

MONTECITO WATER DISTRICT



FINAL
**URBAN WATER MANAGEMENT
PLAN UPDATE-2005**



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Updated in October 2005

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SECTION 1.0

PLAN ADOPTION, PUBLIC PARTICIPATION, AND PLANNING COORDINATION

Law

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. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

1.1 Introduction

The Urban Water Management Planning Act was enacted in 1985 and requires urban water suppliers serving 3,000 acre-feet of municipal/industrial water per year or 3,000 urban customers, to prepare a comprehensive urban water management plan (UWMP) addressing their current and projected water sources/supplies, water uses, supply reliability, comparison of supply and demand, water demand management (conservation) programs, wastewater recycling and drought contingency planning. In compliance with this law, the Montecito Water District (MWD) adopted its first Urban Water Management Plan (UWMP) in December 1985. Subsequent updates to the plan have been prepared every five years, as required by state law. Each update has contained revised information, and replaced, or superseded, the original UWMP and previous updates.

The 2005 UWMP update contains new information based on recent revisions to the Urban Water Management Planning Act and other new information, including:

- Results of MWD's Water Supply Optimization Plan (WSOP), a new water supply planning study which represents a comprehensive historical and projected water supply and demand analysis,
- incorporation of the revised fourteen best management practices (BMPs) contained in the statewide Memorandum of Understanding (MOU) for Urban Water Conservation revised in September 1999.

1.2 Plan Adoption

The 2005 UWMP update was reviewed and adopted by the District's Board of Directors on December 20, 2005 following a public review period, and was submitted to the California Department of Water Resources (DWR) on December 30, 2005, within 30 days of the Board's adoption. This plan includes all the information necessary to meet the requirements of California Water Code Division 6, Part 2.6 (Urban Water Management Planning). A copy of the signed Resolution of Adoption (MWD Resolution No. 2005) is included in Appendix 10.6.

1.3 Public Participation

To obtain public comment on this update of the Urban Water Management Plan, a public hearing was held on December 20, 2005. The draft plan was also made available for public review during the period October to (insert new date). Comments received during that period were reviewed by District staff and Board, and were included in the plan where appropriate. Please see Appendix 10.5 for copies of the letters received during the public review period.

Law

10620 (d) (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.

1.4 Agency Coordination

MWD staff and its consultant contacted other agencies to coordinate elements of this Plan. These agencies include: the County of Santa Barbara (Water Agency), the Central Coast Water Authority (local State Water Project wholesaler), the Montecito Sanitary District and the Summerland Sanitary District. Each of these agencies provided information that is contained in this Plan. MWD works closely with these agencies to coordinate activities and/or manage district operations.

The Legislature enactment of Assembly Bill (AB) 2552, requires water purveyors preparing urban water management plans to submit their draft plans to local cities, planning agencies and other affected parties for review and comment *prior to adoption*.. MWD provided this draft Plan to the entities listed below for their review and comment, and invited them to attend the public hearing to provide that comment:

- ❖ County Supervisor Salud Carbahal, 1st District
- ❖ Carpinteria Valley Water District
- ❖ City of Santa Barbara (Water Department)
- ❖ Santa Barbara County Planning and Development Department
- ❖ Santa Barbara County Water Agency
- ❖ Central Coast Water Authority
- ❖ Cachuma Operations and Maintenance Board
- ❖ Citizens' Planning Association
- ❖ Montecito Association
- ❖ Montecito and Summerland Sanitary Districts
- ❖ Local Agency Formation Commission (LAFCO)
- ❖ Santa Barbara County Association of Governments (SBCAG)
- ❖ Montecito Fire District
- ❖ Summerland Citizens' Association
- ❖ Carpinteria Valley Association

SECTION 2.0

SERVICE AREA INFORMATION: MONTECITO WATER DISTRICT

Law

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

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.

2.1 Mission Statement

The mission of MWD is to provide an adequate and reliable supply of high quality water to the residents of Montecito and Summerland, at the most reasonable cost. In carrying out this mission, the District places particular emphasis on providing outstanding customer service, conducting its operations in an environmentally sensitive manner, and working cooperatively with other agencies.

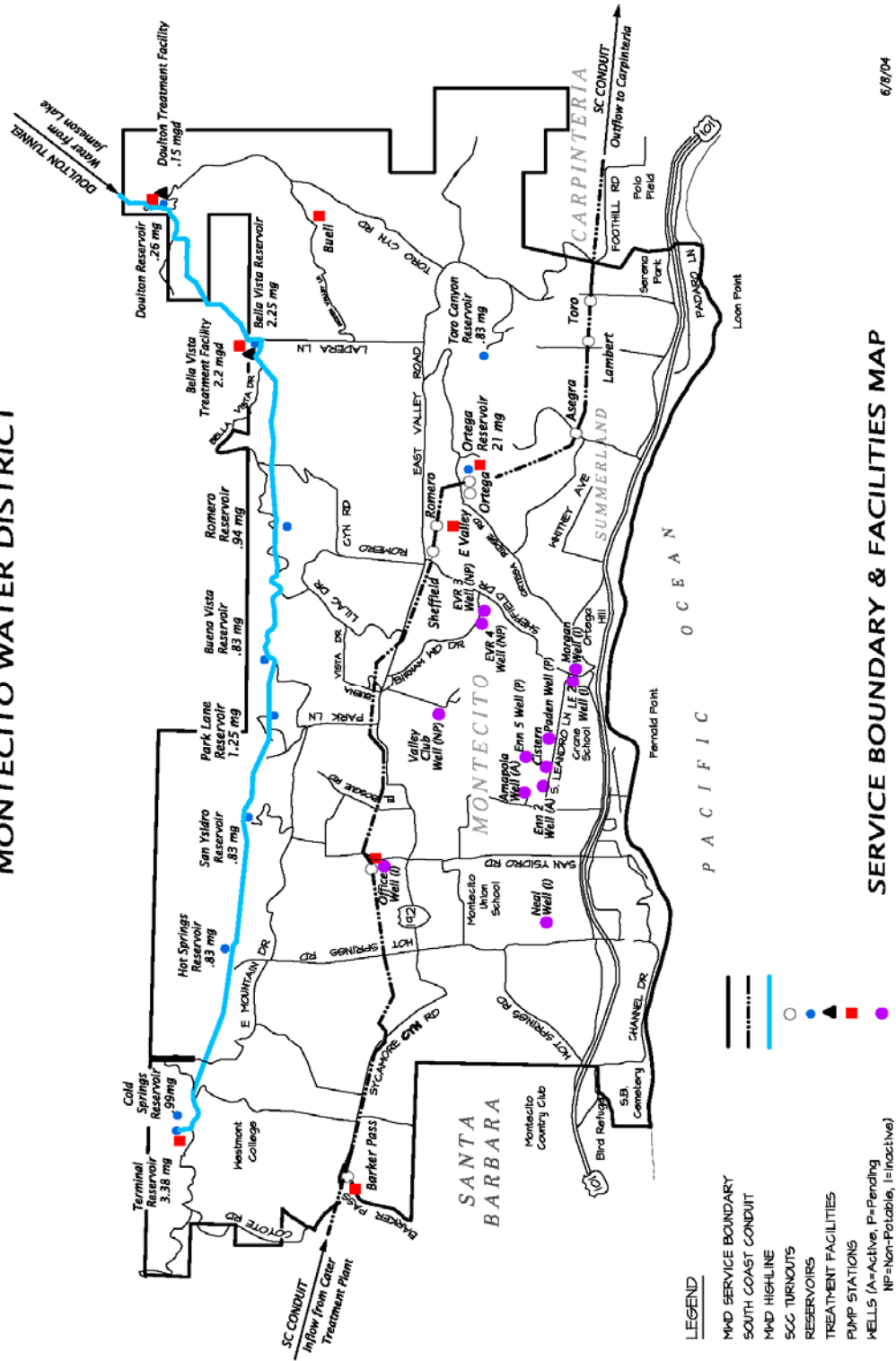
2.2 History

MWD was formed as a County Water District in November 1921, in accordance with the California Water Code, with the purpose of furnishing potable water within the District. MWD executed the first contract with the United States Bureau of Reclamation in 1949 to receive water from Lake Cachuma (Bradbury Dam). As a result of annexations and the 1995 merger with the former Summerland County Water District, the total acreage has increased from 8100 acres to its current 9,225 acres. The service area acreage calculation has changed from that previously reported in the 2000 UWMP. Since the 2000 UWMP, MWD has created digital maps of its service area enabling a more accurate calculation of service area acreage. The District's service area includes the unincorporated Montecito and Summerland communities, as well as Toro Canyon, and portions of the western Carpinteria Valley and the City of Santa Barbara. All powers of the District are vested in a five-member elected Board of Directors.

2.3 Location

The District is located on the Central Coast of California, adjacent to the City of Santa Barbara in southern Santa Barbara County. The District extends 5½ miles to the east of the City of Santa Barbara and 3½ miles from the coast to the Santa Ynez coastal mountains. (Please see the Figure 1 for a map of the MWD service area). MWD encompasses an area of 9,225 acres of unincorporated lands, of which approximately 6,421 acres are developed (98% residential and 2% commercial) and approximately 849 acres are currently used for agriculture. The District is divided into three planning areas, each governed by an adopted community plan. The three planning areas are: the Montecito Community, with an area of approximately 5828 acres; Summerland, with 1126 acres; and the Toro Canyon area, with an area of 2271 acres. Geographically, the overall terrain varies in elevation from sea level to its highest elevation of about 1820 feet against the coastal foothills.

MONTECITO WATER DISTRICT



6/18/04

SERVICE BOUNDARY & FACILITIES MAP

FIGURE 1

Not all properties within the Montecito area are currently served by the District. Several properties rely solely on water provided by private wells, creeks and streams, and 7 small private water companies, while others use these sources as a supplement to the potable water supply received from MWD. The District has provided outreach to these property owners, who also participate in the District’s Water Availability Charge program. Since the year 2000 UWMP update, MWD and two private water companies have worked together in providing water companies customers with District potable water service. The number of private water companies within the District has changed from 9 to 7.

2.4 Climate

The climate of the Montecito area is temperate and primarily Mediterranean. Winters are cool with moderate amounts of rain. Average rainfall is approximately 20 inches per year. Spring conditions remain mild with light amounts of rain and fog. During summer and fall, the climate is usually dry with warm, moderate conditions. The average annual ETO (reference evapotranspiration) is approximately 41 inches. Refer to the following Table 1 for additional precipitation and temperature data.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
avg precip ¹ (in.)	4.37	4.47	3.51	1.50	.34	.08	.03	.10	.35	.49	2.19	2.79	19.75
avg temp ²	52.0	53.9	54.7	56.3	59.2	62.2	65.2	66.4	65.5	61.8	56.8	52.6	58.9
max temp ²	63.3	64.4	65.0	66.6	68.4	71.2	73.6	74.8	75.0	72.5	69.0	64.8	69.0
min temp ²	40.6	42.9	44.4	47.0	49.9	53.3	56.8	58.0	56.1	51.0	44.5	40.3	48.7

Average precipitation can be misleading in this area, as the semi-arid area is subject to extreme annual variation.

The following data is from 1989, a year with minimum rainfall.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Precip	.58	3.30	1.04	.33	.27	.04	0	0	.07	.91	.52	0	7.06

average wind velocity : 1.48 m.p.h.

average direction: south/south-east

average annual frost free days: 365 days

2.5 Demographics

The community is composed of a relatively older, stable population with a larger than average proportion of married couple and elderly households and a smaller than average number of non-white households. The District has a customer base that is almost 95% residential, representing

¹The time period for the precipitation data is July, 1953 through June, 1993 from MWD records.

²The time period for the temperature data is based on a 30 year average (1961-1991) provided by the National Weather Service.

about 76% of water use in the District. Many of the residential properties are large lots with estate style homes and extensive landscaping. MWD staff estimate that about 70% of the residential water usage is for outside irrigation.

The service area population has increased gradually since MWD’s formation in 1921. While the Montecito Community is still unincorporated, the first zoning ordinance in California was adopted for the area in the early 1930’s. The development of new residences and the resulting population growth within the service area is controlled by a number of regulatory programs, including the land use designations and associated build-out levels identified in the County’s adopted Comprehensive Plan, the Montecito and Summerland Community Plans, and the Local Coastal Plan. The current population within the MWD service area is estimated at 13,500, which includes customers that were previously served by the Summerland County Water District prior to the 1995 merger of the two districts.

Future population projections are also based on these approved land use documents and their anticipated build-out levels. Within the service area boundaries of MWD, the rate of new residential development is approximately 38 new units per year, including affordable housing units. At projected build-out levels, there will be approximately 6,646 residential units in the communities of Summerland and Montecito (Source: Montecito and Summerland adopted Community Plans). The County’s Planning and Development Department has developed a long-range plan for the Toro Canyon area, which has resulted in a reduction in the build-out estimate for this portion of the District. Please see Table 2 for population projections within MWD’s service area through the year 2030, which are below the projected build-out levels contained in the land use plans referenced above.

Table 2A Montecito Water District Population Projections ⁽¹⁾						
	2005	2010	2015	2020	2025	2030
Population	13500	14000	14500	15000	15500	16000

- (1) **2005 – 2030:** Using the 2005 population estimate as a base, add: **38** connections per year x 2.56 people per connection (per the Montecito Community Plan projections) = **97 new people** (rounded off) per year or **486 new people** every five years.
- (2) This population projection falls below the population levels that could be expected at build-out, consistent with the community plans developed for land within the MWD service area.

2.6 Past Drought, Water Demand and Conservation Information

Over the years, the District has acquired additional water supplies to meet the increasing water demands of the community. Water sources developed or acquired include the District's Jameson Lake and Doulton Tunnel constructed in the late 1920’s, a Federal contract for construction of the Cachuma Project in 1954, the acquisition of a State Water entitlement in 1991 and construction of new State Water water transmission facilities completed in 1997.

Due to concerns over the ability to meet growing water demand district-wide in the early 1970s, MWD declared a water shortage emergency on January 18, 1973, and imposed restrictions on new water connections and water use. At that time, the District's Board of Directors determined that the safe yield of existing supplies would not satisfy normal water demands within its service area. A water allocation system was also adopted in 1973. The original water allocation program was based upon customers' actual water usage during the years 1970 through 1972. Please see Section 8, Water Shortage Contingency Plan, for more information about MWD's previous allocation programs.

More recently, the prolonged drought of 1987-91 resulted in additional severe water shortages on the south coast of Santa Barbara County. At the time, water purveyors in the area were 100% dependent on local groundwater and surface water supplies. Surface water from the Santa Ynez River was, and still is, the primary source of water for the Montecito Water District. These surface supplies were seriously depleted during the drought. This led to development of emergency water supplies, adoption of drought emergency measures, a new water allocation ordinance, and water conservation services for customers with penalty water rates and prohibition for certain water uses. The water allocation ordinance was revised twice during the drought. In the latter revision, allocations were based on past use, lot size and a percentage of the total available water supply. Water use restrictions included prohibitions against waste of water, increased surcharges for excessive use, and a provision for installation of flow restrictors on accounts that exceeded their allocation for three consecutive quarters.

For the 1987-1991 drought, MWD staff assisted customers by providing a variety of useful public information (indoor and outdoor water conservation tips), residential water audits and distribution of water efficient plumbing devices. A full-time water conservation coordinator, assistant and student interns were retained to implement these customer service programs during the drought. Water users in the District responded to these measures and to the widespread information campaigns requesting all local water users to save water, by reducing their demand by an average of 36% between 1989 and 1992.

To provide supplemental water supplies during the drought, MWD obtained agreements for two emergency, supplemental sources of water for customers: (1) State Water "wheeled" from the Metropolitan Water District of Southern California through Ventura County and exchanged with water from Lake Casitas in Ojai; and (2) desalinized seawater from the City of Santa Barbara's Temporary Desalination Plant. Neither supplemental source of water was activated as the drought abated in March 1991. Please see Water Shortage Contingency Plan (Section 8.0) for more details about these projects.

Since the end of the drought in 1991, the District has secured a new supplemental water supply via the State Water Project, and implemented long-term water efficiency programs. MWD also participates in an ongoing regional water efficiency program conducted by the Santa Barbara County Water Agency (please see Section 10.1 for Fiscal Year 2003-04 Annual Report containing details regarding the regional program). The nearly 25-year water shortage emergency and water moratorium and associated restrictions were officially terminated in 1997 following the completion of the new State Water transmission facilities bringing a new supply of water to MWD and the other participating Santa Barbara County (County) water purveyors.

Since the year 2000 UWMP update, MWD and other County water agencies experienced another short term drought condition beginning in year 2001. This most recent drought ended in the rainfall period of 2004/05 following rainfall for the season that was over 200% of the yearly annual average. Prior to the onset of heavy rains filling local surface water reservoirs, MWD and other County water purveyors were able to utilize their recently acquired State Water supplies and available Department of Water Resources (DWR) dry year water purchase program. MWD's State Water entitlement provided a new imported water supply to District customers without the need for implementation of the previously referenced customer allocation program used during the 1987-1991 drought. The local 2001-04 below average rainfall years was severe enough to cause a 20% reduction in the District's Cachuma Lake water supply allocation for the start of the 2004/05 water year. The 20% reduction in this water supply was lifted in March 2005 following the above average rainfall for the winter of 2004/05. The availability of State Water for this last drought period enabled the District to plan for and optimize its water resources to avert customer water shortages and extend the yield of its local surface and groundwater supplies. In Table 2B below, you will find water supply conditions for the past two drought periods. Note the Cachuma and Jameson Lake values in Table 2B represent storage levels for the beginning of each water year (July through June). Full storage volume is 188,030 acre-feet (AF) for Lake Cachuma and 5,291 AF for Jameson Lake.

Table 2B				
1987-1991 Local Drought Period Water Conditions				
w/o State Water				
Year	Rain (in)	Water Sales (AF)	Cachuma Storage (AF)	Jameson Storage (AF)
1986/87	11.17	4894	140,489	3,568
1987/88	28.88	4865	107,623	3,262
1988/89	13.59	5174	74,869	2,404
1989/90	15.01	4403	40,654	1,879

2001-2004 Local Drought Period Water Conditions				
With State Water				
Year	Rain (in)	Water Sales (AF)	Cachuma Storage (AF)	Jameson Storage (AF)
2001/02	11.44	5234	151,252	3,575
2002/03	27.31	5194	124,245	3,277
2003/04	15.71	6055	84,904	2,551

SECTION 3.0

WATER SOURCES (SUPPLY)

Law

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

10631 (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 [to 20 years or as far as data is available.]

3.1 Supply Overview

MWD has a diverse variety of local and supplemental water supplies available to meet customers' needs. Water supplies include local surface water supplies from Lake Cachuma, Jameson Lake, smaller seasonal District water diversions on the Santa Ynez River, Doulton Tunnel groundwater infiltration, 18 water wells, and importation of State Water. Table 3 below indicates District water production by source and percentage for the water years 2000/01 through 2003/04. Note that the water year in Santa Barbara County is for the period October 1 through September 30 of each year.

Table 3								
Water Production Summary by Source (af)								
Source Of Supply	Water Year (Oct thru Sept)							
	2000/01	% Total	2001/02	% Total	2002/03	% Total	2003/04	% Total
Owned								
Jameson Lake	1595	32.9	1831	32.4	1414	25.0	1388	21.2
Doulton Tunnel	389	8.0	201	3.6	297	5.3	170	2.6
Groundwater	65	1.3	78	1.4	78	1.4	326	5.0
Sub-Total	2049	42.2	2110	37.3	1789	31.17	1884	28.8
Local Purchased								
Cachuma Lake	2805	57.8	2927	51.17	2458	43.5	3273	50.0
Import Purchased								
State Water	0	0.0	621	11.0	1403	24.8	1395	21.3
Total	4854		5658		5650		6552	

Adjustments to the available surface water supply occur during periods of extended drought. The adjustments for the water supply from Lake Cachuma are mutually agreed to by the Cachuma member agencies. For example, the Cachuma entitlements for all water purveyors were reduced by 40% in 1991 and 20% for the recent drought period ending in 2005.

The District's multiple water supplies allow for flexibility in water production. In the event surface water supplies are reduced, MWD has a groundwater conjunctive use program that provides a supplemental water supply to its service area. The District also has potential additional supplies from short and long-term water transfers. Table 3A details the current and projected amounts of water for District planning purposes available from the following water sources. Note that the values shown in Table 3A (unless otherwise noted) represent the historical long term average supply based on hydrological models and historical data.

Table 3A						
Montecito Water District						
Historical Long Term Average Water Supply						
(Shown in Calendar Years)						
SOURCE OF SUPPLY	2005	2010	2015	2020	2025	2030
Lake Cachuma (1)	2,558	2,558	2,558	2,558	2,558	2,558
Cachuma Spill Surplus (1)	348	348	348	348	348	348
Jameson Lake (2)	1,569	1,569	1,569	1,569	1,569	1,569
Doulton Tunnel	375	375	375	375	375	375
Groundwater (4)	250	250	250	250	250	250
State Water Project (3)	2,280	2,280	2,280	2,280	2,280	2,280
Totals	7,380	7,380	7,380	7,380	7,380	7,380
*Units of Measure: Acre-feet/Year						

1. Lake Cachuma is operated based on an operational yield that was developed through experience during long-term droughts and acceptable delivery reductions during such drought periods. MWD entitlement is 2651 AF with the average yield being 2558 AFY (WSOP, Pg. 20). The Cachuma spill surplus is that water delivered to MWD during spill periods that is not part of the Cachuma entitlement.
2. The District's management of Jameson Lake is based on the full legal rights to 2,000 acre-feet per year; however, the long term yield is 1569 AFY (WSOP, Pg 21).
3. The District's full State Water entitlement is 3,000 AFY (not including a 300 AFY share of the drought buffer maintained for contractors by the CCWA to enhance the reliability of State Water during shortages). According to the Department of Water Resources and CCWA, State Water Contractors can expect to receive full entitlements in wet years, 76% of their entitlement as a long-term average annual delivery, and 55% of their entitlement in a repeat of the 1928-34 drought years. For planning purposes, the District has used the 76% average year projection. These reliability estimates were initially developed by Bookman-Edmonston Engineering, Inc. in a report (Technical Memorandum: A Review of Alternatives to Improve the Reliability of CCWA's State Water Project Supply) to the CCWA in 1995 and refined as a result of certain regulatory actions since 1995. The District plans to take State Water in excess of demand in certain years in order to bank water for years when delivery is reduced, and so may further enhance reliability. (Please see Table 8 for supply availability during multiple dry years.)
4. Groundwater production of 250 acre-feet is predicated on current MWD water well production capacity and not the historical long term average.

3.2 Local Surface Water Supplies



3.2.1 Lake Cachuma

Lake Cachuma is an open surface water reservoir owned by the United States Bureau of Reclamation (USBR). Water from Lake Cachuma is purchased by the District from the Cachuma Project pursuant to a contract with USBR. The Cachuma Project provides municipal and irrigation water to MWD and other water purveyors located within Santa Barbara County (the City of Santa Barbara, the Carpinteria Valley Water District, the Goleta Water District, and the Santa Ynez River Water Conservation District, Improvement District No. 1). Water delivered through the Cachuma Project is captured by Bradbury Dam, located on the Santa Ynez River approximately 25 miles northwest of Santa Barbara. The reservoir created by Bradbury Dam, Lake Cachuma, had an original capacity of 205,000 acre-feet. It now has a capacity of 188,030 acre-feet, based on information gathered in a silt survey conducted by the Cachuma Operations and Maintenance Board (COMB) in the year 2000. Because of the availability of State Water and related conjunctive use opportunities thereby created, the operational yield of Cachuma is not likely to change due solely to siltation.

Water is diverted from Lake Cachuma through the Tecolote Tunnel, which extends approximately 6.4 miles through the Santa Ynez Mountains to the head works of the South Coast Conduit. The South Coast Conduit is a steel pipeline which runs a distance of approximately 24 miles and includes four regulating reservoirs - Glen Anne Dam and Reservoir with a capacity of 470 acre-feet (which is currently not in service pending additional seismic safety review), Lauro Dam and Reservoir, with a capacity of 640 acre-feet, Ortega Dam and Reservoir with a capacity of 60 acre-feet, and Carpinteria Reservoir with a capacity of 44 acre-feet. Lake Cachuma water supplies delivered to the South Coast are treated at the Cater Treatment Plant, which was designed to treat 37 million gallons per day.

The District has three main pump turnout stations from the South Coast Conduit, with a combined maximum pumping capacity of 7.7 million gallons per day. The pump stations feed District reservoirs and the distribution system. In addition to the pump stations, there are two metered turnouts serving MWD's recreational and agricultural customers directly. All water pumped from the South Coast Conduit into the District's distribution system is metered.

The District's available supply from Lake Cachuma during years of normal rainfall is 2,651 acre-feet, which is approximately 10.3% of the Lake's current design operational yield based on a seven-year reserve and on the drought years for the period 1947-1952. Lake Cachuma is operated based on an operational yield that was developed through experience during long-term droughts and

acceptable delivery reductions during such drought periods. Actual delivered entitlement to MWD over the 76-year Santa Ynez River model averages approximately 2540 AFY.



3.2.2 Jameson Lake

Jameson Lake is an open surface water reservoir owned and operated by MWD. The reservoir was built by MWD between the years 1928 and 1930 and served as its primary water supply until the Cachuma Project was completed in the early 1950's. It receives water from the Santa Ynez River, the North Fork stream and the seasonal diversion at Alder Creek. The current capacity of the lake is 5,307 acre-feet based on a storage elevation of 2,224 feet (MSL) and based on a bathymetric survey completed by MNS Engineers in July 1998. The Lake elevation at maximum storage is currently 2,224 feet (MSL). The District will continue to perform periodic silt surveys and other studies on the reservoir, and has developed a conjunctive use operational plan for all District supplies, including an operational yield and rule curve based on reservoir capacity. The rule curve, developed with the Montecito Water District Water Supply Optimization Plan (WSOP) (Bachman, 2005) is a summary of a two part equation relating reservoir levels, demand and available supplies (WSOP, Pg. 22).

The District employs a full-time dam caretaker who oversees reservoir operations and monitors all pertinent operational and diversion data. MWD has also converted the diversion operation and monitoring to remote control with upgrades to its hard-wired Supervisory Control and Data Acquisition (SCADA) system serving Jameson Lake and all District major distribution system facilities. Juncal Dam is designated as a dam impoundment structure under State permit number 34-2. Juncal Dam is under the jurisdiction of the State Department of Water Resources, Division of Safety of Dams (DSOD). Water from the lake is ordered on a daily basis by MWD operations personnel who monitor storage levels in secondary water reservoirs located throughout the service area. Water from the lake flows by gravity through a 14" diameter pipeline and enters the District's service area at the end of the 2.2-mile long Doulton Tunnel. The Tunnel passes through the Santa Ynez Mountain range at an elevation of 1,921 feet (MSL). The water then flows by gravity to treatment facilities, secondary storage and distribution to customers.

Water diverted from Jameson Lake over the last ten years has averaged approximately 35% of the yearly District production total. The Jameson Lake diversion including all its Santa Ynez diversions is limited to a maximum of 2,000 acre-feet per year as a result of the Gin Chow decision by the California Supreme Court, and re-affirmed by the Court in the Jordan decision (1998). The average yearly diversion over the last 10 years is approximately 1,550 acre-feet. The Superior and Appellate courts recently affirmed MWD's rights to water from Jameson Lake and Fox and Alder

Creeks in the Jordan Judgment. Planning figures used in this plan for Upper Santa Ynez diversions are lower than the District's general operations. WSOP diversion guidelines establish procedures to maximize the operational yield of MWD's water supplies, taking into account historic hydrologic data and water demand.

3.2.3 Santa Ynez River Tributary Diversions

Fox and Alder Creeks are tributaries of the Santa Ynez River located in the upper reaches of the Santa Ynez River between the Juncal campground and Jameson Lake. MWD diversion operations were revised in the late 1990's to address and mitigate potential impacts caused by newly listed species under the Endangered Species Act. MWD has subsequently modified the diversion collection systems to provide for continuous bypass flows downstream of the diversion dam. These changes have reduced the combined yield of these two sources to an estimated annual average of 100 acre-feet per year. Actual operational yields of these seasonal diversion tributaries have been well below 100 acre-feet for years of average rainfall. These tributaries though still legal sources of water are not considered.

3.2.4 Doulton Tunnel

Doulton Tunnel, a 2.2-mile long tunnel through the Santa Ynez Mountains, is a source of groundwater infiltration water of approximately 375 acre-feet. During consecutive years of normal rainfall, the tunnel contributes approximately 5% of the District's total water production. This source is commingled by the District with the water received from Jameson Lake and Fox and Alder Creeks, but was determined by the California Supreme Court to be groundwater not subject to the 2,000 acre-feet per year limitation.

3.3 State Water Supplies



In 1963, the Santa Barbara County Flood Control and Water Conservation District (County) contracted with the California Department of Water Resources (DWR) for the delivery of State Water Project water. This contract did not include the costs of constructing the necessary delivery system to bring water to Santa Barbara County. In the 1980's the County assigned the majority of its State Water entitlements to local water agencies, cities and others. In 1991 voters in a number of these communities with retained entitlements, including MWD, voted to fund the facilities to import State Water. The Central Coast Water Authority (CCWA) was formed to finance, construct, manage and operate Santa Barbara County's 42-mile extension, the "Coastal Branch", of the State Water pipeline and necessary treatment facilities. The District is a member of CCWA.

The District's full entitlement to State Water is 3,300 AFY, including a 300 AFY share of the drought buffer maintained for contractors by the CCWA to enhance the reliability of State Water during shortages. This water is being used to restore supplies to support traditional demand, reduce use of groundwater, support new authorized construction, and offset naturally occurring reservoir siltation at Cachuma and Jameson Lakes. State Water Project deliveries to the South Coast began in 1997. State Water delivered to local water purveyors, including MWD, is stored and delivered through Lake Cachuma.

According to the Department of Water Resources, State Water Contractors can expect to receive full entitlements in wet years, 76% of their entitlement in average years, and 55% of their entitlement in drought years. In addition to the drought buffer, the District also participates in a Cachuma water exchange, and has the ability to store additional water in Lake Cachuma, and to develop conjunctive uses programs and out-of-area storage projects to increase supply reliability. For planning purposes, the District has conservatively used the 76% average year projection, which is 2,280 AFY (76% of MWD's 3,000 acre-foot entitlement). This takes into account the reliability enhancement from the drought buffer. (See Table 8 for supply availability during multiple dry years.)

3.3.1 State Water Project: Central Coast Water Authority

The Coastal Branch will help the Central Coast more effectively handle droughts, groundwater overdraft, and water marketing and transfers on a countywide and statewide basis. Now the region has a more flexible water supply consisting of both local and imported sources.

For decades, Santa Barbara and San Luis Obispo counties depended on water stored in local reservoirs and pumped from groundwater basins. As demand rose, groundwater pumping increased, resulting in groundwater overdraft and increasing the possibility of seawater intrusion into aquifers. Reservoirs ran dry in droughts. Local water managers looked for the day when they could draw on another source of water to supplement local water supplies.

The drought of 1987-91 showed how vulnerable County water agencies were to successive below average rainfall years. The dwindling local surface water supplies caused strict cutbacks in water use and residents decided it was time to connect to the State Water Project (SWP) by completing the Coastal Branch of the California Aqueduct.

The two counties had joined the SWP in 1963, but the connection to the SWP remained unsettled. The initial phase of the Coastal Branch, completed in 1968, ended in Kern County. In 1991, voters served by many Santa Barbara County water suppliers approved financing for local facilities. San Luis Obispo County and certain other Santa Barbara County suppliers also agreed to participate in the project. The CCWA was formed in Santa Barbara County to finance, build, and operate local treatment and conveyance facilities.

The local water suppliers that approved financing for the facilities to deliver State Water are funding the entire project cost of about \$575 million for the Coastal Branch and for the local treatment plant and extension. Through their payments for the water, the water users reimburse CCWA and the SWP for all costs, including construction and operation.

The Coastal Branch can supply as much as 47,816 acre-feet a year to supplement supplies from area reservoirs and groundwater basins. (An acre-foot is the amount of water that covers an acre to a depth of one foot, about the size of a football field). San Luis Obispo County decided to receive 4,830 acre-feet a year while Santa Barbara County signed up for 42,986 acre-feet.

Water for the Central Coast travels more than 400 miles from its Sierra Nevada watershed. Released from Lake Oroville north of Sacramento, the water moves down the Feather and Sacramento Rivers over 100 miles to the Sacramento-San Joaquin River Delta. From there it is pumped into the California Aqueduct for a 185-mile journey south to the beginning of the Coastal Branch.

3.3.2 State Water Project: Sacramento-San Joaquin Delta

The source of Santa Barbara County's State Project Water supplies is the Sacramento-San Joaquin Bay Delta (or "the Delta"). It has been said that whatever affects California's Sacramento-San Joaquin Delta in one way or another tends to influence much of our total water supply in the state. The reverse is also true. Whatever issues may affect water elsewhere in the state will eventually be felt in the Delta. The Delta is a complex environmental and political jigsaw puzzle that is at the center of all discussions concerning California's future water supply.

Geographically, the Delta covers an area of about 700,000 acres. It is the historical collection point for surface water runoff created by the Sacramento and San Joaquin Rivers into San Francisco Bay. It also serves as the "low point" of the Sacramento-San Joaquin Valley through which water flows before going into the Pacific Ocean.

From a water resources perspective, California's economy and its environment "meet" in the Delta. The Delta provides valuable habitat for a variety of sensitive fish, plant and animal species. It is also the hub of a water supply infrastructure system essential to the operation of a \$750 billion state economy in a number of ways:

- ❖ The Delta is at the heart of two major water supply projects: the State Water Project (SWP) and the federal Central Valley Project (CVP). The CVP and SWP transport fresh water supplies from northern California through the Delta to central and southern California.
- ❖ The Delta captures 47% of the state's runoff, providing water to over 20 million Californians.
- ❖ The Delta supplies 40% of California's drinking water supplies.
- ❖ The Delta provides irrigation water for 200 different crops, including 45% of all the fruits and vegetables consumed in the United States.
- ❖ The Delta supports over 120 species of fish as well as large commercial and recreational fisheries.
- ❖ The Delta contains the largest wetland habitat in the western United States.

3.3.3 State Water Project: Coastal Branch Facilities

After traversing the first section of the Coastal Branch (an open aqueduct completed in 1968), the water surmounts the steep Temblor Range. Three pumping plants – Devil's Den, Bluestone and Polonio Pass – pump the water 1,500 feet in elevation through a buried 57-inch diameter steel

pipeline to the summit of Polonio Pass. On the summit, a state-of-the art water treatment plant uses electronically controlled systems to operate flocculation, sedimentation, filtration, and disinfection process. The plant produces up to 43 million gallons of drinking water per day.

Filled with treated water, the pipeline plunges nearly 1,000 feet to the floor of the Cholame Valley. It passes through three tunnels, burrowing through rugged Calf Canyon near Santa Margarita and into the hills southeast of the city of San Luis Obispo. The water is moved by pressure and gravity. The diameter of the pipeline gets progressively smaller, narrowing to 42 inches where it ends at Vandenberg Air Force Base in Santa Barbara County. At this point, the Coastal Branch pipeline links to another buried pipeline, a 42-mile long locally owned extension. This pipeline further decreases in size to 30 inches and ends at the storage reservoir of Lake Cachuma. A pump station near Santa Ynez pumps the water the last eight miles to the lake. The bulk of the water is received by cities and communities in Santa Barbara County. About 10 percent is delivered in San Luis Obispo County.

3.4 Groundwater

MWD currently operates 8 active potable and non-potable wells of its total 18 wells in two of its four groundwater basins located within the District. Most water is drawn from the Montecito Groundwater Basin. The Basin is not adjudicated, therefore the District use is subject to overlying landowner use. As the overlying water purveyor, MWD, in accordance with Assembly Bill 3030, manages the groundwater basin within its service area. MWD performs bi-annual groundwater management surveys by recording water levels in water wells located throughout its service boundary. Data collected in the survey is analyzed and published with a report to the District's Board of Directors and those well owners participating in the groundwater survey program. Currently there are 62 wells in the District's bi-annual monitoring program. The District estimated that there were an additional several hundred active wells in the community in 1998 (please see Section 3.8 of the District's AB 3030 Groundwater Basin Management Plan). The District does not have production data for these private wells.

A safe yield evaluation of the Montecito and Toro Canyon basins was prepared in 1980 by Hoover and Associates. The combined basin safe yield was estimated to be 1,650 acre-feet for both private and District pumpage. This annual yield was derived as an average amount of water than can be withdrawn from the Basin over a number of years through wet and dry cycles. As part of its overall operational plan, MWD plans to pump 400 acre-feet on an annual basis, though up to 700 acre-feet per year may be pumped on a short-term basis, when surface or imported water supplies are limited. According to a more recent hydrogeologic assessment prepared by Richard Slade and Associates in 1991, the usable capacity (not safe yield) of the combined basins is approximately 14,500 acre-feet. In severe drought conditions, the District can pump more than 700 acre-feet per year for a very limited time, as long as the Basin is allowed to recover, through reduced pumping, in wet years. To date, the aggregate pumping of District and private wells has not exceeded the operational yield. In the years since the 1987-91 drought, the District wells have not been extensively pumped, which has allowed the groundwater basin to recharge. District groundwater production gradually increased beginning in 2002 in accordance with conjunctive use program guidelines. The increase in groundwater production partially offsets demand on the dwindling local surface water supplies. With above average rainfall and full surface water supplies for the year 2004/05, MWD has since cut back on groundwater use.

As general information, the Montecito Groundwater Basin is divided into three distinct storage units separated by east-west trending faults ((MWD, 88). For the most part, these east-west trending faults represent significant barriers to groundwater movement (Slade, 87). Higher water levels and steeper groundwater gradients north of the Arroyo Parida and Montecito Faults confirm the separation of the units. North of the Montecito Fault groundwater levels have historically remained about 150 feet higher than south of the fault (GTC, 73).

These storage units are numbered one through three, with unit number three being the closest to the ocean. A fourth basin within the MWD service boundary is called the Toro Canyon Storage unit which also encompasses a portion of the Carpinteria Valley. A map of the storage units is attached for your information and review. According to a 1980 study (Safe Yield of the Montecito Basin and Toro Canyon Area) prepared by Mike Hoover, the safe yield of the groundwater basins within the Montecito Water District is estimated at 1,650 acre-feet per year. The estimated breakdown of this yield by groundwater storage units is as follows:

Storage Unit 1	550 AFY
Storage Unit 2	100 AFY
Storage Unit 3	700 AFY
Toro Canyon	<u>300 AFY</u>
Groundwater Basin Safe Yield	1,650 AFY

For the most part MWD well production ranges between 300 - 450 AFY. It is estimated that private pumpage within the District can range between 700-1000 AFY depending on rainfall for that particular year.

3.5 Recycled Wastewater

A 1990 study of the potential for using recycled wastewater within MWD’s service area concluded that use of recycled water was not economically feasible. The study determined that sites capable of using recycled water were not located within a reasonable distance from where the tertiary treated water would be produced. The costs associated with the development of pumping stations, reclaimed transmission and distribution facilities were determined to be prohibitive. However, future drought conditions or substantial increases in potable water costs may justify the expense of re-evaluating this potential source of water in cooperation with the Montecito Sanitary District.

3.6 Water Treatment And Distribution Facilities

The District’s distribution system is gravity-fed with a series of pressure zones controlled by pressure regulating stations, with water pumped from the South Coast Conduit and from wells. MWD’s potable water treatment and distribution system is comprised of a water treatment plant, ten reservoirs, 110 miles of pipeline, and nine pumping stations. All District water is treated to meet all federal and state drinking water standards. The Cachuma water supply is treated by the City of Santa Barbara at the City’s Cater Water Treatment Plant. The Jameson Lake water supply is treated at the District’s Bella Vista and Doulton Water Treatment Plants.

SECTION 4.0

RELIABILITY PLANNING

Law

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

10631 (c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable.

10631 (c) 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 replace that source with alternative sources or water demand management measures, to the extent practicable.

10631 (c) Provide data for each of the following:

(1) An average water year, (2) A single dry water year, (3) Multiple dry water years.

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

10632 (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.

The reliability of any given water supply depends on a variety of factors such as climactic conditions, a dependable water distribution system, and the ability to withstand earthquakes and other emergencies. Because no water supply is reliable 100% of the time, public agencies that secure a variety of water supplies and develop contingency measures for short and long-term shortages will improve the reliability of their water system. Reliability planning requires information about: (1) the expected frequency and severity of shortages; (2) how additional water management measures are likely to affect the frequency and severity of shortages; and (3) how available contingency measures can reduce the impact of shortages when they occur.

4.1 Reliability of Montecito Water District Supplies

MWD's Board of Directors has long recognized the importance of assuring a reliable, dependable supply of water to its customers. The best way to provide for reliability is to secure a variety of water sources that are not equally vulnerable to short-term water shortages. It is also important to provide an ongoing water supply "buffer" or "bank" to account for the possibility of multiple dry years. Faced with the probability of future droughts or water shortages that could diminish its water supplies, the District has spent many years and made a substantial investment of financial resources acquiring different types of supplemental water sources to be used with existing supplies. MWD's Board of Directors' most recent action regarding water supply analysis and reliability was

authorizing the preparation of the previously referenced Water Supply Optimization Plan (WSOP). The WSOP prioritizes use of MWD's various water supply sources, defines optimal operation procedures for the local surface water supplies and discusses "banked" storage of surface water supplies, when available, in designated local or regional groundwater storage banks. The WSOP also examines possible costs of alternative sources of dry water year supplies and State Water transfer program options. The WSOP contains planning analyses for population growth, drought and the multiplicity of water supplies in relation to existing and projected water demand. For specific detailed information regarding future supply reliability see the WSOP attached to this report.

The degree of vulnerability to drought of each of the District's sources of water depends on the length and severity of the drought, and on whether water shortages are localized or statewide. Local reservoirs are optimally managed in order to equalize years of surplus and years of shortage. The annual safe yield accounts for the possibility of a long dry period. Water that flows into the reservoirs during wet years can be stored and used during dry years. Lake Cachuma, for example, is a large reservoir with enough capacity to withstand a long dry period when managed in conjunction with other supplies. Jameson Lake, which is much smaller than Lake Cachuma, might provide less water during a long dry period, but recovers more quickly during wet years.

The State Water Project (SWP), as with most other sources of water, cannot be expected to provide 100% of contractual entitlements in all years. This is particularly true during droughts or when operational problems occur with the SWP system. Another factor affecting the reliability of SWP water is the fact that some facilities needed for the SWP to deliver all of its entitlements statewide have not yet been constructed. MWD has taken these factors into account in its planning for future droughts. (Please see Table 8).

The Sacramento-San Joaquin Delta is a significant part of the system that supplies water to SWP water contractors south of the Delta. In recent years a group of state and federal resource agencies known as CALFED has been developing a program to restore the Delta's ecosystem and reliability as a water source. The result of CALFED's multi-year planning process is a Programmatic Record of Decision that identifies new conveyance facilities, water demand reduction programs and varying levels and locations of water storage to improve the reliability of the SWP, improve water quality and enhance the environment. The implementation phase of this program will begin in late 2000.

According to CCWA, all local contractors for SWP water are currently able to receive their full entitlement. Based on information provided to CCWA by DWR, all contractors will be able to receive 76% of their contract entitlement during an average year. This figure represents a long-term average of wet and dry years. During a prolonged drought, using the "dependable yield" of the project, contractors will be able to receive 55% of their contract entitlement. The District anticipates that it would take actions in preparation for such cutbacks to provide for needed supplies.

The CCWA Operating Committee has recently authorized CCWA staff to further define water transfer opportunities within the State Water project. Water transfers and available dry water year purchases insures that entitlements can be met in most years. Costs for these programs are considered affordable and MWD is actively participating in these available programs.

4.2 Frequency and Magnitude of Supply Deficiencies

Over the past seventy-six years, the District has experienced periods of shortage due to droughts (1929-31, 1948-1952, 1976-78, 1987-92, 2001-2004) along with normal and above average rainfall periods. As a result of growing customer demand, the District declared a water shortage emergency on January 18, 1973, and imposed restrictions on new water connections (Resolution No.1291-A). At that time, MWD's Board of Directors determined that the safe-yield of existing supplies would not satisfy the normal water demand of customers. A water allocation system was also adopted in 1973. It was based upon customers' actual water usage during the years 1970 through 1972. Due to drought conditions, the allocation system was revised twice in 1989 and 1990, and additional water supplies were procured.

MWD worked to educate customers about the need to conserve and provided water conservation assistance. Showerheads, toilet leak detection dye tablets as well as displacement bags were available free of charge to customers. The District created temporary staff positions to monitor the allocation program and perform water audits. In the most severe period of the drought, some customer allocations were 45% lower than their pre-drought levels. Also, between 1992 and 1997, MWD purchased an entitlement of 1,250 acre-feet of water per year from the City of Santa Barbara's temporary desalination plant. The plant has since been decommissioned.

To discourage waste and help finance supplemental water supplies (i.e. temporary State Water and water from the City of Santa Barbara's desalination plant), water rates were increased significantly in 1990 - from \$1.42 per hcf (tier 2, domestic rate) to \$5.93 per hcf (tier 2, domestic rate). This action, along with other water conservation measures, reduced water demand by over 30%. Although customer water use decreased dramatically, MWD's operational costs remained unchanged.

Due to ample local water supplies resulting from a series of wet years that filled local reservoirs, and the completion of the Coastal Aqueduct construction for the State Water Project in 1997, MWD has not experienced any supply deficiencies since that time. The import and use of State Water during the most recent below average rainfall period 2001-2004 provided a new imported supplemental water supply that provided for full water deliveries to customers without the implementation of customer reduction allocation programs. It is important to note that the District retains the option to implement a water shortage emergency ordinance if necessary in the future, together with the water moratorium and water allocation programs.

4.3 Plans to Assure a Reliable Water Supply

As described in previous sections, MWD has taken significant steps in recent years to assure a reliable supply of water for its customers. Most recently, construction of facilities to deliver water from the State Water Project have boosted the District's available supplies and enhanced its ability to meet current and future demand. In addition to the delivery of State Water, the District has analyzed water demand and supply and has established reasonable meter use factors to help define future build-out. The data analyzed took into account rainfall, actual water production / demand data corrected to account for the meter moratorium, allocation programs and successive above average rainfall. More important, the data shows a relative consistency in recent years which is then applied to a full build-out condition. Full service boundary build-out condition looks at the local

community plans and zoning for the three distinct regions within the District. The three regions are Montecito, Summerland and Toro Canyon. Each distinct area is governed by its own community plan. Build-out projections are extrapolated to the year to 2032 which is the year estimated to complete full District build-out.

Build-out projections based on current demand are critical in determining future water needs and course of action in insuring that water supply meets demand. Drought further exacerbates the District's ability to provide sufficient water to its customers and shortages would be expected to occur if the District were to rely on its current available water supply.

The WSOP actions currently being considered to increase water supply reliability to meet water demand increases and drought include:

- Storing the unused portion of MWD's imported surface water supplies during wet years for use during drought years,
- Establishing either local or remote groundwater storage banks that store unused MWD water for periods when supplemental water supplies are needed to meet dwindling local surface water conditions,
- Negotiating with the other southcoast water agencies on optimizing local groundwater and shared surface water supplies, implementation of temporary, emergency water supply alternatives such as desalinization during extended drought periods,
- Participation in Dry Year water supply purchases and water transfer programs offered through State Water contractors.

All options listed above are presently being reviewed by the District.

4.4 Three-Year Minimum Water Supply

Based on experience, MWD recognizes that it is better to properly plan for the occurrence of water shortages and respond early when shortages are anticipated. Early response helps to prevent severe economic and environmental impacts. Within MWD's service area, customers have installed many water efficient plumbing and irrigation devices, and implemented more efficient water use practices/habits because of the past water shortage emergency, water allocation program, past droughts, ongoing public awareness programs and the increasing cost of water. In the future, it will become more difficult to achieve substantial reductions in water use during water shortages due to "demand hardening" resulting from more efficient customer use of water. However, as with other South Coast communities, there are still opportunities for increased efficiency in landscape irrigation.

The three driest years within the District's service area occurred during the years 1987-91. This period is being considered as the basis for the multiple dry year supply projections, since water conditions in Northern and Southern California were both affected by successive below average rainfall years. To determine the three-year minimum water supply totals (Table 4) for a multiple dry year period, as required by Section 10632 (b) in the California Water Code cited above, the District relied on operational yields, demand planning figures and the hydrological models for its local and DWR State Water supplies. The hydrological models reflect historical water supplies and deliveries and compare them to a calculated demand scenario under a multiple dry year event. This water

supply and demand forecasting reflects actual historical available water conditions in both northern and southern California. This creates a calculated demand which removes the hypothetical condition previously used by most water agencies in predicting the three year minimum supply. The analysis of historical and current water demand is extrapolated to reflect a build-out condition under actual District usage characteristics. For the three year minimum water supply condition, MWD is using a projected and planned demand condition for calculation of water supplies.

Table 4 below illustrates the hydrological water supply conditions for both local and import water sources for the multiple dry water year event that occurred between 1987-1991. The total demand value of 7900 AF reflects a full build-out condition **without** drought conservation measures, no imposed customer demand reduction programs and no delivery of “banked” water.

Table 4				
Three Year Minimum Water Supply Analysis				
Statewide and Local Drought				
Supply / Demand Comparison	2005 Available Water Supply (AF)	Calendar Year Full Build-Out Condition		
		1988	1989	1990
		Year 1	Year 2	Year 3
Total Supply	7,380	6,527	5,733	4,685
Total Demand	6,505 ¹	7,900 ²	7,900	7,900
Difference	875	-1,373	-2,167	-3,215
% Supply Shortage		12%	22%	37%

1. The 2005 total water supply/production estimate includes the annual transfer of 300 acre-feet to the City of Santa Barbara and system losses at 6% of water sales.
2. The total water demand figure of 7900 acre-feet is the estimated water demand at a full build-out condition. See Section 5 of this report.

Table 4 above shows the 3 year minimum water supply/demand condition whereby local and imported water supplies are reduced significantly from their normal deliveries. It is important to note that the varying supply assumes no participation in water supply reliability programs and supply levels are a direct reflection of hydrological conditions and available water deliveries.

4.5 Reliability Comparison

Previous attempts to define supply reliability in the 2000 UWMP update suggested an arbitrary 10% and 20 % reduction in supply. Table 4A shows the predicted water supply and demand difference for this update of the UWMP over the period 2005-2010. The 2005 water production value reflects actual production in 2005 and the three year incremental increase in production as shown in Section 5, Table 5. Table 4A provides the use of the Cachuma “bank” supply which utilizes the storage of Cachuma entitlement and State Water allocation when water demand periods are lower than the available supply. This condition assumes full deliveries of available surface water supplies following a surface reservoir spill year.

Table 4A				
Three Year Minimum Water Supply Analysis				
Statewide and Local Drought				
With Use of the Cachuma "Bank" Supply				
Supply / Demand Comparison	2005 Available Water Supply	Calendar Year Full Build-Out Condition		
	(AF)	2006 Year 1	2007 Year 2	2008 Year 3
Local Water Supply	5,100	5,238	5,180	4,043
State Water (SW)	2,280	1,279	1,642	1,031
Total Supply	7,380	6,527	5,733	4,685
Total Demand ¹	6,505	6,553	6,606	6,658
Difference	875	-26	-873	-1,973
% of Supply Shortage		13%	23%	37%
"Cachuma Bank" ²	0	952	461	885
Supply Shortage	0	-26	-873	-1,973
Unused CCWA Capacity ³		2021	1658	2269

1. The variable acre-feet demand reflects the current 2005 base line water demand condition with an incremental annual increase as shown in Section 5, Chart 5B. The 2005 demand value also includes 6% in unaccounted water and the annual transfer of 300 AF to the City of Santa Barbara.
2. The normal year supply / demand difference provides a water supply carryover that will be stored in the Cachuma Reservoir following a spill year.
3. The Unused CCWA Capacity refers to available pipeline capacity not being utilized due to the available State Water delivery being less than the District's 3300 AF entitlement.

4.6 Transfer or Exchange Opportunities

Law

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

10631 (d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

Water stored in Lake Cachuma by the South Coast and Santa Ynez Water Districts provides a potential vehicle for water trades and exchanges. During the drought of 1987-91, interim SWP water was imported from the Metropolitan Water District of Southern California, stored in Lake Casitas, and "wheeled" through various districts in Ventura and Santa Barbara Counties.

A large component of MWD's water supply is its State Water entitlement of 3300 AF including the 300 AF drought buffer. As a State Water contractor, MWD through the Central Coast Water Authority is pursuing dry water year purchases and transfer programs that will increase its

entitlement above the annual Department of Water Resources (DWR) allocation. For the three year minimum water supply, MWD's annual entitlement was well below the 2,280AF which is 76% of its 3000 AF entitlement. It is MWD's intent to purchase its annual entitlement of 3000 AF through SW programs, with the goal of storing its excess surface water supply in Lake Cachuma.

SECTION 5.0

WATER USE

Law

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

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; and (I) Agricultural.

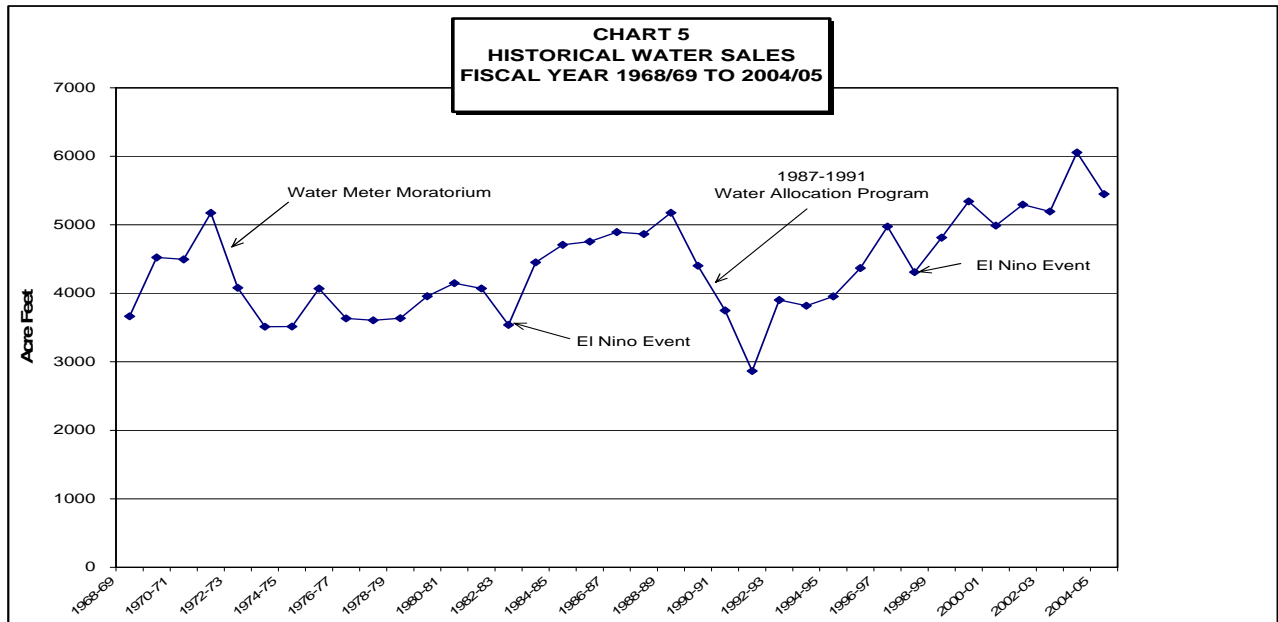
(2) The water use projections shall be in the same 5-year increments to 20 years or as far as data is available.

5.1 Past, Current, and Projected Use

Water use within the District's service area has shown varying trends dependent on District imposed restrictions over the last three decades. In 1973 MWD implemented a water meter moratorium which effectively limited and controlled new water service connections. The moratorium was responsible for decreasing District customer water demand from pre-moratorium (pre- 1973) levels for the first 10 years with an increase in water use to the pre-moratorium level by the mid 1980s. The 1987 to 1991 drought did see a significant drop in water demand District wide which was a direct consequence of the multi-tier water rate structure adopted as part of the customer water allocation program and the water shortage emergency ordinance.

The 1987-91 drought galvanized the District and County at large to overwhelmingly support and vote in the State Water Project. With County wide approval of this new imported water source, MWD terminated the water shortage emergency ordinance and the water meter moratorium in 1997. Since 1997, the District is again experiencing an increase in water use with new meters being sold District-wide to developing properties.

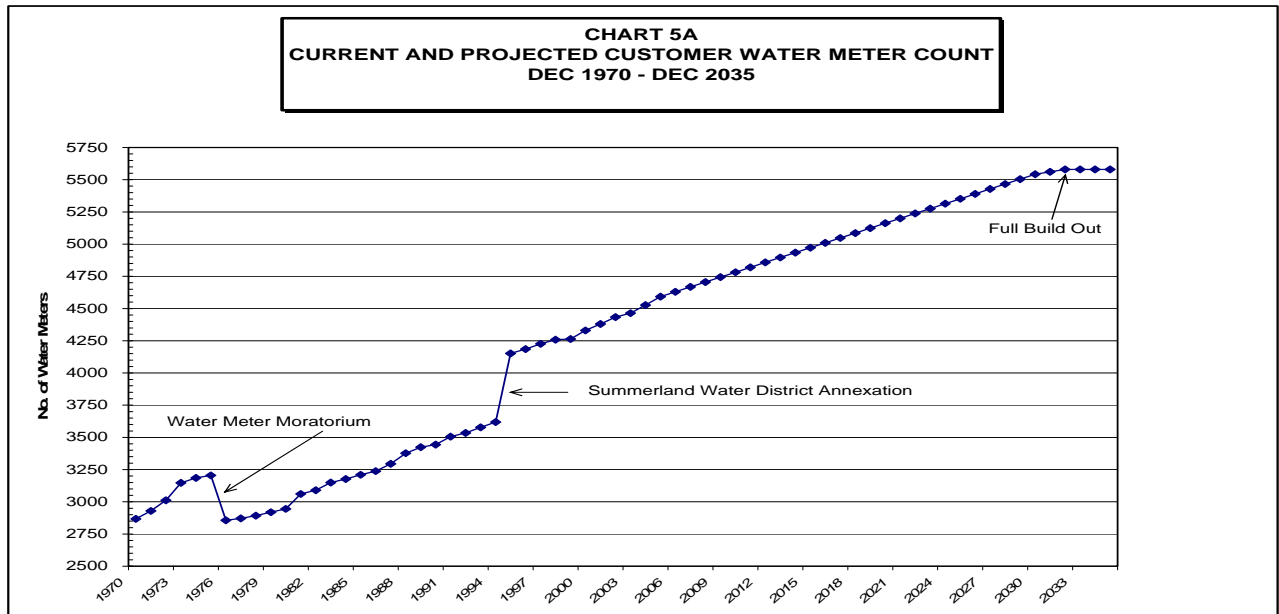
The Historical Water Sales Chart 5 below summarizes water sales from 1968/69 to the present. The sales trends provide valuable information on the measurable effects of District imposed multi-tier rates and allocation programs which were very successful in reducing customer demand during drought periods as well as the effects of multiple dry and wet years on water demand.



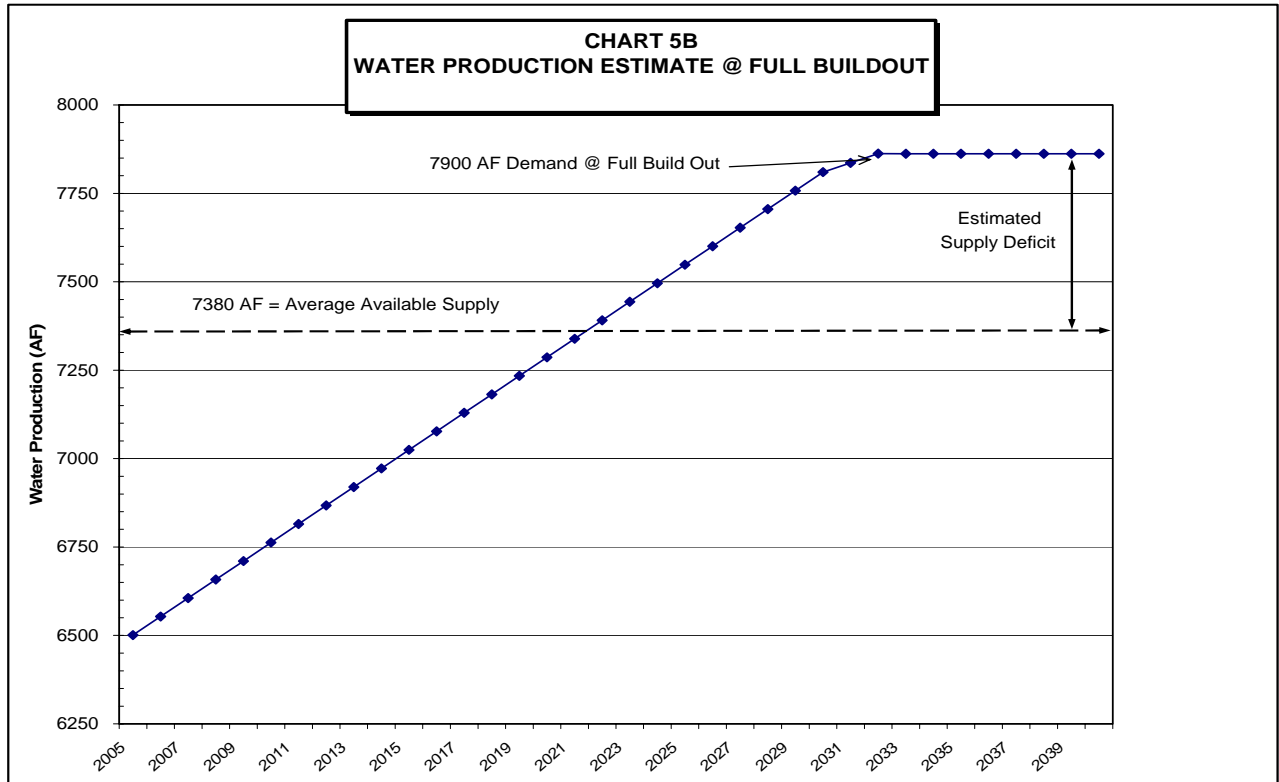
MWD has been carefully tracking the number of new meters added to its system with the end of District-imposed water use restrictions. The number of new meters added to the system is shown in Chart 5A which reflects the years 1970 through 2004 and the projected number of meters added per year to a full build-out condition. Note the decrease in meter count in the mid 1970s when District meters were removed from undeveloped properties. The increase in meter count in 1995 reflects the annexation of the Summerland Water District and its customers to the Montecito Water District. The dissolution of the Summerland County Water District resulted in the transfer of all Summerland water supplies and customers to the Montecito Water District. This transfer formally occurred in November 1995 with MWD receiving approximately 540 new customers. Along with the new customers, MWD also received about 244 AF of Cachuma Project entitlement and 300 AF of State Water.

MWD customer demand data has been further analyzed in the WSOP to provide a full build-out estimate for water demand district-wide which is expected to occur within the next 25 years. The build-out water demand and subsequent supply analysis is based on an annual average use per meter derived from historical and current water demand values. The calculated average water demand use per meter is approximately 1.3 AF/meter/year from historical and current water use patterns and is a corrected value taking into consideration water demand variations caused by wet and dry rainfall years.

Build-out estimates used to determine the District’s future water needs are made for each of the three distinct District service areas. The three service areas, Montecito, Toro Canyon and Summerland are each governed by adopted community plans with specific zoning and building ordinances. The build-out scenario (i.e. new customer connections) is shown in chart 5B, for the three communities combined, from the year 2006 to 2040. The estimated annual number of meters added District-wide to full build-out includes nineteen meters/year for the Montecito community, nine meters/year for the Summerland community and ten meters/year for the Toro Canyon service area.



Full build-out water demand / supply projections are based on the total number of new connections at full build-out and the historical and current average meter use factor previously defined as 1.3 acre-feet/year/meter. Applying the 1.3 AF/year/meter to the estimated 38 increase in annual meter count provides the District with projected water demand through the year 2032. This information is graphically represented in Chart 5B below. Added to the demand values for each year are a 300 AF transfer to the City of Santa Barbara and system losses which are approximately 6% of water sales.



According to projections, customer demand is estimated to create a water supply shortfall to the community within 18 years unless the District procures new water sources or reduces customer demand.

Table 5D illustrates past, current and projected water use in acre-feet from 2000-2030 by customer category. These values illustrate projected water demand by category of use currently in place. Water use categories are subject to change in the future.

Table 5D Past, Current and Projected Water Use - 2000-2030 (Acre-feet) Shown in Calendar Years							
Customer Sector	2000	2005*	2010	2015	2020	2025	2030
Single Family ⁽¹⁾	3,841	4,350	4,600	4,850	5,100	5,350	5,600
Multi-Unit	150	150	150	150	150	150	150
Commercial	261	260	260	260	260	260	260
Institutional	167	170	170	170	170	170	170
Public	11	15	15	15	15	15	15
Recreation	357	360	360	360	360	360	360
Agriculture	551	550	550	550	550	550	550
Unaccounted For Loss	435	350	370	380	400	410	430
Water Use Within Service Area	5,773	6,205	6,475	6,735	7,005	7,265	7,535
Transfer to City of Santa Barbara per Gin Chow Agreement ⁽²⁾	300	300	300	300	300	300	300
Total ⁽³⁾	6,073	6,505	6,775	7,035	7,305	7,565	7,835

*Projections from MWD WSOP, June 2005

(1) Single Family Residential Use Projections (2000 – 2030) were derived by adding single-family water use in the year 2000 to an annual increase of 49.4 acre-feet (247 acre-feet for every 5 years). The estimated increase of 247 acre-feet every five years is based upon historical and current water use as derived from MWD WSOP 2005 report.

(2) The District has a contractual obligation to transfer to the City of Santa Barbara 300 AF each year. In some years financial payment is made in lieu of water, at an agreed rate.

(3) The District continues to seek means to reduce per-capita use in the long-term, to avoid extreme reductions during drought periods. However, if extreme reductions become necessary, the District would implement measures outlined in the drought contingency plan. Full build-out is expected to occur in the Year 2032 with a production requirement of approximately 7,900 acre-feet.

Table 5E lists the number of past, current and projected service accounts by customer type. The data is comprised of all customer accounts through the year 2005 and then an individual single meter connection per customer account from 2006 to full build-out in 2032. A customer account prior to 2005 can include more than one meter which is representative of the difference in the total number of accounts in Table 5E and the total number of meters shown in Chart 5A. Note the account usage projections shown indicate no change in account classifications through 2030.

Table 5E							
Numbers of Accounts By Customer Type							
2000-2030							
Shown in Calendar Years							
Customer Sector	2000	2005 ¹	2010	2015	2020	2025	2030
Single Family	3,836	4,060	4,250	4,440	4,630	4,820	5,010
Multi-Unit	57	57	57	57	57	57	57
Commercial	93	101	101	101	101	101	101
Institutional	12	11	11	11	11	11	11
Public	9	10	10	10	10	10	10
Recreation	17	24	24	24	24	24	24
Agriculture	48	40	40	40	40	40	40
Total	4,072	4,303	4,493	4,683	4,873	5,063	5,253

¹ Projection from MWD WSOP, June 2005 at the rate of 38 new meter connections per year.

5.2 Current Water Use

5.2.1 Residential Sector

Single-family residential accounts comprise 94% of the District's customers. The majority of District customers (4,060 accounts) are single-family residences situated on properties of 0.1 acre to over 8 acres in size. Approximately 74% of the total water usage is estimated to be from this category. Approximately 70% of the total residential usage is for landscape irrigation purposes, and 30% is for domestic (indoor) purposes. Water use in this category is expected to increase at a controlled annual rate based on limitations in the County adopted community plans, 38 connections per year.

5.2.2 Multiple Unit Residential Sector

There are only 57 multi-unit residential accounts within MWD's service area, which account for 3% of the total water use. Due to a limitation of vacant property zoned for multi-family housing units, and the existing nature of the community, it is unlikely that the number of multi-unit residential accounts will increase in the future. Water used in the multi-unit residential sector will not change significantly to the year 2030.

5.2.3 Commercial Sector

There are 101 commercial accounts that represent 4% of the total water demand. Commercial customers include small retail stores, restaurants, hotels and office buildings. Due to a limitation of available buildable land and restrictions of zoning designations, commercial uses of water are not expected to change significantly by the year 2030.

5.2.4 Institutional Sector

There are now 11 institutional accounts, which include private/public schools, including a small university and a conference facility (formerly a Jesuit Monastery) within the District, which account for 3% of the total water demand. Water use in this category is not expected to change significantly by the year 2030.

5.2.5 Public Sector

There are only 10 public (i.e., governmental) accounts in the District, which account for less than 1% of the total water demand. These established services have been in place for many years. Water use in this category will not change significantly by the year 2030.

5.2.6 Agricultural Sector

There are 40 agricultural accounts in the District, which account for about 9% of the total water demand. MWD's Board of Directors is reviewing this classification. Given the value of land in the area, agricultural water use may *decrease* as some of the agricultural land is converted to residential use in the future, up to the limits allowed in the community plans adopted by Santa Barbara County Board of Supervisors. It is also possible that some landowners who cannot develop their land due to urban growth restrictions will begin growing crops on acreage that has previously not been irrigated. Due to the limited amount of non-irrigated lands within the District suitable for agricultural expansion and new County restrictions on grading, an increase in agricultural accounts is unlikely.

Existing agricultural accounts irrigate about 510 acres, which are comprised mainly of avocado and lemon orchards, plant and flower greenhouses. During the past 20 years, due to the relatively high cost of water and allocation limits, many agricultural customers have converted their irrigation systems to more efficient drip and micro-spray types.

As the cost of water has increased, the District has been assisting its agriculture customers by offering water system evaluations by Mobile Irrigation Water Management Lab at no cost to the customer and by providing California Irrigation Management Information System (CIMIS) weather data on a daily basis (see Demand Management Measure No. 5 for additional details).

5.2.7 Recreational Sector

There are 24 recreation accounts in the District, which account for about 6% of the total use. Recreational customers include golf courses, public parks and picnic grounds, cemetery, horse pastures, a tennis club, and the YMCA. Due to the small number of vacant properties, the number of recreation accounts will probably not increase in the future. In the last drought, water allocations for recreational accounts were limited. At that time, many recreational customers installed more efficient irrigation equipment, began to schedule irrigation based on climate (using CIMIS data) and made other long-term adjustments to save water. Water use in this category is likely to remain constant through the year 2030.

SECTION 6.0

SUPPLY AND USE COMPARISON

Law

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 the state, regional, or local agency population projections within the service area of the urban water supplier.

6.1 Supply and Demand Comparison

Supply and demand comparisons were discussed and illustrated in Section 5 of this update. This Section describes the expected shortfall in supply based on previous local and State-wide hydrological conditions during a 5 year drought event. This information is critical in planning for future needed water supplies and the scale of programs necessary to reduce customer water demand when supply shortages occur.

Table 6 compares the available water supply and projected water demand for the local and State wide hydrological drought event between 1987 and 1991. This projected demand scenario illustrates current supply and demand conditions when water supplies are optimal (i.e. year 2005) and that projected to occur at full build-out for the extended drought period. This supply / demand comparison assumes no available “banked” or other supplemental water supplies.

Table 6						
Available Supply and Projected Use Comparison (Acre-feet)						
5 Year Drought @ Full Build-out						
	2005	Year 1	Year 2	Year 3	Year 4	Year 5
Supply totals	7,380	6,258	6,527	5,733	4,685	6,132
Demand totals	6,505	7,900	7,900	7,900	7,900	7,900
Difference	875	-1,642	-1,373	-2,167	-3,215	-1,768
% Supply Shortage		15%	12%	22%	37%	17%

The % supply shortage shows that significant shortages will occur throughout the entire period. The supply totals begin with the average water supply available in 2005 and a corresponding reduction in surface water supplies due to an extended drought. Tables 6 and 6A have been developed by Steve Bachman, PhD., utilizing a computer model of water supplies and hydrological data.

MWD and other Santa Barbara County water agencies utilize Lake Cachuma as a bank by storing water in the reservoir when demand is below the available supply. This water is considered carryover water to supplement its normal annual allocation. Carryover water is, however, lost over the spillway during a spill event which then requires the re-building of the bank for the next drought period. The use of the Cachuma bank does not reduce the expected supply shortages since all carryover water is consumed at the beginning of the drought. More important, the unused CCWA pipeline capacity illustrates that if other State Water dry water year programs were available, supply shortages are erased if this water is purchased early on.

Table 6A						
Available Supply and Projected Use Comparison (Acre-feet)						
1987-1991 Drought Condition 2005-2010						
	2005	2006	2007	2008	2009	2010
Local Supply ³	5,181	5,281	5,248	4,091	3,654	4,837
SWP	2,280 ¹	1,040	1,279	1,642	1,031	1,295
Total Supply ²	7,380	6,258	6,527	5,733	4,685	6,132
Total Demand	6,505	6,554	6,604	6,653	6,703	6,752
Difference	875	-296	-77	-920	-2,018	-620
% Supply Shortage		15%	12%	22%	37%	17%
Cachuma Bank		0	0	0	0	0
SWP Unused Capacity		2,260	2,021	1,658	2,269	2,005

1. The SWP component of MWD's normal supply is 76% of its 3000 AF entitlement or 2,280 AF.
2. The water supply totals for Years 1 through 5 are based upon actual supplies available for the drought period 1987-1991.
3. Local supplies consist of Jameson Lake, Doulton Tunnel, groundwater, and Lake Cachuma.

The 5 year drought period would represent a worst case scenario. Acquiring State Water has created opportunities for MWD to enhance its water supply that were not available with the initial delivery of State Water in the late 1990s. State Water acquisition and supplemental water programs have provided MWD with supply options that could meet customer demand without employing the previously used mandatory customer allocation programs.

Section 8 - Water Shortage Contingency Plan addresses actions to be taken under *severe* drought or water shortage conditions. If necessary, the District would adopt a similar approach to the one taken during previous droughts, which would include reinstating the building moratorium and water rationing programs, adjusting water rates and instituting more water conservation measures. These would include water use restrictions, water use prohibitions, and conducting an intensive public outreach campaign to assist customers in minimizing their water use.

In order to prepare for the worst-case drought scenario outlined above, the District will develop management policies to address water supply shortfalls for anticipated future droughts. These policies will include a combination of water supply enhancements, as outlined in the District's

WSOP, and water demand reductions. In the future, possible alternative, cost-effective technologies may be available to the District. These technologies could increase water supplies and/or reduce water demand that cannot be anticipated at this time.

SECTION 7.0

WATER DEMAND MANAGEMENT MEASURES

Law

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:.....

MWD has been implementing water conservation/efficiency programs since the 1970's, and is committed to helping its customers use water efficiently. The District became a signatory to the statewide Memorandum of Understanding (MOU) regarding Urban Water Conservation in California in October 1991, and thereby is a member of the California Urban Water Conservation Council (CUWCC). In addition, MWD is a member of the Cachuma Project Contractors, and was required to submit a Water Conservation Plan to the United States Bureau of Reclamation (USBR) as a part of its renegotiated contract for water from Cachuma Reservoir. The Plan was approved by the USBR in October 1995. As required by USBR and the CUWCC, the District submits regular updates to these agencies describing progress on implementation of the urban and agricultural best management practices (BMPs) that apply to the District.

MWD also participates in a regional water efficiency program coordinated by the Santa Barbara County Water Agency. County staff work with local purveyors to conduct large-scale efficiency programs, eliminating duplication of programs and the need for each purveyor to research, design and implement each BMP independently. The County's program implements or helps purveyors to implement a number of the required BMPs. Examples of these include large landscape water audits, landscape water conservation in single-family homes, public information, school education, and water conservation coordination efforts towards meeting the requirements. For more information about programs implemented as part of the regional water efficiency program, please see the 2003-04 Santa Barbara County Regional Water Efficiency Program Annual Report in Section 10.1

Water use efficiency within MWD is relatively high due to the high cost of water. The District will continue to promote increased water use efficiency through customer outreach and education programs and BMP implementation where possible. Following is a summary of the status of each Demand Management Measure (DMM) required by state law.

7.1 Water Survey Programs Residential Customers (DMM 1)

Implementation Description:

Since 1995, MWD has been performing water use evaluations (audits) on request for single, multi-family residential accounts, and governmental/institutional customers. These audits include an evaluation of water use at the property, and provide an opportunity to educate customers on how to use water more efficiently. Customers are also given an analysis of their water use in comparison to similar sized properties within the District's service area. This program has been very popular. Customers appreciate the opportunity to minimize water waste on their property and to reduce their water bills. During the reporting period, water audit request forms were sent to all MWD customers, and 330 accounts responded with a request for an audit. A questionnaire requesting residential and landscaping information was sent as a follow-up to these requests. Ninety-two customers returned completed questionnaires, and water audits were performed for these customers.

District personnel have participated in special trainings offered by the County and City of Santa Barbara on how to perform water audits. MWD's Water Conservation Coordinator maintains a list of the top 20% of water users and offers these customers water audits annually. Other customers are also contacted for audits on a rotating basis so that a free audit is offered to each customer at least once every five years. The District's web site and newsletter also publicize the availability of this service to customers. In addition to offering water audits to customers, the District "flags" sudden high water use monthly on customer bills, and calls to follow up with the customer on the possibility of a leak or other problem requiring immediate attention.

Future Actions: The District will continue to offer water audits to residential customers.

7.2 Residential Plumbing Retrofit (DMM 2)

Implementation Description:

MWD staff members work with the City of Santa Barbara and County Building Departments to assure enforcement of the state law requiring installation of ultra-low flow (ULF) plumbing fixtures in new construction. Currently, only ULF toilets are sold in California for any type of construction or renovation. As previously noted, there is a limit of 19 new residences, plus 8 affordable housing units, per year in Montecito.

The District continues to supply free low-flow showerheads and toilet displacement devices to customers upon request. Since the beginning of the program in 1990, the majority of customers have installed water saving devices. The following table provides information about the quantities of these devices distributed to customers in recent years:

Montecito Water District Residential Retrofit Program Summary		
	Single family units	Multi family units
Total households	3,769	57
Low flow shower heads	4,000	125
Toilet displacement bags	3,300	225
Dye tablets	400	0

Future Actions: The District will continue to offer these devices to its customers.

7.3 System Water Audits, Leak Detection And Repair (DMM 3)

Implementation Description:

In 1990, MWD hired JBS Associates to perform a water audit of its distribution system in order to determine overall system efficiency. The objectives of the audit were to determine the quantity of lost water, where those losses were occurring, and the long range cost effectiveness of meter replacement and leak detection. Because of this report, the District has begun a multi-year, multi-million dollar capital improvement project to replace old and undersized water mains, install new fire hydrants and add or enlarge pump stations. Many mains within the existing distribution system date from the 1920's and have exceeded their expected design life. Old and undersized mains are being replaced with larger diameter ductile iron pipe, the strongest and longest lasting material available. This will increase reliability and flow, improve water pressure and reduce maintenance.

Recent surveys of the District's water distribution system indicate that with recent District improvements unaccounted losses of water have been reduced from as high as 9% to approximately 5% of the total system production. This level is within the industry standard of 3-5% as recommended by the American Water Works Association (AWWA). MWD monitors all water main breaks throughout its service area. Operations personnel are on call 24 hours a day, seven days a week. Reported water main breaks are repaired and mains shut down immediately upon notification. In addition, customer water usage is monitored on a monthly basis, and customers with abnormally high water usage are contacted. In cases where the District determines there is a severe leak on the customer's property, water service to the property is shut off at the meter until the customer can be contacted.

Future Actions: The District has implemented a \$14 million main replacement program. In addition, MWD has initiated a valve exercising program for the over 2,000 valves within its system. This will improve the functioning and extend the useful life of these valves, and improve overall system efficiency including reducing unaccounted-for water losses. The District has also implemented a meter replacement program for 1½ inch and larger meters, resulting in more accurate flow measurements on the customer side.

7.4 Metering With Commodity Rates (DMM 4)

Implementation Description:

Since the inception of the Montecito Water District in 1921, all accounts have been metered. As a result, all existing accounts in the District are metered, and new accounts are required to be metered. No further action is needed.

7.5 Large Landscape Conservation Programs And Incentives (DMM 5)

Implementation Description:

There are many properties within MWD's service area with large amounts of turf grass. There are several golf courses, parks, schools, cemeteries and even private homes with over three acres of turf. The Cachuma Resource Conservation District (CRCD) operates an irrigation water management program that provides water use evaluations to owners of large turf areas and to agricultural water users. This program is funded with state and federal grants and support from the Santa Barbara County Water Agency. During these audits, information about water saving devices and cost effective incentives is disseminated, as well as suggestions for improving water efficiency. Several evaluations have been conducted in the District.

Another successful method to improve the efficiency of irrigation of these larger turf areas is to educate the gardeners and irrigators about efficient irrigation management practices. In recent years, annual irrigation seminars for Spanish and English speaking gardeners have been conducted by the County, local cities and water purveyors including MWD. The District also distributes written materials regarding efficient irrigation practices.

Future Actions: District staff are working with the County and the CRCD to provide no-cost evaluations of the irrigation systems and management of large turf areas. In the coming year, MWD will continue to analyze how many properties irrigate three acres or more and target 20% of them for an evaluation by the CRCD. These property owners will be notified of the availability of these evaluations, and offered an opportunity to participate. The District will follow-up annually with those large landscape irrigators that have had an evaluation.

7.6 High-Efficiency Washing Machine Rebate Programs (DMM 6)

Implementation Description:

In recent years manufacturers have developed high efficiency clothes washing machines that save water and energy. In two recent studies (the Oak Ridge National Laboratory study conducted in Bern, Kansas in 1998, and the THELMA project – the High Efficiency Laundry Metering and Marketing Analysis – conducted in the Pacific Northwest and California in 1997) publicized by the California Urban Water Conservation Council (CUWCC), the average water savings per load using a high efficiency washing machine is 15 gallons. This savings translates to an annual savings of 5,400 gallons per machine. In 1998 the retail price of a high efficiency, front-loading washing machine ranged from \$700-1,600, while more traditional, top loading machines ranged from \$300-

600 each (source: CUWCC BMP Costs and Savings Study: a Guide to the Data and Methods for Cost Effectiveness Analysis of Urban Water Conservation Best Management Practices, July 2000).

In January 1998, the District conducted a survey of customers to determine the number of horizontal axis washing machines installed within the service area. At that time, there were 361 horizontal axis washing machines included in all customer classes. This is a relatively small number (less than 10%) of all washers in the District. As the availability of these washers increases, the cost per washer decreases, the cost of water increases and the customers need to replace their existing machines, there will likely be increased interest in the high efficiency models, with or without a rebate or other incentive. The water and energy savings of these washers will result in lower water and energy bills, which is a built-in incentive.

The Southern California Edison Company (SCE) is currently offering a \$75 rebate to customers purchasing a high efficiency clothes washer. The District does not have a rebate program in effect at this time. Historically MWD customers, many with high incomes, have been less responsive to financial incentives when choosing appliances or plumbing fixtures. Therefore, the District relies on education and outreach to influence customer water-use behavior.

Future Actions: On January 7, 2004 MWD requested an exemption of implementing BMP#6 because it was shown not to be cost effective. A letter was mailed to Mary Ann Dickinson of CUWCC; a copy was also forwarded to USBR.

7.7 Public Information Programs (DMM 7)

Implementation Description:

MWD informs its customers about water use efficiency in a variety of ways. District staff maintains a Web site on the Internet that contains information about MWD's water sources, facilities, capital improvement projects and tips to use water efficiently. The site has been visited or "hit" over 30,000 times since it was first created in 1998. The District publishes and distributes a quarterly newsletter to all its customers and interested parties, and posts it on its website. During Water Awareness Month in May of each year, MWD participates in water education campaigns in the County and conducts tours of its own facilities.

MWD's monthly customer water bill includes prior month use and other useful water conservation information. Bill inserts on water conservation and related topics will continue to be utilized. The District maintains a water conservation demonstration garden that is open to the public. Maps of the demonstration garden and information about appropriate plants are available at the District office. The District also promotes other agencies' local demonstration gardens, such as the Santa Barbara Botanic Garden and the City of Santa Barbara's Alice Keck Park Demonstration Garden.

Future Actions: These public information programs will be continued and modified as needed to provide the most complete, high quality information to customers. As stated in the demographics section earlier in this plan, MWD customers tend to be affluent, well educated, and respond better to information and education efforts than to financial incentives or rate adjustments.

7.8 School Education Programs (DMM 8)

Implementation Description:

In cooperation with the County of Santa Barbara and other water purveyors, the District participates in a county-wide education program. This program produces and distributes curriculum material about water resources and conservation to teachers, conducts training workshops for teachers, and maintains a water education website containing education materials, links and other resources for teachers. MWD disseminates current water conservation literature to 80 school teachers, and approximately 800 students at the five local private and public schools, grades K-8. Upon request by educators, District staff will research topics of interest to help them in water educational units. MWD offers guided tours of its facilities to school groups as field trips, primarily during Water Awareness Month.

Future Actions: MWD will continue to participate in the regional water efficiency program education efforts, as well as providing classroom presentations and tours during the annual Water Awareness Month activities.

7.9 Conservation For Commercial, Industrial, And Institutional Accounts (DMM 9)

Implementation Description:

Two percent (93 accounts) of existing District customers are commercial properties. Most of these customers are small, storefront shops. MWD has offered to perform water audits for these types of accounts upon request. To date, no commercial accounts have requested an audit. A new county “**Rinse and Save**” Program targets foodservice facilities that have dishwashing facilities, and can save up to \$1000.00/yr in energy and water costs. The program letter has been sent to all of the foodservice establishments in our district (18) that are good candidates for this program. The district has hired a new part-time water conservation specialist who has distributed conservation education materials relevant to the local hotels and motels in the district, which include pamphlets in the rooms, door hangers with simple conservation tips, and a training video for the cleaning staffs that teaches them many ways to conserve water in the hotel industry.

Future Actions: The District will continue to target the top 10% (by water use) of the commercial accounts, and contact them directly to offer a water audit. Every five years, MWD will conduct follow-up water audits. The audits will include recommendations for improved water efficiency as well as periodic review for follow-up. MWD will continue to participate in city, county and state training workshops that relate to promoting commercial water use efficiency.

7.10 Wholesale Agency Assistance Programs (DMM 10)

Implementation Description:

This measure does not apply to the District, since it is a retail water supplier.

7.11 Conservation Pricing (DMM 11)

Implementation Description:

The water rate structure currently in effect is a uniform rate of \$3.30 per hundred cubic feet (HCF) for residential customers; \$4.25 for commercial customers, \$3.08 for schools; \$1.87 for recreational, and \$1.49 for AG accounts. Please see the table below for specific rates. In addition to the commodity rate, MWD charges a separate meter charge increasing by size, which is \$ 25.75 per month for a ¾ inch meter. Please see Section 10.3 for further details regarding the current water rates and charges.

The calendar year 2005 water rates for the District are as follows:

MONTECITO WATER DISTRICT WATER RATES*	
Classification Type	Water Rate Per Hcf
Single-Family Residential	\$ 3.30
Multi-Unit Residential	\$ 3.30
Commercial	\$4.25
Schools	\$3.08
Agricultural	
Residence Rate (1-12 hcf/month per dwelling unit)	\$ 3.30
Irrigation Rate (13+ hcf/month)	\$ 1.49
Recreational	
Residence rate (1-12 hcf/mo. Per dwelling unit)	\$3.30
Irrigation Rate (13+ hcf/month)	\$1.87

*Source: MWD Rate Schedule effective January 1st, 2005.

During the drought, the District implemented an inclining block rate to discourage wasteful use of water. At the termination of the water moratorium, the District set a new rate structure that includes a higher fixed meter charge to create a fixed revenue base that would better match the increased costs of creating an available permanent water source. The steeply inclining block rate structure was discontinued because it was based on providing the users in the lowest use category a rate less than actual cost to provide water, and by charging users in the highest use category more than the cost to provide water--essentially as a penalty rate. Following the drought the District carefully considered its overall rate structure and held several public hearings at which various tiered rate structures were debated. At that time, the District determined that a first tier rate set to cover the District's cost to provide service was high enough to serve as a conservation incentive. The lower, subsidized tier was not appropriate and was therefore eliminated. MWD returned to a uniform rate structure based on the actual cost to deliver water to each customer, with a decrease in the unit cost for Ag or recreational purposes.

Future Actions: As seen in the above table MWD has increased its uniform rate, and is considering re-instituting the tiered (inclining block) rate structure to encourage efficient water use and waste reduction even during non-drought years. Should multi-year severe drought conditions repeat, the moratorium and allocation systems will also be implemented.

A customer classification & water rate study has been approved and will be completed by early 2006, it's goal being to guide the Board of Directors to adopt a rate structure based on cost of service that will encourage conservation, and meet the short and long term revenue requirements of the District.

7.12 Conservation Coordinator (DMM 12)

Implementation Description:

MWD's Water Conservation Coordinator position was established in 1973, and is responsible for public education, water audits, landscape studies to effect water conservation, and monitoring conservation efforts. The current coordinator officially assumed this position in February 2005, and has thus far been involved in training for audits, BMP updating, and water conservation education. He will seek to reduce the water use of the District's 200 highest volume accounts, implement the evapo-transpiration (ET) landscape controller programs for large landscape accounts, and increase the number of residential, landscape, and commercial water audits realized in the past.

Future Actions: During the next five years, MWD will continue to devote between 16 and 24 hours per week to water conservation efforts, account audits, BMP implementation, and to support the efforts of the County's regional program.

7.13 Water Waste Prohibition (DMM 13)

Implementation Description:

Water waste has been prohibited in MWD's service area for many decades. The District has always included water waste prohibitions in all of its resolutions and ordinances concerning use of water since 1973. In March 1992, Ordinance No. 76 was adopted as a prohibition against waste of water. As stated in this ordinance, it is unlawful for water users to waste water, including but not limited to:

- (a) No runoff of water from the property on which water is being used shall be permitted. The only exception to this restriction will be runoff of water resulting from the draining of swimming pools, ornamental ponds, or spas, or the test pumping of wells.
- (b) All water leaks must be repaired within 48 hours of discovery. The District may, at its discretion, require written verification that the problem has been corrected.

MWD customers have been successfully educated and conditioned in the past twenty-five years because of droughts, public awareness campaigns and the previous District-wide allocation ordinance. Customers typically notify staff when they see water waste in their neighborhood. District employees also report any observed water waste when they are in the field. The District

responds to each report of waste by taking the necessary action to correct the problem, including notifying the customer of a service line break.

Future Actions: Enforcement of this ordinance will continue in the future.

7.14 Residential Ultra-Low Flow Toilet Replacement (DMM 14)

Implementation Description:

On October 14, 2003 MWD requested exemption from implementing DMM 14 on the basis of no cost effectiveness. The District believes that a substantial number of customers replaced their toilets in order to meet their reduced water allocations during the recent droughts.

In 1998, MWD staff conducted a survey of customers to determine how many ultra-low flow (ULF) toilets had been installed within the District's service area. Over 1,465 residential customers, 39% of all 3,774 residential customers responded to the survey. According to these customer surveys, 2,512 ULF toilets were installed, representing 51% of all toilets in the homes participating in the survey. About 62% of single-family homes have at least one ULF toilet. Because of the high unit cost of water, customers also had a financial incentive to replace their toilets with more efficient models to minimize their water bills. For example, residential water rates during the drought increased to nearly \$6 per unit, representing a savings of approximately \$120 per year for a typical household converting a 5 gallon-per-flush toilet to a 1.6-gallon ULF unit. Rates have decreased somewhat since that time; however, such a ULF conversion would still result in an annual savings of approximately \$53 for a residential customer. MWD will continue to promote removal and replacement of older model toilets with ULF toilets when and where appropriate, but does not wish to be held to reporting these numbers annually to the CUWCC.

Future Action: State law requires that since 1992 only ULF toilets be manufactured and sold in California. Therefore toilets within the MWD service area will automatically be replaced with ULF toilets. The District will continue to provide information concerning the potential savings of converting to ULF toilets to its customers through direct mail, the District newsletter, bill inserts and during Water Awareness Month.

SECTION 8.0

WATER SHORTAGE CONTINGENCY PLAN

Law

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

10632 (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.

8.1 Water Shortage Emergency Response: Past Experience

As noted in previous sections of this report, due to growing demand, the District declared a water shortage emergency on January 18, 1973, and imposed restrictions on new water connections. At that time, MWD's Board of Directors determined that the safe yield of existing supplies would not satisfy normal customer water demand. A building moratorium and water allocation program were established in 1973. The allocation program was based on customers' actual water usage during the years 1970 through 1972. In 1973, a water shortage emergency was declared through the adoption of Resolution No. 1291-A (Please see Section 10.4). This water shortage emergency was terminated in 1997.

The prolonged drought of 1987-92 resulted in severe water shortages on the south coast of Santa Barbara County. At the time, MWD was dependent on local groundwater and surface water supplies. These surface supplies were becoming depleted, causing the District to declare a water shortage emergency. This led to development of emergency water supplies, adoption of drought emergency measures, a new water allocation ordinance, water conservation services for customers, penalty water rates and prohibition of certain water uses. The water allocation ordinance was revised several times during the drought. Allocations were based on past use, lot size and a percentage of the total available water supply. Water use restrictions included prohibitions against waste of water, a surcharge for excessive use, and a provision for installation of flow restrictors on accounts that exceeded their allocation for three consecutive quarters.

MWD staff provided customers a variety of public information (indoor and outdoor water conservation tips), residential water audits and distribution of water efficient plumbing devices. A full-time water conservation coordinator, assistant and student interns implemented these programs during the drought. Water users responded to these measures, and to the widespread information campaigns requesting all local water users to save water, by reducing their demand by an average of 36% between 1989 and 1992.

As the drought continued, the District's water allocation system was reviewed and re-evaluated. In May 1990 and August 1991, the Montecito Water District Board of Directors adopted Ordinance No. 72 and Ordinance No. 74, respectively, which revised the allocation system. The last revision

adjusted the allocation system, which based the allocations upon available water supplies, acreage and historical use. Allocations were determined by two methods: one for residential accounts, comprised of a three-component system; and one for non-residential accounts (i.e., commercial, institutional, agricultural, multi-unit, and recreational), which included only a base allocation. Further information about the District's allocation program is contained later in this section.

During the drought, MWD obtained agreements for two emergency, supplemental sources of water for customers: (1) State Water "wheeled" from the Metropolitan Water District of Southern California through Ventura County and exchanged with water from Lake Casitas in Ojai; and (2) desalinated seawater from the City of Santa Barbara's temporary Desalination Plant. The District only received 40 acre-feet of water from the emergency water-wheeling project because soon after its construction heavy rains improved the water supplies of the South Coast region.

In 1992 a temporary desalination plant was constructed by the City of Santa Barbara in collaboration with Goleta and Montecito Water Districts. MWD subscribed for a share of the production of the temporary desalination plant for a five-year period ending April 1997. The plant was constructed as an emergency temporary water supply measure. The plant, located in Santa Barbara, would have delivered water to the District by exchanging Lake Cachuma water credits with the City of Santa Barbara or the Goleta Water District. However, due to the wet weather conditions, which abruptly ended the drought in 1992, and the high cost of desalinated water produced at the plant, MWD did not use any desalinated water during the initial five-year period. The desalination plant has since been decommissioned, as the completion of the SWP delivery system to the area made it redundant.

Wells within MWD's service area remain a valuable and immediate source of water for customers. Wells consist of sixteen domestic and two non-potable wells. The wells are equipped with submersible pumps which convey water into the District's distribution facilities. The domestic well water is chlorinated and filtered depending on the source prior to entering the District's distribution system. MWD would pump from these wells in times of water shortages due to drought or disaster.

8.2 Emergency Response Planning

MWD is a member of MERRAG (Montecito Emergency Response and Recovery Action Group). This group, which meets on a monthly basis, is an association of the water, fire and sanitary Districts, senior resident housing projects, neighborhood associations, schools and colleges. The purpose of this association is to coordinate emergency response planning and to share resources. Each representative has a portable radio and pagers in order to communicate and disseminate information in an emergency. The following actions have been taken to facilitate effective and efficient emergency response in the community of Montecito.

- ❖ In 1994, the District purchased emergency backup generators for emergency power at both the Bella Vista and the Doulton Tunnel Water Treatment Plants. Additionally, in 1996, all four MWD pump stations were upgraded to pump State Water from the South Coast Conduit (Cachuma Project) into the District distribution system. Each of these pump stations has access to emergency backup power generation.

- ❖ At the request of the Montecito Fire Protection District (MFPD), key District reservoirs were retrofitted with a dedicated service to bypass the distribution system and fill MFPD water trucks directly. The MFPD has also invested in foam technology that allows fires to be extinguished with less water.
- ❖ The Montecito Sanitary District (MSD) currently uses its own treated effluent to flush its mains. However, at times they may use potable water if there are concerns about the levels of chemicals in the recycled water the Plant produces. In any case, when water supplies are critically low, the MSD flushes their mains with treated effluent.

In the event of a prolonged and severe drought that could threaten to exhaust combined sources of supply, the District would reinstate a declaration of water emergency. Please see Section 10.4 for Resolution No. 1291-A, a previous Declaration of Water Shortage Emergency. This action could also serve to reactivate MWD's allocation system and moratorium on new meters.

8.3 Water Shortage Contingency Ordinance/Resolution

Law

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

10632 (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.

The District has adopted resolutions and ordinances which include prohibitions on water wasting, specifically Ordinance No. 76, which details restrictions.

8.4 Stages of Action

Rationing Stages and Reduction Goals

MWD has developed a four-stage rationing plan to invoke during declared water shortages. The rationing plan includes voluntary and mandatory rationing depending on the cause, severity, and anticipated duration of the water supply shortage. Please see Table 9 below.

**Table 9
Montecito Water District
Water Rationing Stages and Reduction Goals**

Shortage Condition	Stage	Customer Reduction Goal	Type of Rationing Program
Up to 15%	I	15%	voluntary
15-25%	II	25%	mandatory
25-35%	III	35%	mandatory
35-50%	IV	50% or greater	mandatory

Priority by Use

Priorities for use of available potable water during water supply shortages are established in accordance with the legal requirements set forth in the California Water Code, Sections 350-358. The priorities include:

- Minimum health and safety allocations for interior residential needs (includes single family, multi-family, retirement communities, convalescent facilities, student housing, fire fighting and public safety)
- Commercial, institutional and governmental operations (where water is used for minimum health and safety allocations for employees and visitors), and to maintain jobs and economic base of the community (not for landscape uses)
- Agricultural commercial operations
- Existing landscaping
- New customers

Health and Safety Requirements

Based on commonly accepted estimates of interior residential water use in the United States, Table 10 indicates per capita health and safety water requirements. In all shortages, customers may adjust either interior or outdoor water use (or both), in order to meet the voluntary or mandatory water reduction goals.

The District has established a health and safety allotment of 75 gallons per capita per day (gpcd) which translates to 36 HCF per person per year. This amount is believed to be sufficient for essential interior water use requiring no major changes in habits or plumbing fixtures. If customers wish to change water use habits or plumbing fixtures, 68 gpcd is sufficient to provide for limited non-essential (i.e. outdoor) uses. Customers could make changes in their interior water use habits for example as follows:

- ❖ Flushing toilets less frequently; only flushing when necessary;
- ❖ Taking fewer showers or shower for a shorter period of time,
- ❖ Only running dishwashers and clothes washers when there is a full load, and
- ❖ Reducing the number of water softening regeneration cycles to reduce the amount of water needed to flush out the salts.

Table 10
Montecito Water District
Per Capita Health and Safety Water Quantity Calculations

	Non-Conserving Fixtures	Gal.	Habit Changes ¹	Gal.	Conserving Fixtures ²	Gal.
Toilets	5 flushes x 5.5 gpf	27.5	3 flushes x 5.5 gpf	16.5	5 flushes x 1.6 gpf	8.0
Shower	5 min x 4.0 gpm	20.0	4 min x 3.0 gpm	12.0	5 min x 2.0 gpm	10.0
Washer	12.5 gpcd	12.5	11.5 gpcd	11.5	11.5 gpcd	11.5
Kitchen	4 gpcd	4.0	4 gpcd	4.0	4 gpcd	4.0
Other	4 gpcd	4.0	4 gpcd	4.0	4 gpcd	4.0
Total (gpcd)		68.0		48.0		37.5
HCF per capita per year		33.0		23.0		18.0

NOTES:

1. Reduced shower use results from shorter and reduced flow. Reduced washer use results from fuller loads.
2. Fixtures include ULF 1.6 gpf toilets, 2.0 gpm showerheads and efficient clothes washers.

8.5 Water Shortage Stages and Triggering Mechanisms

Since the beginning of MWD’s water moratorium and the water shortage emergency, the District has sought additional supplies of water to use in the case of a future drought. During the past drought, MWD operated under a water allocation program and had a moratorium on new connections. Water sources included Jameson Lake, Fox and Alder Creeks, Doulton Tunnel, Cachuma Reservoir, local groundwater, State Project water, and desalinated seawater (which may not be available in a future drought). Given the number of different sources of water available and projected demand within the District, MWD does not believe there will be a need within the next five years to trigger another allocation program or moratorium on new water connections.

8.6 Water Allotment Methods

MWD has acquired water supplies to meet the increasing water demands of the community. Through the years new water sources have been added, which included the construction of Jameson Lake and Doulton Tunnel in 1930 and Lake Cachuma in 1954. Due to growing demand, the District declared a water shortage emergency on January 18, 1973, and imposed restrictions on new water connections. At that time, MWD’s Board of Directors determined that the safe yield of existing supplies would not satisfy the normal water demand of the District's customers. A building moratorium and water allocation program were established in 1973. The allocations were based on actual customers' water usage during the years 1970 through 1972.

Due to continued drought conditions, the District's water allocation system was reviewed and re-evaluated. In May 1990 and again in August 1991, the Board of Directors adopted Ordinances 72 and 74, respectively, which revised the allocation system. The last revision adjusted the allocation system, which based the allocations on available water supplies, acreage and historical use. Allocations were determined by two methods: one for residential accounts, which comprised a three-component system, and one for non-residential accounts (i.e., commercial, institutional, agricultural, multi-unit, and recreational), which comprised a base allocation. The basis for determining the three components for residential accounts was as follows:

Component I: Equal Share: An equal distribution to all accounts, considered an allotment for inside use. Twenty-five percent (25%) of the District water supply available was divided equally among the residential users.

Component II: Based on Acreage: Forty-five percent (45%) of MWD water supply available for residential use was divided among all residential users based upon each account's lot size. All parcels greater than eight acres were considered to be eight acres for the purpose of calculating this component.

Component III: Based on Prior Allocation: Thirty percent (30%) of the District water supply was divided among residential accounts as a factor of each account's prior allocation. This component takes into account individual characteristics such as residential inside use and landscape characteristics of the property (historic gardens, wooded areas, natural vegetation, etc.).

The allocation for non-residential accounts was determined by giving each account the lesser of either its prior allocation or its average usage (based on actual water use for the years 1985-86 & through 1989-90). The base allocation was increased or decreased as water supplies permitted. Along with the water allocation plan, MWD promoted an ongoing program of all aspects of water conservation to help its customers in their effort to reduce overall water consumption.

Water service within the District is subject to the rules and regulations of the District in accordance with Ordinance No. 82 and water pricing with Resolution No. 1868. All customers are placed in one of the following rate classifications: domestic, commercial, agricultural, recreational, and schools.

Due to ample local water supplies resulting from heavy rainfall, which essentially filled the District reservoirs, the purchase of temporary emergency water supplies and the expected deliveries of the State Water Project in 1996, the District's water allocation program, and the water shortage emergency and water moratorium were suspended in April 1992 and April 1993, respectively. The District's water shortage emergency was officially terminated in October 1997.

8.7 Prohibitions, Consumption Reduction Methods and Penalties

Law

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

10632 (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.

10632 (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.

10632 (f) Penalties or charges for excessive use, where applicable.

Mandatory Prohibitions on Water Wasting

In March 1992, MWD adopted Ordinance No., 76 which was enacted as a prohibition against waste of water. As stated in this ordinance, it is unlawful for water users to waste water, including but not limited to:

1. No runoff of water from the property on which water is being used shall be permitted. The only exception to this restriction will be runoff of water resulting from the draining of swimming pools, ornamental ponds, or spas, or the test pumping of wells.
2. All water leaks must be repaired within 48 hours of discovery. The District may, at its discretion, require written verification that the problem has been corrected.

8.8 Revenue and Expenditure Impacts and Measures to Overcome Impacts

Law

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

10632 (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...

10632 (g) [An analysis of the impacts of each of the] proposed measures to overcome those [revenue and expenditure] impacts, such as the development of reserves and rate adjustments.

During the last drought, MWD implemented a tiered rate structure with inclining blocks. These rates were adjusted following the drought in order to capture the revenue needed to fund new capital improvements and supplemental water supplies. The District will consider the merits of establishing a Rate Stabilization Fund, to fund the fixed costs of new supplies, conservation and other capital improvements. During any future water supply emergencies, the District will consider increasing rates, or re-instituting an increasing block rate structure.

8.9 Reduction Measuring Mechanism

Law

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

10632 (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

Mechanism to Determine Reductions in Water Use

Water production and demand in MWD are metered, recorded and reported on a monthly basis. Total production or demand rates can be monitored by operations personnel on a daily or weekly basis, if necessary. Under shortage conditions, water production and demand are monitored closely in order to determine if supplies will be adequate to meet demand in the coming days or weeks. For the allocation system implemented during the last drought, water used by each customer was monitored on a monthly basis to assure compliance.

If there is a reoccurrence of dry years that restrict water supplies, MWD will need to take the following actions:

- ❖ If the various water sources are in jeopardy during a dry year, the District will need to carefully manage its water supply, and may need to enter at least a Stage I water shortage response (which calls for voluntary rationing to achieve a 15% water use reduction) to ensure that it can meet the needs of the community.
- ❖ In the second consecutive dry or critically dry year, the District may need to enter into a Stage II or Stage III water shortage response.
- ❖ In the third consecutive dry or critically dry year, or in the event of a major system failure, the District would likely enter into a Stage IV water shortage response.

SECTION 9.0

WATER RECYCLING

Law

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. To the extent practicable, the preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies and shall include all of the following:

10633 (a) A description of the wastewater collection and treatment systems in the supplier's service area...

10633 (a) A [...] quantification of the amount of wastewater collected and treated...

10633 (a) A description of the [...] methods of wastewater disposal.

10633 (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.

10633 (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.

10633 (d) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years.

9.1 Wastewater System Description and Recycled Water Uses

MWD does not own or operate a wastewater treatment system. Wastewater collected in the Montecito and Summerland communities served by the District is treated at facilities operated by the Montecito Sanitary District and the Summerland Sanitary District. Each treatment plant has a small treatment capacity and uses secondary treatment. The treated wastewater from each of these treatment plants is discharged into the ocean. The MSD treats approximately 1.0 MGD and the Summerland Sanitary District treats less than .5 MGD. While no formal wastewater recycling program is underway in either district, treated effluent from MSD is used in many ways throughout the plant as part of operations, and during water shortages, sewer mains are flushed with treated effluent rather than potable water.

Studies have been completed with adjacent sanitary districts to explore the use of recycled water on a regional basis. Due to the geography of the region, use would be limited to landscape or green space (i.e., parks, golf courses, etc.) and agricultural applications. Reuse is only economically viable if it replaces potable water now in use. Future drought conditions could increase the cost of

potable water, which in turn may justify the construction and short-term amortization of the treatment facilities. A cost and environmental complication is that the sewage effluent will require desalting before it can be reused for agricultural purposes. Socially, recycled water will be more acceptable for the irrigation of flower crops than for landscaping or food crops.

9.2 Feasibility of Expanded Recycled Water Use

Studies have been completed with the adjacent sanitary districts to explore the possible use of recycled water. Most recently, a study was completed in January 1991 for both MWD and MSD. MWD's service area is primarily a residential community with a small percentage of commercial, irrigation and agricultural users. Due to the hilly terrain of the region and the location of the wastewater treatment facilities close to the ocean, reclaimed water use would be limited to large landscape (i.e., golf courses, parks, schools) and agricultural customers whose demands are seasonal. Studies concluded that investment in a reclamation plant with higher levels of treatment would not be cost effective. MWD has supported City and Countywide efforts by cooperating on wastewater planning committees. However, an independent project by the District is not economically feasible.

SECTION 10.0

APPENDICES

10.1 Santa Barbara County Regional Water Efficiency Program, Annual Report for 2003-2004

REGIONAL WATER EFFICIENCY PROGRAM PROGRAM IMPLEMENTATION REPORT

July 1, 2003 - June 30, 2004

Prepared by:
Santa Barbara County Water Agency

Program Background

The Regional Water Efficiency Program was established in December 1990 to promote the efficient use of urban and agricultural water supplies in Santa Barbara County, and to provide information and assistance to the eighteen local water purveyors within the county. The Program provides coordination for cooperative efforts among purveyors, acts as a clearinghouse for information on water efficiency technology, and monitors local, state and national legislation concerning efficient water use.

The Program serves around 400,000 county residents. Three Program Specialists dedicate approximately 65 hours of staff time per week in support of this program. The following report documents the activities implemented by staff of the Regional Program between July 1, 2003 and June 30, 2004.

A number of the Regional Water Conservation Program's activities fulfill - on a regional level - the obligations for best management practices (BMPs) in the statewide California Urban Water Conservation Council Memorandum of Understanding (MOU) and/or the Bureau of Reclamation's water conservation criteria. The County Water Agency is a signatory to the MOU and has prepared a plan to meet the Bureau's water conservation criteria. Many of the regional activities also assist individual water purveyors to satisfy their own conservation goals under the MOU and Bureau Criteria. The programs described below contain a reference to the applicable or related MOU or Bureau best management practices. **Regional** implementation of some of the BMPs is encouraged by the Urban Water Conservation Council (which administers the MOU) and by the Bureau.

PROGRAMS

1. IN-SCHOOL EDUCATION RESOURCES AND PROGRAMS

- Teacher's Guide to Free Resources:

This guide provides teachers with information about classroom presentations, field trips, videos and water education materials offered by the Water Agency and each of the purveyors within the county. The materials are available locally or from the Department of Water Resources, American Water Works Association and other sources. This guide is available free to teachers from the County Water Agency or local purveyors. Copies were distributed at the Mountains to Sea Curriculum Training Workshop, the Project WET training workshop and during classroom presentations throughout the county.

Relates to Implementation of: MOU BMP # 8 & Bureau BMP #s A4 & A7.

- Water Awareness High School Video Contest

On May 6, 2004, Cate School walked away with the top prize of \$1,000 in the 5th Annual Santa Barbara County Water Awareness High School Video Contest for their video entitled “Water Waltz”. The water purveyors in Santa Barbara County sponsor this annual event, which encourages local high school students to produce videos that address local water issues. This year students were directed to develop PSAs promoting water conservation services currently offered for free throughout the county, such as the www.sbwater.org website, the lawn irrigation calculator and free home water audits.

Second place and a \$750 prize went to San Marcos High School for “Magical Fairy” and third place and a \$500 prize went to Dos Pueblos High School for “Water Conservation”. Winning videos were aired on City TV Channel 18 and GATV Channel 20 throughout May, as part of Water Awareness Month in California.

This year’s contest was sponsored by Carpinteria Valley Water District, City of Santa Barbara, Goleta Water District, La Cumbre Mutual Water Company, Mission Hills CSD, Montecito Water District, Santa Barbara County Water Agency, Santa Ynez Water Conservation District ID #1 and Vandenberg Village CSD.

Relates to Implementation of: MOU BMP # 8 & Bureau BMP #s A4 & A7.

- Workshop: Project WET

Staff co-sponsored a special training workshop for teachers using the curriculum called Project WET. This 6-hour training held on February 10, 2004 included hands-on activities for teachers to use with their students and a manual with readings, activities, experiments and other resources for teachers for developing a water education curriculum. Ten teachers participated in this training which was held at the Santa Barbara Zoo.

Relates to Implementation of: MOU BMP #8 & Bureau BMP #s A4 & A7.

- Classroom Presentations:

Staff conduct classroom presentations using various pieces from the Water Puzzle which follow the path of that water takes from the sky to the wastewater treatment plant. In addition, staff oversees the book-bag lending program which consists of five bags full of books, which focus on a number of water issues: water treatment, wastewater treatment, water conservation, water quality, aquatic habitats and more. Books are grade specific (for grades K-2 and 3-5), housed in canvas bags and lent out for a 2-week period.

Staff provided approximately 97 classroom presentations, reaching many schools for the first time (See the Table below for specific details). A number of new materials were completed in Fiscal Year 2003/2004 including the following:

A new presentation detailing the amount of water used for growing local crops was introduced in Fall 2003. This presentation features a poster titled “Your daily water menu” and was offered during the 2003-2004 school year.

- The presentation on the water cycle for grades K-1 was updated to include more information on the forms of water and uses of water.
- In addition, County staff developed pre- and post-presentation packets of materials to distribute to classes and evaluative surveys to measure performance in Summer 2003.

County staff also presented information about salinity for the Lompoc Environment Faire held October 14 – 16, 2003.

Location	Number of Presentations	Students Reached
Montecito	12	150
Carpinteria	4	53
Orcutt	21	562
Guadalupe	0	0
Los Alamos	0	0
Cold Springs	0	0
Summerland	0	0
Solvang	14	304
Lompoc	0	0
Santa Maria	28	676
Santa Barbara	3	23
Goleta Unincorporated	10	200
La Cumbre	4	138
Casmalia	4	42
Santa Ynez	1	11
TOTAL	97	2159

Relates to Implementation of: MOU BMP # 8 & Bureau BMP #s A4 & A7.

- Support for California Regional Environmental Education Coordinator (CREEC)

The Water Agency continued to provide funding support for the CREEC staff position.

Relates to Implementation of: MOU BMP # 8 & Bureau BMP #s A4 & A7.

- New Materials Review:

Staff obtained and reviewed new water education materials and informed local water purveyors/schools about these materials.

Relates to Implementation of: MOU BMP # 8 & Bureau BMP #s A4 & A7.

- Water Education Web Site (www.sbwater.org)

In preparation for the August 2003 campaign, the www.sbwater.org website was changed substantially from a purely water education based site to a site designed to represent the Regional Water Efficiency program in Santa Barbara County. The media campaign was a central focus of the site from August-October 2003. Several components were added to the website during that time including:

- A landscape watering calculator, which allowed homeowners to develop a personalized watering schedule for different plants and areas in their landscape.
- A list of water wise plants which highlights plants that make excellent substitutes for thirsty plants and increase the water efficiency of landscapes.
- A list of weather-based irrigation control technologies and manufacturers.
- Tips and tools for water efficiency in the home, landscape and business.
- A description of water efficiency programs available in Santa Barbara County (such as rebate programs, educational programs, etc.).

- Links to web sites that provide information, resources and tools for promoting water efficiency.

The landscape watering calculator was based on a calculator developed by the City of San Diego that was modified to reflect conditions in Santa Barbara County. The calculator allowed residents to enter specific information on their landscaping to generate a recommended irrigation schedule based on historical local evapotranspiration data.

Relates to Implementation of: MOU BMP #8 & Bureau BMP #s A4 & A7.

2. PUBLIC INFORMATION PROGRAMS AND MATERIALS

- Be Water Wise Advertising Campaign

The Be Water Wise advertising campaign, which is sponsored by a number of local water purveyors, began on August 4, 2003. The whimsical ads that promote water use efficiency feature plants complaining about their bloated roots caused by their owner's overwatering and the lackadaisical "Dave" who waters a number of inanimate objects including his driveway and mailbox throughout his neighborhood due to a mismanaged irrigation system. The campaign was designed to raise awareness of how many of us overwater our landscapes and to highlight tools that are available to irrigate more efficiently.

The Be Water Wise Campaign includes radio spots, newspaper advertisements and television commercials highlighting the importance of watering wisely. The ads direct local residents to visit www.bewaterwise.com for tools on efficient irrigation. A feature of the website is a landscape watering calculator that allows residents to enter specific information on their landscaping and will generate a recommended irrigation schedule based on historical local weather data.

Local sponsors of this campaign include the Santa Barbara County Water Agency, City of Santa Barbara, Goleta Water District, California Cities Water Company, Carpinteria Valley Water District, Montecito Water District, La Cumbre Mutual Water Company, Vandenberg Village Community Services District, Los Alamos Community Services District, and Cuyama Community Services District.

During the advertising campaign the number of visitors to our website increased by an average of 80% per month. During August, visits increased by only 8%, but in September and October visits were up by 111% and 121% respectively. In addition, 590 visits to our watering calculator took place during the campaign. Visits to the sbwater.org and the watering calculator remained well above average through December of 2003.

The program partners and KRUZ also co-sponsored a Waterwise Home and Garden Makeover during the campaign. The makeover included plant and irrigation installation and maintenance from EnviroScaping, irrigation equipment from All Around Irrigation, design and construction assistance from CommonGround Landscape Architecture & Planning, a Weather TRAK ET Controller from Hydropoint Data Systems, landscape materials from AgriTurf Supplies Inc., waterwise native plants from Seaside Gardens and books on greywater and principles of ecological design from Oasis designs. Ms. Rosa Torres was selected as the lucky winner from Santa Barbara.

- Santa Maria River Levee Bike Path Interpretive Signs

Water Resources staff completed the production and installation of new interpretive signs for the Santa Maria Levee Bike Path. The signs, which were installed in June 2003, cover a number of topics including water supply, flood control and water quality and have been placed at intervals along the bike path, so that riders can learn about local water issues as they cruise the levee.

Relates to Implementation of: MOU BMP # 7 & Bureau BMP #s A4 & A7.

- Water Awareness Month:

Staff participated with local water purveyors in this annual event, which is sponsored by the California Water Awareness Committee. The County Board of Supervisors adopted a resolution declaring May as Water Awareness Month in Santa Barbara County. Advertisements reminding local residents to conserve water and encouraging them to participate in local events were placed in number of local newspapers. Events included tours of the City's desalination facility and the Alice Keck Park Memorial Garden, and Goleta Water Awareness Day. In addition, Water Awareness Month displays were showcased in both north and south county facilities with information on local water supplies, water conservation and a mural produced by the Girl Scouts of Tres Condados who earned their Water Drop Patches in 2003. Goleta Water District also held their annual Water Awareness Day and Montecito Water District held an Open House. Advertising for each of these events was placed in the *Santa Barbara Independent*, *the Montecito Journal*, *the Santa Barbara News Press*, *the South Coast Beacon* and *the Carpinteria Coastal View*. This year's sponsors included the City of Santa Barbara, Carpinteria Valley Water District, the Santa Barbara County Water Agency, Montecito Water District, Goleta Water District and La Cumbre Mutual Water Company.

Relates to Implementation of: MOU BMP # 7 & Bureau BMP #s A4 & A7.

- Earth Day Fair:

Staff coordinated local purveyor participation in this annual event in Santa Barbara, which took place on April 18, 2004. Staff displayed information on the Green Gardener Program and a Water Trivia game, and also put together a children's activity booth, which included "fishing for water facts", a tooth brushing demonstration to show how kids could save water while brushing their teeth with recycled toothbrushes for prizes and a mural decorating table. Staff also participated in the Flex Your Power promotion of High Efficiency Clothes Washers and coordinated a prize giveaway in which Santa Barbara Family Care Center won a Maytag Neptune washer and dryer set. Approximately 5,000 people attended the event. Sponsors for this event included the City of Santa Barbara, Goleta Water District, Montecito Water District, La Cumbre Mutual Water Company, and the Carpinteria Valley Water District.

In addition, staff attended the Santa Maria Earth Day fair on April 24 with the toothbrush demonstration and the Green Gardener program display.

Relates to Implementation of: MOU BMP #s 7 & 8, & Bureau BMP #s A4 & A7.

- Girl Scouts Water Drop Patch Event

Over 30 Girl Scouts from troops located in Santa Barbara, Ventura, Oxnard, Lompoc and Camarillo traveled to Santa Barbara on May 22nd for the 5th annual Water Drop Patch day extravaganza. This event is open to Brownies and Juniors in the Tres Condados Girl Scout region and explores the wonderful world of water. Topics covered included: the water cycle, local water supply, creek & ocean water pollution, watershed wildlife, water use & conservation and more. Door prizes were awarded to the first 25 girls to arrive at the event, and pizza gift certificates were given to the troops with the most girl attendees.

The Water Drop Patch program was jointly developed by the United States EPA and the Girl Scout Council of the Nation's Capital. The purpose of the project is to encourage girls to:

- Make a difference in their communities by becoming watershed and wetlands stewards.
- Use their skills and their knowledge to educate others in their communities about the need to protect the nation's valuable water resources.
- Explore the natural world to gain an interest in science and math.

This event is sponsored by the Carpinteria Valley Water District, Goleta Water District, City of Lompoc, Montecito Water District, City of Santa Barbara, and Santa Barbara County Water Agency. A similar 'water badge' activity will be held for Santa Barbara County Girl Scouts in the fall. The next Water Drop Patch day will be held on Saturday, June 25, 2005.

Relates to Implementation of: MOU BMP # 7 & Bureau BMP #s A4 & A7.

- Water of Santa Barbara County:

Staff distributed these brochures to local water purveyors, teachers, students and other interested individuals and organizations and at all public events attended by Water Agency staff.

Relates to Implementation of: MOU BMP # 7 & Bureau BMP #s A4 & A7.

- Free Water Check Up Postcards:

This colorful postcard was created to promote water checkups to district customers. The postcard discusses the steps in a checkup and lists important phone numbers for scheduling an appointment.

Relates to Implementation of: MOU BMP # 7 & Bureau BMP #s A4 & A7.

- Water Resources Brochure:

This 3-color poster summarizes the water supplies and uses throughout the County. The brochure is available to the public at water district offices, public events such as Earth Day and at public presentations.

Relates to Implementation of: MOU BMP # 7 & Bureau BMP #s A4 & A7.

- County Water Connection Newsletter:

Three newsletters were published in 2003/2004. The newsletter covers water efficiency, water supply, and pollution prevention in Santa Barbara County. The newsletter is distributed at not cost to over 200 water purveyors, public interest groups and other interested parties. Individuals or groups are added to the mailing list by request.

Relates to Implementation of: MOU BMP # 7 & Bureau BMP #s A4 & A7.

- Conservation Requests:

The County assisted local purveyors and the public by providing information about efficient water use on request, and also provided technical assistance with water conservation program elements and implementation.

Relates to Implementation of: MOU BMP #7 & #12 & Bureau BMP #s A4 & A7.

3. LANDSCAPE WATER EFFICIENCY: EDUCATION AND MATERIALS

- Santa Barbara County ET Controller Distribution and Installation Program

ET Controller Program Partners, Santa Barbara County Water Agency, City of Santa Barbara, Goleta Water District, City of Santa Maria, City of Lompoc and Hydropoint Data Systems, continued to complete tasks associated with this program throughout 2003-2004. As of June 30, 2004, approximately 430 brochures and letters have been sent to high water using customers throughout Santa Barbara County and 127 WeatherTRAK ET Controllers have been installed. The remaining 173 controllers will be installed during fiscal year 2004/2005. Initial water use data indicated that customers were reducing their monthly water use by approximately 26%, although current data reflects only a 6.6% reduction in use. This can be explained by the extremely dry conditions currently being experienced in Santa Barbara County. Staff has begun working with the Water Conservation Alliance of Southern Arizona to conduct additional analysis of the program. The partner purveyors will continue to monitor all program participants for a period of three years after the installation of their controller to ensure that the data is complete.

Relates to Implementation of: MOU BMP #s 1, 5 & 7, & Bureau BMP #s A4 & A7.

- Green Gardener Certification Program

The Green Gardener Certification Program was developed in conjunction with the City of Santa Barbara, with funding from the U.S. Bureau of Reclamation. Additional sponsors include the Santa Barbara Community College District Continuing Education Division, County of Santa Barbara Solid Waste and Utilities Division, Community Environmental Council, Horticulture Consortium of Santa Barbara County, Santa Barbara Botanic Garden, Carpinteria Valley Water District, La Cumbre Mutual Water Company, Goleta Water District, City of Santa Maria, California Cities Water Company, the City of Lompoc, Allan Hancock College and Santa Barbara Air Pollution Control District.

The goal of the program is to educate professional landscape maintenance gardeners in resource efficient landscaping practices. Participants take a seven-week class through the Adult Education Program to become certified Green Gardeners. Upon certification, gardeners receive many benefits including free advertising and promotion and discounts from vendors and sponsors. The program is taught in both English and Spanish. Water Agency staff keeps a list of certified Green Gardeners to distribute to homeowners looking for "Green" landscape services. The first courses were offered through Santa Barbara City College in Fall 2000 and have been offered each fall and spring semester since then.

The first North County Green Gardener Certification Program through Allan Hancock College was held during Spring 2003. The North and South County Spring 2004 graduations bring the total number of certified Green Gardeners in Santa Barbara County to over 350. The next set of basic and advanced Green Gardener classes will take place during the fall in both North and South County locations, and will be offered in both English and Spanish.

Relates to Implementation of: MOU BMP #s 1, 5 & 7, & Bureau BMP #s A4 & A7.

- Sustainable Landscape Fairs:

The South Coast Sustainable Landscape Fair was held on Saturday, October 18, 2003 in Alameda Park in Santa Barbara. The drop-in format encouraged participation from passersby, as well as people who learned about it through advertising. The colorful exhibits included a fountain that poured through a slab of permeable paving material, a display on the Green Gardener Certification Program, and information on integrated pest management, proper pruning and tree care, and water-efficient irrigation.

The focus of the fair is to share ideas about protecting the environment while creating a beautiful landscape. The landscape fair provides an amazing array of options for efficient irrigation, plant selection, and landscape maintenance. Participants are excited to learn how they can reduce water and chemical use, eliminate polluted runoff to our creeks and ocean, and create healthy compost for their yards while preventing greenwaste from going to the landfill.

Participants also took advantage of tours of the water-saving gardens in Alice Keck Park Memorial Garden, and workshops on planting, composting, and pruning. Leadership for these workshops was provided by local landscape experts Owen Dell, Billy Goodnick, Oscar Carmona, and Karen Christman.

Relates to Implementation of: MOU BMP #s 7 and 12, and Bureau BMP #s A4 and A7.

- Santa Maria Valley Sustainable Garden:

The garden is located at the County Technical Services Center in Santa Maria, which includes the offices of state, federal and county agencies that serve the public. This location guarantees significant exposure to the urban and development community that must come to the facility to obtain county building permits or other services provided at the Center. The county is contracting with a professional landscape contractor to renovate the garden, replacing plants that have been unsuccessful. Plant lists and other materials have been revised to reflect these changes and better serve the community.

Relates to Implementation of: MOU BMP #s 1, 5, & 7 & Bureau BMP #s A4 & A7.

- 13th Annual Santa Barbara County Home and Garden Show

Staff prepared a booth for the Annual Home and Garden Show held at Earl Warren Showgrounds. Staff distributed educational materials for sustainable landscaping and promoted the Green Gardener Certification Program. It is estimated that approximately 5,000 people attended the event this year.

Relates to Implementation of: MOU BMP #s 5 & 7 & Bureau BMP #s A4 & A7.

- Sustainable Landscape Brochure:

Staff continued to distribute this attractive and informative brochure published in 1992 as a cooperative effort among water districts in the Tri-Counties area, featuring local resource-efficient landscapes and sustainable landscape concepts. The brochure contains attractive photographs, information on sustainable landscapes and resources/references for assistance. Brochures were distributed at the annual landscape fair, Earth Day and Goleta Water Awareness Day, and by individual purveyors. Currently, this brochure is being updated and revised with funding from the U.S. Bureau of Reclamation. The new brochure will be available in Fall 2003.

Relates to Implementation of: MOU BMP #s 7 & 12, & Bureau BMP #s A4 & A7.

- How to Water Your Garden Brochure:

Staff continued to distribute this Sunset Magazine booklet at public events, in Green Gardener Classes and in the ET Controller Program throughout the year. This colorful brochure includes guidelines, checklists, diagrams, and helpful hints to allow the homeowner to use water efficiently.

Relates to Implementation of: MOU BMP #s 7 & 12, & Bureau BMP #s A4 & A7.

- Landscape Irrigation Guide for Landscape Professionals

This brochure provides information for landscape professionals on watering times, plant water requirements, and how to utilize CIMIS (California Irrigation Management Information System) information for the landscapes they maintain. The brochure has been distributed at all public events attended by Water Agency staff and is available for distribution by purveyors. Purveyors are encouraged to distribute the brochure during water audits.

In Spring 2004, the Water Agency had this brochure translated into Spanish and had the 6,000 copies printed for distribution.

Relates to Implementation of: MOU BMP #s 1, 5 & 7 & Bureau BMP #s A4 & A7.

- Large Landscape Water Audits:

Staff worked with the Cachuma Resource Conservation District's (CRCD) Irrigation Water Management Program to facilitate audits of public agencies (school districts, parks, universities) and private turf areas (golf courses, etc.) in Santa Barbara County. Financial contributions from the County make it possible to reduce the cost of an audit to certain types of customers such as universities, sod farms, and others. County staff assisted the CRCD in promoting these audits by distributing a brochure describing the audit services. These brochures are available to local purveyors to distribute to their customers. In 2003/2004 approximately 23 audits were completed within the County representing a potential water savings of 261 acre-feet per year.

Relates to Implementation of: MOU BMP #5 & Bureau BMP # A7.

4. AGRICULTURAL WATER EFFICIENCY

- California Irrigation Management Information Service (CIMIS)

A series of weather stations throughout the state provide real time evapotranspiration (ET) data for irrigators to use in scheduling irrigation of agricultural acreage or landscapes such as large turf areas. There are six of these CIMIS stations located in Santa Barbara County. Staff distributed information brochures regarding the CIMIS hotline and how to use ET data to schedule irrigation.

Relates to Bureau BMP #s A4 & A5

- Irrigation Water Management Program Support:

The Water Agency provided funding (\$50,000 each year) and staff support to the Cachuma Resource Conservation District for their Irrigation Water Management Program, which offers free irrigation system audits to local farmers. Staff participated in meetings to plan and evaluate irrigation management programs. Brochures describing the agricultural and turf audit programs were distributed by staff and by the CRCD during field visits. Staff helped promote the availability of these valuable services by informing water districts and other agencies.

Relates to Implementation of: Bureau BMP #s A4 & A5.

5. INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL EFFICIENCY PROGRAMS AND MATERIALS

- Green Awards Consortium

The Water Agency continued to participate in the Green Awards Consortium which has developed an awards program that honors businesses in Santa Barbara County that demonstrate environmental stewardship above and beyond their primary mission. The activities considered in the nomination process include those that result in cleaner air or water, less waste, less traffic, conservation of water and energy, and reduced use of hazardous materials. Winners for the Fall 2003 Green Award included DesignARC, Discoveries Learning Center, Intri-Plex Technologies, and livingreen.

Relates to Implementation of: MOU BMP #s 7 & 9

- Lodging Industry In-room Brochures for Water and Energy Efficiency

Staff distributed three in-room brochures for the local lodging industry to promote guest awareness of water and energy efficiency practices. : an in-room towel rack hanger that asks guests to consider reusing their towels during their stay, a sheet changing table tent that asks guests to consider leaving the sheets on their bed for their entire stay, and a general water and energy conservation tip brochure. A corresponding training video (available in both English and Spanish) was also provided to interested hotels to educate hotel personnel about the program. Local water purveyors that actively participated in this program in

2003/2004 include the City of Santa Barbara, Montecito Water District, City of Santa Maria and Vandenberg Village Community Services District. Participants distributed videos and brochures to participating hotels. This program will continue on an on-going basis.

Relates to Implementation of: MOU BMP #s 7 & 9

- Commercial, Industrial, and Institutional Rebate Program

The CII Rebate Program, which is a rebate program for commercial customers within Santa Barbara County that was funded through a grant from the Department of Water Resources, began in December 2003. The program will issue \$234,100 in rebates to CII customers within a 3-year period for the replacement of 600 Category I toilets, 200 Category 2 & 3 toilets, 511 urinals, 200 multi-family common area laundry facility washers, and 200 commercial laundromat clothes washers with water efficient fixtures in three years to save 156 AFY.

Rebates are provided for commercial, industrial and institutional water customers only; no rebates are given to single-family residential dwellings. Fixtures must be purchased after the start date of the program (January 1, 2004) and installed in the service area of one of the water districts listed below. In addition, participants must be replacing higher water use devices with new, water-efficient ones. Installation of the devices is the participants' responsibility, and verification of installation may be conducted through a visual on-sight inspection.

Areas Offering Rebates:

- City of Lompoc
- City of Santa Barbara
- City of Santa Maria
- Goleta Water District
- Carpinteria Valley Water District
- Montecito Water District

Relates to Implementation of: MOU BMP #s 7 & 9

- Rinse and Save Program

As a member of the California Urban Water Conservation Council (CUWCC), the Santa Barbara County Water Agency is eligible to participate in the Rinse and Save Pre-Rinse Spray Nozzle Program coordinated by the CUWCC. The CUWCC received funding for this program through the California Public Utilities Commission's (CPUC) Public Goods Program and provides overall program management, technical support, and measurement and verification. The CUWCC has contracted with Honeywell DMC Services Inc. to perform the marketing, outreach, product procurement and installation of the spray valves. The only commitment required from interested water agencies is a contribution to overall program costs and some staff time to provide a list of local restaurants to the consultant. The total program costs are \$181.179 per valve and local water agencies are required to pay \$50 per valve, while the remainder of these costs (\$131.179) is funded through the grant from the CPUC. The program is open to restaurants, cafeterias, and other food service providers and will save these customers an average of 200 gallons of water and 2 therms of gas **per day** (See table below for more savings information). The Water Agency began coordinating with local water purveyors to share the \$50 local costs and will focus the program in the service areas of those purveyors who cosponsor the program in Spring 2004. The program will be implemented in Summer/Fall 2004.

6. DATA COLLECTION

- Water Rates Survey:

In April 2004, the annual survey of water rates in Santa Barbara County was distributed to local water purveyors. The information was compiled by staff and sent to all participants in May 2004.

Relates to Implementation of: MOU BMP #11 & Bureau BMP #s A2, B3 & A7.

- Water Production Survey:

Staff conducted the annual survey of water production in the County in January 2004. The results were distributed to local water purveyors, the Water Purveyors Agency and the Bureau of Reclamation. The Water Agency also publishes annual reports on surface and groundwater conditions, with input from the staff of the Regional Water Efficiency Program.

7. INFORMATION CLEARINGHOUSE

- Water Resources Report

The Water Resources Report was published in July 2000. The report provides an excellent overview of water resources within the county, treatment facilities, conservation programs, and per capita use information. Copies of the report were distributed to all water purveyors in the county and to teachers at the Summer Teacher's Conference and it is available in hard copy or on the Internet at www.publicworkssb.org/water. It also provides an excellent resource for politicians, consultants, students, and interested members of the public.

- Gray Water Standards:

Staff distributed (on request) brochures on gray water use in the unincorporated areas of Santa Barbara County.

- Updates on Water Efficiency Legislation:

Staff continually monitor water efficiency legislation and the associated requirements, and disseminate information to local purveyors. The information is distributed through the County Water Connection Newsletter, announcements/handouts at the local Water Purveyor's Agency meetings and other means as appropriate.

- Funding for Conservation:

Staff monitors grants and low interest loans available for water conservation programs. Staff notified local districts about the availability of Bureau of Reclamation grant funds. Staff prepared several proposals for funding for local water conservation projects.

8. TECHNICAL COMMITTEES/CONFERENCES/WORKSHOPS

- Santa Barbara/San Luis Obispo Counties Water Conservation Committee:

This committee, comprised of water conservation staff from the two counties, meets annually to share conservation program ideas and organize joint efforts. Because water supply and demand parameters for the two counties are similar, valuable information and ideas can be shared at these joint meetings. Joint projects have included development of a water rates survey, water education materials, and the sustainable landscape brochure.

- Department of Water Resources Water Education Committee:

On April 29 & 30, staff attended the Water Education Committee (WEC) meeting in???. Approximately 30 people were in attendance, representing water districts, water educators and county and state agencies throughout California. Meeting activities included a tour of the Watershed Resource Center and it's educational facilities, a trip to visit the Lake Cachuma nature center and go on a nature cruise, a review of water-related presentations and programs offered in Santa Barbara County and updates from attendees on their water education programs.

- American Water Works Association National Water Conservation Committee:

Staff attend meetings of this national committee whenever possible. The major advantage of this committee is sharing information with water conservation staff from water districts throughout the country. The committee develops joint water use efficiency programs among members, and also produces written materials that can be used nationwide. Water efficiency programs being implemented throughout the nation are highlighted at these meetings. New approaches and technologies are discussed and research needs are identified.

In January 2004, Alison Jordan with the City of Santa Barbara and Rory Lang with the Water Agency provided a presentation entitled “High Tech World Meets the Residential Irrigation Controller to Save Water in Santa Barbara County” at the 2004 Water Sources Conference in Austin Texas. The white paper, which was coauthored by Ms. Jordan, Ms. Lang and Ms. Misty Gonzales of Goleta Water District provided an overview of the Santa Barbara County ET Controller Distribution and Installation Program.

- California Urban Water Conservation Council:

The Council, made up of all signatories to the statewide Memorandum of Understanding for urban water conservation (MOU), was formed as a means to monitor implementation of urban best management practices as outlined in the MOU. Six local agencies, including the County, have signed this agreement. The Council meetings are held quarterly. Water Agency staff attends these meetings, and reports information of interest back to local water purveyors through newsletter articles, letters and meetings.

9. OTHER PROGRAMS

- Water Conservation Plans and Related Reports/Updates:

Staff prepares an annual report of the regional water conservation program each year, which is distributed to all local purveyors and appropriate state and federal agencies. There are several water conservation planning requirements that affect the county and/or local purveyors. These include the state’s Urban Water Management Planning Act, the CUWCC’s annual report, and the Bureau of Reclamation’s water conservation criteria and contract conditions for contractors.

- Regional Drought Management Plan

During Fiscal Year 2000/2001 strategic planning sessions with the water purveyors in Santa Barbara County, Water Agency staff received requests to coordinate the development of a regional drought management plan. Such a plan would allow the County to utilize the experience gained during the 1986-1991 drought to prepare for droughts that may occur in the future while addressing changes in water demand due to population increases, newly developed water supplies and on-going conservation efforts.

In addition, the U.S. Bureau of Reclamation contacted the Water Agency for assistance with the development of a model Drought Management Plan as part of a comprehensive irrigation research and education program, which includes the development of a Drought Preparedness Program.

In response to these requests, Water Agency staff secured grant funding (\$24,640) for the project from the U.S. Bureau of Reclamation and prepared a Drought Planning Handbook for Water Purveyors. The

completed handbook is now available for use for water districts throughout California, both through USBR's website and from the Santa Barbara County Water Agency.

In addition, the Santa Barbara County Water Agency, the local water purveyors and the U.S. Bureau of Reclamation, coordinated the development of this Santa Barbara County Regional Water Shortage/Drought Plan beginning in Spring 2004. Water Agency staff utilized the experience gained during the 1986-1991 drought to prepare this regional plan for the county. The intent of the plan is to prepare for droughts that may occur in the immediate future by addressing changes in water demand due to population increases, newly developed water supplies, and on-going conservation efforts.

The Regional Plan describes specific actions to be undertaken by staff and identified timing and coordination with local water purveyors to maximize effectiveness. The elements of the County Drought Plan include:

- Development of a coordinated advertising campaign and public information materials
- Acceleration of low-flow fixture rebate programs
- Complete an inventory of potential surplus water available for exchange/sale to districts that may wish to augment their existing supplies

In addition, the Water Agency will continue to work with medium and small local water purveyors to complete water shortage plans using the USBR Water Shortage/Drought Planning Handbook developed by the Water Agency in 2003

10. OVERVIEW

Events Attended to Promote Program	16
Grant Funds Secured	\$321,600
Brochures Available	18
Reports Available	4
Customers Reached through Public Events (Estimate only includes attendance at public events and does not include those reached through media advertising or direct mail)	17,981

(Not Included in Electronic Version)

- 10.2 MWD Resolution No. 2004 (12/14/05); Water Service Related Rates and Charges
- 10.3 MWD Resolution No. 1291-A (1/18/73); Declaration of Water Shortage Emergency
- 10.4 Public Comments Received on Draft Urban Water Management Plan and Responses
- 10.5 Resolution No. 2005 (01/17/06); Plan Adoption
- 10.6 MWD Water Supply Optimization Plan
- 10.7 MWD Groundwater Management Plan