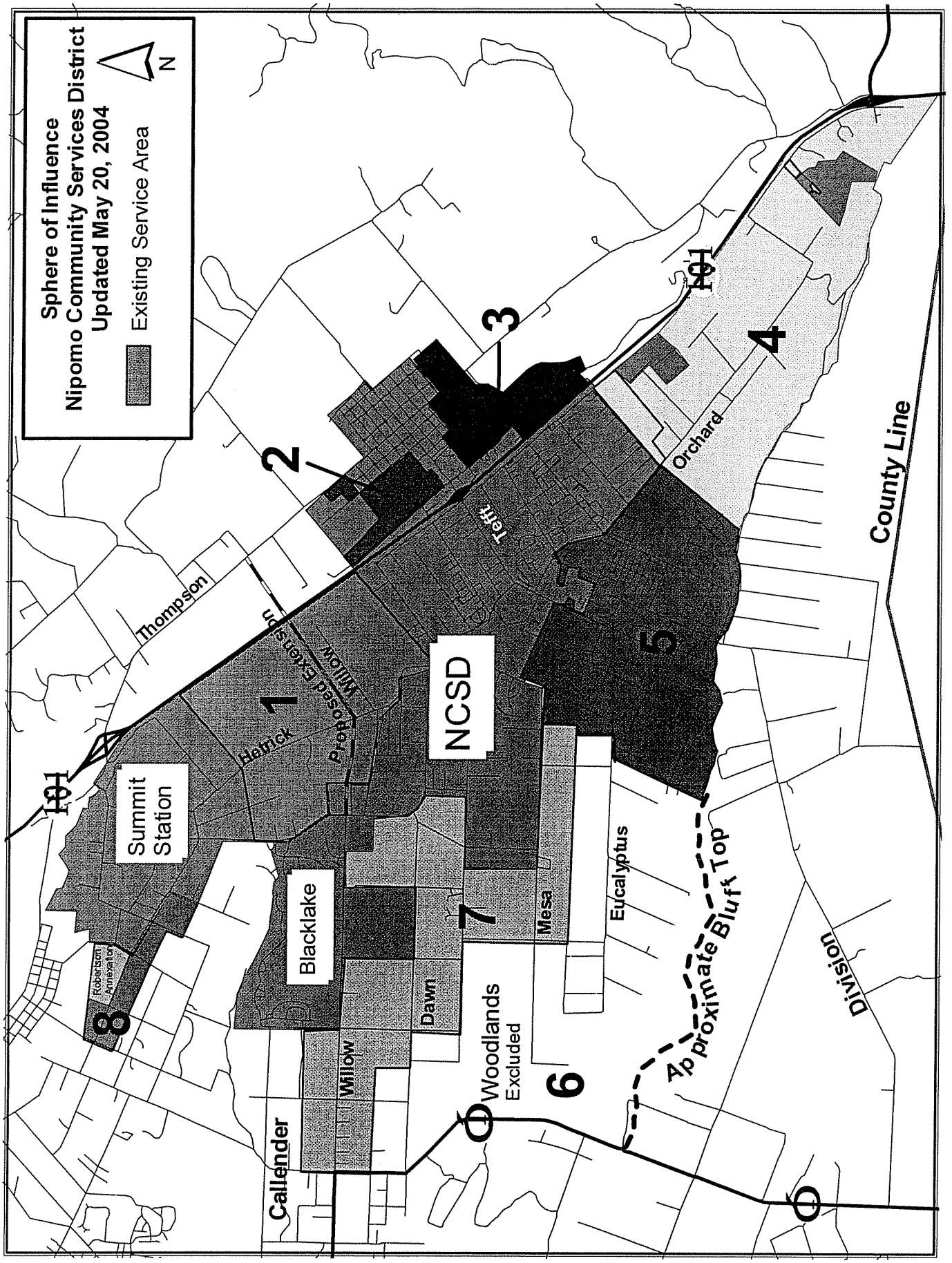


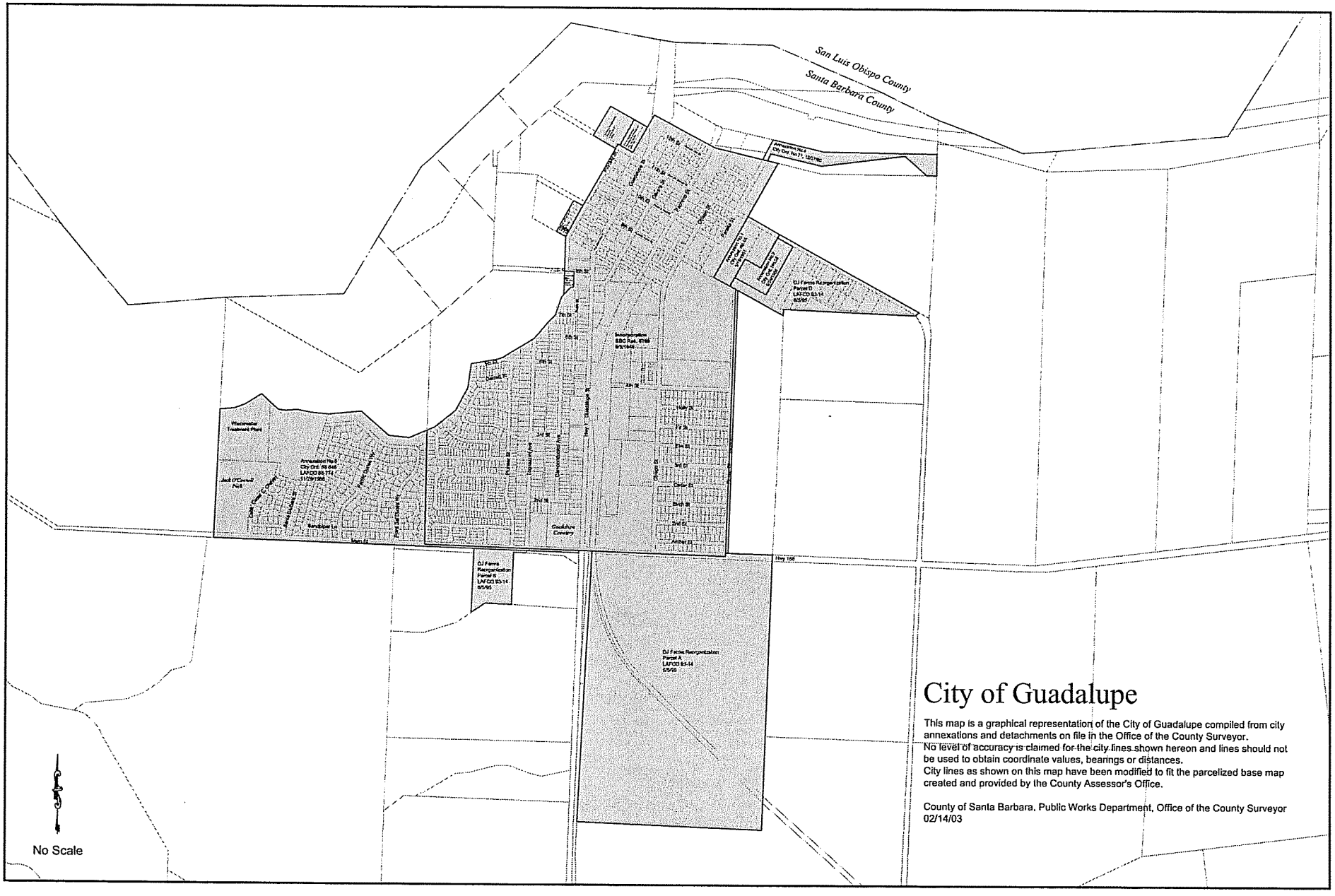
REVISED 8/2004

Southern California Water Company

Sisquoc System


SCALE-FT.
MESA VIEW DR.
TRACT 1993
CYPRESS RIDGE (CR)
ANNEX
(INCLUDES
SEWER
SERVICE)
BOUNDARY OF
SERVICE AREA
WATER MAIN
FIRE HYDRANT
RURAL WATER COMPANY, INC.
1 PUMP STA #2
2 STORAGE TANK, 210,000 GAL
3 PUMP STA #3
4 PUMP STA #1, CHLORINATION BLD.
5 STORAGE TANK, 245,000 GAL
6 STORAGE TANK, 245,000 GAL
7 WELL #2
8 WELL #6
9 WELL #4
10 WELL #5
11 WELL #8 (WITH CHLORINATION)
12 WELL #3 (WITH CHLORINATION)
13 CR WELL #4
14 CR WELL #5
15 CR WELL #6
16 CR WELLS #7 & #8 (inactive)
17 CR STORAGE TANK, 275,000 GAL
18 CR STORAGE TANK, 275,000 GAL
19 CR PUMP STA, CHLORINATION BLD.
RURAL WATER COMPA
SERVICE AREA MA
REV 10-17-2000


Sphere of Influence
Nipomo Community Services District
Updated May 20, 2004
Existing Service Area
N
1
2
3
4
5
6
7
8
NCSD
Summit Station
Blacklake
Woodlands
Excluded
Thompson
Hetrick
Proposed Extension
Willow
Tefft
Orchard
Mesa
Eucalyptus
Dawn
Willow
Callender
Robertson Annexation
Approximate Bluff Top
Division
County Line
101
101



City of Guadalupe

This map is a graphical representation of the City of Guadalupe compiled from city annexations and detachments on file in the Office of the County Surveyor.
No level of accuracy is claimed for the city lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.
City lines as shown on this map have been modified to fit the parcelized base map created and provided by the County Assessor's Office.

County of Santa Barbara, Public Works Department, Office of the County Surveyor
02/14/03

EXHIBIT D

List of Selected Excluded Parcels Nearby the Boundaries of New Urban Use Areas

103-070-004
107-300-007
107-300-008
107-300-012
128-056-024
128-094-018
128-094-019
128-094-020
128-094-021
128-094-023
128-094-024
128-094-029
128-094-031
128-095-001
128-095-002
128-095-003
128-095-004
128-095-006
128-095-008
128-096-001
128-096-002
128-096-003
128-096-004
128-096-006
128-096-009
128-098-005
128-099-001
128-100-001
128-100-003
128-100-020
128-100-021
128-100-022
128-100-027
128-100-028
128-100-029
128-100-030
128-100-031
128-101-010
128-101-012
129-100-008
129-110-020
129-120-001
129-120-023
129-151-029
129-151-031
129-151-032
129-151-033
129-180-010
129-180-011
129-210-017

EXHIBIT E

2002 Settlement Agreement between the Northern Cities and Northern Landowners

Santa Maria Valley Water Conservation District v. City of Santa Maria
Santa Clara County Superior Court Case No. CV 770214

NOSSAMAN, GUTHNER, KNOX & ELLIOTT, LLP
Frederic A. Fudacz, State Bar No. 50546
Henry S. Weinstock, State Bar No. 89765
Alfred E. Smith, State Bar No. 186257
445 South Figueroa Street, 31st Floor
Los Angeles, California 90071
Telephone: (213) 612-7800
Facsimile: (213) 612-7801

Attorneys for Defendants City of Arroyo Grande,
City of Grover Beach, City of Pismo Beach,
Oceano Community Services District

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF SANTA CLARA

SANTA MARIA VALLEY WATER CONSERVATION DISTRICT, a public entity, Plaintiff, v. CITY OF SANTA MARIA, et al., Defendants. AND ALL RELATED ACTIONS.	SANTA MARIA GROUNDWATER LITIGATION, LEAD CASE No. CV 770214 (Consolidated with CV 784900, 784921, 784926, 785509, 785511, 785515, 785522, 785936, 786971, 787150, 787151, 787152, 990738, 990739) **SETTLEMENT AGREEMENT BETWEEN NORTHERN CITIES, NORTHERN LANDOWNERS, AND OTHER PARTIES**

PARTIES AND EFFECTIVE DATE

This Agreement is entered into among the Cities of Arroyo Grande, Pismo Beach, Grover Beach and the Oceano Community Services District (collectively "Northern Cities"), owners/lessors of land located in the Northern Cities Area ("Northern Landowners"), and other parties who execute this Agreement. This Agreement is entered into as of April 30, 2002.

STIPULATIONS OF FACT

A. In 1997, the Santa Maria Valley Water Conservation District initiated this action, Santa Clara Superior Court Case Number CV 770214, consolidated with Case

Numbers 784900, 784921, 784926, 785509, 785511, 785515, 785522, 785936, 786971, 787150, 787151, 787152, 990738, and 990739 (the "Action"), to adjudicate groundwater rights in the Santa Maria Groundwater Basin;

B. Numerous parties have filed complaints and/or cross-complaints in the Action with respect to rights to produce water in the Santa Maria Groundwater Basin;

C. By Order dated December 21, 2001, the Court determined the geographic area constituting the Santa Maria Groundwater Basin ("Basin") and ruled that the Northern Cities Area (identified on the map attached hereto as Exhibit A) is within the Basin;

D. Under current water supply and demand conditions, the groundwater basin in the Northern Cities Area is in rough equilibrium, and groundwater pumping in the Northern Cities Area does not negatively affect water supplies in the remainder of the Basin;

E. For more than 30 years, there have been separate funding, management and usage of groundwater in the Northern Cities Area from groundwater in the Santa Maria Valley. For example, the Northern Cities and Northern Landowners have paid and are paying tens of millions of dollars for the construction and retrofit of the Lopez Reservoir, which benefits the Northern Cities Area; whereas the Twitchell Reservoir has been paid for by parties in the Santa Maria Valley who benefit from it.

F. The Northern Cities and Northern Landowners have agreed among themselves and do hereby reaffirm their agreement to cooperatively share and manage groundwater resources in the Northern Cities Area in accordance with a "Gentlemen's Agreement" that was originally developed in 1983 and amended thereafter. Said Agreement confers no rights on any third parties;

G. It is in the interest of all of the parties to this litigation that the parties settle their claims and potential claims on the basis of the continued separate funding, management, and usage of the waters conserved by the Lopez Reservoir in the Northern Cities Area and by the Twitchell Reservoir in the remainder of the Basin, to preserve and protect water resources in those separate management areas.

H. This Settlement Agreement is also intended to provide the parties with

advance notice of changes in the groundwater conditions in the Northern Cities Area and Nipomo Mesa, as water supplies and demands may change with time. (The Nipomo Mesa is southeast of the Zone 3 Line, and north of the Santa Maria River.); and

I. The parties to this Settlement Agreement have agreed to settle and resolve their cross-claims and potential cross-claims on the conditions set forth below:

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS

1. Separate Management Areas. Subject to the conditions set forth below, water resources and water production facilities in the Northern Cities Area shall continue to be independently managed by the Northern Cities, the San Luis Obispo County Flood Control and Water Conservation District, and the Northern Landowners, with the intention of preserving the long-term integrity of water supplies in the Northern Cities Area. For example, the Northern Cities and Northern Landowners will not be responsible to pay for any of the costs of the Twitchell Reservoir; and the parties outside of the Northern Cities Area (Zone 3) shall not be responsible to pay any of the costs relating to the Lopez Reservoir.

2. Effects on Litigation. Except as provided below, the parties in the Northern Cities Area, on the one hand, and the other parties hereto, on the other hand, agree not to pursue or assert any claims against one another relating to water rights in the Santa Maria Groundwater Basin. Each of the Northern Landowners who execute this Agreement will be deemed to have been served by each of the water purveyor parties in this action who have signed this Agreement with cross-complaints seeking declaratory and other relief in the form of the cross-complaints previously filed by the City of Santa Maria; and each of the Northern Landowners who execute this Agreement shall be deemed to have served and filed answers to said cross-complaints denying all of their material allegations and asserting all available affirmative defenses. The Northern Cities and Landowners shall continue to be subject to reasonable discovery requests that are relevant to the remaining issues in the case.

3. Court Approval. This Settlement Agreement shall be submitted to the Court for approval. If approved, this Settlement Agreement shall be included in and attached as an exhibit to the final judgment in this Action, and the Northern Cities Area shall be treated

separately under the judgment in accordance with the provisions set forth herein. Paragraphs 4 and 7-20 of this Agreement shall take effect only upon Court approval of this Agreement.

4. Consent to Continuing Jurisdiction. Prior to this Agreement, there has been no adjudication of the water rights of the Northern Cities, Northern Landowners, or any other party, other than the determination of the boundaries of the Basin. Except ¶ 5 below, nothing in this Agreement authorizes the Court to restrict or affect the right of any party to pump, divert, use, or store groundwater or surface water without first according that party all of its substantive, procedural, and due process rights under constitutional, statutory, and common law requirements. Subject to the above and to the limitations of paragraphs 5-6 below, the parties hereto agree that the Court reserves and retains full jurisdiction, power, and authority over the Northern Cities Area, the Northern Cities, and the Northern Landowners, to enable the Court, upon motion of any party, to make such further orders or directions (1) to interpret, enforce, amend, or amplify any of the provisions of this Agreement; (2) to enforce, protect, or preserve the rights of the respective parties, consistent with the rights herein decreed; or (3) to issue such additional orders and/or injunctions to prevent injury to any party that might result from any material adverse change in the availability or quality of the water supplies in the Northern Cities Area, or the Nipomo Mesa Area, or any part of the Basin.

5. Reaffirmation of Gentlemen's Agreement. The Northern Cities and Northern Landowners hereby reaffirm their Agreement to cooperatively share and manage groundwater resources in the Northern Cities' Area in accordance with their AGREEMENT REGARDING MANAGEMENT OF THE ARROYO GRANDE GROUNDWATER BASIN, aka the "Gentlemen's Agreement." (A copy of the current version of this Agreement is attached hereto as Exhibit B.) In particular, the Northern Cities and the Northern Landowners agree with each other to continue to divide the safe yield of groundwater in the Northern Cities' Area, including any increases or decreases of the safe yield, in accordance with ¶ 1 of Exhibit B hereto. Said water-sharing Agreement and this paragraph 5 shall only be binding on and enforceable by the Northern Cities and Northern Landowners.

6. No Effect on Water Rights. Except as provided in ¶ 5 above, nothing in

this Agreement shall be construed to create, eliminate, increase, or reduce any substantive right of any party to pump, divert, use, or store groundwater or surface water; and nothing in this Agreement shall be construed to prove or disprove, directly or indirectly, any element of prescriptive rights to groundwater.

TECHNICAL OVERSIGHT COMMITTEE

7. Formation. A Technical Oversight Committee (TOC) shall be established to carry out the ongoing monitoring and analysis program ("MAP," see below).

8. Composition. The TOC shall be comprised of two voting representatives of the Northern Cities and two voting representatives of parties providing public water service on the Nipomo Mesa ("Mesa Parties," which include the Nipomo Community Services District, Rural Water Company and Southern California Water Company, and their successors or assigns). At least one of the two representatives from the Northern Cities and the Mesa Parties shall be technically qualified to carry out the MAP duties described below. The other TOC representatives may be technical, policy, managerial, or legal in nature. The voting representatives shall attempt to operate by consensus. However, if consensus cannot be achieved, TOC decisions may be made by majority vote of the voting representatives.

9. Responsibility. The TOC shall implement and carry out the MAP.

10. Meetings. The TOC shall meet at least semi-annually for the first five (5) years of implementing the MAP, and at least annually thereafter.

11. Procedures of the TOC. The TOC shall establish procedures for the fulfillment of its responsibilities under this Agreement.

MONITORING AND ANALYSIS PROGRAM

12. Purpose and Legal Effect. A monitoring and analysis program (MAP) shall be established to provide ongoing data collection and analysis of water supplies and demands in the Northern Cities Area and the Nipomo Mesa. The purpose of the MAP is to regularly assess the potential impact on the water supplies on either side of the Zone 3 boundary line resulting from changing conditions regarding the water supplies and demands in the Northern Cities Area and the Nipomo Mesa, and the resulting changes in the surface and groundwater

flow conditions adjacent to and across the Zone 3 boundary line.

13. The Water Management Plans and the Annual Reports (collectively "Plans") prepared pursuant to this Agreement are for information purposes only. They shall not independently create in the party(ies) preparing them any affirmative obligation to act, or implement any part of the Plans, nor shall they independently provide any other party or the Court any right to compel Action or enforce any obligation. However, any party may challenge the sufficiency of any Plan produced pursuant to this Agreement by showing that it has not been completed in substantial compliance with the requirements of this Agreement, except that any challenge to a Water Management Plan created pursuant to Paragraph 15 below may only be undertaken in a proceeding and under the standards set forth under Water Code sections 10650, *et seq.*

14. The Parties shall be excused from the preparation of the Plans required in this Agreement when the Court enters a final judgment in this litigation.

15. Water Supply Planning and Reports. Within two years after Court approval of this Settlement, each of the Northern Cities and the Mesa Parties shall evaluate their current and future water supplies and prepare a Water Management Plan. The Water Management Plan shall generally include the content and analysis described in Water Code sections 10630 through 10635, and shall also include an analysis of the ongoing availability of groundwater in the Northern Cities Area given the changing urban and agricultural water demands in the Northern Cities Area. Each of the Northern Cities and the Mesa Parties shall update and revise their previously prepared Water Management Plans prior to December 31, 2006, and every five years thereafter; provided however, that this requirement to prepare a Water Management Plan is not intended to expand or impose upon any party rights or obligations with respect to such Water Management Plans, other than those specifically stated in this Section. Copies of the Water Management Plans shall be provided to the Northern Cities, the Mesa Parties, the Santa Maria Valley Water Conservation District and the City of Santa Maria.

16. Monitoring and Data Collection. The TOC shall implement a MAP that

shall include the data collection and analysis elements described below, and any other monitoring and analysis, if the TOC deems them appropriate and cost-effective to fulfill the purpose of this Agreement. The data collection and database development shall be created so that the data can be shared and transferred between the TOC members for review and evaluation in electronic format. The MAP shall include the following elements.

a. Design. Within six months after Court approval of this Agreement, the TOC shall review existing data to select existing wells to include in the MAP. The TOC shall define the list of wells to be monitored and specific information to be obtained from each well, such as groundwater levels and groundwater quality constituents. The MAP shall also include data collection to provide for early detection of seawater intrusion and collection of other related data (e.g., deliveries of supplemental water, precipitation, discharge of treated waste water, etc.) as are necessary for preparation of the analyses and reports required by this Agreement. To the extent practical to adequately meet the purpose of this Agreement, the TOC shall use existing facilities, rather than new facilities, in the design of the MAP.

b. Data Collection. As soon as the design of the MAP is complete, the TOC shall commence collection of groundwater monitoring data, with data collection to occur at intervals determined by the TOC.

c. Changing Groundwater Use Patterns. The TOC may also monitor the groundwater pumping patterns in the Northern Cities Area and the Nipomo Mesa. The monitoring shall be based on either observed changes (municipal pumping) or estimated changes (private or agricultural pumping). The TOC may review the changes in pumping to assess the potential impacts on groundwater flow conditions along the Zone 3 boundary line and include its findings in the Annual Report, described below.

d. MAP Assessment. Within two years of Court approval of this Agreement, and annually thereafter, the TOC shall evaluate data from the monitoring program, assess data gaps, and make recommendations to revise the monitoring program, including the use of other wells or installation of new monitoring wells, as appropriate. The TOC may recommend to the Northern Cities and the Mesa Parties or to the Court any additional

monitoring of hydrologic characteristics that may be prudent and cost-effective to meet the goals of this Agreement, to provide a higher level of confidence in the data and analyses than that which is based on existing wells, stream gages, etc.

17. Annual Report. Based upon the MAP and other relevant information, the TOC shall annually prepare a Report on Water Supply and Groundwater Conditions (Annual Report) for the Northern Cities Area and Nipomo Mesa. The Annual Report shall be filed with the Court, posted on the Court's website, and served on the Northern Cities, the Mesa Parties, the Santa Maria Valley Water Conservation District, and the City of Santa Maria. The first Annual Report shall be completed, filed and served, as described in the previous sentence, on or before the second (2nd) anniversary of this Court's approval of this Agreement, and annually thereafter. The Annual Report shall assess the adequacy of the water supplies in each area in comparison to the corresponding demands, and shall include an analysis and discussion of the estimates of the volume of groundwater in storage, an updated water budget assessment, and anticipated water supply constraints, if any.

18. Cost Sharing. Unless otherwise agreed, each of the Northern Cities and the Mesa Parties shall bear their own costs in participating in the TOC, gathering and analyzing data, and producing any written documents as may be required by this Agreement. To the extent the construction of new facilities may be required to implement this Agreement, the Northern Cities and the Mesa Parties shall develop an equitable cost sharing agreement. The parties will use their best efforts to minimize the costs of compliance in undertaking the obligations of this Agreement.

19. Cooperation of all Parties. All parties to this litigation and this Agreement shall provide any documents, information, access to wells, and well data, and take any other actions reasonably requested to implement the MAP, subject to prior protective orders and reasonable confidentiality restrictions.

ADVANCE NOTICE OF INCREASED WATER PRODUCTION

20. The Mesa Parties, the Northern Cities, and the Northern Landowners shall provide prior written notice to each other of their intent to drill new wells, materially increase

the production capacity of existing wells or take over the use of an existing well, if the well is to be used for water production (not monitoring). The notice must be served prior to or concurrent with the initiation of environmental review under the California Environmental Quality Act (CEQA), if required, or at least ninety (90) days prior to the construction of a new well or the takeover or increase in capacity of an existing well. This ninety (90) day notice requirement shall not apply in the event of emergencies, such as replacement of a collapsed well, in which case notice will be provided as promptly as possible. The notice should provide a description of the location, intended capacity and use of the well.

GENERAL PROVISIONS

21. No Third Party Beneficiary. Nothing in this Agreement, whether express or implied, shall confer any rights or remedies under this Agreement on any persons other than the Parties to it and their respective successors and assigns. Nothing in this Agreement shall relieve or discharge the obligation or liability of any third parties to any Party to this Agreement.

22. Legal Capacity. The Parties warrant that all necessary approvals and authorizations have been obtained to bind them to all terms of this Agreement, and further warrant that the persons signing have authority to sign on behalf of their respective Parties.

23. Amendment. No amendment to this Agreement will be binding unless it is either signed by an authorized representative of all of the Parties or approved by the Court.

24. Governing Law. This Agreement will be construed in accordance with, and governed by, the laws of the State of California as applied to contracts that are executed and performed entirely in California.

25 Severability. If any provision of this Agreement is held invalid or unenforceable by any court, it is the intent of the Parties that all other provisions of this Agreement be construed so as to remain fully valid, enforceable, and binding on the Parties.

26. Counterparts. This Agreement may be executed in one or more counterparts, each of which will be considered an original, but all of which together will constitute one and the same instrument. Any party that is currently a party to this Action and any Northern Landowner may become a party to this Agreement by agreeing in writing to be

bound by its terms at any time prior to the entry of judgment in this Action. Future signatories to this Agreement shall sign the signature pages attached hereto as Exhibits C (for Northern Landowners) or D (for other parties to this litigation) to confirm their acceptance of its terms.

27. Merger Clause. This Agreement supersedes and replaces all prior settlement negotiations and agreements, written or oral. It is the complete, final, and exclusive statement of the parties' agreement. The parties hereto acknowledge that no party, agent or attorney of any party has made any promise, representation or warranty whatsoever, express or implied, not contained herein, to induce them to execute this Agreement. Each party has executed this Agreement in reliance on the advice of his/her or its own attorney.

Dated: April __ , 2002

CITY OF ARROYO GRANDE

By: *Signature Page Filed with Court*
Title: _____

Dated: April __ , 2002

CITY OF GROVER BEACH

By: *Signature Page Filed with Court*
Title: _____

Dated: April __ , 2002

CITY OF PISMO BEACH

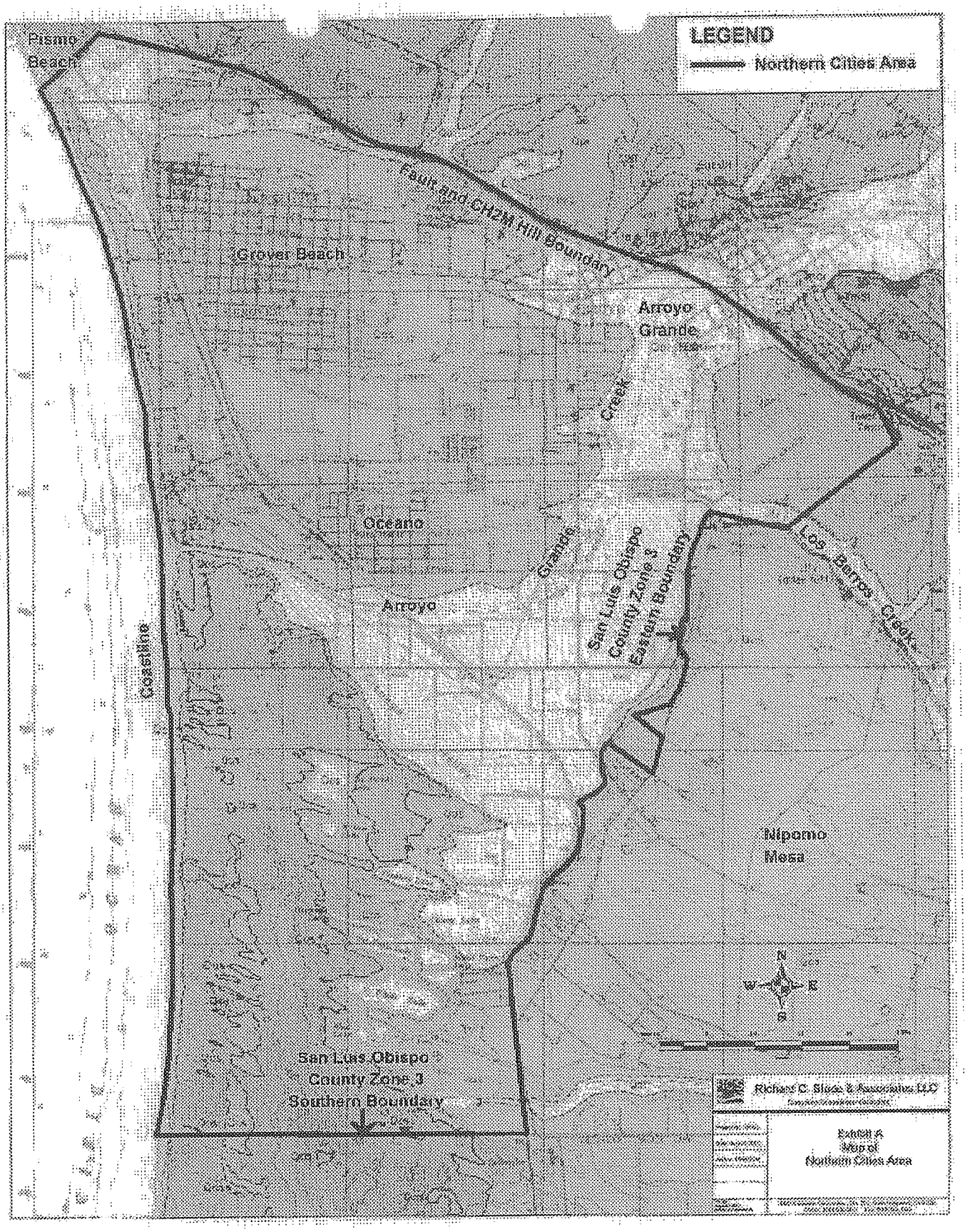
By: *Signature Page Filed with Court*
Title: _____

Dated: April __ , 2002

OCEANO COMMUNITY SERVICES DISTRICT

By: *Signature Page Filed with Court*
Title: _____

EXHIBIT E
Page 10 of 18


LEGEND
Northern Cities Area
Pismo Beach
Fault and CHZM Hill Boundary
Grover Beach
Arroyo Grande
Creek
Oceano
Grande
Arroyo
San Luis Obispo County Zone 3 Eastern Boundary
Los Berros Creek
Coastline
Nipomo Mesa
N
W
E
S
San Luis Obispo County Zone 3 Southern Boundary
Richard C. Slade & Associates LLC
Exhibit A
Map of
Northern Cities Area

AGREEMENT REGARDING
MANAGEMENT OF THE
ARROYO GRANDE GROUNDWATER BASIN

A. Parties

This Agreement is entered into among the Cities of Arroyo Grande, Pismo Beach, Grover Beach and the Oceano Community Services District (collectively referred to hereinafter as "Parties" or "Urban Parties").

B. Recitals

WHEREAS, in January 1983, a Technical Advisory Committee consisting of representatives of Arroyo Grande, Grover City, Pismo Beach, Oceano Community Services District, Port San Luis Harbor District, the Farm Bureau, Avila Beach County Water District and the County of San Luis Obispo ("Committee") determined in reliance on the 1979 Report of the Department of Water Resources entitled Ground Water in the Arroyo Grande Area that the safe yield of the Arroyo Grande Groundwater Basin ("Basin") is 9,500 acre feet per year;

WHEREAS, in or about February 1983, the Parties agreed to enter into a voluntary groundwater management plan to provide for effective management of groundwater resources in the Basin through which each party was given sufficient water to meet its needs as then projected; such needs being met in part by the City of Arroyo Grande foregoing 358 acre feet per year of its historical use and the City of Pismo Beach foregoing 20 acre feet per year of its historical use;

WHEREAS, this management plan provided a reasonable division of the safe yield of the Basin without court imposed groundwater basin adjudication;

WHEREAS, on February 9, 1983, the terms of the management plan were incorporated into Resolution No. 83-1 of the South San Luis Obispo County Water Association Approving the Recommendations of the Committee relating to the Basin (the "Resolution");

WHEREAS, each of the Parties have adopted individual resolutions endorsing the provisions of the Resolution;

WHEREAS, the Parties have generally complied with the terms and conditions of the Resolution; and

WHEREAS, general compliance with the Resolution has proven to be a fair and efficient means of managing and protecting groundwater resources in the Basin as confirmed by the revised final draft report prepared by the Department of Water Resources entitled, Water Resources of Arroyo Grande and Nipomo Mesa, January 2000.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. Division of Safe Yield.

a. The Parties agree to a division of the safe yield of the Basin as follows:

Applied Irrigation	5,300 acre feet
Subsurface flow to ocean	200 acre feet
Urban Use:	
City of Arroyo Grande	1,202 acre feet
City of Grover Beach	1,198 acre feet
City of Pismo Beach	700 acre feet
Oceano Community Services District	900 acre feet

b. Any increase or decrease in the safe yield of the Basin attributable to changed operation of the Lopez Reservoir, or any other cause, shall first be divided between the Urban Parties and applied irrigation on a pro rata basis using the formula from the 1983 Gentlemen's Agreement, fifty-seven percent (57%) to applied irrigation and forty-three percent (43%) to the Urban Parties. Thereafter, the first 378 acre feet per year of any increase of safe yield allocated to the Urban Parties shall be divided between the City of Arroyo Grande and the City of Pismo Beach on a pro rata basis (95% to Arroyo Grande and 5% to Pismo Beach).

c. The entitlements of each respective Urban Party may be increased based upon the conversion of irrigated agricultural lands to urban use. An Urban Party to this Agreement may increase its entitlement for urban use by a factor of three (3) acre feet per acre per year minus the calculated urban usage per acre per year upon the conversion of irrigated agricultural land to urban usage. "Irrigated agricultural land" shall be that land within the corporate limits of the party that was identified as irrigated agricultural land in the 1979 Department of Water Resources Report entitled Ground Water in the Arroyo Grande Area. This agricultural conversion factor may be applied to all acreage converted to urban use from January 1, 1983, throughout the life of this Agreement. Such an agricultural conversion factor is in the best interests of the overall Basin in that it will not result in any decline in the groundwater service over time. The Parties agree that no water should be converted to urban use within the Basin without establishing that it was irrigated agricultural land as defined in the 1979 Department of Water Resources Report, Groundwater in the Arroyo Grande Area.

d. The Parties agree and understand that the safe yield figures utilized in this Agreement are a product of the 1979 Department of Water Resources Report regarding the Arroyo Grande Basin as adjusted by the 1983 ad hoc Technical Advisory Committee and that the division of the resources is based upon the historical use of each party and a practical accommodation of each Party's needs as they existed at the time of the adoption of the 1983

agreement. It is agreed that the Parties will meet and confer on issues related to safe yield and division of existing water resources upon the final adoption of the new Arroyo Grande Basin study performed by the Department of Water Resources, which is currently in draft.

2. Shared Information and Monitoring: The Urban Parties to this Agreement shall freely share information with each other regarding each of their respective uses of groundwater in the Basin, including all pumping data such as amounts of water extracted, well static water levels, and water quality. The Urban Parties to this Agreement shall meet on a quarterly basis to share this information and to discuss water usage and impacts upon the Basin. The Parties shall conduct a review of water usage and the impacts on Basin hydrology in 2010 and 2020.

3. Term:

a. This Agreement shall bind the Parties indefinitely absent a significant change of circumstances as to available water, water quality, or hydrogeology of the Arroyo Grande Basin. A significant change of circumstances shall allow any Party to opt out of this Agreement if the significant change of circumstances put that Party at risk of not being able to meet its potable water needs.

b. Significant changed circumstances shall include changes within the Basin or outside of the Basin, including but not restricted to, a change in the Lopez Reservoir safe yield or an increase in Lopez Reservoir discharges for conservation purposes that threatens the ability of the Urban Parties to obtain their contractual allotments under their Lopez agreements, or a significant change in groundwater yields or quality, or a reduction in foreign water imported by any Urban Party. The Parties recognize that rainfall within the watershed is the most significant factor affecting the yield of Lopez Reservoir and the Basin.

c. The Parties shall revisit the issue of the allocation of groundwater resources within the Arroyo Grande Basin in 2010 and 2020 in the context of the review provided for in section 2 of this Agreement. The Parties shall make new allocations of groundwater resources at that time if circumstances justify it and if no harm will result to other groundwater users. Priority shall be given to reallocation of historical use of groundwater to Arroyo Grande and Pismo Beach that those agencies chose not to pursue in the entering into of the original Gentlemen's Agreement in 1983 should such new allocations be made.

d. A Party may opt out of this Agreement if significant changed circumstances arise as defined in this section. Such a party shall give all other parties to the agreement not less than six months written notice of its intention to opt out. The written notice shall describe in detail the significant changed circumstances upon which the Party bases its election to opt out of the Agreement.

4. Mediation Agreement: The Parties agree to mediate any disputes that arise out of the Parties' performance under this Agreement, or the interpretation of the terms of this Agreement, prior to instituting any litigation against or between any other Party to this Agreement. Should a Party institute litigation without first offering in good faith to mediate any such dispute, any Party may move for an order compelling mediation and staying the proceedings in the litigation until

after mediation has been completed. The prevailing party on a motion to compel mediation shall be entitled to recover its attorney's fees against any resisting party or any party who filed litigation without first making a good faith attempt to mediate the dispute. This mediation requirement shall not apply where the health and safety of any of the Parties, or any of the Parties' residents, is threatened and they must seek, and have obtained, preliminary relief for the purposes of preserving health and safety.

5. No Third Party Beneficiaries: The Parties are entering into this Agreement in order to reasonably allocate existing groundwater resources between themselves and not to benefit any third parties. This agreement shall only be enforceable between the Parties themselves. This Agreement does not create any right enforceable by any person or entity that is not a party to this Agreement.

6. General Provisions:

a. The Parties warrant that all necessary approvals and authorizations have been obtained to bind them to all terms of this Agreement, and further warrant that the persons signing have authority to sign on behalf of their respective Parties.

b. Written notice under this Agreement shall be given by placing such notice in the first class mail, postage prepaid, or by hand delivery to the current address of the office of any Party to this Agreement.

c. No amendment to this Agreement will be binding on any of the Parties unless it is in writing and signed by an authorized representative of all of the Parties.

d. This Agreement will be construed in accordance with, and governed by, the laws of the State of California as applied to contracts that are executed and performed entirely in California.

e. If any provision of this Agreement is held invalid or unenforceable by any final judgment, it is the intent of the Parties that all other provisions of this Agreement be construed to remain fully valid, enforceable, and binding on the Parties.

f. This Agreement may be executed simultaneously in one or more counterparts, each of which will be considered an original, but all of which together will constitute one and the same instrument.

g. The Parties represent that prior to the execution of this Agreement, they consulted independent legal counsel of their own selection regarding the substance of this Agreement.

WHEREFORE, the Parties publicly consent to the terms and conditions of this Agreement by executing the same as set forth below.

Dated: _____, 2001. City of Arroyo Grande

By: _____

Print Name and Title:_____

Dated: _____, 2001. City of Pismo Beach

By: _____

Print Name and Title:_____

Dated: _____, 2001. City of Grover Beach

By: _____
Richard W. Neufeld, Mayor

Dated: _____, 2001. Oceano Community Services District

By: _____

Print Name and Title:_____

EXHIBIT C – NORTHERN LANDOWNER SIGNATURE PAGE FOR SETTLEMENT AGREEMENT

1. I am the owner and/or lessor (*circle one or both*) of at least ten acres of agricultural land in the Northern Cities Area (the area so designated on Exhibit A to this Settlement Agreement).

2. Describe the parcel(s) of agricultural land that you own or lease:

(a) Address(es): _____

(b) Assessor's Parcel Number(s): _____

(c) Number of acres of agricultural land that you own or lease: _____

(d) Approximate number of acre-feet of water pumped annually: _____.

3. I have read this Settlement Agreement. I have obtained such legal advice or other counsel regarding its terms as I deem appropriate. I understand and agree to its terms.

Dated: _____, 2002

Print Name of Owner/Lessor: _____

Title of Signer: _____

Signature: *Signature Page Filed with Court*

EXHIBIT D – SIGNATURE PAGE FOR OTHER PARTIES – WATER PURVEYORS AND LANDOWNERS OUTSIDE NORTHERN CITIES AREA

1. I am a party to the Santa Maria Groundwater Litigation, or the legal representative of such a party.

2. I have read this Settlement Agreement. I have obtained such legal advice or other counsel regarding its terms as I deem appropriate. I understand and agree to its terms.

Dated: _____, 2002

Print Name of Party(ies): _____

Title of Signer: _____

Signature: *Signature Page Filed with Court*

EXHIBIT F

Agreement Among City of Santa Maria, Southern California Water Company and City of Guadalupe Regarding the Twitchell Project and the TMA

Santa Maria Valley Water Conservation District v. City of Santa Maria
Santa Clara County Superior Court Case No. CV 770214

SANTA MARIA VALLEY PUBLIC WATER PURVEYOR WATER MANAGEMENT AGREEMENT

The CITY OF SANTA MARIA ("Santa Maria"), the CITY OF GUADALUPE ("Guadalupe"), and SOUTHERN CALIFORNIA WATER COMPANY ("SCWC") enter into this SANTA MARIA VALLEY PUBLIC WATER PURVEYOR WATER MANAGEMENT AGREEMENT ("Agreement") on this ___ day of _____. Santa Maria, Guadalupe and SCWC are referred to individually as a "Party" and collectively as the "Parties".

RECITALS

A. Santa Maria is a Charter City, providing potable water service to customers within and adjacent to its municipal boundaries.

B. Guadalupe is a general law city, providing potable water service to customers.

C. SCWC is an investor-owned public utility within the meaning of Public Utilities Code section 2400 *et seq.* and operates pursuant to the California Public Utility Act, Public Utilities Code section 200 *et seq.* SCWC provides potable water service to customers within its certificated service area in Santa Barbara County, generally referred to as the "Santa Maria Customer Service Area," which includes four unincorporated areas of Santa Barbara County, commonly known as "Orcutt," "Tanglewood," "Lake Marie," and "Sisquoc," and one unincorporated area in San Luis Obispo County, commonly referred to as the "Nipomo Mesa."

D. On July 20, 2004, Santa Maria and SCWC entered into a Water Management Agreement ("2004 Agreement"), which formalized certain efforts to coordinate the provision of potable water service within their respective service areas. The 2004 Agreement is incorporated herein by reference and remains in full force and effect and is attached as Exhibit A.

E. The Parties have historically relied on local groundwater to provide potable water service to their respective customers and hold rights to pump groundwater ("Groundwater Rights") from the Santa Maria Groundwater Basin ("Basin").

F. The Parties also each hold contracts to receive water from the State Water Project ("SWP Entitlement," collectively, and "Santa Maria SWP Entitlement," "Guadalupe SWP Entitlement," or "SCWC SWP Entitlement," individually). Santa Maria's contract is for 17,800

acre feet, SCWC's contract is for 550 acre feet and Guadalupe's contract is for 610 acre feet. Collectively, the SWP Entitlement totals 18,960 acre-feet per year.

G. The Parties are also litigants in the Santa Maria groundwater basin (*Santa Maria Valley Water Conservation District v. City of Santa Maria, et al.*, Superior Court, County of Santa Clara, Lead Case No. CV 770214 ("Basin Adjudication").

H. The Parties, along with a large number of other litigants, intend to enter into a stipulation ("Stipulation") which will settle the Basin Adjudication among the stipulating parties.

I. This Agreement is that agreement described as Exhibit F in the Stipulation.

NOW THEREFORE, in consideration of the foregoing recitals and the promises and covenants contained herein, the Parties agree as follows:

Section 1. **Definitions.** The terms used in this Agreement shall have the same definition as provided in the Stipulation, unless expressly provided otherwise in this Agreement.

Section 2. **Purpose.** The purpose of this Agreement is to provide the mechanism through which the Parties shall meet their obligations as intended in the Stipulation, through that certain agreement designated as Exhibit F.

Section 3. **Term.** This Agreement shall be effective concurrently with and on the same terms as the Stipulation, and shall remain in effect concurrent with the Stipulation.

Section 4. **Twitchell Yield.**

4.1 Division. The Parties agree that the 80% of the 32,000 acre-feet of Twitchell Yield shall be allocated as follows: Santa Maria 14,300 acre-feet; Guadalupe 1,300 acre-feet and SCWC 10,000 acre-feet. The Parties acknowledge that the remaining 20% of the Twitchell Yield (6,400 acre-feet) is allocated to the Overlying Owners within the District who are Stipulating Parties, subject to the terms of the Stipulation.

4.2 Transfer of Twitchell Yield. The Parties agree that any proposed transfer of Twitchell Yield to one of the Parties shall be made available to all Parties. Each Party shall be given 30 days advance notice to elect to participate in any proposed transfer. The amount of transferred Twitchell Yield shall be divided between the Parties participating in the transfer in proportion to those Parties' then existing Twitchell Yield. If only one Party participates in the transfer, that Party shall be entitled to the full amount of transferred Twitchell Yield.

Section 5. Twitchell Management Authority.

5.1 All decisionmaking of the TMA shall be conducted, to the extent reasonably practical, on a consensus basis. Provided, however, if consensus cannot be achieved, TMA decisions shall be made by majority vote. Unless otherwise specified, the weight of each Party's voting rights shall be equivalent to its then-existing Twitchell Yield.

5.2 The Parties will work with the other Twitchell Participants to develop rules and regulations governing the TMA.

5.3 Budget. Each Stipulating Party holding Twitchell Yield shall be obligated to fund the TMA in proportion to that Party's then existing Twitchell Yield.

5.3.1 The TMA shall establish its members' funding obligations through a duly adopted budget, which shall project the TMA funding needs in 3-5 year increments, as it deems necessary to meet its obligations to preserve Twitchell Yield. Any TMA budget shall be adopted at least 18 months in advance of its intended implementation to provide adequate time for SCWC to secure PUC approval to fulfill its financial obligations as a member of the TMA. The Parties will to work cooperatively to achieve consensus on the TMA operating budget. If Santa Maria and SCWC are unable to agree on the operating budget, SCWC shall grant Santa Maria a proxy for purposes of the TMA vote on the operating budget. If SCWC grants such a proxy and an operating budget is subsequently approved, SCWC retains the right to challenge any such operating budget through the Court's reserved jurisdiction provided in the Stipulation. SCWC's obligations with respect to any such operating budget is subject to final approval by the PUC.

5.3.2 Consistent with Section V(D)(3)(c) of the Stipulation, the TMA's annual budget for the first five years following PUC approval of the Stipulation shall be as provided in Exhibit B to this Agreement. As provided in Exhibit B, the TMA budget shall include anticipated costs necessary to fund:

5.3.2.1 The Management Area Engineer activities for the Valley Management Area, including the implementation of the Valley Management Area Monitoring Program and the associated preparation of the Annual Report; and

5.3.2.2 The preparation and implementation of the Twitchell Project Manual; and

5.3.2.3 The funding of Twitchell Project operations and capital funds that the TMA determines are necessary to preserve the Twitchell Yield. The requirements for the Twitchell operational fund shall take into account the amount collected by the District from its current operation and maintenance assessment. The Twitchell capital fund shall consist of any unused revenues from the Twitchell operating fund, plus other funds necessary to implement approved Capital Improvement Projects.

5.4 Capital Improvement Projects.

5.4.1 The Parties agree that if one Party proposes a TMA Capital Improvement Project, that Party shall make available to the other Parties the opportunity to participate in the funding of the TMA Capital Improvement Project in proportion to the Parties' share of Twitchell Yield.

5.4.1.1 If a Party chooses not to participate in the funding of the TMA Capital Improvement Project, and that Party's participation is required to implement the Project, the Parties may petition the Court to resolve the issue on an expedited basis.

5.4.1.2 If a Party chooses not to participate in the funding of the TMA Capital Improvement Project, and that Party's participation is not required to implement the Project, the Party or Parties choosing not to participate in the Project shall grant the Party proposing the Project a proxy for purposes of the TMA vote to approve the Project, so long as the proposed Project will not adversely affect a Party's share of Twitchell Yield or otherwise cause material injury to a Party.

5.4.1.3 If fewer than all Parties participate in the funding of a TMA Capital Improvement Project, the Parties who participate in the funding of the Project shall be entitled to the benefits received from the Project in proportion to their financial contribution.

5.4.2 If an emergency situation exists such that a TMA Capital Improvement Project is necessary to abate the emergency, the Parties may petition the Court for an order approving the Project on an expedited basis.

Section 6. **<u>New Urban Uses - SCWC</u>.** The 2004 Agreement is expressed modified only as follows:

6.1 All new customers of SCWC, or existing customers proposing to increase their water use through a change in land use requiring a discretionary land use permit or other form of land use entitlement, as specified in Section X(D)(2) of the Stipulation ("SCWC Project

Proponents") shall provide Supplemental Water to offset the demand associated with that prospective use, through the protocol provided in the 2004 Agreement. The entities that have entered into the Reservation/Purchase Agreements identified on Exhibit C to this Agreement and Exhibit B to the 2004 Agreement are deemed to have satisfied the requirements of this Section and are exempt from the requirements of Section 6.2, below.

6.2 In addition to the fee paid to secure Supplemental Water pursuant to the 2004 Agreement, an additional 20% shall be charged to the SCWC Project Proponent by Santa Maria and shall be placed into either the Twitchell operational fund or the Twitchell capital fund. That incremental charge deposited in the applicable fund, shall be deemed a SCWC contribution to offset any SCWC TMA funding requirements.

Section 7. New Urban Uses – Guadalupe.

7.1 Guadalupe and Santa Maria agree that it is within their mutual interests to cooperate and coordinate their efforts to provide retail water service within their respective service areas.

7.2 Guadalupe and Santa Maria mutually acknowledge the benefits of importing SWP supplies to augment their use of local groundwater.

7.3 It is to the mutual advantage of Guadalupe and Santa Maria to have several alternatives for making use of their SWP Entitlements, Return Flows and Twitchell Yield to create flexibility, reliability, and cost effectiveness in their water supply systems. Santa Maria and Guadalupe shall each have the right to use the other's unused Twitchell Yield in any given year if needed.

7.4 Guadalupe and Santa Maria agree to work cooperatively to provide a reliable and cost effective mechanism through which Santa Maria and Guadalupe can maximize the use of their respective SWP supplies and Return Flows within the Basin. Santa Maria agrees not to oppose any effort by Guadalupe that is based on reliable data to increase the fixed percentage of Guadalupe's SWP Return Flow.

7.5 Santa Maria agrees to work cooperatively with Guadalupe to provide Guadalupe with additional SWP supplies. Guadalupe shall compensate Santa Maria through a specified dollar amount or through an exchange of water resources, as Guadalupe and Santa Maria deem appropriate. As further consideration, Santa Maria shall have a right of first refusal to purchase any SWP Return Flows that Guadalupe elects to sell from its existing SWP Entitle-

ment, and any future SWP Entitlement, that are not for use within or adjacent to Guadalupe's service area.

Section 8. **Representations or Warranties of Guadalupe.** Guadalupe makes the following representations, warranties and covenants to SCWC and Santa Maria:

8.1 Power and Authority to Execute and Perform this Agreement. Guadalupe has the power and authority to enter into this Agreement and to perform its obligations and all necessary approvals and authorizations have been obtained.

8.2 Enforceability. This Agreement constitutes a legal, valid and binding obligation of Guadalupe, and is enforceable against Guadalupe in accordance with its terms.

Section 9. **Representations or Warranties of Santa Maria.** Santa Maria makes the following representations, warranties and covenants to SCWC and Guadalupe:

9.1 Power and Authority to Execute and Perform this Agreement. Santa Maria has the power and authority to enter into this Agreement and to perform its obligations and all necessary approvals and authorizations have been obtained.

9.2 Enforceability. This Agreement constitutes a legal, valid and binding obligation of Santa Maria, and is enforceable against Santa Maria in accordance with its terms.

Section 10. **Representations or Warranties of SCWC.** SCWC makes the following representations, warranties and covenants to Santa Maria and Guadalupe:

10.1 Power and Authority to Execute and Perform this Agreement. SCWC is a corporation duly formed and in good standing in the State of California. Subject to California Public Utility Commission approval, expressly including the ability to recover the costs of implementing this agreement through its authorized regulated utility rates, SCWC has the corporate power and authority to enter into this Agreement and to perform its obligations and all necessary corporate approvals and authorizations have been obtained.

10.2 Enforceability. Subject to California Public Utility Commission approval as provided in section 10.1, this Agreement constitutes a legal, valid and binding obligation of SCWC, enforceable against SCWC in accordance with its terms.

Section 11. **Remedies Not Exclusive.** Remedies provided in this Agreement for enforcement of its terms are intended and shall be construed as cumulative rather than exclusive and shall not be deemed to deprive any Party from also using any other remedies provided by this Agreement or by law.

Section 12. **Subject to Applicable Law.** The Parties acknowledge and agree that this Agreement and the rights and obligations of the Parties shall be subject to the laws governing municipal corporations as they now exist and as they may be amended or codified by the Legislature of the State of California.

Section 13. **Integration.** This Agreement shall be integrated with, and interpreted in companion with the 2004 Agreement, the Stipulation, and the final judgment entered in the Basin Adjudication that is based upon the Stipulation. These set of agreements contain the entire understanding between SCWC, Santa Maria and Guadalupe with respect to the subject matter, and supersede all prior agreements, oral or written, and all prior or contemporaneous discussions or negotiations between SCWC, Santa Maria and Guadalupe. This Agreement cannot be amended except in writing signed by all Parties.

Section 14. **No Waiver.** Any failure or delay on the part any Party to exercise any right under this Agreement shall not constitute a waiver of the right, and shall not preclude such Party from exercising or enforcing the right, or any other provision of this Agreement, on any subsequent occasion.

Section 15. **Notices.** All notices or other communications required or desired to be given pursuant to this Agreement shall be in writing and shall be hand-delivered, or mailed by certified mail, return receipt requested, or sent by a reputable overnight courier service providing delivery confirmation. Each such notice or communication shall be deemed to be duly given when hand-delivered, or three (3) days after being mailed in any depository maintained by the United States Postal Service, with prepaid postage, certified, return receipt requested or one (1) day after being deposited for next day delivery with Federal Express or other reputable overnight courier. Each such notice or communication shall be addressed to the Parties at their respective addresses set forth next to their signatures below, or such other address as a Party notifies the other in writing.

Section 16. **Headings; Section References**. Captions and headings appearing in this Agreement are inserted solely as reference aids for the ease and convenience; they shall not be deemed to define or limit the scope or substance of the provisions they introduce, nor shall they be used in construing the intent or effect of such provisions.

Section 17. **Separability**. If any provision of this Agreement is finally determined by a court to be invalid or unenforceable as written, the provision shall, if possible, be enforced to

the extent reasonable under the circumstances and otherwise shall be deemed deleted from this Agreement. The other provisions of this Agreement shall remain in full force and effect so long as the material purposes of the Agreement and understandings of the Parties are not impaired.

Section 18. **Binding Effect Assignment**. This Agreement shall only be binding on and inure to the benefit of the Parties, and their respective successors and permitted assigns. No Party shall assign this Agreement except with the prior written approval of the other Parties. Any unauthorized attempt to assign this Agreement shall be null and void. Notwithstanding the foregoing, SCWC shall have the right to assign this Agreement to any affiliate.

Section 19. **Attorneys Fees**. In the event that any action or proceeding is brought to enforce one or more of the terms of this Agreement, to restrain an alleged violation of this Agreement, or to determine the validity of this Agreement or any part, the prevailing Party in any such action or proceeding shall be entitled to recover from the other its reasonable costs and attorneys' fees, in addition to any other remedies available to it in law or equity. If all Parties are successful in one or more causes of action during any such proceeding, the costs and fees shall be apportioned as determined by the Court.

Section 20. **Force Majeure.** If by reason of acts of God, earthquakes, floods, storms, explosion, fires, labor troubles, strikes, insurrection, riots, acts of the public enemy, or federal, state, or local law, order, rule, or regulation, any Party is prevented from complying with any condition of this Agreement, then while so prevented the condition shall be suspended and the Party shall be relieved of the obligation of complying with such covenant and shall not be liable for damages for failure to comply with it. Any obligation of any Party shall be extended for as long as it is so prevented from complying with any condition or covenant in the Agreement.

Section 21. **Dispute Resolution, Governing Law and Venue**. This Agreement is a contract governed in accordance with the laws of the State of California. The Parties agree that if any dispute arises with respect to any provision of this Agreement, the Parties shall meet and confer in an attempt to resolve any such disputes. If, after 90 days, the meet and confer process is unsuccessful, the dispute shall be presented for Court review and determination pursuant to the Court's reserved jurisdiction and judicial review provisions provided in the Stipulation.

Section 22. **Counterparts**. This Agreement may be signed in any number of counterparts, including counterparts by facsimile signature, each of which shall be deemed an original,

but all of which shall together constitute one and the same instrument. The original signature pages shall be filed with the Court as Exhibit F to the Stipulation.

IN WITNESS WHEREOF, the parties have executed this agreement as of the date first written above.

CITY OF SANTA MARIA:

City of Santa Maria
a California municipal corporation

By: _____
Name: _____
Title: _____

Address: _____
_____

Fax: _____
Phone: _____

SCWC:

Southern California Water Company,
a California corporation

By: _____
Name: Denise L. Kruger
Title: Senior Vice President of Operations

Address: 3035 Prospect Park, Suite 60
Rancho Cordova, CA 95670

Fax: (916) 853-3674
Phone: (916) 853-3606

CITY OF GUADALUPE

City of Guadalupe,
a California municipal corporation

By: _____
Name: _____
Title: _____

Address: _____
_____

Fax: _____
Phone: _____

APPROVED AS TO FORM:

By: _____
Guadalupe City Attorney

EXHIBIT A
to
STIPULATION EXHIBIT F

WATER MANAGEMENT AGREEMENT

This Water Management Agreement ("Agreement") is made and entered into this 20th day of July 2004, by and between the CITY OF SANTA MARIA ("City"), a California municipal corporation, and SOUTHERN CALIFORNIA WATER COMPANY, a California corporation ("SCWC"). The City and SCWC are referred to individually as a "Party" and collectively as the "Parties".

RECITALS

A. The City is a Charter City. The City provides potable water service to customers within the greater Santa Maria area of Santa Barbara County.

B. SCWC is an investor-owned public utility within the meaning of Public Utilities Code Section 2400, *et seq.* and operates pursuant to the California Public Utility Act, Public Utilities Code Section 200, *et seq.* SCWC provides potable water service to customers within its certificated service area in Santa Barbara County, generally referred to as the "Santa Maria Customer Service Area", which includes four unincorporated areas of Northern Santa Barbara County, commonly known as "Orcutt," "Tanglewood," "Lake Marie," and "Sisquoc," and one unincorporated area in San Luis Obispo County, commonly referred to as the "Nipomo Mesa."

C. The City and SCWC have historically cooperated and coordinated their efforts to provide retail water service within their respective service areas.

D. Both the City and SCWC have historically relied on local groundwater to provide potable water service to their respective customers and both hold rights to pump groundwater ("Groundwater Rights") from the Santa Maria Groundwater Basin ("Basin").

E. The City and SCWC also each hold contracts to receive water from the State Water Project ("SWP Entitlement," collectively, and "City SWP Entitlement" or "SCWC SWP Entitlement," individually). Collectively, their contract entitlements total 18,350 acre-feet per year.

F. Both the City and SCWC are legally entitled to retain and recapture that portion of their respective SWP Entitlement that recharges the Basin after the consumptive use of the SWP Entitlement ("Return Flows").

G. The City and SCWC mutually acknowledge the benefits of importing SWP supplies to augment their use of local groundwater.

H. It is to the mutual advantage of the City and SCWC to have several alternatives for making use of their SWP Entitlements, Return Flows and Groundwater Rights, to create flexibility, reliability and cost-effective redundancy in their water supply systems.

I. The County of Santa Barbara ("County") regulates the land use activities within Orcutt. In 1997, the County adopted the Orcutt Community Plan ("OCP"), which establishes, among other things, certain policies regarding water supplies to be secured for new development projects in Orcutt ("Project" or "Projects"). The OCP was amended in 2001. In particular, the OCP requires that the water demand associated with Projects be offset by "supplemental" water supplies that do not result in further overdraft of the Basin ("OCP Water Policies").

J. As of the date of this Agreement, SCWC has fully reserved the SCWC SWP Entitlement for the benefit of Projects (See Section 3 below). In addition, without significant investment in and construction of additional capital facilities and/or the access to City facilities as provided in this Agreement, SCWC is unable to take delivery of the full extent of its SCWC SWP Entitlement.

K. Without the construction of additional capital facilities that extend the SCWC SWP turnout from Tanglewood to Orcutt, SCWC is unable to take delivery of any additional alternative sources of water that may comply with the OCP Water Policies, except as provided in this Agreement.

L. The City has elected to make available to certain Project proponents within Orcutt supplemental water supplies that will satisfy the OCP Water Policies applicable to Projects. (See City Resolution 2003-150, attached as Exhibit "A" ("Resolution 2003-150").)

M. SCWC and the City are also parties to litigation regarding water rights in the Santa Maria groundwater basin (*Santa Maria Valley Water Conservation District v. City of Santa Maria, et al.*, Superior Court, County of Santa Clara, Lead Case No. CV 770214 ("Basin Adjudication")

N. The Parties intend that this Agreement provide a reliable and cost effective mechanism through which the City and SCWC can maximize the use of their respective SWP supplies within the Basin, while making the most efficient use of existing facilities to take delivery of the Parties' respective SWP supplies.

O. The Parties also intend that this Agreement establish a mechanism through which potential new SCWC customers in Orcutt may access supplemental water through the City, consistent with the OCP Water Policies.

NOW THEREFORE, in consideration of the foregoing recitals and the promises and covenants contained herein, the Parties agree as follows:

Section 1. **Purpose.** The purposes of this Agreement are to: (a) provide a reliable and cost effective mechanism through which the City and SCWC can maximize the use of their respective SWP supplies within the Basin, (b) make the most efficient use of existing facilities to take delivery of the Parties' respective SWP supplies, (c) secure a reliable means of accessing Supplemental Water (defined below), and (d) fairly allocate the costs of obtaining and using Supplemental Water within the Basin. Nothing in this Agreement shall be interpreted to impose on either Party any obligation that might arise out of the final judgment entered in the Basin Adjudication, other than as expressly provided in this Agreement.

Section 2. **Term.**

2.1 This Agreement shall be effective on the date first written above ("Effective Date") and shall continue to February 25, 2038, and thereafter shall remain in effect for so long as both the City and SCWC remain SWP contractors ("Term").

2.2 While the Parties contend PUC approval of this Agreement is not required, should the PUC rule that PUC approval is required and that approval of the Agreement as written is denied, the Parties shall make every reasonable effort to modify the Agreement in a manner that the PUC will approve and that also preserves its original, essential terms.

Section 3. **Right to Acquire Water.**

3.1 The Parties acknowledge that given the limits of existing facilities, SCWC is unable to take full delivery of the SCWC SWP Entitlement through its existing SWP facilities because the water demand in the area with direct access to the SCWC SWP Entitlement (Tanglewood) is significantly less than the full SCWC SWP Entitlement. Further, SCWC has fully committed to those Projects listed in Exhibit "B" ("Committed Projects") SCWC's SWP Entitlement and the use of SCWC's existing facilities to make use of the SCWC SWP Entitlement reserved to the benefit of the Committed Projects. To take delivery of the entirety of the SCWC SWP Entitlement, SCWC must either construct additional capital facilities to extend the

SWP turnout from Tanglewood to Orcutt, and/or obtain the rights to rely on the interconnection between the SCWC and City systems, as provided in this Agreement.

3.2 SCWC agrees that, given its geographic proximity to and existing interconnection with SCWC, the City provides the best, most cost effective, and logical source of Supplemental Water for the benefit of Projects in Orcutt to which SCWC would provide retail potable water service.

3.3 For the purpose of this Agreement, "Supplemental Water" shall mean a portion of the yield of the SWP Entitlement held by the City, or a portion of the historic groundwater rights to the Basin held by the City in accordance with the final judgment entered in the Basin Adjudication.

3.4 In working with Project proponents, SCWC agrees that prior to accepting any water that is intended to satisfy the OCP Water Policies, other than the SCWC SWP Entitlement, Supplemental Water and that obtained under Section 7.1, SCWC shall:

3.4.1 Refer to the City any Project proponent that requests water service from SCWC that is also subject to the OCP Water Policies; and

3.4.2 Allow sufficient time for the City and the Project proponent to attempt to make arrangements consistent with the OCP Water Policies, this Agreement and other applicable considerations.

3.5 The City shall make available Supplemental Water to Projects in Orcutt pursuant to Resolution 2003-150 or a substantially similar policy. The City shall not unreasonably withhold Supplemental Water from Projects in Orcutt.

3.6 If any portion of SCWC's SWP Entitlement becomes uncommitted (i.e., a Committed Project is not approved for development or if the County adjusts upward the reliability factor it applies to SCWC SWP Entitlement), SCWC shall use the uncommitted SCWC SWP Entitlement as specified in this Section 3.6 and the Parties shall undertake the following:

3.6.1 SCWC shall provide written notice to the City of the availability of the SCWC SWP Entitlement ("Notice of Availability"), specifying the quantity of SCWC SWP Entitlement that has become available. Within 45 days of the Notice of Availability, the City shall pay to SCWC $22,000 per acre foot, adjusted annually based on the consumer price index Los Angeles-Riverside-Orange County), for the SCWC SWP Entitlement specified in the Notice of Availability. Upon provision of payment to SCWC, the City, at its sole discretion, may make

available to Project(s) in Orcutt, as otherwise provided in this Agreement, this SCWC SWP Entitlement as though it is Supplemental Water. SCWC shall continue to use the SCWC SWP Entitlement as though it is fully committed for the benefit of Projects in Orcutt.

3.7 SCWC shall be relieved of its obligation to refer the Project proponent to the City as provided in subsection 3.4, during any period which:

3.7.1 The City determines that the City has no additional Supplemental Water available for use in Orcutt, or the County determines that the City has no additional Supplemental Water available for use in Orcutt. If the Parties disagree with the County's determination, the Parties agree to use their reasonable best efforts to convince the County that the City does have available Supplemental Water.

3.8 After January 1, 2014, SCWC shall be relieved of its obligation to refer the Project Proponent to the City as provided in subsection 3.4, if one or more of the following conditions applies:

3.8.1 A source of water becomes available to SCWC for use in the Basin at a cost less than the cost of the City's Supplemental Water, on a per acre foot basis;

3.8.2 The Parties agree to meet and confer in good faith to attempt to resolve any issues that arise pursuant to this Section 3.8 prior to SCWC seeking an alternative source of water.

3.9 The Parties acknowledge and agree that this Agreement is not a mechanism through which SCWC may use the City's water distribution system to access alternative sources of water, either directly or indirectly, except as expressly provided in this Agreement.

Section 4. **Interconnection.** The Parties have previously established an interconnection between their respective water distribution facilities, consisting of a two-way meter, meter vault and appurtenances located inside the meter vault ("Interconnection"). The Interconnection is located at Miller Street and Santa Maria Way. The maintenance, repair and improvements to the Interconnection shall be managed as follows:

4.1 The Parties shall share equally the costs of all maintenance and repairs on the Interconnection. SCWC shall be responsible for physically implementing the ongoing maintenance and repair of the Interconnection, subject to the City's prior review of the maintenance and repair plans.

4.2 The Parties shall share the costs of any needed improvements to the Interconnection one-fourth (¼) by the City and three-fourths (¾) by SCWC. Unless otherwise arranged between the Parties, SCWC shall be responsible for physically implementing any improvements to the Interconnection. The City shall provide prior input and approval of any improvements to the Interconnection.

4.3 Both the City and SCWC shall have reasonable access to the meter at the Interconnection.

Section 5. <u>Delivery of Water Through the Interconnection</u>. Either Party may take delivery of water through the Interconnection subject to the following conditions (for the purpose of this Agreement, the Party taking delivery shall be referred to as the "Receiving Party" and the Party supplying the water shall be referred to as the "Supplying Party"):

5.1 As a Receiving Party, SCWC shall have a first priority right to use the Interconnection to take delivery each Year (defined below) of only that amount of SCWC SWP Entitlement that SCWC cannot take delivery of through SCWC's own facilities. In addition, each Year, SCWC's receipt of water through the Interconnection pursuant to this Section shall be limited to that quantity of SCWC's SWP Entitlement SCWC has made available for the City's receipt during that Year, at the City's SWP turnout within the City. The City may impose reasonable limitations on the rate of water SCWC takes through the Interconnection subject to this subsection 5.1.

5.2 Subject to SCWC's use of the Interconnection as provided in Section 5.1, either Party may use the Interconnection to take delivery of water by providing the Supplying Party at least 48 hours advance notice of the quantity and rate at which water will be taken.

5.3 Other than as provided in subsection 5.1, the Supplying Party may impose reasonable limitations on the rate and quantity of water to be taken through the Interconnection. Each Party is under an affirmative obligation to accommodate reasonable requests for use of the Interconnection, subject to SCWC's priority right provided in Section 5.1. Unless otherwise agreed between the Parties, the use of the Interconnection other than as provided in Section 5.1 shall be interim and temporary in nature.

5.4 Payment for receipt of water through the Interconnection shall be made in accordance with Section 6.

Section 6. **Payments for Delivered Water.** The Receiving Party shall pay to the Supplying Party for receipt of water through the Interconnection, as follows:

6.1 Section 5.1 deliveries. For use of the Interconnection as provided in Section 5.1, SCWC shall pay to the Central Coast Water Authority ("CCWA") all costs associated with making available to the City, at the City's SWP turnout within the City, that quantity of the SCWC SWP Entitlement equivalent to that amount of water SCWC intends to receive through the Interconnection. Payment shall be made in accordance with applicable CCWA policies.

6.2 Section 5.2 deliveries. For delivery of water obtained through the Interconnection pursuant to Section 5.2, the Receiving Party shall pay the Supplying Party a per acre-foot charge equivalent to the Supplying Party's cost of producing the water for that Year. The Supplying Party shall determine cost of producing water and shall provide the Receiving Party with an itemized statement summarizing those costs. The Parties agree to meet and confer in good faith regarding any dispute in determining the cost of producing water.

6.3 Neither Party shall be obligated to pay any charge, other than as provided in this Section.

6.4 For the purpose of this Agreement, a "Year" shall refer to a water year commencing on October 1 and ending in the subsequent year on September 30. The Payments required in Section 6.2 shall be made annually, on or before November 1 of each Year, based on actual metered receipt of water through the Interconnection.

Section 7. **Additional Supplemental Water.** In exchange for the commitments in Section 3 and as an element of consideration for those commitments, the City hereby provides to SCWC, upon the Effective Date, the right to take delivery of 20 acre-feet of Supplemental Water annually for the Term of this Agreement, at no cost to SCWC. The City provides these 20 acre-feet of Supplemental Water under the same terms and conditions provided in Resolution 2003-150. If the County determines that Supplemental Water provided pursuant to Resolution 2003-150 does not satisfy the OCP Water Policies, the City shall provide SCWC at no cost, 20 acre-feet per year of water through the Interconnection, in addition and subject to the same priority as that amount of water SCWC can obtain under Section 5.1. SCWC shall have the right to use 20 acre-feet of water provided in this Section 7 for the benefit of any residential Project.

Section 8. **Service Area Integrity.** Nothing in this Agreement is intended nor shall it be interpreted to waive either Party's rights to provide water service to current or future areas within or adjacent to their existing service areas. Should the City seek to acquire (by any means) any portion of, or all of the SCWC certificated service area in SCWC's Santa Maria Customer Service Area, the City shall pay as fair compensation, the greater of 10 times the SCWC rate base or the court-approved fair compensation.

Section 9. **Representations or Warranties of City.** The City makes the following representations, warranties and covenants to SCWC:

9.1 Power and Authority to Execute and Perform this Agreement. The City has the power and authority to enter into this Agreement and to perform its obligations and all necessary approvals and authorizations have been obtained.

9.2 Enforceability. This Agreement constitutes a legal, valid and binding obligation of the City, and is enforceable against the City in accordance with its terms.

Section 10. **Representations or Warranties of SCWC.** SCWC makes the following representations, warranties and covenants to City:

10.1 Power and Authority to Execute and Perform this Agreement. SCWC is a corporation duly formed and in good standing in the State of California. Subject to the conditions of Section 2.2, SCWC has the corporate power and authority to enter into this Agreement and to perform its obligations and all necessary corporate approvals and authorizations have been obtained. The City agrees that nothing in this representation, warranty or covenant shall be interpreted or applied to negate the City's indemnity obligations provided in Section 12.

10.2 Enforceability. This Agreement constitutes a legal, valid and binding obligation of SCWC, enforceable against SCWC in accordance with its terms.

Section 11. **Termination.** This Agreement shall terminate as described in Section 2. If this Agreement is terminated prior to the expiration of the Term, its termination shall not impact: (a) any other agreements regarding Supplemental Water between the City and Project proponents, and SCWC and Project proponents, (b) the provision of water to SCWC pursuant to Section 7 and (c) the payments and associated commitments, if any, regarding the SCWC SWP Entitlement between the City and SCWC made pursuant to Section 3.6.

Section 12. Indemnity.

12.1 The City shall hold harmless, defend and indemnify SCWC, its directors, employees, agents, successors and assigns (all of which are herein referred to as the "SCWC Indemnified Parties") from and against all liabilities, obligations, claims, damages, losses, actions, judgments, suits, costs and expenses, including but not limited to reasonable attorneys' fees (collectively, "Damages"), which may be imposed on, incurred by, or asserted against the SCWC Indemnified Parties as a result of or arising out of the restrictions placed on SCWC's access to Supplemental Water as provided in Section 3, and/or the implementation of this Agreement as of the Effective Date as provided in Section 2. This indemnification shall survive termination of the Agreement.

12.2 Promptly following notice of any claim for which SCWC is indemnified, SCWC shall notify the City of such claim in writing. The City shall thereafter defend against such claim, in consultation with SCWC, in a manner the Parties mutually deem appropriate, including settlement on such terms as SCWC and the City both approve. The City and SCWC shall mutually select counsel. SCWC may also elect to have separate representation at its sole discretion and cost. If the City fails to promptly defend such claim, SCWC may defend the claim in any manner it deems appropriate and with counsel of its choice, including without limitation, settlement of the claim on terms SCWC deems appropriate, and to pursue such remedies as may be available to SCWC against the City.

Section 13. Remedies Not Exclusive. Remedies provided in this Agreement for enforcement of its terms are intended and shall be construed as cumulative rather than exclusive and shall not be deemed to deprive either Party from also using any other remedies provided by this Agreement or by law.

Section 14. No Transfer of Water Rights or Contracts. The rights granted pursuant to this Agreement constitute the right to take delivery of water only and shall not be interpreted as a sale, transfer, or assignment of either Party's water rights or contract entitlements.

Section 15. Subject to Applicable Law. The Parties acknowledge and agree that this Agreement and the rights and obligations of the Parties shall be subject to the laws governing municipal corporations as they now exist and as they may be amended or codified by the Legislature of the State of California.

Section 16. **Entire Agreement.** This Agreement contain the entire understanding between SCWC and the City with respect to the subject matter, and supersedes all prior agreements, oral or written, and all prior or contemporaneous discussions or negotiations between SCWC and the City. This Agreement cannot be amended except in writing signed by both Parties.

Section 17. **No Waiver.** Any failure or delay on the part either Party to exercise any right under this Agreement shall not constitute a waiver of the right, and shall not preclude such Party from exercising or enforcing the right, or any other provision of this Agreement, on any subsequent occasion.

Section 18. **Notices.** All notices or other communications required or desired to be given pursuant to this Agreement shall be in writing and shall be hand-delivered, or mailed by certified mail, return receipt requested, or sent by a reputable overnight courier service providing delivery confirmation. Each such notice or communication shall be deemed to be duly given when hand-delivered, or three (3) days after being mailed in any depository maintained by the United States Postal Service, with prepaid postage, certified, return receipt requested or one (1) day after being deposited for next day delivery with Federal Express or other reputable overnight courier. Each such notice or communication shall be addressed to the Parties at their respective addresses set forth next to their signatures below, or such other address as a Party notifies the other in writing.

Section 19. **Headings; Section References**. Captions and headings appearing in this Agreement are inserted solely as reference aids for the ease and convenience; they shall not be deemed to define or limit the scope or substance of the provisions they introduce, nor shall they be used in construing the intent or effect of such provisions.

Section 20. **Separability**. If any provision of this Agreement is finally determined by a court to be invalid or unenforceable as written, the provision shall, if possible, be enforced to the extent reasonable under the circumstances and otherwise shall be deemed deleted from this Agreement. The other provisions of this Agreement shall remain in full force and effect so long as the material purposes of the Agreement and understandings of the Parties are not impaired.

Section 21. **Binding Effect Assignment**. This Agreement shall be binding on and inure to the benefit of the Parties, and their respective successors and permitted assigns. Neither Party shall assign this Agreement except with the prior written approval of the other Party. Any

unauthorized attempt to assign this Agreement shall be null and void. Notwithstanding the foregoing, SCWC shall have the right to assign this Agreement to any affiliate.

Section 22. **Attorneys Fees**. In the event that any action or proceeding is brought to enforce one or more of the terms of this Agreement, to restrain an alleged violation of this Agreement, or to determine the validity of this Agreement or any part, the prevailing Party in any such action or proceeding shall be entitled to recover from the other its reasonable costs and attorneys' fees, in addition to any other remedies available to it in law or equity. If both Parties are successful in one or more causes of action during any such proceeding, the costs and fees shall be apportioned as determined by the court.

Section 23. **Force Majeure.** If by reason of acts of God, earthquakes, floods, storms, explosion, fires, labor troubles, strikes, insurrection, riots, acts of the public enemy, or federal, state, or local law, order, rule, or regulation, either Party is prevented from complying with any condition of this Agreement, then while so prevented the condition shall be suspended and the Party shall be relieved of the obligation of complying with such covenant and shall not be liable for damages for failure to comply with it. Any obligation of either Party shall be extended for as long as it is so prevented from complying with any condition or covenant in the Agreement.

Section 24. **Governing Law and Venue**. This Agreement is a contract governed in accordance with the laws of the State of California. THE PARTIES HEREBY AGREE THAT VENUE FOR ANY ACTION BROUGHT TO ENFORCE THE TERMS OF THIS AGREEMENT SHALL BE IN A COURT OF COMPETENT JURISDICTION IN THE COUNTY OF SANTA BARBARA, CALIFORNIA, AND CONSENT TO THE JURISDICTION THEREOF.

IN WITNESS WHEREOF, the parties have executed this agreement as of the date first written above.

CITY:

City of Santa Maria
a California municipal corporation

By: L. Lavagnino
Name: L. J. Lavagnino
Title: Mayor

SCWC:

Southern California Water Company,
a California corporation

By: Denise L. Kruger
Name: Denise L. Kruger
Title: Senior Vice President of Operations

Address: 110 E. Cook Street
Santa Maria, CA 93454

Fax: (805) 349-0657
Phone: (805) 925-0951, ext. 200

Address: 3035 Prospect Park, Suite 60
Rancho Cordova, CA 95670

Fax: (916) 853-3674
Phone: (916) 853-3606

APPROVED AS TO FORM:

Best Best & Krieger LLP

By: _____
Eric Garner, Partner

ATTEST:

_____
Patricia A. Perez
Chief Deputy City Clerk

EXHIBIT A

RESOLUTION NO. 2003 - 150

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SANTA MARIA, CALIFORNIA APPROVING THE SALE OF UP TO 400 ACRE-FEET ANNUALLY OF SUPPLEMENTAL STATE WATER PROJECT YIELD AND AUTHORIZING THE CITY MANAGER TO EXECUTE AGREEMENTS FOR THE SALE OF UP TO 400 ACRE-FEET ANNUALLY OF SUPPLEMENTAL STATE WATER PROJECT YIELD

WHEREAS, the City of Santa Maria ("City") holds contracts to receive water from the State Water Project ("Project"), and can import up to 17,820 acre feet of water per year from the Project; and

WHEREAS, the City also holds rights to pump groundwater from the Santa Maria Valley Groundwater Basin ("Basin"); and

WHEREAS, the County of Santa Barbara ("County") regulates the land use activities within the Orcutt area. In 1997, the County adopted the Orcutt Community Plan ("OCP"), which establishes, among other things, certain policies regarding water supplies to be secured for new development projects in Orcutt. The OCP requires that the water demand associated with projects be offset by "supplemental" water supplies that do not result in further overdraft of the Basin; and

WHEREAS, the City has water available for use in the Orcutt area pursuant to the OCP, that is surplus to that needed to serve the City's current and long-term future anticipated demands; and

WHEREAS, "Supplemental Water" shall mean a portion of the yield of the SWP entitlement held by the City, or a portion of the historic groundwater rights to the Basin held by the City in accordance with the final judgment entered in *Santa Maria Valley Water Conservation District v. City of Santa Maria, et al.*, Superior Court, County of Santa Clara, Lead Case No. CV 770214; and

WHEREAS, the sale of up to 400 acre-feet of Project water will not change the existing setting and will not affect the net amount of water that will be extracted from the Basin; and

WHEREAS, the City is willing to enter into agreements to provide up to 400 acre-feet annually of supplemental water to individual property owners for the benefit of the individual property owners and their associated Projects.

NOW, THEREFORE, IT IS HEREBY RESOLVED by the City Council of the City of Santa Maria as follows:

1. The City Council approves the sale of up to 400 acre-feet annually of Supplemental water.

2. The City Manager is authorized and directed to execute agreements substantially in the form provided for the sale of up to 400 acre-feet of Supplemental water per year for municipal use for the purpose of satisfying the Orcutt Community Plan's policies regarding water supplies.

3. City staff is hereby authorized to make minor changes to the final agreement and directed to file any and all notices that may be required by law.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Santa Maria held August 5, 2003.

/S/ L. J. LAVAGNINO

Mayor

ATTEST:

/s/PATRICIA A. PEREZ

City Clerk

APPROVED AS TO FORM:

BY:

CITY ATTORNEY

CONTENTS:

BY:

DEPARTMENT HEAD

BY:

CITY MANAGER

STATE OF CALIFORNIA)
COUNTY OF SANTA BARBARA) ss.
CITY OF SANTA MARIA)

I, **RHONDA M. GARIETZ**, Deputy City Clerk of the City of Santa Maria and ex officio Clerk of the City Council DO HEREBY CERTIFY that the foregoing is a full, true and correct copy of **Resolution No. 2003-150** which was duly and regularly introduced and adopted by said City Council at a regular meeting held **August 5, 2003**, by the following vote:

AYES: **Councilmembers Mariscal, Orach, Patino, Trujillo and Mayor Lavagnino.**

NOES: **None.**

ABSENT: **None.**

ABSTAIN: **None.**

Deputy City Clerk of the City of Santa Maria
and ex officio Clerk of the City Council

EXHIBIT B

SCWC SWP ENTITLEMENT: PROJECT LIST

PROJECT	TYPE	QUANTITY
Oak Knolls South	Residential	3.36 af
Mesa Verde	Residential	33 af
Orthodox Church	Commercial	1.6 af
Fundamental Baptist Church	Commercial	0.6 af
Orcutt Marketplace	Commercial	37 af
Rice Ranch	Residential	350 af
Eskridge Lot Split	Residential	0.5 af
Diamante Estates	Residential	9 af
Hummel Village/Senior Housing	Commercial/Residential	3.5 af
TOTAL		**438.6*af**

* Because the County of Santa Barbara considers State Water Project water less than 100% reliable, the County applies a reliability factor to the SCWC SWP Entitlement. For the purposes of the projects on this Exhibit B, the County has adopted a 79% reliability factor for the SCWC SWP Entitlement. Based on this reliability factor, the County considers the entirety of the SCWC SWP Entitlement fully committed.

EXHIBIT B
to
STIPULATION EXHIBIT F

DRAFT: Subject to Ratification by the TMA

Exhibit B

SANTA MARIA VALLEY PUBLIC WATER PURVEYOR WATER MANAGEMENT AGREEMENT

Twitchell Management Authority
Annual Budget
Applicable for 2006-2011

Item	Amount
Administration	$50,000
Management Area Engineer	$100,000
Twitchell Operation (including Twitchell Project Manual)	$300,000
Monitoring Program/Annual Report	$100,000
Reserves	$100,000

EXHIBIT C
to
STIPULATION EXHIBIT F

SUPPLEMENTAL WATER PURCHASE AGREEMENTS

City of Santa Maria and OakGlen General Partnership dated July 31, 2003 – Project known as OakGlen – 22 afy.

City of Santa Maria and Ronald Chappell and Raymond Gonzales dated July 31, 2003 – Project known as 1374 Solomon – 1 afy.

City of Santa Maria and SB Clark LLC dated July 31, 2003 – Project known as Clark Ranch Estates – 200 afy.

City of Santa Maria and Wellmack dated August 18, 2003 – Project known as Jensen's Crossing/Cobblestone Creek –59 afy.

City of Santa Maria and Harpstone Parntership LP dated August 18, 2003 – Project known as Harp Springs – 26.5 afy.

City of Santa Maria and Stonegate Development LP dated August 18, 2003 – Project StoneGate – 11 afy.

City of Santa Maria and Old Mill Orcutt Venture, LLC dated August 18, 2003 – Project known as Old Mill – 26 afy.

City of Santa Maria and Andy Fetyko dated January 15, 2004 – Project known as Keysite 10 – 10 afy.

City of Santa Maria and Steve LeBard and Debbie LeBard dated February 11, 2004 – Project known as LeBard Project – 2 afy.

City of Santa Maria and Knollwood Properties LP dated March 23, 2004 – Project known as Knollwood Meadows Phase II – 10 afy.

City of Santa Maria and Walter Mendoza dated May 19, 2003 – 1 afy.

City of Santa Maria and Darren Hulstine dated November 17, 2004 – Property located at 1430 Solomon Road – 1 afy.

City of Santa Maria and Cameron Realty Partners dated July 28, 2004 – Project known as Keysite 10 – 10 afy.

City of Santa Maria and David Daniels undated – Project known as 520 W. Rice Ranch Road – ½ afy.

City of Santa Maria and Chris Henderson dated November 30, 2004 – Project known as 295 Siles Lane -- +/- ½ afy.

City of Santa Maria and Simonsen & Associates dated March 1, 2005 – Project known as

Hummel Village II – 3.01 afy.

City of Santa Maria and East Clark Avenue Partnership undated but returned signed on May 9, 2005 – Project known as 250 E. Clark Avenue – 4 afy.

City of Santa Maria and Thor Gjerdrum dated May 12, 2005 – Project known as Rice Oak -- .75 afy

EXHIBIT G

Court's Order Concerning Electronic Service of Pleadings and Electronic Posting of Discovery Documents dated June 27, 2000

Santa Maria Valley Water Conservation District v. City of Santa Maria
Santa Clara County Superior Court Case No. CV 770214

ENDORSED
FILED
JUN 28 2000
STEPHEN V. LOVE
Chief Executive Officer
Superior Court of the County of Santa Clara
By _____ Deputy

SUPERIOR COURT OF CALIFORNIA

COUNTY OF SANTA CLARA

DEPARTMENT 17

SANTA MARIA VALLEY WATER CONSERVATION DISTRICT, a public entity, Plaintiff, vs. CITY OF SANTA MARIA, et al., Defendant	SANTA MARIA GROUNDWATER LITIGATION Case No. CV770214 ORDER CONCERNING ELECTRONIC SERVICE OF PLEADINGS AND ELECTRONIC POSTING OF DISCOVERY DOCUMENTS Consolidated Cases: CV784900; CV784921; CV784926; CV785509; CV785511; CV785515; CV785522; CV785936; CV786971; CV787150; CV787151; CV787152 San Luis Obispo County Superior Court Cases: 990738 and 990739
And Related Cross-Actions and Actions Consolidated For All Purposes	

I. INTRODUCTION

A. The Court, through its Complex Civil Litigation Pilot Project, will host a Website to provide:

1. Electronic service on the parties of pleadings, discovery requests, discovery responses, and other documents to be served, and electronic access by the parties to all such pleadings, requests, responses, and other documents served;

2. Electronic production of documents, and electronic access by the parties to all such documents produced; and

3. A place for the electronic posting of deposition transcripts (as made available by

the attorneys) and transcripts of Court proceedings (when they are brief) and access to such transcripts by the parties.

B. The Website address is http://www.sccomplex.org. A dedicated link to the Santa Maria Groundwater Litigation is contained on the home page of this site.

C. The Court's Website will be maintained, and the tasks required of the Website will be conducted by, the Court's outside Website Vendor:

Andy Jamieson
Global Transactions, Inc.
519 17th St., Oakland, CA 94612
Telephone: 510-548-9050
Email: ajam@glotans.com

D. This Order supercedes and entirely replaces parts VII ("Document Repository") and VIII ("Filing and Service of Papers") of the Court's Case Management Order No. 4. All other parts of Case Management Order No. 4 remain unaffected.

E. The term "Document Repository" as used in Case Management Order No. 4 shall mean the Court's Website.

II. SERVICE LISTS

A. The firm of Hatch & Parent shall compile an initial service list consisting of the service addresses of all parties to the case.

B. On or before July 7, 2000, all parties shall submit to Hatch & Parent the address at which they wish to receive service. Service addresses may be submitted electronically to: GLane@HatchParent.com, or by facsimile to Gina Lane, Hatch & Parent, 805-965-4333.

Parties must elect one of the following three service options. All parties who are able must opt for email service.

1. Parties receiving service electronically shall provide a current electronic mail address, and a backup facsimile number.

2. Parties without email who elect fax service shall provide a current facsimile number.

3. Other parties receiving service by U.S. Mail shall provide a current U.S. Mail address.

The court will notify email recipients that a document has been posted; parties must serve other parties by fax and mail.

C. On or before July 10, 2000, Hatch & Parent shall transmit the initial electronic, facsimile and U.S. Mail service lists to the Website Vendor, based on the addresses submitted by the parties.

D. All parties are obligated to check their email addresses on the website and notify the vendor immediately of any errors.

E. New parties, upon making their first appearance in this case, will be required to elect their preferred method of service (i.e. electronic, facsimile, or U.S. Mail).

F. Parties making any additions, corrections or changes to the electronic, facsimile, or U.S. Mail service lists after June 26, 2000, shall submit their changes directly to the Website Vendor. The Website Vendor shall post and keep current the electronic, facsimile, and U.S. Mail service lists on the Website.

G. Once a party posts a document, the court, through its website, will make email service. The parties are under a continuing obligation to make fax and mail service of the notice of posting in the normal manner.

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III. PLEADING DOCUMENTS

A. POSTING OF PLEADING DOCUMENTS

1. Commencing on July 11, 2000, all parties, including parties who elect service options two (2) and three (3), will be required to serve all Pleading Documents[1] by posting them on the Website. Parties without Internet access will have to seek it out at the public library or at copy stores.

2. Instructions for posting will be provided on the Website itself. Documents posted shall be catalogued according to the instructions provided. The posting party shall provide: its name, the complete title of the document, and the date of posting. All Pleading Documents will be posted to the Website in xml text format (with a copy in PDF format being optional). All Adobe Acrobat resources can be obtained from www.abode.com.

3. Once a Pleading Document has been posted to the Website, no change shall be made to that document by any party. No Pleading Document posted to the Website shall be removed from the Website except upon further Order of the Court.

4. Exhibits attached to Pleading Documents shall be submitted as image file attachments in .GIF or .JPG form.

5. For all Pleading Documents in this case served prior to July 11, 2000, the serving party shall post a copy of that document to the Website no later than August 10, 2000.

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1 "Pleading Document" means: pleadings or any other documents produced in the course of this action and required to be filed with the Court, including, but not limited to: (1) all complaints, cross-complaints and answers, including amendments thereto; (2) all demurrers, opposition to demurrers and replies; (3) all writ petitions and orders thereon; (4) all motions, oppositions to motions and replies; (5) all proposed orders; (6) all expert designations; and (7) all trial briefs.

6. Nothing in this Order modifies the manner of obtaining personal jurisdiction (through service of process) over a party who has not appeared in these consolidated actions. Service of process shall proceed in the regular manner provided under California law.

B. ELECTRONIC SERVICE AND CONFIRMATION OF RECEIPT

1. The Website will be configured to transmit automatically an electronic "Notice of Availability" to all parties on the electronic service list notifying them that a Pleading Document has been served on them and is available for their review on the Website.

2. Any party posting a Pleading Document on the Website who does not receive electronic notice indicating that service of their document has been made shall, within 12 hours of its posting, notify the Website Vendor of this problem.

3. All Parties electronically served shall confirm receipt of electronic service by replying to the electronic mail "Notice of Availability" message received by no later than 5:00 p.m. on the next business day following posting of the document served, not including weekends and holidays. (For instance, an electronic "Notice of Availability" transmitted at 4:59 p.m. on a Thursday must be confirmed by 5:00 p.m. on Friday. Electronic Notice of Availability transmitted at 5:01 p.m. on a Thursday must be confirmed by 5:00 p.m. on the following Monday.) To confirm receipt, simply select "Reply" and then "Send."

4. Parties who fail to confirm receipt of electronic service within the time period specified above will automatically receive a "Notice of Availability" by facsimile from the Court's Website Vendor. A party's repeated failure to timely confirm receipt of electronic service will be reported to the Court, and the court

will require the party to personally appear to explain his failure to comply with the court's electronic service requirements.

C. FACSIMILE AND U.S. MAIL SERVICE

1. Commencing on July 11, 2000, in addition to posting all Pleading Documents on the Website, all parties shall serve, by facsimile and U.S. Mail as applicable, a "Notice of Availability" on all parties electing to receive service by facsimile or U.S. Mail shall be sufficient to constitute service of the Pleading Document itself.

2. The "Notice of Availability" shall contain; (1) the serving party's name and contact information; (2) the title of the document posted on the Website; and (3) the date of posting; and shall indicate that the document served is available for viewing on the Website.

D. PROOF OF SERVICE

3. All Pleading Documents posted to the Website shall contain a Proof of Service. The Proof of Service shall be sufficient if it indicates: (1) the title of the Pleading Document posted; (2) the date and time of posting; (3) that a "Notice of Availability" has been faxed to all parties on the Website's current facsimile service list; and (4)that a "Notice of Availability" has been mailed to all parties on the Website's current U.S. Mail service list.

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IV. DISCOVERY DOCUMENTS

A. POSTING OF DISCOVERY DOCUMENTS

1. Commencing on July 11, 2000, Discovery Documents[2] that are written requests for discovery or written responses to those requests shall be posted to the Website and served in the same manner as Pleading Documents. For all Discovery Documents that are written requests for discovery or written responses to those requests that are produced prior to July 11, 2000, the producing party shall post a copy of that document to the Website no later than August 10, 2000.

2. Commencing on July 11, 2000, Discovery Documents that are deposition transcripts (including exhibits), whether party or non-party, shall be posted to the Website and served by the noticing party in the same manner as Pleading Documents. Deposition transcripts shall be posted promptly after receipt of the transcript. For all Discovery Documents that are deposition transcripts (including exhibits) that are produced prior to July 11, 2000, the noticing party shall post a copy of that document to the Website no later than August 10, 2000.

3. Commencing on July 11, 2000, documents produced in response to a demand for inspection and copying of documents shall be produced by the producing/responding party as follows:

   a. All parties are required to produce documents electronically.

   b. To ensure quality control and uniformity of imaging and indexing, all parties are required to utilize the Document Services Vendor approved

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2"Discovery Documents" means: non-pleading, discovery documents, including, but limited to: (1) all written discovery requests; (2) all written responses to discovery requests; (3) documents produced in response to requests or demands for production of documents; (4) all deposition transcripts; (5) all privilege logs; and (6) all trial exhibits.

by the Court: APS, 3485 Sacramento Drive, Suite H, San Luis Obispo, California 93401, (805) 545-9100. All parties shall contact APS directly to establish their individual accounts with the Document Services Vendor.

c. Documents produced by a party shall be provided to the Document Services Vendor not later than 15 days after the date of service of the written response (unless another time is set by agreement of the parties or by Order of Court).

d. Upon production of document(s) to the Document Services Vendor, the producing/responding party shall post on the Website a "Notice of Submission of Discovery Documents to the Document Services Vendor" indicating: (1) the name of the producing/responding party; (2) the name of the propounding party; (3) the title of the document requesting the production; and (4) the date of the production.

e. The Document Services Vendor will apply a standard indexing protocol (including electronic "Bates" stamping and bibliographic fields).

f. The Document Services Vendor will transmit electronic images of the documents produced directly to the Website Vendor. The Website Vendor will then post those documents to the Website on behalf of the producing/responding party, and will notify the producing/responding party of this fact.

g. Documents previously produced shall be submitted to the Document Services Vendor on or before July 17, 2000.

B. COSTS

1. Each party producing Discovery Documents shall be responsible for the scanning/imaging and indexing costs charged by the Document Services Vendor

for those services, and any and all costs associated with transmitting these documents to the Website Vendor, as described below.

2. A party utilizing the Document Services Vendor for any other services (e.g., obtaining electronic images of produced documents on CD Rom) shall be responsible for all costs associated with those other services.

3. For non-party document productions, the requesting party shall be responsible for posting the documents and for the costs charged by the Document Services Vendor to scan/image and index the documents.

C. PROTECTIVE ORDERS

1. The Court's standard procedures shall apply to any party seeking to protect or limit disclosure of information in a Discovery Document. In lieu of posting of electronic images for documents subject to Court-ordered protection or limitations on disclosure, the Website shall contain a listing of the document and identifying information (including at least the title and description of the document), information on the nature of the protection or limitation ordered by the Court, and information on how to obtain the document.

V. FILING OF DOCUMENTS WITH THE COURT AND EFFECTIVE DATE OF SERVICE

A. Notwithstanding the procedures for posting Pleading Documents on the Website provide by this Order, no party is relieved of its responsibility to file any and all documents required by law with this Court.

B. All Pleading Documents and any other documents required to be filed with the Court may be filed with the Court by facsimile.

C. For purposes of a party's obligation to produce and/or serve upon another party a document, that party shall be deemed to have produced/served the document on the date on which the document was posted to the Website or submitted to the Document

Services Vendor (as applicable). Documents posted to the Website or submitted to the Document Services Vendor after the close of a business day (5:00 p.m.) shall be deemed to have been produced/served on the next business day.

D. For purposes of a party's obligation to respond to any document served on him, service by electronic posting, facsimile and U.S. Mail in accordance with this Order shall be deemed to be service by facsimile transmission in accordance with Code of Civil Procedure section 1013(e), and the time obligations and duties of the parties shall be governed as if such service had been made by facsimile transmission.

E. All parties are under a continuing obligation to post all Pleading Documents and Discovery Documents to the Website, in the manner described in this Order.

VI. STAY

A. The stay on responsive pleadings imposed by the court at the May 12, 2000 hearing is lifted. Responsive pleadings are due July 17, 2000 and shall be posted in accordance with section III.A.2. of this order.

Dated this 27th day of June, 2000

CONRAD L. RUSHING
Judge of the Superior Court

EXHIBIT H

Form of Memorandum of Agreement to be Recorded

Santa Maria Valley Water Conservation District v. City of Santa Maria
Santa Clara County Superior Court Case No. CV 770214

Attached are two draft forms of Exhibit H. One form is intended to be used for recordation of notice of the Stipulation for properties located within Santa Barbara County, and the other form for properties located within San Luis Obispo County.

RECORDING REQUESTED BY:

XYZ CORPORATION

WHEN RECORDED MAIL TO:

CITY OF SANTA MARIA
A California municipal corporation
110 E. Cook Street
Santa Maria, CA 903454

THIS SPACE RESERVED FOR RECORDER ONL
(Gov. Code 27361.6)

NOTICE OF AGREEMENT BY STIPULATION

THIS NOTICE ("Notice") is authorized and required to be recorded in Santa Barbara County by order of the Superior Court of the County of Santa Clara and Government Code Section 27201.

Effective _____, 2005 the Clerk of the Court for Santa Clara County has entered a written stipulation in the matter of *Santa Maria Valley Water Conservation District v. City of Santa Maria,* Santa Clara County Superior Court, Lead Case No. CV 770214 (hereinafter "Stipulation") affecting the use of water rights in the Santa Maria Groundwater Basin as more particularly described in the Stipulation. A copy of the Stipulation is on file with and may be viewed at the Santa Clara County Superior Court, City of Santa Maria, City of Guadalupe, and County of Santa Barbara. The below stated Stipulating Party and it's real property located in Santa Barbara County bound by the terms of the Stipulation is identified in Exhibit "A" attached hereto and incorporated herein.

XYZ CORPORATION
A California corporation

By:
Name:
Title:

EXHIBIT "A"

STIPULATING PARTY AND PROPERTY DESCRIPTION
(Santa Barbara County)

Stipulating Party	Property Description
XYZ Corporation	(APN 101-040-014) NW ¼ of SW ¼, Section 1, R 29E, T 30S, MDB&M (APN 101-040-019) As described in that certain recorded instrument No. 123, Recorded June 29, 2001, Book 123, Page 111, Santa Barbara County Recorder.

STATE OF CALIFORNIA)
) ss.
COUNTY OF SANTA BARBARA)

On the ___ day of _____, 2005, before me, the below-named Notary Public, personally appeared _____
_____,
personally known to me or proved to me on the basis of satisfactory evidence to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same in their authorized capacities and that by their signatures on the instrument the persons, or the entity upon behalf of which the person(s) acted, executed the instrument.

Witness my hand and official seal.

_____
Notary Public

RECORDING REQUESTED BY:

XYZ CORPORATION

WHEN RECORDED MAIL TO:

NIPOMO COMMUNITY SERVICES DISTRICT
A California CSD
148 South Wilson Street
Nipomo, CA 93444

THIS SPACE RESERVED FOR RECORDER ONL
(Gov. Code 27361.6)

NOTICE OF AGREEMENT BY STIPULATION

THIS NOTICE ("Notice") is authorized and required to be recorded in San Luis Obispo County by order of the Superior Court of the County of Santa Clara and Government Code Section 27201.

Effective _____, 2005 the Clerk of the Court for Santa Clara County has entered a written stipulation in the matter of *Santa Maria Valley Water Conservation District v. City of Santa Maria,* Santa Clara County Superior Court, Lead Case No. CV 770214 (hereinafter "Stipulation") affecting the use of water rights in the Santa Maria Groundwater Basin as more particularly described in the Stipulation. A copy of the Stipulation is on file with and may be viewed at the Santa Clara County Superior Court, Nipomo Community Services District, Oceano Community Services District, City of Arroyo Grande, City of Grover Beach, City of Pismo Beach, and County of San Luis Obispo. The below stated Stipulating Party and it's real property located in San Luis Obispo County bound by the terms of the Stipulation are identified in Exhibit "A" attached hereto and incorporated herein.

XYZ CORPORATION
A California corporation

By:
Name:
Title:

EXHIBIT "A"

STIPULATING PARTY AND PROPERTY DESCRIPTION
(San Luis Obispo County)

Stipulating Party	Assessors Parcel Number
XYZ Corporation	(APN 101-040-014) NW ¼ of SW ¼, Section 1, R 29E, T 30S, MDB&M (APN 101-040-019) As described in that certain recorded instrument No. 123, Recorded June 29, 2001, Book 123, Page 111, San Luis Obispo County Recorder.

STATE OF CALIFORNIA)
) ss.
COUNTY OF SAN LUIS OBISPO)

On the ___ day of _____, 2005, before me, the below-named Notary Public, personally appeared _____
_____,
personally known to me or proved to me on the basis of satisfactory evidence to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same in their authorized capacities and that by their signatures on the instrument the persons, or the entity upon behalf of which the person(s) acted, executed the instrument.

Witness my hand and official seal.

_____
Notary Public

Appendix J
Summary of Population Based on Census Data

There is no Appendix J for the Orcutt System.