

PLACER COUNTY WATER AGENCY
2005 URBAN WATER MANAGEMENT PLAN

December 2005

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Mr. Brian C. Martin, P.E.
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1017/129300

Subject: Placer County Water Agency, Urban Water Management Plan

Dear Mr. Martin:

Brown and Caldwell is pleased to submit this 2005 Urban Water Management Plan for your review. Please do not hesitate to contact me if you have any questions or comments at (916) 853-5306.

Sincerely,

BROWN AND CALDWELL



Paul Selsky, P.E.
Vice President

PS:DM:ds

Enclosure

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CHAPTER 1

INTRODUCTION

This Urban Water Management Plan (Plan) addresses the Placer County Water Agency (PCWA or Agency), which provides water to approximately 220,000 people in Placer County (County). The Agency provides retail water service to about 36,000 agricultural, municipal, and industrial connections, with both raw and treated water, in the cities of Auburn, Colfax, Loomis, and Rocklin, and to most of the small communities in unincorporated western Placer County along the I-80 corridor below Alta. The Agency also provides treated water to several mutual water companies within its Zone 1 service area that operate their own distribution systems.

PCWA makes wholesale deliveries of treated water to the City of Lincoln and California American Water Company and untreated water off of its canal system to several smaller water utilities that provide their own treatment and distribution service. The Agency also provides surface water out of the American River that is diverted and used by San Juan Water District, the City of Roseville, and Sacramento Suburban Water District. These wholesale customers are required to prepare their own Urban Water Management Plans.

Placer County Water Agency, a public agency, was established in 1957 by a special Act of the California Legislature (Placer County Water Agency Act, Statutes of 1957, Chapter 1234). Its boundaries are the same as Placer County. Its governing body, a five-member Board of Directors, is elected by district voters. Each director serves a four-year term.

This section provides background information on the plan, coordination with other agencies in the service area, and public participation and adoption of the plan.

1.1 Urban Water Management Planning Act

This Plan has been prepared in accordance with the Urban Water Management Act (Act). The Act is defined by the California Water Code, Division 6, Part 2.6, and Sections 10610 through 10657. The Act became part of the California Water Code with the passage of Assembly Bill 797 during the 1983-1984

regular session of the California legislature. The Act requires every urban water supplier providing water for municipal purposes to more than 3,000 connections, or supplying more than 3,000 acre-feet (ac-ft) of water annually, to adopt and submit a plan every five years to the California Department of Water Resources (DWR). Subsequent assembly bills have amended the Act.

The recent SB 1087 requires the Agency to adopt written policies and procedures “not later than July 1, 2006,” containing specific objective standards for providing services to lower income households. Such policies and procedures are to take into account the availability of water supplies as determined by the Agency in its urban water management plan. The Agency intends to adopt policies and procedures prior to July 2006.

1.2 Resource Maximization and Import Minimization

Water management tools are used by the Agency to maximize water resources. The Agency does not import water from other wholesale water agencies. To maximize water resources, the Agency focuses on increasing water use efficiency, integrating the available mix of water sources, including groundwater, surface water, and recycled water, and upgrading water supply and delivery facilities. The Agency is in the process of completing an integrated water resource plan and a groundwater management plan. The Agency is actively participating with an integrated regional water management plan, a regional water conservation master plan, and various cooperative agreements.

1.3 Agency Coordination

This Plan has been prepared in coordination with the Agency and the other water contractors that receive water from the Agency. The Agency coordinated the preparation of this plan with other appropriate agencies. Table 1-1 summarizes the coordination activities and pertinent agencies.

Table 1-1. Coordination with Appropriate Agencies

	Placer County	City of Roseville	City of Lincoln	San Juan Water District	California American Water Company	Nevada Irrigation District	Sacramento Suburban Water District	Truckee Donner Public Utility District	Other Public Involvement
Attended meeting to provide input		√	√						
Commented on the draft									
Attended public meetings									√
Was contacted for assistance	√	√	√	√	√	√	√	√	
Was sent a copy of the draft plan	√	√	√	√	√	√	√	√	
Was sent a notice of intention to adopt	√	√	√	√	√	√	√	√	
Not involved/No information									

Note:
DWR Table 1

1.4 Previous Reports

Several reports have been prepared in the past decade, which address water supply and demand for the Agency. An understanding of the results of these previous studies provides a broader context for preparing an updated water management plan. This section provides a summary of these recent planning reports.

The Agency prepared urban water management plans in 1985, 1992, 1997, and 2000. The 2000 Plan concluded that the Agency has sufficient water supplies in average precipitation years, but that water shortages may occur during single and multiple dry years.

The Agency prepared an evaluation of water supply and demand in 2001. The key conclusion in the 2001 evaluation is that the Agency has adequate surface water supply entitlements to meet the demands that would occur at buildout of the adopted general plans without the use of groundwater or recycled water and without relying on additional water conservation savings (Placer County Water Agency, 2001).

In 2004, the Agency initiated the preparation of an Integrated Water Resources Plan to assess the buildout water demands in western Placer County, including service to several new development projects that are proposed to be included in future general plan updates, and plan the integration of a variety of water supply sources, including groundwater, reclaimed water, and additional water conservation measures. The draft report concludes that there is adequate water supply to meet all of the demands for each of the growth scenarios. Recycled water is needed to help meet normal year demands, and groundwater is needed to help supplement dry year surface water supplies (Brown and Caldwell, 2005).

1.5 Public Participation

The Act requires the encouragement of public participation and a public hearing regarding the Water Management Plan. This hearing provides an opportunity for the Agency's customers to learn about the water supply situation and the plans for providing a reliable, safe, high-quality water supply for the future.

The Agency encouraged community and public involvement in the Plan update through a public hearing and having the draft document available for public inspection. Public hearing notifications were publicly noted and published in the Auburn Journal, Auburn Sentinel, Colfax Record, Lincoln News Messenger, Placer Herald, Press Tribune, Loomis News, Sierra Sun, and Tahoe World. A copy of the published Notice of Public Hearing is included in Appendix A. The hearing provided an opportunity for all residents in the service area to learn and ask questions about their water supply in addition to the Agency's plans for providing a reliable, safe, high-quality water supply. Copies of the plan were made available for public inspection at the Agency's Administration Building.

This Plan was adopted by the Agency's Board of Directors on December 15, 2005. A copy of the adopted resolution is provided in Appendix A.

1.6 Plan Organization

This section provides a summary of the sections in the plan. Section 2 provides a description of the service area, climate, water supply facilities, and distribution system. Section 3 presents historical and projected water use. Surface and groundwater supplies are described in Section 4. Section 5 describes recycled water. Section 6 addresses water conservation and water shortage contingency planning. Section 7 provides a comparison of future water supply to demand. Various appendices provide relevant supporting documents.

CHAPTER 2

DESCRIPTION OF EXISTING WATER SYSTEM

This chapter describes the area served by the Agency, the climate, and the key water system facilities.

2.1 General Description

The Agency serves customers located in five separate retail zones in the County. The County is located between the snow-fed Yuba/Bear and American Rivers, which cascade westward toward the Sacramento Valley. Running some 100 miles from east to west, the County is about 30 miles wide at either end and narrows to 8 miles at the mid section. Placer County covers an area of approximately 1,500 square miles that include relatively level valley lands in its western portion and extends into the Sierra Nevada mountains to Lake Tahoe and the State of Nevada boundary to the east. The County is located immediately northeast of Sacramento County, and about 120 miles northeast of the San Francisco metropolitan area. Figure 2-1 depicts the location of the five zones served by the Agency. Figure 2-2 is a space shuttle photograph taken in 1991 looking eastward of the area served by the Agency, and the portion of the Sierra Nevada range that the Agency depends on to provide storage in the form of snow.

2.2 Climate

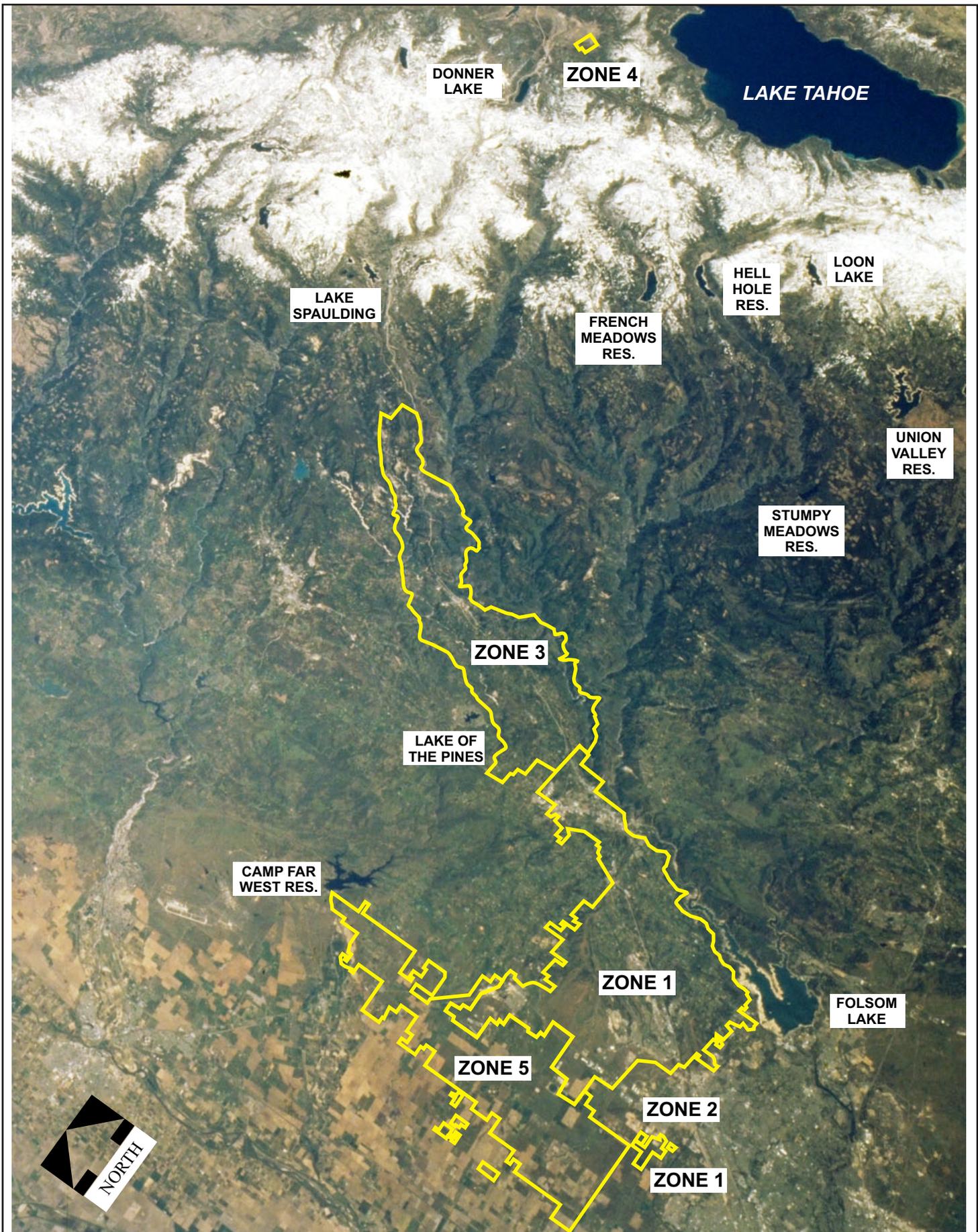
The area served by the Agency has cool and wet winters, and hot and dry summers. The historical annual average precipitation varies from 17 inches in the west portion of the County to 60 inches in the higher elevations in the eastern portion of the County. The rainy season typically begins in November and ends in March. The combination of hot and dry weather during the summer results in high water demands during the summer.



Source: Microsoft Trip Planner 98



BROWN AND CALDWELL	PROJECT	129300	2005 UWMP, Placer County Water Agency, California Water Service Zone Location Map	Figure 2-1
	DATE	12-13-05		



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	PROJECT	129300	2005 UWMP	Figure 2-2
	DATE	11-16-05	Placer County Water Agency, California	
			Satellite Photo of System from Sacramento to Truckee	

Table 2-1 summarizes average monthly temperatures, rainfall, and evapotranspiration rates (ET_o).

Table 2-1. Climate

	Average temperature ^a , °F	Average rainfall ^a , in	Standard average ET _o ^b , in
January	45.1	6.40	1.59
February	48.8	6.03	2.20
March	51.5	5.20	3.66
April	56.3	2.80	5.08
May	63.1	1.21	6.83
June	70.9	0.35	7.80
July	77.2	0.05	8.67
August	76.1	0.08	7.81
September	71.8	0.46	5.67
October	63.7	1.83	4.03
November	52.7	4.16	2.13
December	45.9	5.86	1.59
Annual	60.3	34.45	57.06

Notes:

DWR Table 3

^a 1914-2005 data recorded for Auburn station, www.wrcc.dri.edu.

^b Data represents the monthly average from April 1997 to October 2005 and was recorded from the Fair Oaks station 131, CIMIS database. ET_o is equivalent to evapotranspiration, the loss of water from the soil both by evaporation and by transpiration from the plants growing thereon.

2.3 Agency Organizational Structure

Placer County Water Agency was created in 1957 by a special Act of California State law entitled the Placer County Water Agency Act. The Agency is self-governed by an independently elected five member Board of Directors and is under administrative direction of the General Manager. The Agency provides activities or services in three areas: Agency-Wide, Power System, and Water System.

The general governance and management of the Agency occurs through its Agency-Wide activities. Since 1957 the Agency has been actively involved throughout Placer County's 1,500 square miles on a wide variety of water and energy issues. Agency officials understand the complexities, interrelationships, and importance of sustaining reliable and affordable water and energy for Placer County. Current Agency Wide activities include, for example, involvement in issues affecting the Lake Tahoe and Truckee River system; the American River system; the Yuba/Bear Rivers system; the Central Valley Project and Bay/Delta system; watershed management collaborations; groundwater management; advocacy for Agency water entitlements; and participation in electric deregulation and hydroelectric

divestiture. Agency officials are in close communication with local, regional, State and Federal officials, plus private sector representatives and members of the public and community on water and energy issues affecting Placer County's present and future needs.

In addition to overall Agency-Wide governance and management activities, there are two business divisions of the Agency: one generates hydroelectric power and the other delivers water.

The Agency's Power System was established with the construction of the Middle Fork American River Project (Project) in 1963. This includes five hydroelectric power plants, two large reservoirs (French Meadows and Hell Hole) and twenty-one miles of tunnels. The Project annually generates 1,019,979 megawatt hours of hydroelectric power that is wholesaled to Pacific Gas and Electric Company (PG&E). This is sufficient to provide electricity to more than 200,000 PG&E retail customers. The Project also provides public recreational opportunities, including campground and boating facilities constructed by the Agency and operated through the U.S. Forest Service.

The Agency's Water System was established in 1968. It now serves more than 36,000 water accounts which represents annual deliveries to upwards of 220,000 people in homes, businesses, industry, and agriculture. Water is marketed through various Agency contracts and five Water Service Zones, as described in Section 2.4. A significant amount of raw water irrigates pastures, orchards, rice fields, farms, ranches, golf courses, and other uses. Agency treated water is sold directly to customers residing in Auburn, Colfax, Loomis, Rocklin, and portions of Roseville and the surrounding unincorporated areas of Placer County. Agency treated water is also sold wholesale to the City of Lincoln and several smaller special districts who treat the water and retail it directly to their customers. Agency raw water is also sold to the City of Roseville, San Juan Water District (Granite Bay) and several special districts who treat the water and retail it to their customers.

2.4 Description of Service Zones

The Agency provides both treated and raw water to retail customers in five service zones. In addition, raw water and treated water are wholesaled to several retail water utilities and mutual water companies. Zones 1, 2, and 5 are located in western Placer County, extending from the Sacramento County line as far east as Auburn. This geographic area is identified as the western area and also includes the Agency's

wholesale customers.

Zone 3 includes much of central Placer County, from north of Auburn to Alta along the I-80 corridor. This water system is identified as the central area.

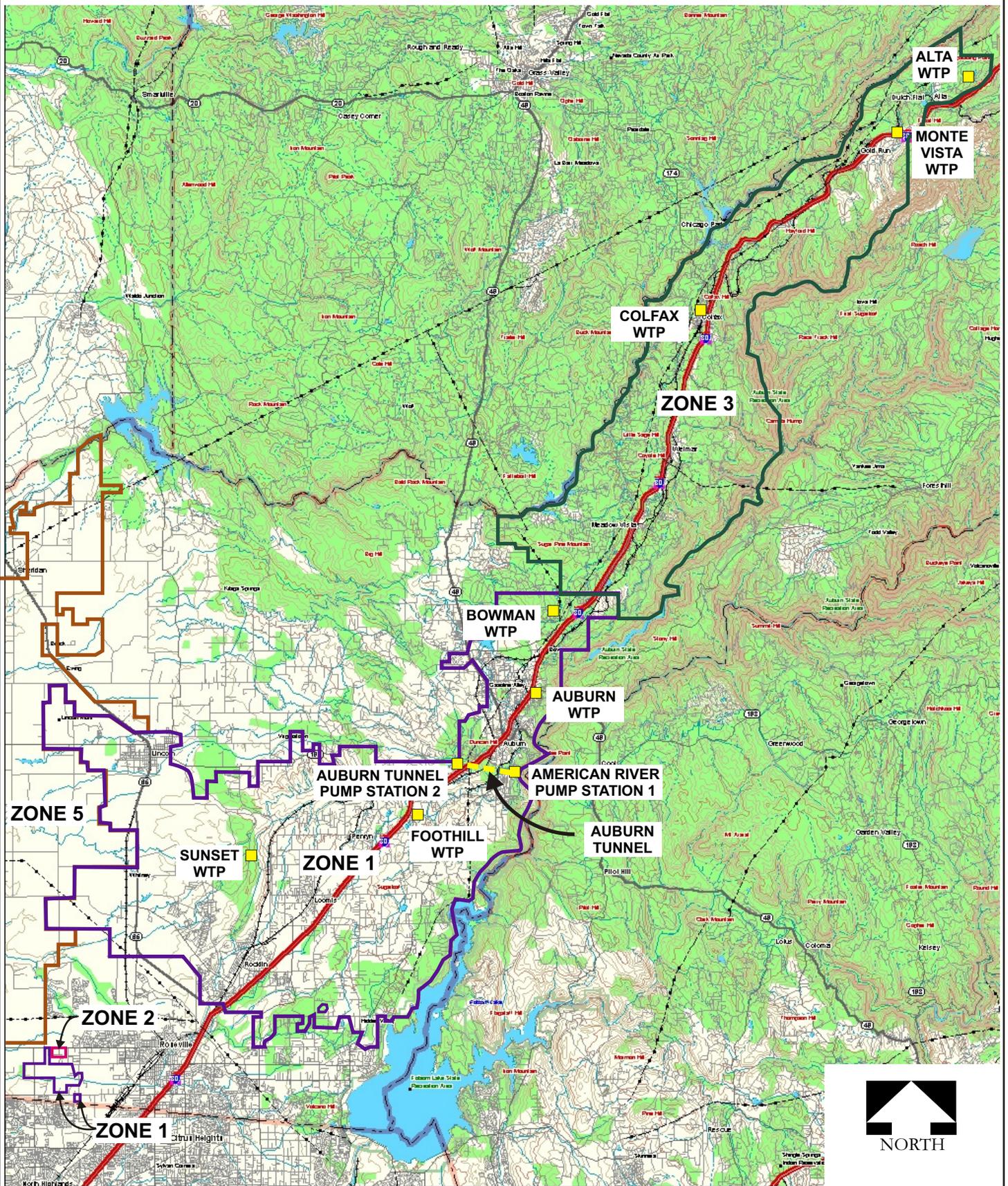
Zone 4 is located in eastern Placer County, within the Martis Valley, and is identified as the eastern area.

This section describes the five zones and their key water system facilities. Figure 2-3 depicts the locations of Zones 1, 2, 3, and 5. Zone 4 is located in eastern Placer County near Truckee. Figure 2-4 depicts the locations of the water and wastewater treatment facilities in western Placer County.

2.4.1 Zone 1

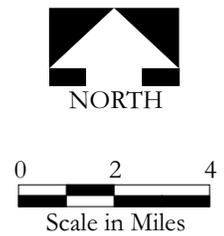
Zone 1 is the largest of the five zones within the Agency. Zone 1 extends from just north of the City of Auburn, south to the northern boundary of the City of Roseville in western Placer County, and north to include the City of Lincoln. There is a small detached portion of Zone 1 southwest of the City of Roseville near Baseline Road and Crowder Lane. The Agency provides retail treated water service to most of Zone 1 and also serves wholesale treated water to the City of Lincoln, California American Water Company, and to other property owner associations located in Zone 1.

Water for Zone 1 facilities comes from PG&E's Drum-Spaulding system, and from the Agency's Middle-Fork American River project. This water is used to supply the Agency's Bowman, Auburn, Foothill, and Sunset Water Treatment Plants as well as raw water customers. The upper portion of Zone 1 (primarily the Auburn area) can only be served from the PG&E system from delivery points off of its Bear River, Wise, and South Canals.



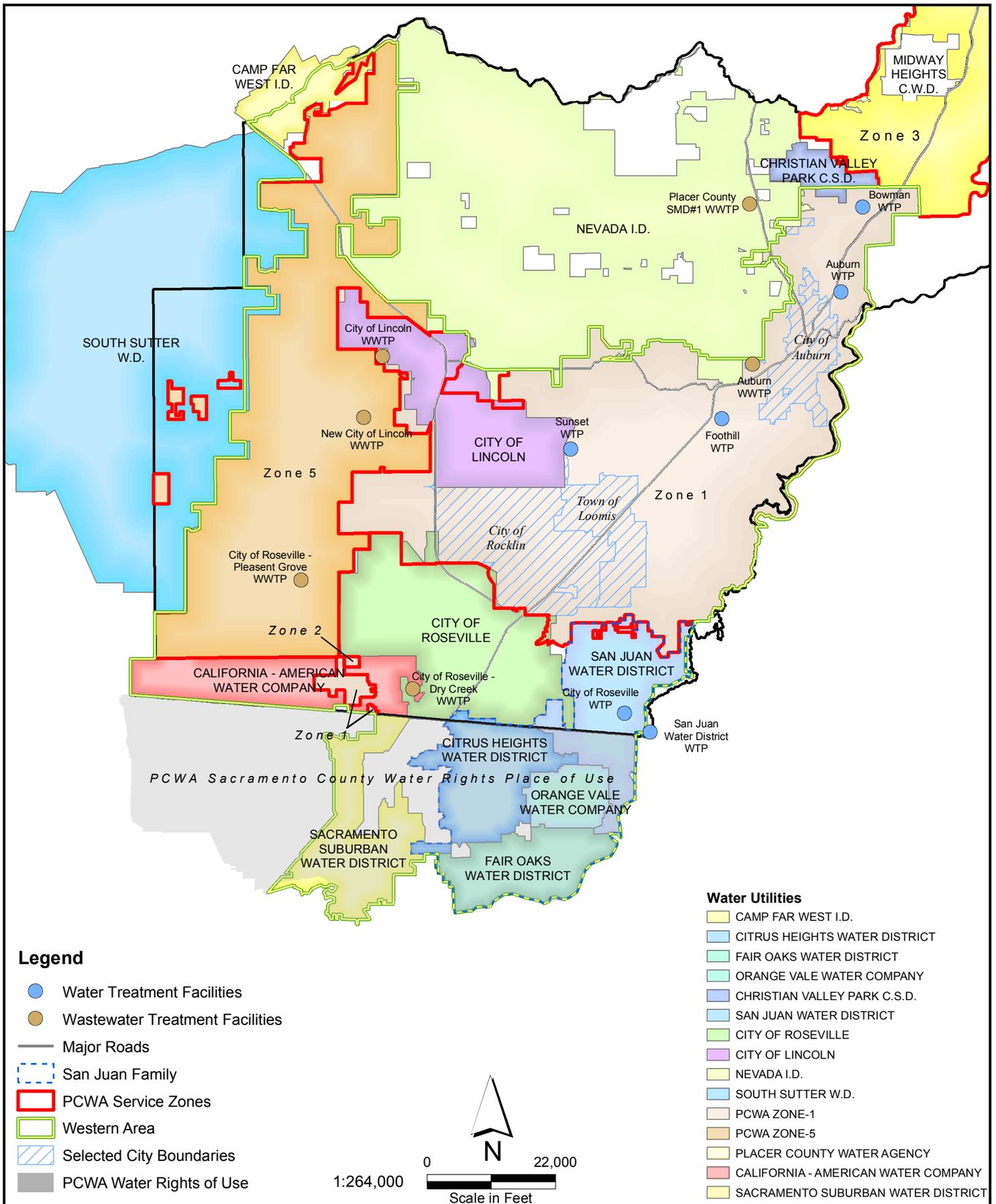
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	PROJECT	129300	2005 UWMP Placer County Water Agency, California	Figure 2-3
	DATE	11-16-05		

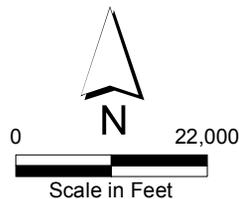


Legend

- Water Treatment Facilities
- Wastewater Treatment Facilities
- Major Roads
- San Juan Family
- PCWA Service Zones
- Western Area
- Selected City Boundaries
- PCWA Water Rights of Use

Water Utilities

- CAMP FAR WEST I.D.
- CITRUS HEIGHTS WATER DISTRICT
- FAIR OAKS WATER DISTRICT
- ORANGE VALE WATER COMPANY
- CHRISTIAN VALLEY PARK C.S.D.
- SAN JUAN WATER DISTRICT
- CITY OF ROSEVILLE
- CITY OF LINCOLN
- NEVADA I.D.
- SOUTH SUTTER W.D.
- PCWA ZONE-1
- PCWA ZONE-5
- PLACER COUNTY WATER AGENCY
- CALIFORNIA - AMERICAN WATER COMPANY
- SACRAMENTO SUBURBAN WATER DISTRICT



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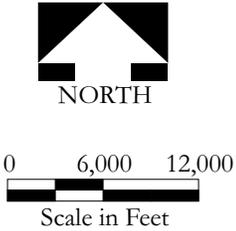
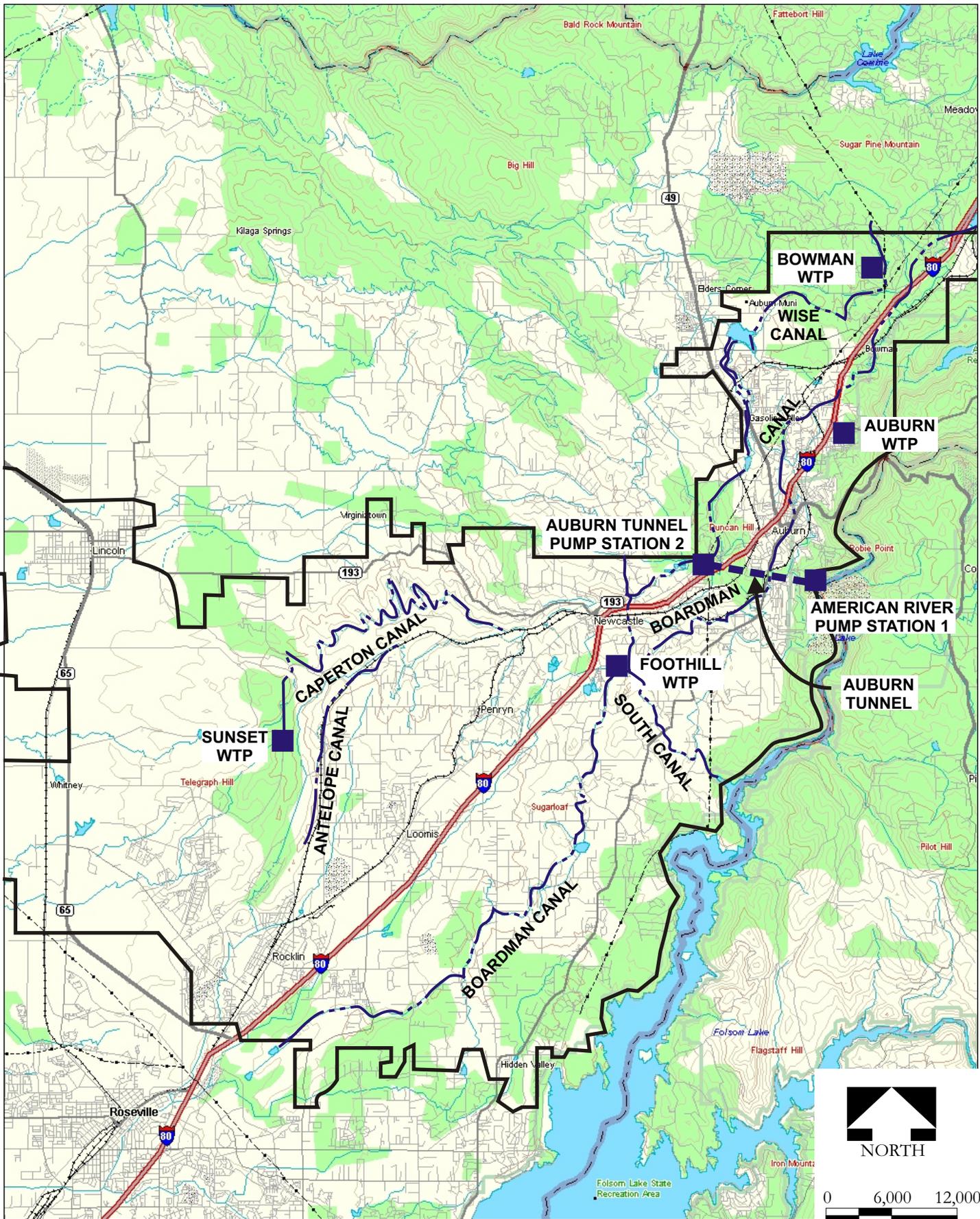
BROWN AND CALDWELL	PROJECT 129300	2005 UWMP Placer County Water Agency, California	Figure 2-4
	DATE 11-16-05	Water and Wastewater Treatment Facilities	

Water can be supplied to lower Zone 1 from both the PG&E system and from the American River by operating pumps located near the Auburn Dam site. These pumps lift water from the river to the inlet of the Auburn Tunnel. The Auburn Tunnel is a 3-mile long tunnel that connects the American River Canyon with Auburn Ravine near the community of Ophir. By operating pumps that intercept the Auburn Tunnel, the Agency is able to pump water to the surface and discharge it into PG&E's South Canal, from where it can be distributed to the lower system water treatment plants and distribution canals.

The water treatment plants within Zone 1 are broken into two categories: Upper Zone 1 plants, which consist of Bowman and Auburn, and the lower Zone 1 plants, which consist of Foothill and Sunset plants. The upper Zone 1 plants of Bowman and Auburn provide treated water service to the communities of Bowman, Auburn, and Newcastle. The Lower Zone 1 plants of Foothill and Sunset provide treated water service to the communities of Penryn, Loomis, Rocklin, Lincoln, Newcastle, and a portion of Granite Bay. Figure 2-5 depicts the locations of the key Zone 1 water system facilities.

The Bowman plant has a capacity of 7 million gallons per day (MGD) and the Auburn plant has a capacity of 5 MGD, providing 12 MGD of total capacity for Upper Zone No. 1. The Auburn water treatment plant is currently being expanded to 8 MGD and will have an ultimate capacity of 14 MGD. The Foothill plant has a capacity of 55 MGD and the Sunset plant has a capacity of 8 MGD, providing 63 MGD of total capacity for lower Zone 1.

Within the Zone 1 service area, there are 16 storage tanks providing approximately 49 million gallons (MG) of storage capacity. There is approximately 444 miles of treated water piping within the Zone 1 service area. The Agency is currently constructing another 10 MG of storage capacity at its Tinker Road pump and tank site in the Sunset Industrial area.



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PROJECT	129300
DATE	11-16-05

2005 UWMP
 Placer County Water Agency, California
 Zone 1 Key Water System Facilities

Figure
 2-5

2.4.2 Zone 2

Zone 2 was located in western Placer County south of the City of Roseville. The system serves 46 residential accounts on two-acre lots adjacent to Roseville's southwest boundary. In the past, water supply for Zone 2 was groundwater supplied by two wells. In 2003, Zone 2 was connected to the City of Roseville's pipeline in Baseline Road and now receives surface water through Zone 1 facilities. For the purpose of this plan, Zone 2 is considered to be functionally integrated into Zone 1.

2.4.3 Zone 3

Zone 3 is the second largest zone within the Agency. Zone 3 serves rural customers in the communities of Applegate, Weimar, Meadow Vista, Colfax, Gold Run, Monte Vista, Dutch Flat, and Alta and areas in between.

Water for Zone 3 customers comes from PG&E's Drum Spaulding system. The Agency purchases water from PG&E at various "buy points" near Alta. The Agency's Boardman Canal, beginning near Alta, extends along the I-80 corridor to Zone No. 1 near Lake Theodore and constitutes the delivery backbone for most of the treated and raw water deliveries in Zone 3. From the Boardman Canal, water is delivered to the four Agency water treatment plant facilities located within Zone 3, other community water districts, and the Agency's raw water customers.

There are four Agency water treatment plants within Zone 3: Alta (0.31 MGD), Monte Vista (0.124 MGD), Colfax (1.24 MGD), and Applegate (0.12 MGD). These plants supply treated water to the communities in which they are located. There are approximately 24 miles of treated water piping and 2.16 million gallons of treated water storage capacity within Zone 3.

2.4.4 Zone 4

Zone 4 was established in 1998 and is located on the floor of the Martis Valley, near Truckee in eastern Placer County. Zone 4 serves residential customers in the Lahontan Subdivision that is situated near the

Nevada County line, Highway 267 and the community of Northstar. The water supply for Zone 4 is groundwater pumped from the Martis Valley aquifer. Home construction in the new development began in 1997.

The key water facilities within Zone 4 include two wells, one with a capacity of 750 gallons per minute (gpm) and another with a capacity of 1,220 gpm, a 500,000 gallon water storage tank, and approximately eight miles of treated water distribution system piping.

2.4.5 Zone 5

Zone 5 was established in 2000 to provide water to commercial agriculture in western Placer County. Water is supplied to Zone 5 from Zone 1 facilities. Water supplies to Zone 5 include PG&E water from the Drum-Spaulding system and Middle Fork Project water diverted out of the American River at Auburn.

CHAPTER 3

HISTORICAL AND PROJECTED WATER USE

Water demand projections provide the basis for evaluating the adequacy of future water supplies and for sizing and staging future water facilities. This chapter presents the projections of future water needs for each of the zones served by the Agency.

3.1 Demographics

This section describes the demographics in terms of the population, historical number of connections, and the number of connections by customer category. Table 3-1 provides the current and projected population within the Agency's service area through the year 2030. The population in Table 3-1 is for all of the Agency's service zones, and includes the population that is served wholesale treated and untreated water. Table 3-1 does not include the population within the City of Roseville and San Juan Water District that is supplied by contract untreated water that is not diverted by the Agency. The year 2005 total population including these contract customers is 220,000.

Table 3-1. Population – Historical and Projected

Year	Population
2003	124,725
2004	135,863
2005	140,000
2010	176,000
2015	228,000
2020	285,000
2025	342,000
2030	376,000

Note:
DWR Table 2
Does not include Roseville, Sacramento Suburban Water District,
and San Juan Water District.

Table 3-2 presents the historical number of raw water and treated water customers.

Table 3-2. Historical Number of Connections

Year	Raw Water Connections	Treated Water Connections	Estimated Number Treated Water Multi Unit & Resale Dwelling Units ²	Total Connections	Annual Growth Rate %
1985	2,393	11,285	3,443	17,121	
1990	2,769 ¹	18,091	4,129	24,989	7.9
1996	3,220	21,951	5,095	30,266	3.2
1999	3,509 ¹	24,855	7,965	36,329	6.3
2000	3,654	25,767	11,702	41,123	13.2
2001	3,720 ¹	27,130	13,597	44,447	8.1
2002	3,786	29,005	15,561	48,352	8.8
2003	3,844	31,402	16,632	51,878	7.3
2004	3,902	32,147	19,671	55,720	7.4

Notes:

Includes PCWA customers from all zones (zones 1, 2, 3, 4, 5 and AW)

Source: Treated Water 1985 - Water Sales and Connections Summary Report, 1990-2002 Historical Treated Meter Data Report, 2003-2004 Active Connection Report.

Source: Raw water 1985 - Water Sales and Connections Summary Report, 1996-2002 - Canal Master Summary Report, 2003-2004 - Active Connection Report.

¹ Estimated.

² Includes estimated number of multiple dwelling units, dwellings in City of Lincoln, and other resale accounts.

Tables 3-3 and 3-4 present a breakdown of the number of treated water connections for 2000 and both treated and untreated connections for 2004 by customer category and zone. As shown in Tables 3-3 and 3-4, the majority of the treated and untreated water customers are located in Zone 1. Table 3-5 presents a breakdown of the annual water use for 2004 by customer category and zone.

Table 3-3. Treated Water Connections by Customer Category and Zone for Year 2000

Customer type	Zone 1	Zone 2	Zone 3	Zone 4	Total
Residential	20,311	46	934	424	21,715
Multi Units (6,567)	502	0	54	0	556
Commercial	1,238	0	124	6	1,368
Industrial	15	0	0	0	15
Municipal	153	0	3	0	156
Landscape-Greenbelt	96	0	1	1	98
Irrigation/Ag	96	0	0	0	96
Construction	56	0	2	1	59
Fire Protection	386	0	4	3	393
Resale	7	0	0	0	7
No Demand	1,253	0	50	0	1,303
Total	24,113	46	1,172	435	25,767

Table 3-4. Connections by Customer Category and Zone for Year 2004

Customer type	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Total
Treated water						
Residential	25,647	46	1,027	509	0	27,229
Commercial	1,433	0	111	8	0	1,552
Landscape	335	0	4	0	0	339
Municipal	132	0	15	0	0	147
Multi-unit (7,324)	664	0	66	0	0	730
Agriculture	81	0	0	0	0	81
Industrial	2	0	0	0	0	2
Resale	8	0	0	0	0	8
Miscellaneous	1,550	0	30	3	0	1,583
Subtotal	29,852	46	1,253	520	0	31,671
Raw Water						
Summer	3,300	0	283	1	9	3,593
Winter ¹	2,200	0	128	1	0	2,329
Metered	86	0	217	0	0	303
Resale	1	0	5	0	0	6
All others	0	0	0	0	0	0
Subtotal	3,387	0	505	1	9	3,902
Total	33,239	46	1,758	521	9	35,573

¹ Not to be added to total.

Table 3-5. Treated Water Demand by Customer Category and Zone for Year 2004, ac-ft/yr

Customer type	Zone 1	Zone 2	Zone 3	Zone 4	Total
Treated water					
Residential	16,063.07	71.00	381.36	30.51	16,545.94
Multi Units (7,324)	1,982.61	0	93.03	0	2,075.64
Commercial	2,945.75	0	101.54	9.24	3,056.53
Industrial	1,078.26	0	0.00	0	1,078.26
Municipal	971.22	0	29.41	0	1,000.63
Landscape-Greenbelt	1,323.99	0	13.16	0	1,337.15
Irrigation/Ag	411.00	0	0.00	0	411.00
Construction	210.01	0	0.16	0	210.17
Fire Protection	8.83	0	0.20	0	9.03
Resale	7,978.85	0	0.00	0	7,978.85
No Demand	139.29	0	0.80	0	140.09
Interties	16.18	0	0.00	0	16.18
Total	33,129	71	620	40	33,859

3.2 Historical Water Production

Water production is the volume of water measured at the source, which includes all untreated and treated water delivered to customers, as well as unaccounted-for water. The Agency also wholesales untreated water out of Folsom Reservoir to San Juan Water District, Sacramento Suburban Water District, and the City of Roseville. From the PG&E supply in Zone 3, wholesale untreated water is sold to Weimar, Christian Valley, Meadow Vista, and a few small mutual water companies. Treated water is sold in Zones 1, 2, 3, and 4. Wholesale treated water is sold in Zone 1 to the City of Lincoln, California American Water Company, and several small homeowners associations. Table 3-6 presents historical annual treated water production for each zone for the last 20 years.

Table 3-6. Historical Treated Water Production, ac-ft/yr

	Zone 1 ¹	Zone 2 ²	Zone 3	Zone 4	Total
1985	12,216	35	545	0	12,769
1986	13,623	51	632	0	14,306
1987	14,356	56	740	0	15,152
1988	14,374	55	668	0	15,097
1989	14,697	53	713	0	15,463
1990	16,148	59	812	0	17,019
1991	17,167	63	806	0	18,036
1992	19,435	66	872	0	20,373
1993	19,368	76	511	0	19,955
1994	20,240	71	778	0	21,089
1995	19,789	65	810	0	20,664
1996	20,643	77	709	0	21,429
1997	24,064	80	737	0	24,881
1998	20,781	63	675	0	21,519
1999	25,580	76	724	35	26,416
2000	27,897	73	765	31	28,767
2001	29,191	69	838	7	30,105
2002	31,678	78	855	5	32,617
2003	32,335	36	841	30	32,632
2004	38,035	--	887	52	38,984

Notes:

¹ Includes treated water supply to the City of Lincoln.

² Zone 2 was consolidated into Zone 1 in 2003.

Includes water use at the treatment plants.

ac-ft/yr = acre-feet per year

3.3 Historical Unaccounted-for Water

Unaccounted-for water is unmetered water use such as for fire protection and training, construction, system and street flushing, sewer cleaning, system leaks, water use at the treatment plants, and unauthorized connections. Unaccounted-for water can also result from meter inaccuracies. The Agency has two types of unaccounted-for water. The first type is the unaccounted-for water occurring in the raw water transmission system between the water source and the delivery points to the municipal water treatment plants and raw water customers. The second type is the unaccounted-for water occurring in the treated water system between the surface water treatment plants and the retail customers. Tables 3-7 through 3-9 present the historical unaccounted-for water occurring in the treated water system in Zones 1, 2, and 3. Zone 4 experienced 72 percent unaccounted-for water in 1999 due to project startup. With only a handful of the 450 lots having homes constructed and occupied, significant water flushing of the water distribution system occurred. Unaccounted-for water in the raw water system is not addressed in this Plan.

Table 3-7. Zone 1 Historical Unaccounted for Treated Water

Year	Water sales ac-ft/yr	Water production ac-ft/yr	Unaccounted – for water, ac-ft/yr ^a	Unaccounted – for water, % of annual water production
1985	10,260	12,199	1,989	15.9%
1986	10,808	13,604	2,796	20.6%
1987	12,018	14,336	2,318	16.2%
1988	12,541	14,354	1,814	12.6%
1989	13,776	14,677	901	6.1%
1990	14,251	16,126	1,875	11.6%
1991	15,317	17,143	1,827	10.7%
1992	15,983	19,408	3,425	17.6%
1993	16,164	19,375	3,211	16.6%
1994	17,625	20,311	2,686	13.2%
1995	16,999	19,795	2,797	14.1%
1996	18,006	20,649	2,643	12.8%
1997	19,875	24,072	4,197	17.4%
1998	17,711	20,787	3,076	14.8%
1999	21,232	25,580	4,613	18.0%

Table 3-7. Zone 1 Historical Unaccounted for Treated Water (continued)

Year	Water sales ac-ft/yr	Water production ac-ft/yr	Unaccounted – for water, ac-ft/yr ^a	Unaccounted – for water, % of annual water production
2000	22,866	27,897	5,031	18.0%
2001	24,324	29,191	4,867	16.7%
2002	26,646	31,678	5,032	15.9%
2003	27,960	32,335	4,375	13.5%
2004	33,129	38,035	4,906	12.9%

Notes:

^a Includes water used at water treatment plants for backwashing and other uses.

ac-ft/yr = acre-feet per year

1993 – 2004 data from PCWA spreadsheet wateruse_RawDataPCWA.xls.

Includes deliveries to City of Lincoln.

Table 3-8. Zone 2 Historical Unaccounted for Treated Water

Year	Water sales ac-ft/yr	Water production ac- ft/yr	Unaccounted - for water, ac-ft/yr ^a	Unaccounted - for water, percent of annual water production
1994	69	71	3	3.7%
1995	58	65	7	11.5%
1996	67	77	10	13.2%
1997	70	79	10	12.4%
1998	55	63	8	12.1%
1999	64	76	13	16.4%
2000	66	73	7	9.6%
2001	69	69	0	0.0%
2002	66	78	12	15.4%
2003	60	NA	NA	NA
2004	71	NA	NA	NA

Notes:

^a Includes water used at water treatment plants for backwashing and other uses.

ac-ft/yr = acre-feet per year

NA = Not available

Zone 2 was consolidated into Zone 1 in 2003.

Table 3-9. Zone 3 Historical Unaccounted for Treated Water

Year	Water sales ac-ft/yr	Water production, ac-ft/yr	Unaccounted - for water, ac-ft/yr ^a	Unaccounted - for water, percent of annual water production
1985	355	546	190	34.9%
1986	414	631	217	34.4%
1987	499	739	240	32.5%
1988	418	667	249	37.4%
1989	444	712	268	37.7%
1990	478	811	333	41.0%
1991	408	805	397	49.3%
1992	506	871	365	41.9%
1993	403	511	107	21.1%

Table 3-9. Zone 3 Historical Unaccounted for Treated Water (continued)

Year	Water sales ac-ft/yr	Water production, ac-ft/yr	Unaccounted - for water, ac-ft/yr ^a	Unaccounted - for water, percent of annual water production
1994	569	777	208	26.8%
1995	475	809	335	41.3%
1996	481	708	227	32.0%
1997	518	735	217	29.5%
1998	478	666	188	28.2%
1999	492	724	232	32.1%
2000	612	765	153	20.0%
2001	600	838	238	28.4%
2002	673	855	182	21.3%
2003	643	841	198	23.5%
2004	620	887	267	30.1%

Notes:

^a Includes water used at water treatment plants for backwashing and other uses.

ac-ft/yr = acre-feet per year

3.4 Projected Water Use

Water demand projections have been prepared based on data from several sources. The Placer County General Plan and General Plans from cities throughout the county each contain data regarding projected population and housing units. In addition, the County of Placer and the City of Lincoln are currently considering significant changes to their general plans. The projections in this plan include these proposed projects. The Sacramento Area Council of Governments has also prepared population projections for Placer County.

The Agency anticipates that buildout of its service areas will occur after 2030.

3.4.1 Water Use by Customer Type

The primary water uses in the Agency's service area are by single family, multifamily, business, industrial and public authority customers. Tables 3-10 to 3-12 present the projected water use by zone and customer category. These water demand projections include the water savings due to conservation measures currently being implemented. Impacts to water demands due to additional conservation measures that are currently not in use are not reflected in the projected water demands. Future

conservation planning by the Agency will quantify the expected water savings from the additional conservation measures planned to be implemented. All of the accounts served by the treated water system are metered. Some of the demands will likely be supplied by recycled water.

**Table 3-10. Zones 1 and 5 Projected Annual Water Usage
by User Type, ac-ft/yr¹**

Customer type	2000	2005	2010	2015	2020	2025	2030
Treated water							
Residential	12,672	13,589	16,720	21,709	27,388	33,102	36,726
Commercial	2,679	2,873	3,535	4,590	5,790	6,998	7,764
Landscape	415	445	548	711	897	1,084	1,203
Municipal	650	697	858	1,114	1,405	1,698	1,884
Multi-unit	1,322	1,418	1,744	2,265	2,857	3,453	3,831
Agriculture	425	425	425	425	425	425	425
Industrial	1,160	1,244	1,531	1,987	2,507	3,030	3,362
City of Lincoln	2,614	7,700	11,550	15,400	19,250	23,100	25,085
Resale	519	600	600	600	600	600	600
No-usage	5	0	0	0	0	0	0
Construction	404	500	500	500	500	500	500
Subtotal²	22,866	29,494	38,008	48,693	61,624	73,994	81,380
Raw water³	79,651	74,959	76,166	77,393	78,639	79,905	81,200
Total	102,517	103,453	114,174	126,086	140,263	153,899	162,580

Notes:

DWR Table 12

¹ Excludes those portions of the western area that receive wholesale water deliveries. Includes future expanded Zone 1.

² Does not include unaccounted for water.

³ Represents the water distributed to the raw water distribution system.

ac-ft/yr = acre-feet per year

Table 3-11. Central Area (Zone 3) Projected Annual Water Usage by User Type, ac-ft/yr

Customer type	2000	2005	2010	2015	2020	2025	2030
Treated water							
Residential	365	380	460	540	610	710	810
Commercial	141	140	160	170	190	190	190
Municipal	14	20	20	20	20	20	20
Multi-unit	53	50	50	60	70	70	70
Other	27	10	10	10	10	10	10
Subtotal	600	600	700	800	900	1,000	1,100
Raw water¹	6,206	6,400	7,000	8,000	9,000	10,000	11,000
Total	6,806	7,000	7,700	8,800	9,900	11,000	12,100

Notes:

DWR Table 12

¹ Represents water distributed to the raw water distribution system.

ac-ft/yr = acre-feet per year

Table 3-12. Eastern Area (Zone 4) Projected Annual Water Usage by User Type, ac-ft/yr

Customer type	2000	2005	2010	2015	2020	2025	2030
Groundwater							
Residential	15	50	400	900	900	900	900
Commercial	4	5	5	5	5	5	5
Other	16	10	10	10	10	10	10
Irrigation	35	50	50	50	50	50	50
Total	70	115	465	965	965	965	965

Note:
 DWR Table 12
 ac-ft/yr = acre-feet per year

3.4.2 Water Sales to Other Agencies and Transfer and Exchange Opportunities

The Agency currently wholesales water from Folsom Reservoir to the City of Roseville, Sacramento Suburban Water District, and San Juan Water District. Table 3-13 presents the projected water sales to other agencies. These water sales are diverted and treated by these other agencies all within the west Placer County area. The Agency also delivers treated water through its facilities to the City of Lincoln and several other agencies. Untreated water is also delivered by the Agency to several smaller agencies. The water demands for these other agencies are incorporated into Table 3-10 and 3-11. There are no projected transfer and exchange opportunities.

Table 3-13. Sales to Other Agencies, ac-ft/yr

Water Distributed	2000	2005	2010	2015	2020	2025	2030
Sacramento Suburban Water District	10,019	18,000	25,000	29,000	29,000	29,000	29,000
City of Roseville	0	3,000	4,118	6,753	11,075	18,164	29,800
San Juan Water District	10,698	13,684	14,311	14,967	15,652	16,370	17,100
Total	20,717	34,684	43,429	50,720	55,727	63,534	75,900

Note:
 DWR Table 13

The City of Roseville has a contract and options with the Agency for a total of 30,000 ac-ft/yr. San Juan Water District has a contract for 25,000 ac-ft/yr. The contract between the Agency and Sacramento Suburban Water District provides for a maximum of 29,000 acre-feet annually. However, the contract also provides that deliveries to Sacramento Suburban Water District will be curtailed when necessary to meet the demand for water in Placer County. Also, no water is available for Sacramento Suburban Water District in dry years. When deliveries are curtailed that District must resume using groundwater or other supplies. The agreement with Sacramento Suburban Water District increases from 7,000 ac-ft per year in the year 2000 to 29,000 ac-ft per year in the fifteenth year. The 29,000 ac-ft per year will be

maintained through the twenty-fifth year of the agreement. The term of the agreement can be extended by mutual consent of both parties. The contract entitlement schedule is shown in Table 3-14. The water to Sacramento Suburban Water District is diverted at Folsom Lake, wheeled through San Juan Water District's water treatment plant, and then delivered through the cooperative transmission pipeline.

**Table 3-14. Sacramento Suburban Water District-PCWA
 Contract Water Entitlement Schedule**

Year	Surface water entitlement (ac-ft)
June 1 through December 31, 2000 ^a	7,000
2001	11,000
2002	12,000
2003	14,000
2004	16,000
2005	18,000
2006	20,000
2007	22,000
2008	23,000
2009	24,000
2010	25,000
2011	26,000
2012	27,000
2013	28,000
2014 and each year thereafter	29,000

Notes: Schedule based on June 1, 2000 amended water contract between PCWA and Sacramento Suburban Water District. These annual amounts can be increased with mutual approval of Sacramento Suburban Water District and PCWA.

^a Delivery of PCWA water began June 1, 2000 and has been pro-rated to 7,000 ac-ft for the year 2000.

ac-ft = acre-feet

3.4.3 Unaccounted-for Water and Additional Water Use

Unaccounted-for water use is unmetered water use, such as that used for fire protection and training, construction system and street flushing, sewer cleaning, system leaks, as well as that used by unauthorized connections. Unaccounted-for water can also result from meter inaccuracies. Table 3-15 to 3-17 provides the estimated quantity of unaccounted-for system water losses for Zones 1, 3, and 4, respectively. Zone 5 has no additional water uses and the raw water losses are not quantified for this plan.

Table 3-15. Western Area (Zones 1 and 5) Additional Water Uses and Losses, ac-ft/yr

Water Use	2000	2005	2010	2015	2020	2025	2030
Saline barriers	0	0	0	0	0	0	0
Groundwater recharge	0	0	0	0	0	0	0
Conjunctive use	0	0	0	0	0	0	0
Recycled ¹	0	0	0	0	0	0	0
Other (define)	0	0	0	0	0	0	0
Unaccounted-for system losses ²	5,031	5,618	7,240	9,275	11,737	14,094	15,501
Total	5,031	5,618	7,240	9,275	11,737	14,094	15,501

Note:

DWR Table 14

ac-ft/yr = acre-feet per year

¹ Demands that will be met by recycled water are included in Table 3-10 to 3-14.

² Assumes 16 percent of treated water production.

Table 3-16. Central Area (Zone 3) Additional Water Uses and Losses, ac-ft/yr

Water Use	2000	2005	2010	2015	2020	2025	2030
Saline barriers	0	0	0	0	0	0	0
Groundwater recharge	0	0	0	0	0	0	0
Conjunctive use	0	0	0	0	0	0	0
Recycled ¹	0	0	0	0	0	0	0
Other (define)	0	0	0	0	0	0	0
Unaccounted-for system losses ²	200	192	224	256	288	320	352
Total	200	192	224	256	288	320	352

Note:

DWR Table 14

ac-ft/yr = acre-feet per year

¹ Demands that will be met by recycled water are included in Table 3-10 to 3-14.

² Based on 32 percent of treated water sales or 24 percent of treated water production.

Table 3-17. Eastern Area (Zone 4) Additional Water Uses and Losses, ac-ft/yr

Water Use	2000	2005	2010	2015	2020	2025	2030
Saline barriers	0	0	0	0	0	0	0
Groundwater recharge	0	0	0	0	0	0	0
Conjunctive use	0	0	0	0	0	0	0
Recycled ¹	0	0	0	0	0	0	0
Other (define)	0	0	0	0	0	0	0
Unaccounted-for system losses ²	7	12	47	97	97	97	97
Total	7	12	47	97	97	97	97

Note:

DWR Table 14

ac-ft/yr = acre-feet per year

¹ Demands that will be met by recycled water are included in Table 3-10 to 3-13.

² Based on 10 percent of water sales or 9 percent of production.

3.4.4 Total Water Use

Past, present, and future water use for western, central, and eastern Placer County are provided in Tables 3-18, 3-19, and 3-20.

Table 3-18. Western Area Total Water Use (Including Zones 1 and 5 and sales to wholesale customers), ac-ft/yr

Water Use	2000	2005	2010	2015	2020	2025	2030
Treated water	22,866	29,494	38,008	48,693	61,624	73,994	81,380
Raw water	79,651	74,959	76,166	77,393	78,639	79,905	81,200
Unaccounted-for system losses	5,031	5,618	7,240	9,275	11,737	14,094	15,501
Sales to other agencies	20,717	34,684	43,429	50,720	55,727	63,534	75,900
Total water use	128,271	144,755	164,843	186,081	207,727	231,527	253,980

Note:
 DWR Table 15
 ac-ft/yr = acre-feet per year
 Sum of Tables 3-10, 3-13, and 3-16.

Table 3-19. Central Area (Zone 3) Total Water Use, ac-ft/yr

Water Use	2000	2005	2010	2015	2020	2025	2030
Treated water	600	600	700	800	900	1,000	1,100
Raw water	6,206	6,400	7,000	8,000	9,000	10,000	11,000
Unaccounted-for system losses	200	192	224	256	288	320	352
Sales to other agencies	0	0	0	0	0	0	0
Total water use	7,006	7,192	7,924	9,056	10,188	11,320	12,452

Note:
 DWR Table 15
 ac-ft/yr = acre-feet per year
 Sum of Tables 3-11 and 3-17.

Table 3-20. Eastern Area (Zone 4) Total Water Use, ac-ft/yr

Water Use	2000	2005	2010	2015	2020	2025	2030
Treated water	70	115	465	965	965	965	965
Raw water	0	0	0	0	0	0	0
Unaccounted-for system losses		12	47	97	97	97	97
Sales to other agencies	0	0	0	0	0	0	0
Total water use	77	127	512	1,062	1,062	1,062	1,062

Note:
 DWR Table 15
 ac-ft/yr = acre-feet per year
 Sum of Tables 3-12 and 3-18.

CHAPTER 4

WATER SUPPLY

The Agency primarily uses surface water as its source of supply. A relatively small amount of groundwater is currently used by the Agency for emergency purposes from one existing well in the Sunset Industrial Area. Recycled water is used by the cities of Roseville and Lincoln, who also receive wholesale Agency surface water. This chapter describes the water supplies, current and projected water supplies, water supply reliability, and water shortage expectations.

4.1 Surface Water

The Water Systems Division's current largest source of water is from the Yuba and Bear Rivers for consumptive uses. This supply comes from Lake Spaulding and is purchased from PG&E. The American River provides a second source from appropriated water rights developed through construction of the Middle Fork Project. A third source is from the United States Bureau of Reclamation's Central Valley Project (CVP). Figure 4-1 depicts schematically the Agency's water supply sources.

4.1.1 PG&E (Yuba/Bear River System)

The Agency has two water supply contracts with PG&E providing for the purchase of up to 125,400 acre-feet annually from PG&E's rights to water for consumptive purposes from the Yuba and Bear River systems. This water source is used to supply Zones 1 and 3. Zone 1 is supplied up to 100,400 ac-ft/yr and Zone 3 is supplied up to 25,000 ac-ft/yr.

The rights to this water were developed by PG&E and its predecessors by appropriation prior to 1914, with the place of use for this water being western Placer County, which extends along the Colfax Ridge up to Alta, California. The Zone 3 contract for 25,000 ac-ft has no term limit while the Zone 1 contract, for 100,400 acre-feet annually, terminates in 2013, at which time it will come up for renewal for an adjustment in the price to be paid for the water.

Figure 4-1. Water Supply Contracts Schematic

4.1.2 Middle Fork American River System

The Agency has permits obtained from the California State Water Resources Control Board allowing it to divert from the American River at Auburn and/or Folsom Reservoir. The Agency has agreed with the United States Bureau of Reclamation not to divert more than 120,000 ac-ft/yr for consumptive use under these permits. This water is available from direct diversions from the north fork of the American River between November and June and from the rediversion of releases from the Agency's Middle Fork American River Project in the remainder of the year. The place of use under those permits is western Placer County and a portion of northeastern Sacramento County. The Agency has entered into wholesale contracts to provide portions of the Middle Fork Project water to the San Juan Water District, the City of Roseville, and Sacramento Suburban Water District. These contracts give the Agency the right to reduce supply in the event of water shortages. The contract between the Agency and San Juan Water District provides for a maximum of 25,000 ac-ft annually. San Juan Water District diverts this water at Folsom Lake and uses its own facilities to provide treatment and delivery. The contract between the Agency and the City of Roseville provides for a maximum of 30,000 acre-feet annually. The City of Roseville diverts water at Folsom Lake and uses its own facilities to provide treatment and delivery.

4.1.3 Central Valley Project

The Agency has a contract with the United States Bureau of Reclamation (Bureau) for a maximum of 35,000 acre-feet of CVP water annually. This supply is subject to water shortages in a manner similar to shortages imposed on other CVP contractors.

4.2 Water Forum

The Agency is a stakeholder in the Sacramento Area Water Forum (Water Forum). The Water Forum Agreement, which was signed in 2000, was the result of the efforts of a diverse group of community leaders formed in 1994 to formulate principles for a regional solution to future water supply that also protects the lower American River. The Water Forum Agreement is a comprehensive package aimed at achieving two coequal objectives: Provide a reliable and safe water supply for the region's economic

health and planned development to the year 2030; and preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River. The key water supply provisions in the purveyor specific agreement for the Agency are as follows.

1. Water that the Agency sells to Roseville, San Juan Water District, and Sacramento Suburban Water District is not addressed in the Agency's specific agreement.
2. In most years, when the projected March through November unimpaired inflow to Folsom Reservoir is greater than 950,000 ac-ft, the Agency may divert and use 35,500 ac-ft from the American River.
3. In the drier years and driest years, when the Folsom Reservoir inflow is less than 950,000 ac-ft, the Agency may divert 35,500 ac-ft plus, under certain conditions, it will release up to 27,000 ac-ft of replacement water into the American River from reoperation of the Middle Fork Project reservoirs.
4. The Agency agrees to implement best management practices for water conservation.

4.3 Groundwater

The Agency uses very little groundwater. Zone 1 has one well in the Sunset Industrial area. It is used infrequently due to industrial customers' concerns with hardness. This well pumps from the North American subbasin of the Sacramento Valley groundwater basin (subbasin 5-21.64). Zone 4, which is in the Martis Valley near Truckee, is supplied entirely by groundwater from the Martis Valley groundwater basin (basin 6-67) (DWR). Table 4-1 presents historical groundwater pumping.

Due to concerns about groundwater pumping exceeding groundwater recharge within the North American River groundwater subbasin, which underlies the western portion of Placer County, the Agency, Placer County, and the City of Roseville have developed a groundwater management plan, which is currently being updated, which will provide for the conjunctive use of groundwater to supplement surface water primarily in dry years, within the limits of the safe yield of the basin.

Groundwater pumping in Zone 4 is anticipated to continue. Development within Zone 4 will continue to utilize groundwater from the Martis Valley aquifer.

Table 4-1. Amount of Agency Groundwater Pumped – ac-ft/yr

Basin Name (s)	2000	2001	2002	2003	2004
North American subbasin, Sacramento Valley basin (Zone 2)	66	69	78	36	7
Martis Valley basin (Zone 4)	0	7	5	30	52
Percent of Total Water Supply ¹	100	100	100	100	100

Notes:

DWR Table 6

ac-ft/yr = acre-feet per year

¹ Expressed as percent of Zones 2 and 4 supplies.

The projected groundwater to be pumped during normal climate years for the next 20 years is presented in Table 4-2.

Table 4-2. Amount of Agency Groundwater Projected to be Pumped

Basin Name(s)	2005	2010	2015	2020	2025	2030
North American subbasin, Sacramento Valley basin	0	0	0	0	0	0
Martis Valley basin (Zone 4)	127	512	1,062	1,062	1,062	1,062
Percent of Total Water Supply ¹	100	100	100	100	100	100

Note:

DWR Table 7

¹ Expressed as percent of Zone 4 supply.

There are currently no legal constraints to the Agency's rights to its groundwater supply (Table 4-3).

Table 4-3. Agency Groundwater Pumping Rights – ac-ft/yr

Basin Name	Pumping Right - ac-ft/yr
North American subbasin, Sacramento Valley basin	No pumping limit
Martis Valley basin	No pumping limit
Total	

Note:

DWR Table 5

Source: California Department of Water Resources, 2003.

ac-ft/yr = acre-feet per year

4.4 Desalination

There are currently no plans to develop desalinated water supplies, and no desalination for future water supply is anticipated. Brackish groundwater is not present in the area. Therefore, no desalinated water supplies are projected for this Plan.

4.5 Current and Projected Water Supplies

This section provides projections of the future water supply quantities available to the Agency. Deliverable water supply quantities are based on a combination of entitlements and having the infrastructure necessary to access the entitlement. Utilizing the Agency’s full surface water entitlements are dependent upon certain planned infrastructure improvements being approved and constructed. Middle Fork Project and CVP entitlements are 120,000 and 35,000 ac-ft/yr, respectively. Infrastructure limitations results in a lower deliverable supply to Zone 1. Table 4-4 presents the water supply available for the western area including Zones 1 and 5 and wholesale customers for normal climate years. Future projects that will contribute to the Agency’s full utilization of its water supply are summarized in Table 4-5.

**Table 4-4. Western Area (Zones 1 and 5 and supplies to wholesale customers)
 Projected Water Supply, ac-ft/yr**

	2000	2005	2010	2015	2020	2025	2030
Supplier surface water diversions							
PG&E supply	100,400	100,400	100,400	100,400	100,400	100,400	100,400
Deliverable supply from Middle Fork American River and Central Valley Project supply to Zone 1	13,000	13,000	35,500	70,500	70,500	70,500	70,500
Deliverable supply from MFP and CVP to Roseville and San Juan Water District ¹	55,000	55,000	55,000	55,000	55,000	55,000	55,000
Deliverable supply from MFP and CVP to Sacramento Suburban Water District ¹	7,000	18,000	25,000	29,000	29,000	29,000	29,000
Remaining MFP and CVP supplies ²	80,000	69,000	39,500	500	500	500	500

**Table 4-4. Western Area (Zones 1 and 5 and supplies to wholesale customers)
Projected Water Supply, ac-ft/yr (continued)**

	2000	2005	2010	2015	2020	2025	2030
Recycled water ³	0	0	765	1,300	2,210	3,758	6,400
Groundwater ⁴	0	0	0	0	0	0	0
Desalination, transfers, or exchanges ⁵	0	0	0	0	0	0	0
Total	255,400	255,400	256,165	256,700	257,610	259,158	261,800

Notes:

DWR Table 4

ac-ft = acre-feet

¹ These wholesale customers must construct their own diversion, treatment, and delivery facilities if necessary.

² Construction of additional diversion facilities is required to access remaining supplies.

³ Recycled water supply in Zone 1, except for City of Lincoln. See Table 6-8.

⁴ Groundwater assumed to not be pumped in normal climate years. See Table 4-2.

⁵ To avoid double counting, water transfers and exchanges are assumed to be zero. Agency water supplies to others are noted as water sales to other agencies as shown in Table 3-16.

Table 4-5. Future Water Supply Infrastructure Projects

Project Name	Projected Start Date	Projected Completion Date	Normal-year ac-ft to agency	Single-dry year yield ac-ft	Multiple Dry-Year 1 ac-ft	Multiple Dry-Year 2 ac-ft	Multiple Dry-Year 3 ac-ft
American River Water Supply Projects ¹	In progress	2007-9	35,500	35,500	35,500	35,500	35,500
Sacramento River Water Supply Projects ²	In progress	2012	35,000	35,000	35,000	35,000	35,000

Note:

DWR Table 17

¹ This project will replace the temporary pump station, which currently provides 13,000 ac-ft/yr.

² Sacramento River Water Supply Project will be capable of diverting 35,000 ac-ft/yr in all years. Actual delivery in dry years will be dependent on the water supply entitlement being accessed. Amounts shown assumes Middle Fork supply.

ac-ft = acre-feet

Tables 4-6 to 4-7 present the water supply for normal climate years for Zones 3 and 4. Recycled water is addressed in more detail in Chapter 6.

Table 4-6. Central Area (Zone 3) Projected Water Supply, ac-ft/yr

	2000	2005	2010	2015	2020	2025	2030
Supplier surface diversions							
PG&E supply	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Recycled water	0	0	0	0	0	0	0
Groundwater ¹	0	0	0	0	0	0	0
Desalination, transfers, or exchanges	0	0	0	0	0	0	0
Total	25,000	25,000	25,000	25,000	25,000	25,000	25,000

Notes:

DWR Table 4

¹ See Table 4-2

ac-ft/yr = acre-feet per year

Table 4-7. Eastern Area (Zone 4) Projected Water Supply, ac-ft/yr

	2000	2005	2010	2015	2020	2025	2030
Supplier surface diversions	0	0	0	0	0	0	0
Recycled water	0	0	0	0	0	0	0
Groundwater ¹	10	127	512	1,062	1,062	1,062	1,062
Desalination, transfers, or exchanges	0	0	0	0	0	0	0
Total	10	127	1,200	1,200	1,200	1,200	1,200

Notes:
 DWR Table 14
 ac-ft/yr = acre-feet per year
¹ See Table 4-2

4.6 Water Supply Reliability

This section presents the projected supplies available during single and multiple-dry years. The surface water supply would be reduced during a multiple dry year scenario. In any dry or critically dry year, the Agency would carefully manage its water supply by increased groundwater pumping and delivery reductions by activating the water shortage response stages defined in the water shortage contingency plan, which is presented in Appendix C. In addition to the drought condition, physical disruption in the system infrastructure could reduce supplies from either the Yuba/Bear Rivers or the American River systems. The reliability of the Agency’s water sources is summarized in Tables 4-8 to 4-10. The supply values in these tables represent projected supplies in 2030. The single dry year supply values for the western and central areas approximate the supplies that were available during the 1976 to 1977 drought. The four year multiple dry year supply values approximates supply reductions that occurred during the 1987 to 1992 dry period.

Table 4-8. 2030 Supply Reliability for the Western Area (Zones 1 and 5 and Supplies to Wholesale Customers) - Percent of Normal ac-ft/yr

Sources	Average/Normal Water Year	Single Dry Water Year	Multiple-Dry Water Years			
			Year 1	Year 2	Year 3	Year 4
Surface water						
PG&E supply ¹	100,400	50,200	75,300	75,300	75,300	75,300
Middle Fork American River supply ²	120,000	120,000	120,000	120,000	120,000	120,000
Central Valley Project supply ³	35,000	26,250	26,250	26,250	26,250	26,250
Groundwater ⁴	0	20,000	20,000	20,000	20,000	20,000
Recycled water	6,400	6,400	6,400	6,400	6,400	6,400
Total	261,800	222,850	247,950	247,950	247,950	247,950
Percent of Normal	100	85	95	95	95	95

Notes:

DWR Table 8

ac-ft/yr = acre-feet per year

¹ A supply reduction of 25% for years 1 through 4 respectively is assumed. The single dry year supply assumes a 50% reduction.

² It is assumed that single and multiple dry water years would have no impact on supply due to the amount of upstream storage.

³ A supply reduction of 25% is assumed.

⁴ Groundwater needed to match demand.

Table 4-9. 2030 Supply Reliability for Central Area (Zone 3) - Percent of Normal ac-ft/yr

Sources	Average/Normal Water Year	Single Dry Water Year	Multiple-Dry Water Years			
			Year 1	Year 2	Year 3	Year 4
Surface water						
PG&E supply ¹	25,000	12,500	18,750	18,750	18,750	18,750
Groundwater	0	0	0	0	0	0
Recycled water	0	0	0	0	0	0
Total	25,000	12,500	18,800	18,800	18,800	18,800
Percent of Normal	100	50	75	75	75	75

Notes:

DWR Table 8

ac-ft/yr = acre-feet per year

¹ A supply reduction of 25% for years 1 through 4 respectively is assumed. The single dry year supply assumes a 50% reduction.

Table 4-10. 2030 Supply Reliability for Eastern Area (Zone 4) - Percent of Normal ac-ft/yr

Sources	Average/Normal Water Year	Single Dry Water Year	Multiple-Dry Water Years			
			Year 1	Year 2	Year 3	Year 4
Surface water	0	0	0	0	0	0
Groundwater wells	1,062	1,062	1,062	1,062	1,062	1,062
Recycled water	0	0	0	0	0	0
Total	1,062	1,062	1,062	1,062	1,062	1,062
Percent of Normal	100	100	100	100	100	100

Notes:
DWR Table 8
ac-ft/yr = acre-feet per year

Table 4-11 lists the years upon which the data in Table 4-8 to 4-10 are based.

Table 4-11. Basis of Water Year Data

Water Year Type	Base Year(s)	Historical Sequence
Normal Water Year		
Single-Dry Water Year	1977	
Multiple-Dry Water Years	1987-1992	

Note:
DWR Table 9

Inconsistent water sources are those that may not be available at a consistent level of use. Alternatives for replacing inconsistent sources may include transfers and increased use of recycled water and groundwater. Factors resulting in inconsistency of supply are summarized in Table 4-12. Water quality issues are not anticipated to have a significant impact on water supply reliability. If applicable in the future, chemical contamination and the lowering of maximum contaminant levels (MCLs) for naturally occurring constituents can be mitigated by constructing new treatment facilities. These treatment facilities can have a significant cost.

Table 4-12. Description of the Factors in Inconsistency of Supply

Name of supply	Legal	Environmental	Water Quality	Climatic
Placer County Water Agency Surface Water	None	None	None	Drought could result in curtailment
Groundwater	None	None	None	None
Recycled water	None	None	None	None

Note:
DWR Table 10 and 22

4.6.1 Wholesaler (Agency) Water Supply Projections

The written information provided by the Agency that quantifies water availability to its retail and wholesale customers is presented in Table 4-13. This is the surface water supply available in the western and central areas. Within Zone 1, water supplies are limited by infrastructure. This infrastructure limitation impacts the Agency’s wholesale water supplies to purveyors within Zone 1, such as the City of Lincoln. These Zone 1 supplies are noted in Table 4-13 as the deliverable supply. Outside of Zone 1, such as to the City of Roseville, San Juan Water District, and Sacramento Suburban Water District, there are no infrastructure limitations. The deliverable supplies available outside of Zone 1 are noted in Table 4-13 as the remaining supplies.

The water supply reliability of the Agency’s surface water supplies for its retail and wholesale customers in the western and central areas is presented in Table 4-14, considering three water supply scenarios: normal water year; single-dry water year; and multiple-dry water years.

Table 4-13. Wholesaler Identified and Quantified Existing and Planned Sources of Water - ac-ft/yr

Wholesaler sources	2010	2015	2020	2025	2030
Placer County Water Agency					
Surface Water Supply					
Deliverable PG&E supply ¹	125,400	125,400	125,400	125,400	125,400
Deliverable supply from Middle Fork American River and Central Valley Project supply to Zone 1	35,500	70,500	70,500	70,500	70,500
Deliverable supply from MFP and CVP to Roseville and San Juan Water District ²	55,000	55,000	55,000	55,000	55,000
Deliverable supply from MFP and CVP to Sacramento Suburban Water District ²	25,000	29,000	29,000	29,000	29,000
Remaining MFP and CVP supplies ³	39,500	500	500	500	500
Total	280,400	280,400	280,400	280,400	280,400
Percent of Normal	100	100	100	100	100

Note:

DWR Table 20

¹ Supply for Zones 1 and 3.

² These wholesale customers must construct their own diversion, treatment, and delivery facilities if necessary.

³ Construction of additional diversion facilities is required to access remaining supplies.

ac-ft/yr = acre-feet per year

Table 4-14. 2030 Wholesaler Supply Reliability – ac-ft/yr

Wholesaler	Average/normal water year	Single dry water year	Multiple dry water years			
			Year 1	Year 2	Year 3	Year 4
Placer County Water Agency Surface Water Supply						
Deliverable PG&E supply to Zone 1 ¹	100,400	50,200	75,300	75,300	75,300	75,300
Deliverable PG&E supply to Zone 3 ¹	25,000	12,500	18,750	18,750	18,750	18,750
Deliverable supply from Middle Fork American River and Central Valley Project supplies to Zone 1 ²	70,500	97,250	75,600	75,600	75,600	75,600
Deliverable supply from MFP and CVP to Roseville and San Juan Water District ³	55,000	49,000	55,000	55,000	55,000	55,000
Deliverable supply from MFP and CVP to Sacramento Suburban Water District ³	29,000	0	0	0	0	0
Remaining supply from Middle Fork American River and Central Valley Project supplies ⁴	500	0	15,650	15,650	15,650	15,650
Subtotal	280,400	208,950	240,300	240,300	240,300	240,300
Percent of Normal	100	75	86	86	86	86

Note:

DWR Table 21

This is the supply available to the Agency's retail and wholesale customers.

ac-ft/yr = acre-feet per year

¹ A supply reduction of 25% for years 1 through 4 respectively is assumed. The single dry year assumes a 50% reduction.

² It is assumed that multiple dry water years would have no impact on the MFP supply due to the amount of upstream storage. A 25% reduction is assumed for the CVP supply.

³ These wholesale customers must construct their own division, treatment, and delivery facilities if necessary.

⁴ Construction of additional division facilities is required to access remaining supplies.

4.6.2 Previous Drought Experience

In 1977 California experienced a severe drought. At the time the Agency's zone systems relied exclusively on the Agency's PG&E contract supply. In 1977, a resolution was adopted by the Agency to restrict certain canal water deliveries up to 50 percent and suspend all landscape watering. Also, various mandatory and voluntary water conservation measures were placed on all customers. These measures continued through all of 1977.

The Agency again experienced shortages, although less severe, in its PG&E supply in 1988. A late spring rain, and water saved through conservation in March, April, and May, allowed the Agency to resume normal deliveries during the remainder of 1988. The same scenario as 1988 occurred again in 1991. Toward the end of March 1991, significant rainfall relieved the drought conditions and normal deliveries were restored.

PG&E and Central Valley Project

The PG&E supply is subject to shortages due to drought as well as infrastructure problems. PG&E estimates that it can make full deliveries of the 100,400 acre feet to Zone 1 and 25,000 acre feet to Zone 3 that it has under contract to the Agency with only 60% of average precipitation. The worst case drought assumption for planning purposes for the PG&E supply would be a repeat of the 1977 event, with a 50% reduction in supply. CVP supply reductions would likely be more frequent than PG&E reductions. A maximum of 25% reduction of CVP supplies is assumed, which is consistent with the current municipal and industrial shortage policy.

Middle Fork American River System

There were no shortages in Middle Fork deliveries to City of Roseville and San Juan Water District during the late 1980's and early 1990's drought years.

The Agency has recently completed computer modeling of the Middle Fork Project to determine the reliability of its water supply under the 70 years of available hydrologic record. That report concluded the Middle Fork Project could have supplied the full 120,000 acre feet of consumptive water rights in all the years of record, and could provide full deliveries even in the worst case three year consecutive event. For example, 1976, 1977, and a repeat of 1977.

Deliveries of the Middle Fork water to the Agency's Zone 1 system (which exclude San Juan Water District, Sacramento Suburban Water District, and the City of Roseville) are through pumping facilities at Auburn. Currently those facilities are of a temporary nature, installed each spring and removed each fall by the Bureau of Reclamation pursuant to agreements intertwined with the construction of the Auburn Dam. During high flow events extensive damage could occur to the temporary pump station infrastructure if left in over the winter. Under normal circumstances the pump station has the capability to deliver up to 13,000 ac-ft/yr to the Agency's Zone 1 system during the summer season. The Agency expects to complete a permanent pump station by 2007. Completion of the pump station will increase the diversion capacity from the American River to Zone 1 to 35,500 acre-feet per year.

4.7 Water Quality Impacts on Future Water Supply

The quality of the Agency’s water deliveries is regulated by the California Department of Health Services (DHS), which requires regular collection and testing of water samples to ensure that the quality meets regulatory standards and does not exceed maximum contaminant levels (MCLs). The Agency performs water quality testing, which has consistently yielded results within the acceptable regulatory limits.

The quality of the surface water supplies is expected to continue to be adequate. No water supply changes due to water quality are foreseen. Table 4-15 summarizes the current and projected water supply changes due to water quality.

Table 4-15. Current and Projected Water Supply Changes due to Water Quality – Percentage

Water Source	2005	2010	2015	2020	2025	2030
Placer County Water Agency Surface Water	0	0	0	0	0	0
Groundwater	0	0	0	0	0	0
Recycled water	0	0	0	0	0	0
Total	0	0	0	0	0	0

Note:
DWR Table 39

CHAPTER 5

WATER CONSERVATION BEST MANAGEMENT PRACTICES

Water conservation is a method available to reduce water demands, thereby reducing water supply needs for the Agency. This chapter presents a description of the Agency's water conservation program and its water demand management measures or best management practices (BMPs).

The unpredictable water supply and ever increasing demand on California's complex water resources resulted in a coordinated effort by DWR, water utilities, environmental organizations, and other interested groups to develop a list of urban BMPs for conserving water. The California Urban Water Conservation Council (CUWCC) was created to assist in increasing water conservation through partnerships among urban water agencies, public interest organizations, and private entities. The CUWCC's goal is to integrate BMPs into the planning and management of California's water resources. This consensus-building effort resulted in a Memorandum of Understanding (MOU) Regarding Urban Water Conservation in California, which formalizes an agreement to implement these BMPs and makes a cooperative effort to reduce the consumption of California's water resources. The Agency is a signatory of the MOU.

Those signing the MOU have pledged to develop and implement fourteen BMPs. The MOU requires that a water utility implement only the BMPs that are economically feasible. If a BMP is not economically feasible, the utility may request an economic exemption for that BMP. Table 5-1 identifies the CUWCC's 14 BMPs along with information on the BMPs performed by the Agency.

Table 5-1. California Urban Water Conservation Council Best Management Practices

Best Management Practices, BMP	Placer County Water Agency
BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers	✓
BMP 02: Residential Plumbing Retrofit	✓
BMP 03: System Water Audits, Leak Detection, and Repair	✓
BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing	✓
BMP 05: Large Landscape Conservation Programs and Incentives	✓
BMP 06: High-Efficiency Washing Machine Rebate Programs	✓
BMP 07: Public Education Programs	✓
BMP 08: School Education Programs	✓
BMP 09: Conservation Programs for Commercial, Industrial, and Institutional Accounts	✓
BMP 10: Wholesale Agency Assistance Programs	✓
BMP 11: Conservation Pricing	✓
BMP 12: Conservation Coordinator	✓
BMP 13: Water Waste Prohibition	✓
BMP 14: Residential ULFT Replacement Programs	✓

The Agency became a CUWCC signatory on June 11, 2003 and submits BMP reports every two years to the CUWCC in accordance with the MOU. According to DWR Water Code, section 10631(j), urban water suppliers that are members of the CUWCC may submit their annual BMP reports to satisfy the requirements of Water Code section 10631 Demand Management Measures. The Agency’s BMP report filing for 2004 is presented in Appendix B.

Water conservation is an increasingly important issue throughout California due to increased competition for available supplies and limited resources. The Placer County Water Agency’s Board of Directors recognizes the importance of water management and conservation programs. The adopted rules and regulations of the Agency include the general policy of the water system that states in part:

“The Agency will operate and maintain the water system in an efficient and economical manner and distribute and supply water as fairly and equitably as possible.”

Conservation measures and practices are a daily part of the Agency’s water systems operation. The Agency’s rules and regulations provide numerous guidelines for protecting this limited water resource. With the ongoing adoption of additional conservation measures, the Agency is reinforcing its commitment to conservation. In addition, the Agency recognizes that water conservation can delay or downsize the construction of future water supply facilities.

The Agency is a member of the Water Forum and a signatory of the Water Forum Agreement (Agreement). In the year 2000, the Water Forum finalized the Agreement that contains seven major elements to meet its objectives. Water conservation is the fifth major element in the Agreement, under which the Agency’s conservation plan for implementing the BMPs listed in the Agreement are described. Table 5-2 presents the BMPs as defined by the Agreement. These BMPs were derived from the original MOU developed by the CUWCC, and then customized for the conservation plans prepared for the individual purveyors. These Water Forum BMPs, are slightly different than the BMPs as currently defined in the MOU.

Table 5-2. Water Forum Conservation Best Management Practices

No.	BMP name
1.	Interior and exterior water audits and incentive programs for single-family residential, multi-family residential, and institutional customers.
2.	Plumbing retrofit of existing residential accounts.
3.	Distribution system water audits, leak detection and repair.
4.	Non-residential and residential meter retrofit.
5.	Large landscape water audits and incentives for commercial, industrial, institutional, and irrigation accounts.
6.	Landscape water conservation requirements for new and existing commercial, industrial, institutional and multi-family developments.
7.	Public information.
8.	School education.
9.	Commercial and industrial water conservation.
11.	Conservation pricing.
12.	Landscape water conservation for new/existing single family homes.
13.	Water waste prohibition.
14.	Water conservation coordinator.
16.	Ultra-low flush toilet replacement program for non-residential and residential customers.

Signatories of the Water Forum Agreement are committed to follow the Water Forum conservation plans. The Agreement’s conservation element requires that the Agency be fully implementing each of the Water Forum BMPs within four years of signing the Agreement, or by year-end 2004. The Agency is currently fully meeting all of its Water Forum conservation commitments.

CHAPTER 6

RECYCLED WATER

The purpose of this chapter is to provide information on recycled water and its potential for use as a water resource in the service area. The Agency does not own or operate any wastewater and recycled water facilities. Recycled water currently is supplied by the cities of Roseville and Lincoln. It is likely that in the future these cities would provide recycled water to the Agency's customers.

Water recycling is the treatment and management of municipal, industrial, or agricultural wastewater to produce water that can be reused for beneficial uses, and offset demands for drinking water supplies. Water recycling provides an additional source of water that can be used for purposes such as irrigation, groundwater recharge, industrial uses, and environmental restoration. "Recycled water" is defined in the California Water Code to mean "water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur." DHS sets the water quality criteria for specific uses of recycled water in Title 22 of the California Code of Regulations.

This section provides information on the amount of generated wastewater, existing disposal of wastewater, the amount of recycled water potentially available, and existing and future potential uses for recycled water.

6.1 Agency Participation

To develop the plan for recycled water use, the Agency participated with the cities of Lincoln and Roseville, and Placer County. Both the cities of Lincoln and Roseville have active recycled water programs. There are proposed developments that would be located in the unincorporated county area primarily west of Roseville that are planned for recycled water.

Table 6-1. Participating Agencies

Agency Type	Agency Name	Plan Development Role
Water and Wastewater Agencies	City of Roseville	Provided recycled water supply and demand information
Water and Wastewater Agencies	City of Lincoln	Provided recycled water supply and demand information
Planning Agencies	County of Placer	Provided proposed development information
Wastewater Agency	Placer Nevada Wastewater Authority	Provided recycled water supply and demand information
Wastewater Agency	City of Auburn	Provided capacity information

6.2 Wastewater Collection, Treatment, and Disposal

Wastewater collection systems are owned and operated by several different agencies. In west Placer County, wastewater collection systems are owned and operated by the County of Placer, Newcastle Sanitation District, South Placer Municipal District, City of Lincoln, City of Auburn, and the City of Roseville. In east Placer County, a wastewater collection system collects wastewater generated in the north Lake Tahoe area, Alpine Valley, Squaw Valley, and Martis Valley. The entities responsible for this activity are the North Tahoe Public Utility District, Tahoe City Public Utility District, Alpine Springs County Water District, Squaw Valley Public Service District, Northstar Community Service District, and the Truckee Sanitary District.

There are four major wastewater treatment plants (WWTP) in the west Placer County area and numerous smaller wastewater systems. Major facilities include Roseville’s two WWTPs, the City of Lincoln WWTP, and the City of Auburn WWTP (the smallest of the four). The City of Lincoln facility recently began operations and is capable of treating wastewater to recycled water and discharge standards. Each plant is summarized in Table 6-2. There are also several smaller wastewater collection and treatment systems in the area.

Table 6-2. Major Wastewater Treatment Facilities in West Placer

Name	Service Area	Plant Capacity, mgd	Discharge Location
Roseville Dry Creek WWTP	Southern portion of Roseville service area	18.0	Dry Creek
Roseville Pleasant Grove WWTP	Northern portion of Roseville service area	12.0	Pleasant Grove Creek
Lincoln WWTP	Lincoln	3.3	Land application
Auburn WWTP	Auburn	1.35	Auburn Ravine

In east Placer County, all wastewater collected in the North Lake Tahoe area and the Truckee River Basin from Lake Tahoe to the Martis Valley is treated at the Tahoe-Truckee Sanitation Agency facility in Truckee. Disposal involves underground injection and above ground spray with the flow ultimately reaching the Truckee River. Due to the stringent discharge conditions imposed, the facility processes the wastewater through tertiary treatment. There are also several smaller wastewater collection and treatment systems in the area.

The quantities of wastewater generated are proportional to the population and the water use in the service area. The current and projected volume of collected wastewater from the Agency's retail service area and the amount that meets recycled water standards is shown in Table 6-3. The sources of the estimates are the treated water demand projections for the Agency's service zones presented in Chapter 3, and an assumption that generated wastewater is equivalent to approximately 40 percent of treated water use. The wastewater from the City of Roseville and San Juan Water District are not included.

Table 6-3. Wastewater Collected and Treated – ac-ft/yr

	2000	2005	2010	2015	2020	2025	2030
Wastewater collected and treated in service area	9,000	12,000	16,000	20,000	26,000	30,000	33,000
Quantity that meets recycled water standard	9,000	12,000	16,000	20,000	26,000	30,000	33,000

Note:
 DWR Table 33
 ac-ft/yr = acre-feet/year

Table 6-4 summarizes the disposal of wastewater based on the assumption that approximately 20 percent of the wastewater will be disposed by discharge to creeks. Much of the treated wastewater will be used for agricultural irrigation purposes. This disposal method would not significantly offset the use of water supplies delivered by the Agency, but would reduce some groundwater pumping.

Table 6-4. Disposal of Wastewater (Non-Recycled) ac-ft/yr

Method of disposal	Treatment Level	2005	2010	2015	2020	2025	2030
Discharge to creeks	Tertiary	2,000	3,000	4,000	5,000	6,000	7,000
Total		2,000	3,000	4,000	5,000	6,000	7,000

Notes:

DWR Table 34

¹ Discharge to creeks.

ac-ft/yr = acre-feet/year

6.3 Water Recycling

Currently, the entities in Placer County that provide reclaimed water to customers are the cities of Roseville and Lincoln. A couple of million gallons per day from Roseville's Dry Creek WWTP is used for golf course and large park irrigation.

The 2000 Urban Water Management Plan for the Agency made projections for the future recycled water use. It was projected that no recycled water use would occur in 2005. A comparison of the projections for 2005 with the actual use in 2005 is shown in Table 6-5. Table 6-6 identifies the current uses of recycled water.

As of 2005, no recycled water use occurs within the Agency's retail service area. The cities of Roseville and Lincoln do utilize some recycled water.

**Table 6-5. Recycled Water Uses – 2000 Projection Compared with
 2005 Actual - ac-ft/yr**

Type of Use	2000 Projection for 2005	2005 Actual Use
Agriculture	0	0
Landscape	0	0
Wildlife Habitat	0	0
Wetlands	0	0
Industrial	0	0
Groundwater Recharge	0	0
Total	0	0

Notes:
 DWR Table 37
 ac-ft/yr = acre-feet/year

Table 6-6. Recycled Water Uses – Actual ac-ft/yr

Type of Use	Treatment Level	2005 ac-ft/yr
Agriculture		0
Landscape (Golf Course)		0
Wildlife Habitat		0
Wetlands		0
Industrial		0
Groundwater Recharge		0
Other Landscape		0
Total		0

Notes:
 DWR Table 35a
 ac-ft/yr = acre-feet/year

6.4 Potential for Water Recycling in the Service Area

The potential for water recycling is discussed in terms of the western and eastern portions of Placer County.

In west Placer County, the Roseville and Lincoln WWTP's will be treating wastewater to Title 22 standards which will eventually open the opportunity for an estimated 15,000+ ac-ft/yr of recycled water being available for use. Approximately 8,600 ac-ft/yr would be supplied and used by and within the cities of Roseville and Lincoln. Approximately 6,400 ac-ft/yr would be used in unincorporated areas of the County to help supplement Agency supplied surface water. Likely customers include municipal landscape irrigation and commercial agriculture. Recycled water could replace groundwater or raw water to agriculture.

In east Placer County, in 1990 Congress authorized Public Law 101-618, the Truckee-Carson-Pyramid Lake Water Settlement Act. This Act essentially resolves a hundred-year water conflict between those in the State of California and Nevada over the use of Truckee River waters. This Act places certain restrictions on the discharge from the Tahoe-Truckee WWTP. The Act requires that any alteration of the timing or amount of return flows to the Truckee River must be made up by replacement water, such as surface water or groundwater available and owned by those in California. This requirement effectively represents a “poison pill” on any consideration to use reclaimed water from this facility.

The future use of recycled water would likely occur in the western portion of Placer County, which are Zones 1 and 5. The potential future use of recycled water within the Agency’s Zones 1 and 5 service areas and the projected future use are shown in Tables 6-7 and 6-8. No recycled water use is projected in central Placer County (Zone 3) and eastern Placer County (Zone 4).

Table 6-7. Recycled Water Uses in the Western Area (Zones 1 and 5) – Potential ac-ft/yr

Type of Use	Treatment Level	2010	2015	2020	2025	2030
Agriculture	Secondary					
Landscape	Tertiary	765	1,300	2,210	3,758	6,400
Wildlife Habitat		0	0	0	0	0
Wetlands	Tertiary	0	0	0	0	0
Industrial		0	0	0	0	0
Groundwater Recharge		0	0	0	0	0
Other (type of use)		0	0	0	0	0
Total		765	1,300	2,210	3,758	6,400

Note:
 DWR Table 35b
 ac-ft/yr = acre-feet per year

Table 6-8. Projected Future Use of Recycled Water in the Western Area (Zones 1 and 5) ac-ft/yr

Type of Use	2010	2015	2020	2025	2030
Agriculture	0	0	0	0	0
Landscape	765	1,300	2,210	3,758	6,400
Wildlife Habitat	0	0	0	0	0
Wetlands	0	0	0	0	0
Industrial	0	0	0	0	0
Groundwater Recharge	0	0	0	0	0
Other (type of use)	0	0	0	0	0
Total	765	1,300	2,210	3,758	6,400

Notes:
 DWR Table 36
 ac-ft/yr = acre-feet per year

6.4.1 Promotion of Recycled Water Use

Methods to encourage recycled water use and the projected amount of recycled water uses are listed in Table 6-9.

Table 6-9. Methods to Encourage Recycled Water Use - ac-ft/yr

Actions	Ac-ft of use projected to result from action				
	2010	2015	2020	2025	2030
Financial incentives	0	0	0	0	0
Water Quality	0	0	0	0	0
Supply Reliability	765	1,300	2,210	3,758	6,400
Total	765	1,300	2,210	3,758	6,400

Notes:

DWR Table 38

Source: Draft Recycled Water Master Plan, Dodson, 2004

ac-ft/yr = acre-feet per year

CHAPTER 7

WATER SUPPLY VERSUS DEMAND COMPARISON

This section provides a comparison of the projected water supply and demand from 2005 through 2030. Water supply to demand comparisons are also provided for single dry year and multiple dry year scenarios. The comparisons are presented separately for western Placer County (Zones 1 and 5), central Placer County (Zone 3), and eastern Placer County (Zone 4). The water demands are developed in Section 3, water supplies are defined in Section 4, and recycled water supplies are presented in Section 5 of this report.

7.1 Normal Water Supply vs. Demand Comparison

Water is delivered by the Agency to its retail zones and other water contractors to meet required water demands. Tables 7-1 to 7-3 compares the projected normal climate year water supplies for each of the three areas from 2010 to 2030, in five year increments.

Table 7-1. Western Area (Zones 1 and 5 and Sales to Wholesale Customers) Projected Normal Water Supply – ac-ft/yr

(from Table 4-4)	2010	2015	2020	2025	2030
Supply	256,165	256,700	257,610	259,158	261,790
% of normal year	100	100	100	100	100

Note:

DWR Table 40

Includes recycled water, except Lincoln's recycled water.

ac-ft/yr = acre-feet per year

Table 7-2. Central Area (Zone 3) Projected Normal Water Supply – ac-ft/yr

(from Table 4-6)	2010	2015	2020	2025	2030
Supply	25,000	25,000	25,000	25,000	25,000
% of normal year	100	100	100	100	100

Note:

DWR Table 40

ac-ft/yr = acre-feet per year

Table 7-3. Eastern Area (Zone 4) Projected Normal Water Supply – ac-ft/yr

(from Table 4-7)	2010	2015	2020	2025	2030
Supply	512	1,062	1,062	1,062	1,062
% of normal year	100	100	100	100	100

Note:
 DWR Table 40
 ac-ft/yr = acre-feet per year

The projected normal climate year demands for each of the three areas are presented in Tables 7-4 to 7-6.

Table 7-4. Western Area (Zones 1 and 5 and Sales to Wholesale Customers) Projected Normal Water Demand – ac-ft/yr

(from Table 3-18)	2010	2015	2020	2025	2030
Demand	164,843	186,801	207,727	231,527	253,980
% of year 2005	118	134	151	166	181

Notes:
 DWR Table 41
 ac-ft/yr = acre-feet per year

Table 7-5. Central Area (Zone 3) Projected Normal Water Demand – ac-ft/yr

(from Table 3-19)	2010	2015	2020	2025	2030
Demand	7,924	9,056	10,188	11,320	12,452
% of year 2005	110	126	142	157	173

Notes:
 DWR Table 41
 ac-ft/yr = acre-feet per year

Table 7-6. Eastern Area (Zone 4) Projected Normal Water Demand – ac-ft/yr

(from Table 3-20)	2010	2015	2020	2025	2030
Demand	512	1,062	1,062	1,062	1,062
% of year 2005	403	836	836	836	836

Notes:
 DWR Table 41
 ac-ft/yr = acre-feet per year

The comparison of projected water supply and demand is presented in Table 7-7 to 7-9.

Table 7-7. Western Area Projected Supply and Demand Comparison (Including Zones 1 and 5 and sales to wholesale customers)– ac-ft/yr

	2010	2015	2020	2025	2030
Supply totals	256,165	256,700	257,610	259,158	261,790
Demand totals	164,843	186,801	207,707	231,527	253,980
Difference	91,321	69,899	49,883	27,631	7,810
Difference as % of Supply	36	27	19	11	3
Difference as % of Demand	55	37	24	12	3

Note:

DWR Table 42

ac-ft/year = acre-feet per year

Table 7-8. Central Area (Zone 3) Projected Supply and Demand Comparison – ac-ft/yr

	2010	2015	2020	2025	2030
Supply totals	25,000	25,000	25,000	25,000	25,000
Demand totals	7,924	9,056	10,188	11,320	12,452
Difference	17,076	15,944	14,812	13,680	12,548
Difference as % of Supply	68	64	59	55	50
Difference as % of Demand	215	176	145	121	101

Note:

DWR Table 42

ac-ft/year = acre-feet per year

Table 7-9. Eastern Area (Zone 4) Projected Supply and Demand Comparison – ac-ft/yr

	2010	2015	2020	2025	2030
Supply totals	512	1,062	1,062	1,062	1,062
Demand totals	512	1,062	1,062	1,062	1,062
Difference	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

Note:

DWR Table 42

ac-ft/year = acre-feet per year

7.2 Single Dry Year Water Supply vs. Demand Comparison

Tables 7-10 through 7-18 provide a comparison of a single dry year water supply with projected total water use over the next 25 years, in five-year increments. For the single dry year, it is assumed that water sales to Sacramento Suburban Water District would not occur.

**Table 7-10. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Single-Dry Year Water Supply – ac-ft/yr**

	2010	2015	2020	2025	2030
Supply ¹	197,138	197,619	198,438	199,830	202,196
% of projected normal	77	77	77	77	77

Note:

DWR Table 43

ac-ft/yr = acre-feet per year

¹ From Table 4-8, single dry water year, with ramped up recycled water from Table 6-8, and without groundwater included.

Table 7-11. Central Area (Zone 3) Projected Single-Dry Year Water Supply – ac-ft/yr

(from Table 4-9)	2010	2015	2020	2025	2030
Supply	18,750	18,750	18,750	18,750	18,750
% of projected normal	75	75	75	75	75

Note:

DWR Table 43

ac-ft/yr = acre-feet per year

Table 7-12. Eastern Area (Zone 4) Projected Single-Dry Year Water Supply – ac-ft/yr

(from Table 4-10)	2010	2015	2020	2025	2030
Supply	512	1,062	1,062	1,062	1,062
% of projected normal	100	100	100	100	100

Note:

DWR Table 43

ac-ft/yr = acre-feet per year

**Table 7-13 Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Single-Dry Year Water Demand – ac-ft/yr**

	2010	2015	2020	2025	2030
Demand	136,845	153,704	174,381	197,447	220,026
% of projected normal	100	100	100	100	100

Note:

DWR Table 44

ac-ft/yr = acre-feet per year

Table 7-14 Central Area (Zone 3) Projected Single-Dry Year Water Demand – ac-ft/yr

(from Table 3-19)	2010	2015	2020	2025	2030
Demand	7,924	9,056	10,188	11,320	12,452
% of projected normal	100	100	100	100	100

Note:

DWR Table 44

ac-ft/yr = acre-feet per year

Table 7-15 Eastern Area (Zone 4) Projected Single-Dry Year Water Demand – ac-ft/yr

(from Table 3-20)	2010	2015	2020	2025	2030
Demand	512	1,062	1,062	1,062	1,062
% of projected normal	100	100	100	100	100

Note:
 DWR Table 44
 ac-ft/yr = acre-feet per year

**Table 7-16. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Single-Dry Year Supply and Demand Comparison – ac-ft/yr**

	2010	2015	2020	2025	2030
Supply totals	197,138	197,619	198,438	199,830	202,196
Demand totals	136,845	153,704	174,381	197,447	220,026
Difference	69,293	43,915	24,057	2,383	(17,830) ⁽¹⁾
Difference as % of Supply	31	22	512	1	-9 ¹
Difference as % of Demand	44	29	14	1	-8 ¹

Note:
 DWR Table 45
 ac-ft/yr = acre-feet per year
¹ Difference would be met with groundwater

**Table 7-17. Central Area (Zone 3) Projected Single-Dry Year Supply and
 Demand Comparison – ac-ft/yr**

	2010	2015	2020	2025	2030
Supply totals	18,750	18,750	18,750	18,750	18,750
Demand totals	7,924	9,056	10,188	11,320	12,452
Difference	10,826	9,694	8,562	7,430	6,298
Difference as % of Supply	58	52	46	40	34
Difference as % of Demand	137	107	84	66	51

Note:
 DWR Table 45
 ac-ft/yr = acre-feet per year

Table 7-18. Eastern Area (Zone 4) Projected Single-Dry Year Supply and Demand Comparison – ac-ft/yr

	2010	2015	2020	2025	2030
Supply totals	512	1,062	1,062	1,062	1,062
Demand totals	512	1,062	1,062	1,062	1,062
Difference	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

Note:
 DWR Table 45
 ac-ft/yr = acre-feet per year

7.3 Multiple-Dry Year Comparison

This section compares the total water supply available in multiple dry water years with projected total water use over the next 20 years, in one-year increments for the western, central, and eastern Placer Count areas.

7.3.1 Western Area (Zones 1 and 5)

Tables 7-19 through 7-30 compare the total water supply to demands in multiple dry years for western Placer County. It is assumed that a four year drought starts at the beginning of each five year period. Total supply includes surface water and recycled water in Zone 1, but excluding Lincoln’s recycled supply. It is assumed that water sales to Sacramento Suburban Water District would not occur during each four year drought period. Groundwater supply is not included, but is used to meet any deficits.

Table 7-19. Western Area (Zones 1 and 5 and Sales to Wholesale Customers) Projected Supply during Multiple-Dry Year Period Ending in 2010 – ac-ft/yr

	2006	2007	2008	2009	2010
Supply	222,050	222,106	222,168	222,238	256,165
% of projected normal	87	87	87	87	100

Note:
 DWR Table 46
 ac-ft/yr = acre-feet per year

**Table 7-20. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Demand during Multiple-Dry Year Period Ending in 2010 - ac-ft/yr**

	2006	2007	2008	2009	2010
Demand	128,940	131,295	133,996	136,845	164,843
% of projected normal	100	100	100	100	100

Note:
 DWR Table 47
 ac-ft/yr = acre-feet per year

**Table 7-21. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Supply and Demand Comparison during Multiple-Dry Year
 Period Ending in 2010 – ac-ft/yr**

	2006	2007	2008	2009	2010
Supply totals	222,050	222,106	222,168	222,238	256,165
Demand totals	128,940	131,295	133,996	136,845	164,843
Difference	93,110	90,811	88,172	85,393	91,321
Difference as % of Supply	42	41	40	38	36
Difference as % of Demand	72	69	66	62	55

Note:
 DWR Table 48
 ac-ft/yr = acre-feet per year

**Table 7-22. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Supply during Multiple-Dry Year
 Ending in 2015 – ac-ft/yr**

	2011	2012	2013	2014	2015
Supply	222,400	222,495	222,601	222,179	256,700
% of projected normal	87	87	87	87	100

Note:
 DWR Table 49
 ac-ft/yr = acre-feet per year

**Table 7-23. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Demand during Multiple-Dry Year Period Ending in 2015 - ac-ft/yr**

	2011	2012	2013	2014	2015
Demand	142,996	146,419	149,949	153,704	186,801
% of projected normal	100	100	100	100	100

Note:
 DWR Table 50
 ac-ft/yr = acre-feet per year

**Table 7-24. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Supply and Demand Comparison during Multiple-Dry Year
 Period Ending in 2015- ac-ft/yr**

	2011	2012	2013	2014	2015
Supply totals	222,400	222,495	222,601	222,719	256,700
Demand totals	142,996	146,419	149,949	153,704	186,801
Difference	79,404	76,076	72,652	69,015	69,899
Difference as % of Supply	36	34	33	31	27
Difference as % of Demand	56	52	48	45	37

Note:
 DWR Table 51
 ac-ft/yr = acre-feet per year

**Table 7-25. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Supply during Multiple-Dry Year Period Ending in 2020 – ac-ft/yr**

	2016	2017	2018	2019	2020
Supply	222,995	223,157	223,337	223,538	257,610
% of projected normal	87	87	87	87	100

Note:
 DWR Table 52
 ac-ft/yr = acre-feet per year

**Table 7-26. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Demand during Multiple-Dry Year
 Period Ending in 2020 – ac-ft/yr**

	2016	2017	2018	2019	2020
Demand	161,797	165,925	170,080	174,381	207,727
% of projected normal	100	100	100	100	100

Note:
 DWR Table 53
 ac-ft/yr = acre-feet per year

**Table 7-27. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Supply and Demand Comparison during Multiple-Dry Year
 Period Ending in 2020 – ac-ft/yr**

	2016	2017	2018	2019	2020
Supply totals	222,995	223,157	223,337	223,538	257,610
Demand totals	161,797	165,925	170,080	174,381	207,727
Difference	61,198	57,232	53,258	49,157	49,883
Difference as % of Supply	27	26	24	22	19
Difference as % of Demand	38	34	31	28	24

Note:
 DWR Table 54
 ac-ft/yr = acre-feet per year

**Table 7-28. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Supply during Multiple-Dry Year Period Ending in 2025 – ac-ft/yr**

	2021	2022	2023	2024	2025
Supply	224,008	224,283	224,589	224,930	259,158
% of projected normal	87	87	87	87	100

Note:
 DWR Table 55
 ac-ft/yr = acre-feet per year

**Table 7-29. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Demand during Multiple-Dry Year Period Ending in 2025 - ac-ft/yr**

	2021	2022	2023	2024	2025
Demand	183,239	187,817	192,586	197,447	231,527
% of projected normal	100	100	100	100	100

Note:
 DWR Table 56
 ac-ft/yr = acre-feet per year

**Table 7-30. Western Area (Zones 1 and 5 and Sales to Wholesale Customers)
 Projected Supply and Demand Comparison during Multiple-Dry Year
 Period Ending in 2025 – ac-ft/yr**

	2021	2022	2023	2024	2025
Supply totals	224,008	224,283	224,589	224,930	259,158
Demand totals	183,239	187,817	192,586	197,447	231,527
Difference	40,769	36,466	32,003	27,483	27,631
Difference as % of Supply	18	16	14	12	11
Difference as % of Demand	22	19	17	14	12

Note:
 DWR Table 57
 ac-ft/yr = acre-feet per year

7.3.2 Central Area (Zone 3)

Tables 7-31 through 7-42 compare the total water supply available in multiple dry water years with projected total water use over the next 20 years, in one-year increments, for central Placer County.

Table 7-31. Central Area (Zone 3) Projected Supply during Multiple-Dry Year Period Ending in 2010 – ac-ft/yr

	2006	2007	2008	2009	2010
Supply	18,750	18,750	18,750	18,750	25,000
% of projected normal	75	75	75	75	100

Note:
 DWR Table 46
 ac-ft/yr = acre-feet per year

Table 7-32. Central Area (Zone 3) Zone 3 Projected Demand during Multiple-Dry Year Period Ending in 2010 - ac-ft/yr

	2006	2007	2008	2009	2010
Demand	7,333	7,476	7,623	7,772	7,924
% of projected normal	100	100	100	100	100

Note:
 DWR Table 47
 ac-ft/yr = acre-feet per year

Table 7-33. Central Area (Zone 3) Projected Supply and Demand Comparison during Multiple-Dry Year Period Ending in 2010 – ac-ft/yr

	2006	2007	2008	2009	2010
Supply totals	18,750	18,750	18,750	18,750	25,000
Demand totals	7,333	7,476	7,623	7,772	7,924
Difference	11,417	11,274	11,127	10,978	17,076
Difference as % of Supply	61	60	59	59	68
Difference as % of Demand	156	151	146	141	215

Note:
 DWR Table 48
 ac-ft/yr = acre-feet per year

Table 7-34. Central Area (Zone 3) Projected Supply during Multiple-Dry Year Ending in 2015 – ac-ft/yr

	2011	2012	2013	2014	2015
Supply	18,750	18,750	18,750	18,750	25,000
% of projected normal	75	75	75	75	100

Note:
 DWR Table 49
 ac-ft/yr = acre-feet per year

Table 7-35. Central Area (Zone 3) Projected Demand during Multiple-Dry Year Period Ending in 2015 - ac-ft/yr

	2011	2012	2013	2014	2015
Demand	8,138	8,359	8,585	8,817	9,056
% of projected normal	100	100	100	100	100

Note:
 DWR Table 50
 ac-ft/yr = acre-feet per year

Table 7-36. Central Area (Zone 3) Projected Supply and Demand Comparison during Multiple-Dry Year Period Ending in 2015- ac-ft/yr

	2011	2012	2013	2014	2015
Supply totals	18,750	18,750	18,750	18,750	25,000
Demand totals	8,138	8,359	8,585	8,817	9,056
Difference	10,612	10,391	10,165	9,933	15,944
Difference as % of Supply	57	55	54	53	64
Difference as % of Demand	130	124	118	113	176

Note:
 DWR Table 51
 ac-ft/yr = acre-feet per year

Table 7-37. Central Area (Zone 3) Projected Supply during Multiple-Dry Year Period Ending in 2020 – ac-ft/yr

	2016	2017	2018	2019	2020
Supply	18,750	18,750	18,750	18,750	25,000
% of projected normal	75	75	75	75	100

Note:
 DWR Table 52
 ac-ft/yr = acre-feet per year

Table 7-38. Central Area (Zone 3) Projected Demand during Multiple-Dry Year Period Ending in 2020 – ac-ft/yr

	2016	2017	2018	2019	2020
Demand	9,272	9,493	9,719	9,951	10,188
% of projected normal	100	100	100	100	100

Note:
 DWR Table 53
 ac-ft/yr = acre-feet per year

Table 7-39. Central Area (Zone 3) Projected Supply and Demand Comparison during Multiple-Dry Year Period Ending in 2020 – ac-ft/yr

	2016	2017	2018	2019	2020
Supply totals	18,750	18,750	18,750	18,750	18,750
Demand totals	9,272	9,493	9,719	9,951	10,188
Difference	9,478	9,257	9,031	8,799	14,812
Difference as % of Supply	51	49	48	47	59
Difference as % of Demand	102	98	93	88	145

Note:
 DWR Table 54
 ac-ft/yr = acre-feet per year

Table 7-40. Central Area (Zone 3) Projected Supply during Multiple-Dry Year Period Ending in 2025 – ac-ft/yr

	2021	2022	2023	2024	2025
Supply	18,750	18,750	18,750	18,750	25,000
% of projected normal	75	75	75	75	100

Note:
 DWR Table 55
 ac-ft/yr = acre-feet per year

Table 7-41. Central Area (Zone 3) Projected Demand during Multiple-Dry Year Period Ending in 2025 - ac-ft/yr

	2021	2022	2023	2024	2025
Demand	10,405	10,627	10,853	11,084	11,320
% of projected normal	100	100	100	100	100

Note:
 DWR Table 56
 ac-ft/yr = acre-feet per year

Table 7-42. Central Area (Zone 3) Projected Supply and Demand Comparison during Multiple-Dry Year Period Ending in 2025 – ac-ft/yr

	2021	2022	2023	2024	2025
Supply totals	18,750	18,750	18,750	18,750	25,000
Demand totals	10,405	10,627	10,853	11,084	11,320
Difference	8,345	8,123	7,897	7,666	13,680
Difference as % of Supply	45	43	42	41	55
Difference as % of Demand	80	76	73	69	121

Note:
 DWR table 57
 ac-ft/yr = acre-feet per year

7.3.3 Eastern Area (Zone 4)

Tables 7-43 through 7-54 compare the total water supply available in multiple dry water years with projected total water use over the next 20 years, in one-year increments, for eastern Placer County.

Table 7-43. Eastern Area (Zone 4) Projected Supply during Multiple-Dry Year Period Ending in 2010 – ac-ft/yr

	2006	2007	2008	2009	2010
Supply	170	220	290	390	512
% of projected normal	100	100	100	100	100

Note:
 DWR Table 46
 ac-ft/yr = acre-feet per year

Table 7-44. Eastern Area (Zone 4) Projected Demand Multiple-Dry Year Period Ending in 2010 - ac-ft/yr

	2006	2007	2008	2009	2010
Demand	170	220	290	390	512
% of projected normal	100	100	100	100	100

Note:
 DWR Table 47
 ac-ft/yr = acre-feet per year

Table 7-45. Eastern Area (Zone 4) Projected Supply and Demand Comparison during Multiple-Dry Year Period Ending in 2010 – ac-ft/yr

	2006	2007	2008	2009	2010
Supply totals	170	220	290	390	512
Demand totals	170	220	290	390	512
Difference	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

Note:
 DWR Table 48
 ac-ft/yr = acre-feet per year

Table 7-46. Eastern Area (Zone 4) Projected Supply during Multiple-Dry Year Ending in 2015 – ac-ft/yr

	2011	2012	2013	2014	2015
Supply	590	690	800	930	1,062
% of projected normal	100	100	100	100	100

Note:
 DWR Table 49
 ac-ft/yr = acre-feet per year

Table 7-47. Eastern Area (Zone 4) Projected Demand during Multiple-Dry Year Period Ending in 2015 - ac-ft/yr

	2011	2012	2013	2014	2015
Demand	590	690	800	930	1,062
% of projected normal	100	100	100	100	100

Note:
 DWR Table 50
 ac-ft/yr = acre-feet per year

Table 7-48. Eastern Area (Zone 4) Projected Supply and Demand Comparison during Multiple-Dry Year Period Ending in 2015- ac-ft/yr

	2011	2012	2013	2014	2015
Supply totals	590	690	800	930	1,062
Demand totals	590	690	800	930	1,062
Difference	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

Note:
 DWR Table 51
 ac-ft/yr = acre-feet per year

**Table 7-49. Eastern Area (Zone 4) Projected Supply during Multiple-Dry Year Period
 Ending in 2020 – ac-ft/yr**

	2016	2017	2018	2019	2020
Supply	1,062	1,062	1,062	1,062	1,062
% of projected normal	100	100	100	100	100

Note:
 DWR Table 52
 ac-ft/yr = acre-feet per year

**Table 7-50. Eastern Area (Zone 4) Projected Demand during Multiple-Dry Year
 Period Ending in 2020 – ac-ft/yr**

	2016	2017	2018	2019	2020
Demand	1,062	1,062	1,062	1,062	1,062
% of projected normal	100	100	100	100	100

Note:
 DWR Table 53
 ac-ft/yr = acre-feet per year

**Table 7-51. Eastern Area (Zone 4) Projected Supply and Demand Comparison during
 Multiple-Dry Year Period Ending in 2020 – ac-ft/yr**

	2016	2017	2018	2019	2020
Supply totals	1,062	1,062	1,062	1,062	1,062
Demand totals	1,062	1,062	1,062	1,062	1,062
Difference	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

Note:
 DWR Table 54
 ac-ft/yr = acre-feet per year

**Table 7-52. Eastern Area (Zone 4) Projected Supply during Multiple-Dry Year Period
 Ending in 2025 – ac-ft/yr**

	2021	2022	2023	2024	2025
Supply	1,062	1,062	1,062	1,062	1,062
% of projected normal	100	100	100	100	100

Note:
 DWR Table 55
 ac-ft/yr = acre-feet per year

**Table 7-53. Eastern Area (Zone 4) Projected Demand during Multiple-Dry Year Period
 Ending in 2025 - ac-ft/yr**

	2021	2022	2023	2024	2025
Demand	1,062	1,062	1,062	1,062	1,062
% of projected normal	100	100	100	100	100

Note:
 DWR Table 56
 ac-ft/yr = acre-feet per year

**Table 7-54. Eastern Area (Zone 4) Projected Supply and Demand Comparison during
 Multiple-Dry Year Period Ending in 2025 – ac-ft/yr**

	2021	2022	2023	2024	2025
Supply totals	1,062	1,062	1,062	1,062	1,062
Demand totals	1,062	1,062	1,062	1,062	1,062
Difference	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

Note:
 DWR table 57
 ac-ft/yr = acre-feet per year

CHAPTER 8

REFERENCES

Brown and Caldwell. 2000. Urban Water Management Plan for Placer County Water Agency. December.

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APPENDIX A

Public Hearing and Resolution

RESOLUTION NO. 05-34 OF THE BOARD OF DIRECTORS
OF THE PLACER COUNTY WATER AGENCY
APPROVING THE DECEMBER 2005 URBAN WATER
MANAGEMENT PLAN

WHEREAS, in 1984 the California Legislature enacted the Urban Water Management Act requiring every urban water supplier providing water for municipal purposes to more than 3,000 connections to adopt and submit to the California Department of Water Resources an Urban Water Management Plan ("Plan") and to update the Plan every five years;

WHEREAS, Placer County Water Agency has, pursuant to the Act, prepared an Urban Water Management Plan in 1985, and updated the Plan in 1992, 1997, and 2000; and

WHEREAS, the attached Plan, dated December, 2005, is the update of the last Urban Water Management Plan adopted by the Agency; and

WHEREAS, the Plan was released for public comment on December 1, 2005 and a public hearing to receive oral comments was held on December 15, 2005; and

WHEREAS, the Board of Directors of Placer County Water Agency has reviewed the Plan, received public comments thereon, and incorporated such amendments to the Plan as it has deemed warranted;

BE IT RESOLVED by the Board of Directors of the Placer County Water Agency that

1. The December, 2005 Draft Urban Water Management Plan is hereby approved, and
2. The Clerk of the Board is directed to transmit a copy of the approved Plan to the California Department of Water Resources.

The foregoing resolution was duly passed at a regular meeting of the Board of Directors of the Placer County Water Agency held on the 15th day of December, 2005, by the following vote on roll call:

AYES DIRECTORS: Lowell Jarvis, Mike Lee, Pauline Roccucci,
Otis Wollan, Chair Alex Ferreira

NOES DIRECTORS: n/a

ABSENT DIRECTORS: n/a

Signed and approved by me after its passage this 15th day of December, 2005.



Chair, Board of Directors
Placer County Water Agency

ATTEST:



Clerk, Board of Directors
Placer County Water Agency

TAHOE WORLD

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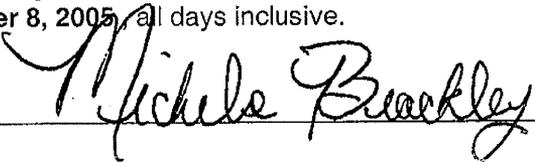
Legal / Sierra
Placer County Water Agency
Attn: Cheri Sprunck
PO Box 6570
Auburn, CA 95604

Michele Brackley says:
that (s)he is a legal clerk of the **TAHOE WORLD**, a
weekly newspaper published at Tahoe City, in the
State of California.

Notice of Availability of 2005 Draft Urban
Water Management Plan Update
Ad #03519658

of which a copy is hereto attached, was published in
said newspaper for the full required period of **2 times**
commencing on **December 1, 2005**, and ending on
December 8, 2005, all days inclusive.

Signed: _____



STATEMENT:

Date	Amount	Credit	Balance
12/08/05	83.30		83.30

Proof and Statement of Publication

PLACER COUNTY
WATER AGENCY

NOTICE OF
AVAILABILITY OF
2005 DRAFT URBAN
WATER MANAGEMENT
PLAN UPDATE
AND
PUBLIC HEARING TO
RECEIVE COMMENTS
THEREON

NOTICE IS HEREBY GIV-
EN that the Draft 2005
Urban Water Manage-
ment Plan Update ("Draft
Update") for the Placer
County Water Agency is
available for public review
and comment, and that
the Board of Directors of
the Placer County Water
Agency has set a Public
Hearing to receive com-
ments on the Draft Up-
date, to be conducted on
December 15, 2005 at
3:00 p.m. or as soon
thereafter as the matter
can be heard, at the
Chambers of the Placer
County Board of Supervi-
sors, 175 Fulweiler Ave-
nue, Auburn, CA.

Copies of the Draft Update
are available for public
review at the Agency's
Offices at 144 Ferguson
Road, Auburn, California
on or after November 30,
2005. The Board of Di-
rectors of the Agency in-
tends to consider the
Draft Update at its De-
cember 15, 2005 meet-
ing, which will be held in
the Chambers of the
Board of Supervisors,
175 Fulweiler Avenue,
Auburn, California, com-
mencing at 3:00 p.m.
Members of the public
are invited to present
their views on the Plan
Update at that time.
Comments may also be
submitted in writing, ad-
dressed to Brent Smith,
PCWA, 144 Ferguson
Road, Auburn, CA 95604.

DATED: November, 2005

Cheri Sprunck, Clerk of the
Board of Directors
Placer County Water
Agency

Pub: Dec 8, 2005
Ad #03519658

PROOF OF PUBLICATION

STATE OF CALIFORNIA
County of Placer

The following space is reserved for the County Clerk's filing stamp

I am a citizen of the United States and a resident of Placer County. I am over the age of eighteen years, and not a party to the above mentioned matter. I am the principal clerk of The Sentinel, a newspaper of general circulation, which is printed and published in the City of Auburn, County of Placer. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the County of Placer, on the date of March 9, 1992 (Case Number S-2108). The notice, of which the attached is a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

PROOF OF PUBLICATION OF

Notice of Availability of
2005 Draft Urban Water
Management Plan Update

November 25,

December 2,

I certify, under penalty of perjury, that the foregoing is true and correct.

Rachel Holtz
Signature

Dated in Auburn, California

December 2, 2005

PLACER COUNTY WATER AGENCY

NOTICE OF AVAILABILITY OF
2005 DRAFT URBAN WATER MANAGEMENT PLAN UPDATE
AND
PUBLIC HEARING TO RECEIVE COMMENTS THEREON

NOTICE IS HEREBY GIVEN that the Draft 2005 Urban Water Management Plan Update ("Draft Update") for the Placer County Water Agency is available for public review and comment, and that the Board of Directors of the Placer County Water Agency has set a Public Hearing to receive comments on the Draft Update, to be conducted on December 15, 2005 at 3:00 p.m. or as soon thereafter as the matter can be heard, at the Chambers of the Placer County Board of Supervisors, 175 Fulweiler Avenue, Auburn, CA.

Copies of the Draft Update are available for public review at the Agency's Offices at 144 Ferguson Road, Auburn, California on or after November 30, 2005. The Board of Directors of the Agency intends to consider the Draft Update at its December 15, 2005 meeting, which will be held in the Chambers of the Board of Supervisors, 175 Fulweiler Avenue, Auburn, California, commencing at 3:00 p.m. Members of the public are invited to present their views on the Plan Update at that time. Comments may also be submitted in writing, addressed to Brent Smith, PCWA, 144 Ferguson Road, Auburn, CA 95604.

DATED: November 21, 2005
Cheri Sprunck, Clerk of the Board of Directors
Placer County Water Agency
Publish: November 25, December 2, 2005

PROOF OF PUBLICATION
THE SENTINEL
1226 High St. P.O. Box 9148
Auburn, CA 95604-9148

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

STATE OF CALIFORNIA
County of Placer

I am a citizen of the United States and a resident of Placer County. I am over the age of eighteen years, and not a party to the below mentioned matter. I am the principal clerk of The Colfax Record, a newspaper of general circulation, which is printed and published in the City of Colfax, County of Placer. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the County of Placer, on the date of June 23, 1952 (Case Number 17642). The notice, of which the attached is a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

December 1, 8

All in the year 2005

I certify, under penalty of perjury, that the foregoing is true and correct.


Signature

Dated in Colfax, California

December 8, 2005

The following space is reserved for the County Clerk's filing stamp

PROOF OF PUBLICATION OF

16099536

Notice of Availability of 2005 Draft Urban Water

Management Plan Update and Public Hearing
To Receive Comments Thereon

16099536

**NOTICE OF AVAILABILITY OF
2005 DRAFT URBAN WATER MANAGEMENT PLAN UPDATE
AND PUBLIC HEARING TO RECEIVE COMMENTS THEREON
PLACER COUNTY WATER AGENCY**

NOTICE IS HEREBY GIVEN that the Draft 2005 Urban Water Management Plan Update ("Draft Update") for the Placer County Water Agency is available for public review and comment, and that the Board of Directors of the Placer County Water Agency has set a Public Hearing to receive comments on the Draft Update, to be conducted on December 15, 2005 at 3:00 p.m. or as soon thereafter as the matter can be heard, at the Chambers of the Placer County Board of Supervisors, 175 Fulweiler Avenue, Auburn, CA.

Copies of the Draft Update are available for public review at the Agency's Offices at 144 Ferguson Road, Auburn, California on or after November 30, 2005. The Board of Directors of the Agency intends to consider the Draft Update at its December 15, 2005 meeting, which will be held in the Chambers of the Board of Supervisors, 175 Fulweiler Avenue, Auburn, California, commencing at 3:00 p.m. Members of the public are invited to present their views on the Plan Update at that time. Comments may also be submitted in writing, addressed to Brent Smith, PCWA, 144 Ferguson Road, Auburn, CA 95604.

DATED: 2005

Cheri Sprunck, Clerk of the Board of Directors
Placer County Water Agency

Published in Colfax Record: December 1, 8, 2005.

**PROOF OF PUBLICATION
THE COLFAX RECORD
25 W. Church Street P.O. Box 755
Colfax, CA 95713**

PROOF OF PUBLICATION

STATE OF CALIFORNIA
County of Placer

I am a citizen of the United States and a resident of Placer County. I am over the age of eighteen years, and not a party to the below mentioned matter. I am the principal clerk of The Auburn Journal, a newspaper of general circulation, which is printed and published in the City of Auburn, County of Placer. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the County of Placer, on the date of May 26, 1952 (Case Number 17407). The notice, of which the attached is a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

December 1, 8

In the year of 2005

I certify, under penalty of perjury, that the foregoing is true and correct.

Cassidy M. Berger
Signature

Dated in Auburn, California

December 8, 2005

The following space is reserved for the County Clerk's filing stamp

PROOF OF PUBLICATION OF

16099535

Notice of Availability of 2005 Draft Urban Water

Management Plan Update and Public Hearing
to Receive Comments Thereon

16099535
**NOTICE OF AVAILABILITY OF
2005 DRAFT URBAN WATER MANAGEMENT PLAN UPDATE
AND PUBLIC HEARING TO RECEIVE COMMENTS THEREON
PLACER COUNTY WATER AGENCY**
NOTICE IS HEREBY GIVEN that the Draft 2005 Urban Water Management Plan Update ("Draft Update") for the Placer County Water Agency is available for public review and comment, and that the Board of Directors of the Placer County Water Agency has set a Public Hearing to receive comments on the Draft Update, to be conducted on December 15, 2005 at 3:00 p.m. or as soon thereafter as the matter can be heard, at the Chambers of the Placer County Board of Supervisors, 175 Fulweiler Avenue, Auburn, CA.
Copies of the Draft Update are available for public review at the Agency's Offices at 144 Ferguson Road, Auburn, California on or after November 30, 2005. The Board of Directors of the Agency intends to consider the Draft Update at its December 15, 2005 meeting, which will be held in the Chambers of the Board of Supervisors, 175 Fulweiler Avenue, Auburn, California, commencing at 3:00 p.m. Members of the public are invited to present their views on the Plan Update at that time. Comments may also be submitted in writing, addressed to Brent Smith, PCWA, 144 Ferguson Road, Auburn, CA 95604.
DATED: 2005
Cheri Sprunck, Clerk of the Board of Directors
Placer County Water Agency
Published in Auburn Journal: December 1, 8, 2005.

**PROOF OF PUBLICATION
THE AUBURN JOURNAL
1030 High St. P.O. Box 5910
Auburn, CA 95604-5910**

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

STATE OF CALIFORNIA
County of Placer

I am a citizen of the United States and a resident of Placer County. I am over the age of eighteen years, and not a party to the below mentioned matter. I am the principal clerk of The Loomis News, a newspaper of general circulation, which is printed and published in the Town of Loomis, County of Placer. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the County of Placer. The notice, of which the attached is a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

December 1, 8

All in the year 2005

I certify, under penalty of perjury, that the foregoing is true and correct.

Cheryl M. Sprunck
Signature

Dated in Loomis, California

December 8, 2005

The following space is reserved for the County Clerk's filing stamp

PROOF OF PUBLICATION OF

16099539

Notice of Availability of 2005 Draft Urban Water Management Plan Update and Public Hearing To Receive Comments Thereon

16099539

**NOTICE OF AVAILABILITY OF
2005 DRAFT URBAN WATER MANAGEMENT PLAN UPDATE
AND PUBLIC HEARING TO RECEIVE COMMENTS THEREON
PLACER COUNTY WATER AGENCY**

NOTICE IS HEREBY GIVEN that the Draft 2005 Urban Water Management Plan Update ("Draft Update") for the Placer County Water Agency is available for public review and comment, and that the Board of Directors of the Placer County Water Agency has set a Public Hearing to receive comments on the Draft Update, to be conducted on December 15, 2005 at 3:00 p.m. or as soon thereafter as the matter can be heard, at the Chambers of the Placer County Board of Supervisors, 175 Fulweiler Avenue, Auburn, CA.

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DATED: 2005

Cheri Sprunck, Clerk of the Board of Directors
Placer County Water Agency
Published in Loomis News: December 1, 8, 2005.

PROOF OF PUBLICATION
THE LOOMIS NEWS
3550 Taylor Rd., P.O. Box 125
Loomis, CA 95650

PROOF OF PUBLICATION

STATE OF CALIFORNIA
County of Placer

I am a citizen of the United States and a resident of Placer County. I am over the age of eighteen years, and not a party to the below mentioned matter. I am the principal clerk of The Lincoln News Messenger, a newspaper of general circulation, which is printed and published in the City of Lincoln, County of Placer. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the County of Placer, on the date of November 13, 1951 (Case Number 16996). The notice, of which the attached is a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

December 1, 8

In The Year 2005

I certify, under penalty of perjury, that the foregoing is true and correct.

Carolyn M. Berger
Signature

Dated in Lincoln, California

December 8, 2005

The following space is reserved for the County Clerk's filing stamp

PROOF OF PUBLICATION OF

16099538

Notice of Availability of 2005 Draft Urban Water

Management Plan Update and Public Hearing
to Receive Comments Thereon

16099538

**NOTICE OF AVAILABILITY OF
2005 DRAFT URBAN WATER MANAGEMENT PLAN UPDATE
AND PUBLIC HEARING TO RECEIVE COMMENTS THEREON
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DATED: 2005
Cheri Sprunck, Clerk of the Board of Directors
Placer County Water Agency
Published in Lincoln News Messenger: December 1, 8, 2005

PROOF OF PUBLICATION
THE LINCOLN NEWS MESSENGER
P.O. Box 368
Lincoln, CA 95648

RECEIVED DEC 16 2005 **PROOF OF PUBLICATION**

STATE OF CALIFORNIA
County of Placer

I am a citizen of the United States and a resident of Placer County. I am over the age of eighteen years, and not a party to the below mentioned matter. I am the principal clerk of The Placer Herald, a newspaper of general circulation, which is printed and published in the City of Rocklin, County of Placer. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the County of Placer, on the date of September 12, 1990 (Case Number 090199). The notice, of which the attached is a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

December 7, 14

In the year of 2005

I certify, under penalty of perjury, that the foregoing is true and correct.

Carolin M. Bergner
Signature

Dated in Rocklin, California

December 14, 2005

The following space is reserved for the County Clerk's filing stamp

PROOF OF PUBLICATION OF

16099541

Notice of Availability

16099541

**NOTICE OF AVAILABILITY OF
2005 DRAFT URBAN WATER MANAGEMENT PLAN UPDATE
AND PUBLIC HEARING TO RECEIVE COMMENTS THEREON
PLACER COUNTY WATER AGENCY**

NOTICE IS HEREBY GIVEN that the Draft 2005 Urban Water Management Plan Update ("Draft Update") for the Placer County Water Agency is available for public review and comment, and that the Board of Directors of the Placer County Water Agency has set a Public Hearing to receive comments on the Draft Update, to be conducted on December 15, 2005 at 3:00 p.m. or as soon thereafter as the matter can be heard, at the Chambers of the Placer County Board of Supervisors, 175 Fulweiler Avenue, Auburn, CA.

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DATED: 2005
Cheri Sprunck, Clerk of the Board of Directors
Placer County Water Agency
Published in Placer Herald: December 7, 14, 2005.

PROOF OF PUBLICATION
THE PLACER HERALD
5903 B Sunset Blvd.
Rocklin, CA 95677

PROOF OF PUBLICATION

RECEIVED DEC 16 2005

STATE OF CALIFORNIA
County of Placer

I am a citizen of the United States and am employed in the County aforesaid. I am over the age of eighteen years and not a party to or interested in the above entitled matter. I am the principal clerk of The Press-Tribune, a newspaper of general circulation printed and published in the County of Placer and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Placer, State of California, under date of May 5, 1952, by Superior Court order number 17357, that the notice, for which the annexed is printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

December 7, 14

In the year of 2005

I certify, under penalty of perjury, that the foregoing is true and correct.

Carolyn M. Berger
Signature

Dated in Auburn, California

December 14, 2005

The following space is reserved for the County Clerk's filing stamp

PROOF OF PUBLICATION OF

16099542

Notice of Availability of 2005 Draft Urban Water Management Plan Update and Public Hearing to Receive Comments Thereon

16099542

NOTICE OF AVAILABILITY OF
2005 DRAFT URBAN WATER MANAGEMENT PLAN UPDATE
AND PUBLIC HEARING TO RECEIVE COMMENTS THEREON
PLACER COUNTY WATER AGENCY

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DATED: 2005

Cheri Sprunck, Clerk of the Board of Directors
Placer County Water Agency

Published in Roseville Press-Tribune: December 7, 14, 2005.

PROOF OF PUBLICATION
The PRESS TRIBUNE

188 Cirby Way
Roseville, CA 95678

SIERRA SUN

Serving the Truckee Community since 1869

Proof and Statement of Publication

12315 Deerfield Drive,
Truckee, CA 96161
Phone (775) 881-1201
Fax (775) 887-2408

Account Number: #03101911

Legal /Sierra
Placer County Water Agency
Attn: Cheri Sprunck
PO Box 6570
Auburn, CA 95604

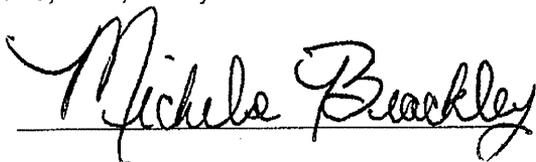
Michele Brackly says:

That (s)he is a legal clerk of the **SIERRA SUN**, a bi-weekly newspaper published at Truckee, in the State of California.

Notice of Availability of 2005 Draft Urban
Water Management Plan Update
**Public Hearing December 15, 2005 @ 3:00
p.m.**
Ad# 03519657

of which a copy is hereto attached, was published in said newspaper for the full required period of **2 times** commencing on **December 2, 2005**, and ending on **December 9, 2005**, all days inclusive.

Signed: _____



STATEMENT:

Date	Amount	Credit	Balance
12/09/05	83.30		83.30

PLACER COUNTY
WATER AGENCY

NOTICE OF
AVAILABILITY OF
2005 DRAFT URBAN
WATER MANAGEMENT
PLAN UPDATE
AND
PUBLIC HEARING TO
RECEIVE COMMENTS
THEREON

NOTICE IS HEREBY GIV-
EN that the Draft 2005
Urban Water Manage-
ment Plan Update ("Draft
Update") for the Placer
County Water Agency is
available for public review
and comment, and that
the Board of Directors of
the Placer County Water
Agency has set a Public
Hearing to receive com-
ments on the Draft Up-
date, to be conducted on
December 15, 2005 at
3:00 p.m. or as soon
thereafter as the matter
can be heard, at the
Chambers of the Placer
County Board of Supervi-
sors, 175 Fulweiler Ave-
nue, Auburn, CA.

Copies of the Draft Update
are available for public
review at the Agency's
Offices at 144 Ferguson
Road, Auburn, California
on or after November 30,
2005. The Board of Di-
rectors of the Agency in-
tends to consider the
Draft Update at its De-
cember 15, 2005 meet-
ing, which will be held in
the Chambers of the
Board of Supervisors,
175 Fulweiler Avenue,
Auburn, California, com-
mencing at 3:00 p.m.
Members of the public
are invited to present
their views on the Plan
Update at that time.
Comments may also be
submitted in writing, ad-
dressed to Brent Smith,
PCWA, 144 Ferguson
Road, Auburn, CA 95604.

DATED: November, 2005

Cheri Sprunck, Clerk of the
Board of Directors,
Placer County Water
Agency

Pub: Dec 8, 2005
Ad #03519657

APPENDIX B

Best Management Practices Report Filing

• Placer County Water Agency - Retail

Signatory

Retail Only

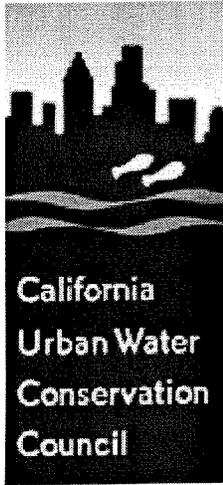


• Placer County Water Agency - Wholesale

Signatory

Wholesale Only





Best Management Practices Report Filing

Placer County Water Agency - Retail BMP Report Filing as of October 27, 2005

Memorandum of Understanding

Back to Reporting Unit List

• COVERAGE REPORTS:

Signatories of the Council's Memorandum of Understanding agree to meet certain requirements to achieve full implementation of the BMPs. These **Coverage Requirements** may be expressed either in terms of activity levels by water suppliers or as water savings achieved. To track this Reporting Unit's progress on meeting the Coverage Requirements set forth by the MOU, please [view the Coverage Reports.](#)

• BACKGROUND / ONE-TIME FORMS:

- [Base Year Data](#)
- [BMP Activity History](#)

• ANNUAL BMP AND REPORT FORMS: Complete Annually / File Biennially

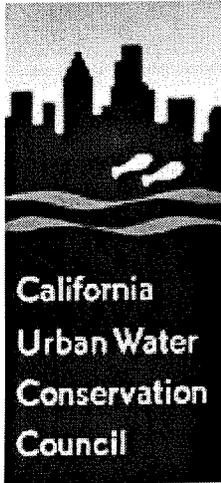
🔍 Select any VIEWER icon to view the report form. If no icon is visible, report has not yet been submitted to the Council.

◀ **YEARS** ▶
DOWN - UP

Annual BMP and Report Form Status Overview		
REPORT FORM NAME	Year: 2003	Year: 2004
Water Supply & Reuse	🔍	🔍
Accounts & Water Use	🔍	🔍
BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers	🔍	🔍
BMP 02: Residential Plumbing Retrofit	🔍	🔍
BMP 03: System Water Audits, Leak Detection and Repair	🔍	🔍
BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing	🔍	🔍
BMP 05: Large Landscape Conservation Programs and Incentives	🔍	🔍
BMP 06: High-Efficiency Washing Machine Rebate Programs	🔍	🔍
BMP 07: Public Information Programs	🔍	🔍
BMP 08: School Education Programs	🔍	🔍
BMP 09: Conservation Programs for CII Accounts	🔍	🔍

BMP 09a: CII ULFT Water Savings		
BMP 11: Conservation Pricing		
BMP 12: Conservation Coordinator		
BMP 13: Water Waste Prohibition		
BMP 14: Residential ULFT Replacement Programs		
	<input type="button" value="Print All"/>	<input type="button" value="Print All"/>

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[Webmaster](#)



California
Urban Water
Conservation
Council

Memorandum of
Understanding

Back to
Reporting Unit
List

Best Management Practices Report Filing

Placer County Water Agency - Wholesale BMP Report Filing as of October 27, 2005

• **COVERAGE REPORTS:**

Signatories of the Council's Memorandum of Understanding agree to meet certain requirements to achieve full implementation of the BMPs. These **Coverage Requirements** may be expressed either in terms of activity levels by water suppliers or as water savings achieved. To track this Reporting Unit's progress on meeting the Coverage Requirements set forth by the MOU, please [view the Coverage Reports](#).

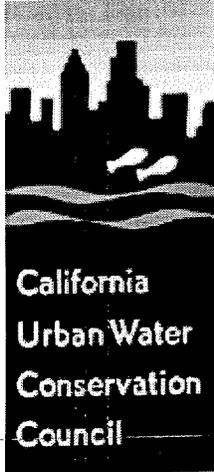
• **BACKGROUND / ONE-TIME FORMS:**

• **ANNUAL BMP AND REPORT FORMS: Complete Annually / File Biennially**

🔍 Select any VIEWER icon to view the report form. If no icon is visible, report has not yet been submitted to the Council.

◀ **YEARS** ▶
DOWN - UP

Annual BMP and Report Form Status Overview		
REPORT FORM NAME	Year: 2003	Year: 2004
Water Supply & Reuse	🔍	🔍
BMP 03: System Water Audits, Leak Detection and Repair	🔍	🔍
BMP 07: Public Information Programs	🔍	🔍
BMP 08: School Education Programs	🔍	🔍
BMP 10: Wholesale Agency Assistance Programs	🔍	
BMP 11: Conservation Pricing	🔍	🔍
BMP 12: Conservation Coordinator	🔍	🔍
	Print All	Print All



**California
Urban Water
Conservation
Council**

**Memorandum of
Understanding**

**Back to
BMP Reports
List**

Best Management Practices Report Filing

Placer County Water Agency - Retail's BMP Coverage/Credit Overview	
Credit Summary Report	🔍
	<div style="display: flex; align-items: center; justify-content: center;"> ◀ <div style="border: 1px solid black; padding: 2px; margin: 0 5px;">YRs</div> ▶ </div> <div style="display: flex; align-items: center; justify-content: center; margin-top: 2px;"> DN - UP </div>
BMP COVERAGE FORM NAME	Reporting Period
	2003-2004
BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers	🔍
BMP 02: Residential Plumbing Retrofit	🔍
BMP 03: System Water Audits, Leak Detection and Repair	🔍
BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing	🔍
BMP 05: Large Landscape Conservation Programs and Incentives	🔍
BMP 06: High-Efficiency Washing Machine Rebate Programs	🔍
BMP 07: Public Information Programs	🔍
BMP 08: School Education Programs	🔍
BMP 09: Conservation Programs for CII Accounts	🔍
BMP 11: Conservation Pricing	🔍
BMP 12: Conservation Coordinator	🔍
BMP 13: Water Waste Prohibition	🔍
BMP 14: Residential ULFT Replacement Programs	🔍
	<input type="button" value="Print All"/>

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[Webmaster](#)

Reported as of 10/2

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

Reporting Unit:
Placer County Water Agency - Retail

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

A Reporting Unit (RU) must meet three conditions to satisfy strict compliance for BMP 1.

Condition 1: Adopt survey targeting and marketing strategy on time

Condition 2: Offer surveys to 20% of SF accounts and 20% of MF units during report period

Condition 3: Be on track to survey 15% of SF accounts and 15% of MF units within 10 years of implementation start date.

Test for Condition 1

Placer County Water Agency - Retail to Implement Targeting/Marketing Program by: 2005

	<u>Single-Family</u>	<u>Multi-Family</u>
Year Placer County Water Agency - Retail Reported Implementing Targeting/Marketing Program:		
Placer County Water Agency - Retail Met Targeting/Marketing Coverage Requirement:	NO	NO

Test for Condition 2

			<u>Single-Family</u>	<u>Multi-Family</u>
Survey Program to Start by:	2004	Residential Survey Offers (%)	203.82%	203.67%
Reporting Period:	03-04	Survey Offers ≥ 20%	YES	YES

Test for Condition 3

	Completed Residential Surveys	
	<u>Single Family</u>	<u>Multi-Family</u>
Total Completed Surveys 1999 - 2004:	1,047	87
Past Credit for Surveys Completed Prior to 1999 (Implementation of Reporting Database):		
Total + Credit	1,047	87

Residential Accounts in Base Year	26,302	7,421
Placer County Water Agency - Retail Survey Coverage as % of Base Year Residential Accounts	3.98%	1.17%
Coverage Requirement by Year 1 of Implementation per Exhibit 1	0.70%	0.70%
Placer County Water Agency - Retail on Schedule to Meet 10-Year Coverage Requirement	YES	YES

BMP 1 COVERAGE STATUS SUMMARY:

Water supplier has not met one or more coverage requirements for this BMP.

Reported as of 10/2

BMP 02 Coverage: Residential Plumbing Retrofit

Reporting Unit: **Placer County Water Agency - Retail** Reporting Period: **03-04**
MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? **No**

An agency must meet one of three conditions to satisfy strict compliance for BMP 2.

Condition 1: The agency has demonstrated that 75% of SF accounts and 75% of MF units constructed prior to 1992 are fitted with low-flow showerheads.

Condition 2: An enforceable ordinance requiring the replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts is in place for the agency's service area.

Condition 3: The agency has distributed or directly installed low-flow showerheads and other low-flow plumbing devices to not less than 10% of single-family accounts and 10% of multi-family units constructed prior to 1992 during the reporting period.

Test for Condition 1

Report Year	Report Period	Single-Family		Multi-Family	
		Reported Saturation	Saturation > 75%?	Reported Saturation	Saturation > 75%?
1999	99-00				
2000	99-00				
2001	01-02				
2002	01-02				
2003	03-04	50.00%	NO	50.00%	NO
2004	03-04	45.00%	NO	45.00%	NO

Test for Condition 2

Report Year	Report Period	Placer County Water Agency - Retail has ordinance requiring showerhead retrofit?
1999	99-00	
2000	99-00	
2001	01-02	
2002	01-02	
2003	03-04	NO
2004	03-04	NO

Test for Condition 3

Reporting Period: 03-04			
<u>1992 SF Accounts</u>	<u>Num. Showerheads Distributed to SF Accounts</u>	<u>Single-Family Coverage Ratio</u>	<u>SF Coverage Ratio > 10%</u>
13,151	3,363	25.6%	YES
<u>1992 MF Accounts</u>	<u>Num. Showerheads Distributed to MF Accounts</u>	<u>Multi-Family Coverage Ratio</u>	<u>MF Coverage Ratio > 10%</u>

3,710

102

2.7%

NO

BMP 2 COVERAGE STATUS SUMMARY:

Water supplier has not met one or more coverage requirements for this BMP.

Reported as of 10/2

BMP 03 Coverage: System Water Audits, Leak Detection and Repair

Reporting Unit:
Placer County Water Agency - Retail

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one of two conditions to be in compliance with BMP 3:

Condition 1: Perform a prescreening audit. If the result is equal to or greater than 0.9 nothing more needs be done.

Condition 2: Perform a prescreening audit. If the result is less than 0.9, perform a full audit in accordance with AWWA's Manual of Water Supply Practices, Water Audits, and Leak Detection.

Test for Conditions 1 and 2

<u>Report Year</u>	<u>Report Period</u>	<u>Pre-Screen Completed</u>	<u>Pre-Screen Result</u>	<u>Full Audit Indicated</u>	<u>Full Audit Completed</u>
1999	99-00				
2000	99-00				
2001	01-02				
2002	01-02				
2003	03-04	YES	94.6%	No	NO
2004	03-04	YES	89.4%	Yes	NO

BMP 3 COVERAGE STATUS SUMMARY:

Water supplier is meeting coverage requirements for this BMP.

Reported as of 10/2

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

Reporting Unit:
Placer County Water Agency - Retail

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must be on track to retrofit 100% of its unmetered accounts within 10 years to be in compliance with BMP 4.

Test for Compliance

Total Meter Retrofits Reported through 2004
 No. of Unmetered Accounts in Base Year
 Meter Retrofit Coverage as % of Base Year Unmetered Accounts
 Coverage Requirement by Year 0 of Implementation per Exhibit 1
 RU on Schedule to meet 10 Year Coverage Requirement

YES

BMP 4 COVERAGE STATUS SUMMARY:

Water supplier is meeting coverage requirements for this BMP.

Reported as of 10/2

BMP 05 Coverage: Large Landscape Conservation Programs and Incentives

Reporting Unit:
Placer County Water Agency - Retail

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet three conditions to comply with BMP 5.

Condition 1: Develop water budgets for 90% of its dedicated landscape meter accounts within four years of the date implementation is to start.

Condition 2: (a) Offer landscape surveys to at least 20% of its CII accounts with mixed use meters each report cycle and be on track to survey at least 15% of its CII accounts with mixed use meters within 10 years of the date implementation is to start OR (b) Implement a dedicated landscape meter retrofit program for CII accounts with mixed use meters or assign landscape budgets to mixed use meters.

Condition 3: Implement and maintain customer incentive program(s) for irrigation equipment retrofits.

Test for Condition 1

Year	Report Period	BMP 5 Implementation Year	No. of Irrigation Meter Accounts	No. of Irrigation Accounts with Budgets	Budget Coverage Ratio	90% Coverage Met by Year 4
1999	99-00					NA
2000	99-00					NA
2001	01-02					NA
2002	01-02					NA
2003	03-04		315	58	18.4%	NA
2004	03-04		323	35	10.8%	NA

Test for Condition 2a (survey offers)

Select Reporting Period:	03-04
Large Landscape Survey Offers as % of Mixed Use Meter CII Accounts	88.7%
Survey Offers Equal or Exceed 20% Coverage Requirement	YES

Test for Condition 2a (surveys completed)

Total Completed Landscape Surveys Reported through Credit for Surveys Completed Prior to Implementation of Reporting Database	70
Total + Credit	70
CII Accounts in Base Year	1,710
RU Survey Coverage as a % of Base Year CII Accounts	4.1%
Coverage Requirement by Year of Implementation per Exhibit 1	
RU on Schedule to Meet 10 Year Coverage	

Requirement YES

Test for Condition 2b (mixed use budget or meter retrofit program)

<u>Report Year</u>	<u>Report Period</u>	<u>BMP 5 Implementation Year</u>	<u>Agency has mix-use budget program</u>	<u>No. of mixed-use budgets</u>
1999	99-00			
2000	99-00			
2001	01-02			
2002	01-02			
2003	03-04		NO	
2004	03-04		YES	

<u>Report Year</u>	<u>Report Period</u>	<u>BMP 4 Implementation Year</u>	<u>No. of mixed use CII accounts</u>	<u>No. of mixed use CII accounts fitted with irrig. meters</u>
1999	99-00			
2000	99-00			
2001	01-02			
2002	01-02			
2003	03-04			
2004	03-04		1,213	

Test for Condition 3

<u>Report Year</u>	<u>Report Period</u>	<u>BMP 5 Implementation Year</u>	<u>RU offers financial incentives?</u>	<u>No. of Loans</u>	<u>Total Amt. Loans</u>
1999	99-00				
2000	99-00				
2001	01-02				
2002	01-02				
2003	03-04		NO		
2004	03-04		NO		

<u>Report Year</u>	<u>Report Period</u>	<u>No. of Grants</u>	<u>Total Amt. Grants</u>	<u>No. of rebates</u>	<u>Total Amt. Rebates</u>
1999	99-00				
2000	99-00				
2001	01-02				
2002	01-02				
2003	03-04				
2004	03-04				

BMP 5 COVERAGE STATUS SUMMARY:
 Water supplier has not met one or more coverage requirements for this BMP.

Reported as of 10/2

BMP 06 Coverage: High-Efficiency Washing Machine Rebate Programs

Reporting Unit:
Placer County Water Agency - Retail

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one condition to comply with BMP 6.

Condition 1: Offer a cost-effective financial incentive for high-efficiency washers if one or more energy service providers in service area offer financial incentives for high-efficiency washers.

Test for Condition 1

<u>Year</u>	<u>Report Period</u>	<u>BMP 6 Implementation Year</u>	<u>Rebate Offered by ESP?</u>	<u>Rebate Offered by RU?</u>	<u>Rebate Amount</u>
1999	99-00				
2000	99-00				
2001	01-02				
2002	01-02				
2003	03-04		YES	NO	
2004	03-04		YES	NO	

<u>Year</u>	<u>Report Period</u>	<u>BMP 6 Implementation Year</u>	<u>No. Rebates Awarded</u>	<u>Coverage Met?</u>
1999	99-00			
2000	99-00			
2001	01-02			
2002	01-02			
2003	03-04			NO
2004	03-04			NO

BMP 6 COVERAGE STATUS SUMMARY:

Water supplier has not met one or more coverage requirements for this BMP.

Reported as of 10/2

BMP 07 Coverage: Public Information Programs

Reporting Unit:
Placer County Water Agency - Retail

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one condition to comply with BMP 7.

Condition 1: Implement and maintain a public information program consistent with BMP 7's definition.

Test for Condition 1

<u>Year</u>	<u>Report Period</u>	<u>BMP 7 Implementation Year</u>	<u>RU Has Public Information Program?</u>
1999	99-00		
2000	99-00		
2001	01-02		
2002	01-02		
2003	03-04		YES
2004	03-04	1	YES

BMP 7 COVERAGE STATUS SUMMARY:

Water supplier is meeting coverage requirements for this BMP.

Reported as of 10/2

BMP 08 Coverage: School Education Programs

Reporting Unit:
Placer County Water Agency - Retail

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one condition to comply with BMP 8.

Condition 1: Implement and maintain a school education program consistent with BMP 8's definition.

Test for Condition 1

<u>Year</u>	<u>Report Period</u>	<u>BMP 8 Implementation Year</u>	<u>RU Has School Education Program?</u>
1999	99-00		
2000	99-00		
2001	01-02		
2002	01-02		
2003	03-04		YES
2004	03-04	1	YES

BMP 8 COVERAGE STATUS SUMMARY:

Water supplier is meeting coverage requirements for this BMP.

Reported as of 10/2

BMP 09 Coverage: Conservation Programs for CII Accounts

Reporting Unit:
Placer County Water Agency - Retail

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet three conditions to comply with BMP 9.

Condition 1: Agency has identified and ranked by use commercial, industrial, and institutional accounts.

Condition 2(a): Agency is on track to survey 10% of commercial accounts, 10% of industrial accounts, and 10% of institutional accounts within 10 years of date implementation to commence.

OR

Condition 2(b): Agency is on track to reduce CII water use by an amount equal to 10% of baseline use within 10 years of date implementation to commence.

OR

Condition 2(c): Agency is on track to meet the combined target as described in Exhibit 1 BMP 9 documentation.

Test for Condition 1

Year	Report Period	BMP 9 Implementation Year	Ranked Com. Use	Ranked Ind. Use	Ranked Inst. Use
1999	99-00				
2000	99-00				
2001	01-02				
2002	01-02		YES	YES	YES
2003	03-04		YES	YES	YES
2004	03-04		YES	YES	YES

Test for Condition 2a

	Commercial	Industrial	Institutional
Total Completed Surveys Reported through 2004	376	1	30
Credit for Surveys Completed Prior to Implementation of Reporting Databases			
Total + Credit	376	1	30
CII Accounts in Base Year	1,481	2	227
RU Survey Coverage as % of Base Year CII Accounts	25.4%	50.0%	13.2%
Coverage Requirement by Year 0 of Implementation per Exhibit 1			
RU on Schedule to Meet 10 Year Coverage Requirement	YES	YES	YES

Test for Condition 2a

Performance

<u>Year</u>	<u>Report Period</u>	<u>BMP 9 Implementation Year</u>	<u>Performance Target Savings (AF/yr)</u>	<u>Performance Target Savings Coverage</u>	<u>Target Savings Coverage Requirement</u>	<u>Coverage Requirement Met</u>
1999	99-00					
2000	99-00					
2001	01-02					
2002	01-02					
2003	03-04					
2004	03-04					

Test for Condition 2c

Total BMP 9 Surveys + Credit	407
BMP 9 Survey Coverage	23.8%
BMP 9 Performance Target Coverage	
BMP 9 Survey + Performance Target Coverage	23.8%
Combined Coverage Equals or Exceeds Coverage Requirement?	YES

BMP 9 COVERAGE STATUS SUMMARY:

Water supplier is meeting coverage requirements for this BMP.

Reported as of 10/2

BMP 11 Coverage: Conservation Pricing

Reporting Unit:
Placer County Water Agency - Retail

Reporting
 Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one condition to comply with BMP 11.

Agency shall maintain rate structure consistent with BMP 11's definition of conservation pricing. Implementation methods shall be at least as effective as eliminating non-conserving pricing and adopting conserving pricing. For signatories supplying both water and sewer service, this BMP applies to pricing of both water and sewer service. Signatories that supply water but not sewer service shall make good faith efforts to work with sewer agencies so that those sewer agencies adopt conservation pricing for sewer service.

a) Non-conserving pricing provides no incentives to customers to reduce use. Such pricing is characterized by one or more of the following components: rates in which the unit price decreases as the quantity used increases (declining block rates); rates that involve charging customers a fixed amount per billing cycle regardless of the quantity used; pricing in which the typical bill is determined by high fixed charges and low commodity charges.

b) Conservation pricing provides incentives to customers to reduce average or peak use, or both. Such pricing includes: rates designed to recover the cost of providing service; and billing for water and sewer service based on metered water use. Conservation pricing is also characterized by one or more of the following components: rates in which the unit rate is constant regardless of the quantity used (uniform rates) or increases as the quantity used increases (increasing block rates); seasonal rates or excess-use surcharges to reduce peak demands during summer months; rates based upon the longrun marginal cost or the cost of adding the next unit of capacity to the system.

Test for Condition 1

<u>Year</u>	<u>Report Period</u>	<u>RU Employed Conserving WATER Rate Structure</u>	<u>RU Employed Conserving SEWER Rate Structure</u>	<u>RU Meets BMP 11 Coverage Requirement</u>
1999	99-00			
2000	99-00			
2001	01-02			
2002	01-02			
2003	03-04	YES	YES	YES
2004	03-04	YES	YES	YES

BMP 11 COVERAGE STATUS SUMMARY:

Water supplier is meeting coverage requirements for this BMP.

Reported as of 10/2

BMP 12 Coverage: Conservation Coordinator

Reporting Unit:
Placer County Water Agency - Retail

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

Agency shall staff and maintain the position of conservation coordinator and provide support staff as necessary.

Test for Compliance

<u>Report Year</u>	<u>Report Period</u>	<u>Conservation Coordinator Position Staffed?</u>	<u>Total Staff on Team (incl. CC)</u>
1999	99-00		
2000	99-00		
2001	01-02		
2002	01-02		
2003	03-04	YES	2
2004	03-04	YES	3

BMP 12 COVERAGE STATUS SUMMARY:

Water supplier is meeting coverage requirements for this BMP.

Reported as of 10/2

BMP 13 Coverage: Water Waste Prohibition

Reporting Unit:
Placer County Water Agency - Retail

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one condition to comply with BMP 13.

Implementation methods shall be enacting and enforcing measures prohibiting gutter flooding, single pass cooling systems in new connections, non-recirculating systems in all new conveyer car wash and commercial laundry systems, and non-recycling decorative water fountains.

Test for Condition 1

Agency or service area prohibits:

Year	Gutter Flooding	Single-Pass Cooling Systems	Single-Pass Car Wash	Single-Pass Laundry	Single-Pass Fountains	Other	RU has ordinance that meets coverage requirement
1999							
2000							
2001							
2002							
2003	YES	NO	NO	NO	NO	NO	NO
2004	YES	NO	NO	NO	NO	NO	NO

BMP 13 COVERAGE STATUS SUMMARY:

Water supplier has not met one or more coverage requirements for this BMP.

Reported as of 10/2

BMP 14 Coverage: Residential ULFT Replacement Programs

Reporting Unit:

MOU Exhibit 1 Coverage Requirement

A Reporting Unit (RU) must meet one of the following conditions to be in compliance with BMP 14.

Condition 1: Retrofit-on-resale (ROR) ordinance in effect in service area.

Condition 2: Water savings from toilet replacement programs equal to 90% of Exhibit 6 coverage requirement.

An agency with an exemption for BMP 14 is not required to meet one of the above conditions. This report treats an agency with missing base year data required to compute the Exhibit 6 coverage requirement as out of compliance with BMP 14.

Status: as of

<u>Coverage</u> <u>Year</u>	<u>BMP 14 Data</u> <u>Submitted to</u> <u>CUWCC</u>	<u>Exemption</u> <u>Filed with</u> <u>CUWCC</u>	<u>ROR</u> <u>Ordinance</u> <u>in Effect</u>	<u>Exhibit 6</u> <u>Coverage</u> <u>Req'mt</u> <u>(AF)</u>	<u>Toilet</u> <u>Replacement</u> <u>Program</u> <u>Water Savings*</u> <u>(AF)</u>
--------------------------------	---	---	--	---	---

*NOTE: Program water savings listed are net of the plumbing code. Savings are cumulative (not annual) between 1991 and the given year. Residential ULFT count data from unsubmitted forms are NOT included in the calculation.

BMP 14 COVERAGE STATUS SUMMARY:



Annual BMP and Report Form Status Overview				
REPORT FORM NAME	Year: 2003		Year: 2004	
	Form With Status Report	Input Form	Form With Status Report	Input Form
Water Supply & Reuse				
BMP 03: System Water Audits, Leak Detection and Repair	Submitted to CUWCC 11/10/2004		Submitted to CUWCC 08/30/2005	
BMP 07: Public Information Programs	Submitted to CUWCC 11/10/2004		Submitted to CUWCC 08/30/2005	
BMP 08: School Education Programs	Submitted to CUWCC 11/10/2004		Submitted to CUWCC 08/30/2005	
BMP 10: Wholesale Agency Assistance Programs	Submitted to CUWCC 11/10/2004		Submitted to CUWCC 08/30/2005	
BMP 11: Conservation Pricing	Submitted to CUWCC 11/10/2004		Submitted to CUWCC 08/30/2005	
BMP 12: Conservation Coordinator	Submitted to CUWCC 11/10/2004		Submitted to CUWCC 07/25/2005	
	<input type="button" value="Submit All"/>		<input type="button" value="Submit All"/>	

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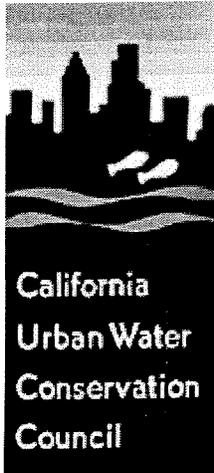
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**California
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**Memorandum of
Understanding**

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BMP Reports
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Best Management Practices Report Filing

Placer County Water Agency - Wholesale's BMP Coverage/Credit Overview	
Credit Summary Report	🔍
	◀ YRs ▶ DN - UP
BMP COVERAGE FORM NAME	Reporting Period
	2003-2004
BMP 03: System Water Audits, Leak Detection and Repair	🔍
BMP 07: Public Information Programs	🔍
BMP 08: School Education Programs	🔍
BMP 11: Conservation Pricing	🔍
BMP 12: Conservation Coordinator	🔍
	Print All

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Reported as of 10/2

BMP 03 Coverage: System Water Audits, Leak Detection and Repair

Reporting Unit:
Placer County Water Agency - Wholesale

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one of two conditions to be in compliance with BMP 3:

Condition 1: Perform a prescreening audit. If the result is equal to or greater than 0.9 nothing more needs be done.

Condition 2: Perform a prescreening audit. If the result is less than 0.9, perform a full audit in accordance with AWWA's Manual of Water Supply Practices, Water Audits, and Leak Detection.

Test for Conditions 1 and 2

<u>Report Year</u>	<u>Report Period</u>	<u>Pre-Screen Completed</u>	<u>Pre-Screen Result</u>	<u>Full Audit Indicated</u>	<u>Full Audit Completed</u>
1999	99-00				
2000	99-00				
2001	01-02				
2002	01-02				
2003	03-04	YES	98.1%	No	NO
2004	03-04	YES	100.0%	No	NO

BMP 3 COVERAGE STATUS SUMMARY:

Water supplier is meeting coverage requirements for this BMP.

Reported as of 10/2

BMP 07 Coverage: Public Information Programs

Reporting Unit:

Placer County Water Agency - Wholesale

Reporting Period:

03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one condition to comply with BMP 7.

Condition 1: Implement and maintain a public information program consistent with BMP 7's definition.

Test for Condition 1

<u>Year</u>	<u>Report Period</u>	<u>BMP 7 Implementation Year</u>	<u>RU Has Public Information Program?</u>
1999	99-00		
2000	99-00		
2001	01-02		
2002	01-02		
2003	03-04		YES
2004	03-04	1	YES

BMP 7 COVERAGE STATUS SUMMARY:

Water supplier is meeting coverage requirements for this BMP.

Reported as of 10/2

BMP 08 Coverage: School Education Programs

Reporting Unit:
Placer County Water Agency - Wholesale

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one condition to comply with BMP 8.

Condition 1: Implement and maintain a school education program consistent with BMP 8's definition.

Test for Condition 1

<u>Year</u>	<u>Report Period</u>	<u>BMP 8 Implementation Year</u>	<u>RU Has School Education Program?</u>
1999	99-00		
2000	99-00		
2001	01-02		
2002	01-02		
2003	03-04		YES
2004	03-04	1	YES

BMP 8 COVERAGE STATUS SUMMARY:

Water supplier is meeting coverage requirements for this BMP.

Reported as of 10/2

BMP 11 Coverage: Conservation Pricing

Reporting Unit:
Placer County Water Agency - Wholesale

Reporting
 Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one condition to comply with BMP 11.

Agency shall maintain rate structure consistent with BMP 11's definition of conservation pricing. Implementation methods shall be at least as effective as eliminating non-conserving pricing and adopting conserving pricing. For signatories supplying both water and sewer service, this BMP applies to pricing of both water and sewer service. Signatories that supply water but not sewer service shall make good faith efforts to work with sewer agencies so that those sewer agencies adopt conservation pricing for sewer service.

a) Non-conserving pricing provides no incentives to customers to reduce use. Such pricing is characterized by one or more of the following components: rates in which the unit price decreases as the quantity used increases (declining block rates); rates that involve charging customers a fixed amount per billing cycle regardless of the quantity used; pricing in which the typical bill is determined by high fixed charges and low commodity charges.

b) Conservation pricing provides incentives to customers to reduce average or peak use, or both. Such pricing includes: rates designed to recover the cost of providing service; and billing for water and sewer service based on metered water use. Conservation pricing is also characterized by one or more of the following components: rates in which the unit rate is constant regardless of the quantity used (uniform rates) or increases as the quantity used increases (increasing block rates); seasonal rates or excess-use surcharges to reduce peak demands during summer months; rates based upon the longrun marginal cost or the cost of adding the next unit of capacity to the system.

Test for Condition 1

<u>Year</u>	<u>Report Period</u>	<u>RU Employed Conserving WATER Rate Structure</u>	<u>RU Employed Conserving SEWER Rate Structure</u>	<u>RU Meets BMP 11 Coverage Requirement</u>
1999	99-00			
2000	99-00			
2001	01-02			
2002	01-02			
2003	03-04	YES	YES	YES
2004	03-04	YES	YES	YES

BMP 11 COVERAGE STATUS SUMMARY:

Water supplier is meeting coverage requirements for this BMP.

Reported as of 10/2

BMP 12 Coverage: Conservation Coordinator

Reporting Unit:
Placer County Water Agency - Wholesale

Reporting Period:
03-04

MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

Agency shall staff and maintain the position of conservation coordinator and provide support staff as necessary.

Test for Compliance

<u>Report Year</u>	<u>Report Period</u>	<u>Conservation Coordinator Position Staffed?</u>	<u>Total Staff on Team (incl. CC)</u>
1999	99-00		
2000	99-00		
2001	01-02		
2002	01-02		
2003	03-04	YES	2
2004	03-04	YES	3

BMP 12 COVERAGE STATUS SUMMARY:

Water supplier is meeting coverage requirements for this BMP.



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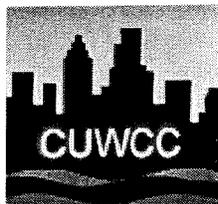
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Memorandum of Understanding

Back to BMP Reports List

Base Year Data	
Reporting Unit: Placer County Water Agency - Retail	Form Status: CUWCC Reviewed
<p>1. Your BASE YEAR is 2003. <small>NOTE: Many calculations in determining credit history and coverage requirements are contingent on your BASE YEAR, which is calculated based on the following criteria. If a Signatory signed the MOU in 1997 or earlier, then the Base Year is 1997. If a Signatory signed the MOU after 1997, then the Base Year is the year the MOU was signed. The same holds true for USBR Contractors, except the date their Base Year is calculated from is the date that their Plan was noticed in the Federal Register.</small></p>	
BMP 1	
2. Number of single-family customers in 2003	26302
3. Number of multi-family units in 2003	7421
BMPs 2 and 14	
4. Number of single-family housing units constructed prior to 1992	13151
5. Number of multi-family units prior to 1992	3710
BMP 4	
6. Number of unmetered accounts in 2003	0
BMPs 5 and 9	
7. Number of commercial accounts in 2003	1481
8. Number of industrial accounts in 2003	2
9. Number of institutional accounts in 2003	227
10. Total water use (AF) by commercial, industrial and institutional accounts in 2003	4893
BMP 14	
11. Average number of toilets per single-family household	2
12. Average number of toilets per multi-family household	1.25
13. Five-year average resale rate of single-family households	5
14. Five-year average resale rate of multi-family households	3
15. Average persons per single-family household	2.77
16. Average persons per multi-family household	2.05

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Memorandum of Understanding

BMP Activity History: Multiple-Year Overview

Reporting Unit:
Placer County Water Agency - Retail

INSTRUCTIONS: Exhibit 1 allows Signatories to credit BMP activity completed prior to 1998 against BMP coverage requirements. To obtain credit for this past activity you must complete the information summarized below. Choose a year and click "Go" to ADD or EDIT BMP activity data for that specific year. If you do not enter previous BMP activity, the system will have no way to calculate credit toward coverage requirements for this activity.

A. Number of RESIDENTIAL Water Use Surveys by Year		
Year	No. Single-Family Surveys	No. Multi-Family Surveys
1991		
1992		
1993		
1994		
1995		
1996		
1997		
1998	0	0
Total	0	0

B. Number of LANDSCAPE Surveys Completed by Year		
Year	Surveys Receiving Follow-up	Surveys Not Receiving Follow-up
1991		
1992		
1993		
1994		
1995		
1996		
1997		
1998	0	0
Total	0	0

C. Number of CII Surveys Completed by Year						
Year	Commercial		Industrial		Institutional	
	Follow-Up	No Follow-Up	Follow-Up	No Follow-Up	Follow-Up	No Follow-Up
1991						
1992						
1993						
1994						
1995						
1996						
1997						
1998	0	0	0	0	0	0

Total	0	0	0	0	0	0
-------	---	---	---	---	---	---

D. Estimated WATER SAVINGS (AF/Yr) from CII Programs by Year		
Year	Site Verified	Site Not Verified
1991		
1992		
1993		
1994		
1995		
1996		
1997		
1998	0	0
Total	0	0

E. (Part I) Historical CII Ultra-Low-Flush Toilet Installations by CII Sector by Year							
Year	Auto	Food	Health	Hotel	Manuf'g	Membership	Multi-Use
1991							
1992							
1993							
1994							
1995							
1996							
1997							
1998	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

E. (Part II) Historical CII Ultra-Low-Flush Toilet Installations by CII Sector by Year							
Year	Office	Religious	Restaurant	Retail	School	Wholesale	Unknown
1991							
1992							
1993							
1994							
1995							
1996							
1997							
1998	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

F. Number of Residential ULFT Rebates / Installations by Year:		
Year	Single-Family	Multi-Family
1991		
1992		
1993		
1994		
1995		
1996		
1997		
1998	0	0

Total	0	0
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Water Supply & Reuse

Reporting Unit:

Placer County Water Agency - Retail

Year:

2004

Water Supply Source Information

Supply Source Name

Quantity (AF) Supplied

Supply Type

PG&E

30486

Local Watershed

Total AF: 30486

Reported as of 10/2

Accounts & Water Use

Reporting Unit Name: **Placer County Water Agency - Retail** Submitted to **CUWCC** Year: **2004**
 05/05/2005

A. Service Area Population Information:

1. Total service area population 94286

B. Number of Accounts and Water Deliveries (AF)

Type	Metered		Unmetered	
	No. of Accounts	Water Deliveries (AF)	No. of Accounts	Water Deliveries (AF)
1. Single-Family	27309	16546	0	0
2. Multi-Family	723	2076	0	0
3. Commercial	1493	3054	0	0
4. Industrial	2	1078	0	0
5. Institutional	143	1000	0	0
6. Dedicated Irrigation	323	1328	0	0
7. Recycled Water	0	0	0	0
8. Other	846	794	0	0
9. Unaccounted	NA	4610	NA	0
Total	30839	30486	0	0

Metered Unmetered

Reported as of 10/2

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

Reporting Unit:

**Placer County Water Agency -
Retail**

BMP Form Status:
100% Complete

Year:
2004

A. Implementation

- | | |
|---|------------|
| 1. Based on your signed MOU date, 06/11/2003, your Agency STRATEGY DUE DATE is: | 06/10/2005 |
| 2. Has your agency developed and implemented a targeting/ marketing strategy for SINGLE-FAMILY residential water use surveys? | yes |
| a. If YES, when was it implemented? | 01/01/2003 |
| 3. Has your agency developed and implemented a targeting/ marketing strategy for MULTI-FAMILY residential water use surveys? | yes |
| a. If YES, when was it implemented? | 01/01/2003 |

B. Water Survey Data

Survey Counts:	Single Family Accounts	Multi-Family Units
1. Number of surveys offered:	27306	7693
2. Number of surveys completed:	631	87

Indoor Survey:

- | | | |
|---|-----|-----|
| 3. Check for leaks, including toilets, faucets and meter checks | yes | yes |
| 4. Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, if necessary | yes | yes |
| 5. Check toilet flow rates and offer to install or recommend installation of displacement device or direct customer to ULFT replacement program, as necessary; replace leaking toilet flapper, as necessary | yes | yes |

Outdoor Survey:

- | | | |
|--|-----|-------------|
| 6. Check irrigation system and timers | yes | yes |
| 7. Review or develop customer irrigation schedule | yes | yes |
| 8. Measure landscaped area (Recommended but not required for surveys) | no | no |
| 9. Measure total irrigable area (Recommended but not required for surveys) | yes | yes |
| 10. Which measurement method is typically used (Recommended but not required for surveys) | | Pacing |
| 11. Were customers provided with information packets that included evaluation results and water savings recommendations? | yes | yes |
| 12. Have the number of surveys offered and completed, survey results, and survey costs been tracked? | yes | yes |
| a. If yes, in what form are surveys tracked? | | spreadsheet |
| b. Describe how your agency tracks this information. | | |

We use the Agency User defined data base, spreadsheets and some manual.

C. Water Survey Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	38000	38000
2. Actual Expenditures	39122	

D. "At Least As Effective As"

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

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

n/a

E. Comments

average 2 hours per survey @ 27.50, materials \$7.50 per survey, \$62 per survey.

Reported as of 10/2

BMP 02: Residential Plumbing Retrofit

Reporting Unit:

**Placer County Water Agency -
Retail**

BMP Form Status:
100% Complete

Year:
2004

A. Implementation

1. Is there an enforceable ordinance in effect in your service area requiring replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts? no

a. If YES, list local jurisdictions in your service area and code or ordinance in each:

0

2. Has your agency satisfied the 75% saturation requirement for single-family housing units? no

3. Estimated percent of single-family households with low-flow showerheads: 45%

4. Has your agency satisfied the 75% saturation requirement for multi-family housing units? no

5. Estimated percent of multi-family households with low-flow showerheads: 45%

6. If YES to 2 OR 4 above, please describe how saturation was determined, including the dates and results of any survey research.

0

B. Low-Flow Device Distribution Information

1. Has your agency developed a targeting/ marketing strategy for distributing low-flow devices? yes

a. If YES, when did your agency begin implementing this strategy? 01/01/2002

b. Describe your targeting/ marketing strategy.

Offer thru newsletter, public events, direct mail and door to door

Low-Flow Devices Distributed/ Installed	SF Accounts	MF Units
---	-------------	----------

2. Number of low-flow showerheads distributed:	1991	100
--	------	-----

3. Number of toilet-displacement devices distributed:	1991	100
---	------	-----

4. Number of toilet flappers distributed:	1991	100
---	------	-----

5. Number of faucet aerators distributed:	1991	100
---	------	-----

6. Does your agency track the distribution and cost of low-flow devices? yes

a. If YES, in what format are low-flow devices tracked? Database

b. If yes, describe your tracking and distribution system :

The placement of retrofit kits is tracked in the user defined section of the Agency software

C. Low-Flow Device Distribution Expenditures

	This Year	Next Year
1. Budgeted Expenditures	12000	15000

2. Actual Expenditures 15100

D. "At Least As Effective As"

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

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

o

E. Comments

Kits @ \$6.25 ea,\$2000 temp labor, 10% of total multi family, track multi family in 2005

Reported as of 10/2

BMP 03: System Water Audits, Leak Detection and Repair

Reporting Unit:

Placer County Water Agency - Retail

BMP Form Status:
100% Complete

Year:
2004

A. Implementation

- 1. Has your agency completed a pre-screening system audit for this reporting year? yes
- 2. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production:
 - a. Determine metered sales (AF) 27248
 - b. Determine other system verifiable uses (AF) 0
 - c. Determine total supply into the system (AF) 30486
 - d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required. 0.89
- 3. Does your agency keep necessary data on file to verify the values used to calculate verifiable uses as a percent of total production? yes
- 4. Did your agency complete a full-scale audit during this report year? no
- 5. Does your agency maintain in-house records of audit results or the completed AWWA audit worksheets for the completed audit? no
- 6. Does your agency operate a system leak detection program? yes
 - a. If yes, describe the leak detection program:

Leak detection methods include zone usage monitoring, zone pressure monitoring, and surface conditions. Repairs are made on an as-needed basis. The Agency has an on going main line replacement program in effect. A full zone distribution system water audit is scheduled for 2005 in Alta Dutch Flat and Colfax.

B. Survey Data

- 1. Total number of miles of distribution system line. 435
- 2. Number of miles of distribution system line surveyed. 0

C. System Audit / Leak Detection Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	60000	60000
2. Actual Expenditures	0	

D. "At Least As Effective As"

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
 - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

0

E. Comments

DWR grant for 60,000 in 2004 & 2005

Reported as of 10/2

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

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2004**

A. Implementation

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

B. Feasibility Study

- 1. Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? no
 - a. If YES, when was the feasibility study conducted? (mm/dd/yy) 0
 - b. Describe the feasibility study:
n/a
- 2. Number of CII accounts with mixed-use meters. 1213
- 3. Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period. 0

C. Meter Retrofit Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	20000	20000
2. Actual Expenditures	20849	

D. "At Least As Effective As"

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
 - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."
n/a

E. Comments

All PCWA customers are metered with increasing tier rates. Mixed use meters are unknown, probably around 90%. Commerical minus landscape equals mixed use meters, some have no landscape but this is unknown

Reported as of 10/2

BMP 05: Large Landscape Conservation Programs and Incentives

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2004**

A. Water Use Budgets

- | | |
|--|-----|
| 1. Number of Dedicated Irrigation Meter Accounts: | 323 |
| 2. Number of Dedicated Irrigation Meter Accounts with Water Budgets: | 35 |
| 3. Budgeted Use for Irrigation Meter Accounts with Water Budgets (AF): | 0 |
| 4. Actual Use for Irrigation Meter Accounts with Water Budgets (AF): | 0 |
| 5. Does your agency provide water use notices to accounts with budgets each billing cycle? | no |

B. Landscape Surveys

- | | |
|--|------------|
| 1. Has your agency developed a marketing / targeting strategy for landscape surveys? | yes |
| a. If YES, when did your agency begin implementing this strategy? | 01/01/2002 |
| b. Description of marketing / targeting strategy: | |

PCWA offers a free landscape to any customer requesting a survey. PCWA is working with the RWA to enhance this program with improvement grants

- | | |
|---|------|
| 2. Number of Surveys Offered. | 1493 |
| 3. Number of Surveys Completed. | 13 |
| 4. Indicate which of the following Landscape Elements are part of your survey: | |
| a. Irrigation System Check | yes |
| b. Distribution Uniformity Analysis | yes |
| c. Review / Develop Irrigation Schedules | yes |
| d. Measure Landscape Area | yes |
| e. Measure Total Irrigable Area | yes |
| f. Provide Customer Report / Information | yes |
| 5. Do you track survey offers and results? | yes |
| 6. Does your agency provide follow-up surveys for previously completed surveys? | no |
| a. If YES, describe below: | |

We do not provide follow up surveys at this time.

C. Other BMP 5 Actions

- | | |
|---|-----|
| 1. An agency can provide mixed-use accounts with ETo-based landscape budgets in lieu of a large landscape survey program. Does your agency provide mixed-use accounts with landscape budgets? | yes |
| 2. Number of CII mixed-use accounts with landscape budgets. | 0 |
| 3. Do you offer landscape irrigation training? | no |

4. Does your agency offer financial incentives to improve landscape water use efficiency? no

Type of Financial Incentive:	Budget (Dollars/Year)	Number Awarded to Customers	Total Amount Awarded
a. Rebates	0	0	0
b. Loans	0	0	0
c. Grants	0	0	0

5. Do you provide landscape water use efficiency information to new customers and customers changing services? yes

a. If YES, describe below:

We offer a survey, past usage and booklets

6. Do you have irrigated landscaping at your facilities? yes

a. If yes, is it water-efficient? yes

b. If yes, does it have dedicated irrigation metering? yes

7. Do you provide customer notices at the start of the irrigation season? yes

8. Do you provide customer notices at the end of the irrigation season? yes

D. Landscape Conservation Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	20000	20000
2. Actual Expenditures	20109	

E. "At Least As Effective As"

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

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

F. Comments

We need to identify dedicated meters, mixed use meters and landscape areas, we will start collecting information in 2005. Budgets are not available at this time, but will be in 2005.

Reported as of 10/2

BMP 06: High-Efficiency Washing Machine Rebate Programs

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2004**

A. Implementation

1. Do any energy service providers or waste water utilities in your service area offer rebates for high-efficiency washers? yes
- a. If YES, describe the offerings and incentives as well as who the energy/waste water utility provider is.

PG&E and Roseville Electric

2. Does your agency offer rebates for high-efficiency washers? no
3. What is the level of the rebate? 0
4. Number of rebates awarded. 0

B. Rebate Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	7500
2. Actual Expenditures	0	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

n/a

D. Comments

PCWA was awarded a USBR grant for up to 300 rebates in 2005 & 2006.

Reported as of 10/2

BMP 07: Public Information Programs

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2004**

A. Implementation

1. Does your agency maintain an active public information program to promote and educate customers about water conservation? yes

a. If YES, describe the program and how it's organized.

PCWA partners with the RWA & Water Education Foundation for Public and School programs. PCWA has booths at public events and is available for presentations.

2. Indicate which and how many of the following activities are included in your public information program.

Public Information Program Activity	Yes/No	Number of Events
a. Paid Advertising	yes	1
b. Public Service Announcement	yes	2
c. Bill Inserts / Newsletters / Brochures	yes	6
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	yes	1
f. Special Events, Media Events	yes	3
g. Speaker's Bureau	yes	1
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

B. Conservation Information Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	30000	34109
2. Actual Expenditures	34109	

C. "At Least As Effective As"

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

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

n/a

D. Comments

PCWA contracts with the Water Education Foundation and is a member of the Regional Water Authority. PCWA has a booth at 3 public events or more each year.

Reported as of 10/2

BMP 08: School Education Programs

Reporting Unit:
**Placer County Water
 Agency - Retail**

BMP Form Status:
100% Complete

Year:
2004

A. Implementation

1. Has your agency implemented a school information program to promote water conservation? yes

2. Please provide information on your school programs (by grade level):

Grade	Are grade-appropriate materials distributed?	No. of class presentations	No. of students reached	No. of teachers' workshops
Grades K-3rd	yes	13	1840	1
Grades 4th-6th	yes	13	1840	1
Grades 7th-8th	no	0	0	0
High School	no	0	0	0

3. Did your Agency's materials meet state education framework requirements? yes

4. When did your Agency begin implementing this program? 05/20/2002

B. School Education Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	25000	28304
2. Actual Expenditures	28304	

C. "At Least As Effective As"

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

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

n/a

D. Comments

PCWA contracts with the Water Education Foundation and is member of the Regional Water Authority. South Yuba River Citizens League did presentation at 26 schools.

Reported as of 10/2

BMP 09: Conservation Programs for CII Accounts

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2004**

A. Implementation

- 1. Has your agency identified and ranked COMMERCIAL customers according to use? yes
- 2. Has your agency identified and ranked INDUSTRIAL customers according to use? yes
- 3. Has your agency identified and ranked INSTITUTIONAL customers according to use? yes

Option A: CII Water Use Survey and Customer Incentives Program

- 4. Is your agency operating a CII water use survey and customer incentives program for the purpose of complying with BMP 9 under this option? yes

CII Surveys	Commercial Accounts	Industrial Accounts	Institutional Accounts
a. Number of New Surveys Offered	1493	2	143
b. Number of New Surveys Completed	327	1	25
c. Number of Site Follow-ups of Previous Surveys (within 1 yr)	0	0	0
d. Number of Phone Follow-ups of Previous Surveys (within 1 yr)	0	0	0

CII Survey Components	Commercial Accounts	Industrial Accounts	Institutional Accounts
e. Site Visit	yes	yes	yes
f. Evaluation of all water-using apparatus and processes	yes	no	yes
g. Customer report identifying recommended efficiency measures, paybacks and agency incentives	yes	yes	yes

Agency CII Customer Incentives	Budget (\$/Year)	No. Awarded to Customers	Total \$ Amount Awarded
h. Rebates	0	0	0
i. Loans	0	0	0
j. Grants	2040	34	2040
k. Others	0	0	0

Option B: CII Conservation Program Targets

-
- 5. Does your agency track CII program interventions and water savings for the purpose of complying with BMP 9 under this option? yes
 - 6. Does your agency document and maintain records on how savings were realized and the method of calculation for estimated savings? no
 - 7. Estimated annual savings (AF/yr) from site-verified actions taken by agency since 1991. 0
 - 8. Estimated annual savings (AF/yr) from non-site-verified actions taken by agency since 1991. 0

B. Conservation Program Expenditures for CII Accounts

	This Year	Next Year
1. Budgeted Expenditures	30000	34636
2. Actual Expenditures	34636	

C. "At Least As Effective As"

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
 - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

n/a

D. Comments

CUWCC rinse and save program from 2003 entered into 2004.

Reported as of 10/2

BMP 09a: CII ULFT Water Savings

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2004**

1. Did your agency implement a CII ULFT replacement program in the reporting year? No
 If No, please explain why on Line B. 10.

A. Targeting and Marketing

1. What basis does your agency use to target customers for participation in this program? CII Sector or subsector
 Check all that apply.

a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.

Effort on this BMP is difficult, not a lot of interest in CII ulft.

2. How does your agency advertise this program? Check all that apply. Direct letter
Newsletter

a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.

None

B. Implementation

1. Does your agency keep and maintain customer participant information? (Read the Help information for a complete list of all the information for this BMP.) Yes

2. Would your agency be willing to share this information if the CUWCC did a study to evaluate the program on behalf of your agency? No

3. What is the total number of customer accounts participating in the program during the last year ? 0

4. CII Subsector	Number of Toilets Replaced			
	Standard Gravity Tank	Air Assisted	Valve Floor Mount	Valve Wall Mount
a. Offices	12	0	0	0
b. Retail / Wholesale	0	0	0	0
c. Hotels	0	0	0	0
d. Health	0	0	0	0
e. Industrial	0	0	0	0
f. Schools: K to 12	0	0	0	0
g. Eating	0	0	0	0
h. Government	0	0	0	0
i. Churches	0	0	0	0
j. Other	0	0	0	0

- 5. Program design. Rebate or voucher
- 6. Does your agency use outside services to implement this program? No
 - a. If yes, check all that apply.
- 7. Participant tracking and follow-up. No follow-up
- 8. Based on your program experience, please rank on a scale of 1 to 5, with 1 being the least frequent cause and 5 being the most frequent cause, the following reasons why customers refused to participate in the program.
 - a. Disruption to business 5
 - b. Inadequate payback 4
 - c. Inadequate ULFT performance 1
 - d. Lack of funding 4
 - e. American's with Disabilities Act 1
 - f. Permitting 1
 - g. Other. Please describe in B. 9. 5
- 9. Please describe general program acceptance/resistance by customers, obstacles to implementation, and other issues affecting program implementation or effectiveness.
 - owner not on premise and afraid they might have to get a building permit.
- 10. Please provide a general assessment of the program for this reporting year. Did your program achieve its objectives? Were your targeting and marketing approaches effective? Were program costs in line with expectations and budgeting?
 - PCWA was not a CUWCC member, we were not part of the 3 year intrim program.

C. Conservation Program Expenditures for CII ULFT

1. CII ULFT Program: Annual Budget & Expenditure Data

	Budgeted	Actual Expenditure
a. Labor	0	0
b. Materials	0	900
c. Marketing & Advertising	1200	1200
d. Administration & Overhead	0	0
e. Outside Services	0	0
f. Total	1200	2100

2. CII ULFT Program: Annual Cost Sharing

a. Wholesale agency contribution	450
b. State agency contribution	
c. Federal agency contribution	450

d. Other contribution

e. Total

900

D. Comments

PCWA is participating in the Sacramento Water Forum Conservation Plan. This is the the least compliant BMP of the WF plan. Total CII toilets is estimated.

Reported as of 10/2

BMP 11: Conservation Pricing

Reporting Unit:

Placer County Water Agency - Retail

BMP Form

Status:

100% Complete

Year:

2004**A. Implementation****Rate Structure Data Volumetric Rates for Water Service by Customer Class****1. Residential**

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	\$13890000
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$0

2. Commercial

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Increasing Block
c. Total Revenue from Volumetric Rates	\$1700000
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$0

3. Industrial

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	\$405000
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$0

4. Institutional / Government

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	\$531000
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$0

5. Irrigation

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	\$692000
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$0

6. Other

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	\$867000

d. Total Revenue from Non-Volumetric
Charges, Fees and other Revenue \$10127600
Sources

B. Conservation Pricing Program Expenditures

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

C. "At Least As Effective As"

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

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

n/a

D. Comments

Residential includes multi unit.

Reported as of 10/2

BMP 12: Conservation Coordinator

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2004**

A. Implementation

- 1. Does your Agency have a conservation coordinator? yes
- 2. Is this a full-time position? no
- 3. If no, is the coordinator supplied by another agency with which you cooperate in a regional conservation program? yes
- 4. Partner agency's name: Regional Water Authority
- 5. If your agency supplies the conservation coordinator:
 - a. What percent is this conservation coordinator's position? 50%
 - b. Coordinator's Name Harley Lukenbill
 - c. Coordinator's Title Deputy Director of Customer Service
 - d. Coordinator's Experience and Number of Years 10
 - e. Date Coordinator's position was created (mm/dd/yyyy) 01/01/2000
- 6. Number of conservation staff, including Conservation Coordinator. 3

B. Conservation Staff Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	150000	155000
2. Actual Expenditures	86000	

C. "At Least As Effective As"

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no
 - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

n/a

D. Comments

3 full time water efficiency employees

Reported as of 10/2

BMP 13: Water Waste Prohibition

Reporting Unit:

**Placer County Water Agency -
Retail**

BMP Form Status:
100% Complete

Year:
2004

A. Requirements for Documenting BMP Implementation

1. Is a water waste prohibition ordinance in effect in your service area? yes

a. If YES, describe the ordinance:

The ordinance prohibits the wasting of water, the offense if not corrected could lead to disconnection of water service.

2. Is a copy of the most current ordinance(s) on file with CUWCC? no

a. List local jurisdictions in your service area in the first text box and water waste ordinance citations in each jurisdiction in the second text box:

n/a n/a

B. Implementation

1. Indicate which of the water uses listed below are prohibited by your agency or service area.

- a. Gutter flooding yes
 - b. Single-pass cooling systems for new connections no
 - c. Non-recirculating systems in all new conveyor or car wash systems no
 - d. Non-recirculating systems in all new commercial laundry systems no
 - e. Non-recirculating systems in all new decorative fountains no
 - f. Other, please name no
- n/a

2. Describe measures that prohibit water uses listed above:

The ordinance prohibits the wasting of water, the offense if not corrected could lead to disconnection of water service.

Water Softeners:

3. Indicate which of the following measures your agency has supported in developing state law:

- a. Allow the sale of more efficient, demand-initiated regenerating DIR models. no
- b. Develop minimum appliance efficiency standards that:
 - i.) Increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per pound of common salt used. no
 - ii.) Implement an identified maximum number of gallons discharged per gallon of soft water produced. no
- c. Allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply. no

4. Does your agency include water softener checks in home water audit programs? no

5. Does your agency include information about DIR and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models? no

C. Water Waste Prohibition Program Expenditures

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

D. "At Least As Effective As"

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

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

n/a

E. Comments

The ordinance prohibits the wasting of water, the offense if not corrected could lead to disconnection of water service.

Reported as of 10/2

BMP 14: Residential ULFT Replacement Programs

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2004**

A. Implementation

	Single-Family Accounts	Multi-Family Units
1. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	yes	yes
Number of Toilets Replaced by Agency Program During Report Year		
Replacement Method	SF Accounts	MF Units
2. Rebate	281	31
3. Direct Install	0	0
4. CBO Distribution	0	0
5. Other	0	0
Total	281	31

6. Describe your agency's ULFT program for single-family residences.

A \$75 rebate is available for all customers. Adverised in flyers and newsletters. Most are 50-50 grants with the USBR.

7. Describe your agency's ULFT program for multi-family residences.

A \$75 rebate is available for all customers. Adverised in flyers and newsletters. Most are 50-50 grants with the USBR.

8. Is a toilet retrofit on resale ordinance in effect for your service area? no

9. List local jurisdictions in your service area in the left box and ordinance citations in each jurisdiction in the right box:

n/a n/a

B. Residential ULFT Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	30000	30000
2. Actual Expenditures	30490	

C. "At Least As Effective As"

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

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

n/a

D. Comments

PCWA has 3 field service grants with the USBR for 500 ULFT toilet

replacements through 2006.

Reported as of 10/2

Water Supply & Reuse

Reporting Unit:
Placer County Water Agency - Retail

Year:
2003

Water Supply Source Information

Supply Source Name	Quantity (AF) Supplied
PG&E	27748

Supply Type
Local Watershed

Total AF: 27748

Reported as of 10/2

Accounts & Water Use

Reporting Unit Name: **Placer County Water Agency - Retail** Submitted to **CUWCC** Year: **2003**
 11/10/2004

A. Service Area Population Information:

1. Total service area population 88702

B. Number of Accounts and Water Deliveries (AF)

Type	Metered		Unmetered	
	No. of Accounts	Water Deliveries (AF)	No. of Accounts	Water Deliveries (AF)
1. Single-Family	26302	14966	0	0
2. Multi-Family	725	1798	0	0
3. Commercial	1499	2859	0	0
4. Industrial	2	1092	0	0
5. Institutional	143	943	0	0
6. Dedicated Irrigation	315	2000	0	0
7. Recycled Water	0	0	0	0
8. Other	1931	649	0	0
9. Unaccounted	NA	3441	NA	0
Total	30917	27748	0	0

Metered Unmetered

Reported as of 10/2

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

Reporting Unit:

**Placer County Water Agency -
Retail**

BMP Form Status:
100% Complete

Year:
2003

A. Implementation

- | | |
|---|------------|
| 1. Based on your signed MOU date, 06/11/2003, your Agency STRATEGY DUE DATE is: | 06/10/2005 |
| 2. Has your agency developed and implemented a targeting/ marketing strategy for SINGLE-FAMILY residential water use surveys? | yes |
| a. If YES, when was it implemented? | 01/01/2002 |
| 3. Has your agency developed and implemented a targeting/ marketing strategy for MULTI-FAMILY residential water use surveys? | yes |
| a. If YES, when was it implemented? | 01/01/2002 |

B. Water Survey Data

Survey Counts:	Single Family Accounts	Multi-Family Units
1. Number of surveys offered:	26302	7421
2. Number of surveys completed:	290	0

Indoor Survey:

- | | | |
|---|-----|-----|
| 3. Check for leaks, including toilets, faucets and meter checks | yes | yes |
| 4. Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, if necessary | yes | yes |
| 5. Check toilet flow rates and offer to install or recommend installation of displacement device or direct customer to ULFT replacement program, as necessary; replace leaking toilet flapper, as necessary | yes | yes |

Outdoor Survey:

- | | | |
|--|-----|-------------|
| 6. Check irrigation system and timers | yes | yes |
| 7. Review or develop customer irrigation schedule | yes | yes |
| 8. Measure landscaped area (Recommended but not required for surveys) | no | no |
| 9. Measure total irrigable area (Recommended but not required for surveys) | no | no |
| 10. Which measurement method is typically used (Recommended but not required for surveys) | | Pacing |
| 11. Were customers provided with information packets that included evaluation results and water savings recommendations? | yes | yes |
| 12. Have the number of surveys offered and completed, survey results, and survey costs been tracked? | yes | yes |
| a. If yes, in what form are surveys tracked? | | spreadsheet |
| b. Describe how your agency tracks this information. | | |

We use the Agency User defined data base, spreadsheets and some manual.

C. Water Survey Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	20000	38000
2. Actual Expenditures	18000	

D. "At Least As Effective As"

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

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

n/a

E. Comments

Budgets will be tracked in 2004

Reported as of 10/2

BMP 02: Residential Plumbing Retrofit

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2003**

A. Implementation

1. Is there an enforceable ordinance in effect in your service area requiring replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts? no
 - a. If YES, list local jurisdictions in your service area and code or ordinance in each:

0
2. Has your agency satisfied the 75% saturation requirement for single-family housing units? no
3. Estimated percent of single-family households with low-flow showerheads: 50%
4. Has your agency satisfied the 75% saturation requirement for multi-family housing units? no
5. Estimated percent of multi-family households with low-flow showerheads: 50%
6. If YES to 2 OR 4 above, please describe how saturation was determined, including the dates and results of any survey research.

0

B. Low-Flow Device Distribution Information

1. Has your agency developed a targeting/ marketing strategy for distributing low-flow devices? yes
 - a. If YES, when did your agency begin implementing this strategy? 01/01/2002
 - b. Describe your targeting/ marketing strategy.

We offer this through our bi-monthly newsletter, door to door and at the Auburn Home Show

Low-Flow Devices Distributed/ Installed	SF Accounts	MF Units
2. Number of low-flow showerheads distributed:	1372	2
3. Number of toilet-displacement devices distributed:	1372	2
4. Number of toilet flappers distributed:	1392	0
5. Number of faucet aerators distributed:	1372	4
6. Does your agency track the distribution and cost of low-flow devices?		yes
a. If YES, in what format are low-flow devices tracked?		Database
b. If yes, describe your tracking and distribution system :		

The placement of retrofit kits is tracked in the user defined section of the Agency software

C. Low-Flow Device Distribution Expenditures

This Year Next Year

1. Budgeted Expenditures	12000	12000
2. Actual Expenditures	12000	

D. "At Least As Effective As"

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

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

0

E. Comments

0

Reported as of 10/2

BMP 03: System Water Audits, Leak Detection and Repair

Reporting Unit:

Placer County Water Agency - Retail

BMP Form Status:
100% Complete

Year:
2003

A. Implementation

- 1. Has your agency completed a pre-screening system audit for this reporting year? yes
- 2. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production:
 - a. Determine metered sales (AF) 24301
 - b. Determine other system verifiable uses (AF) 1944
 - c. Determine total supply into the system (AF) 27748
 - d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required. 0.95
- 3. Does your agency keep necessary data on file to verify the values used to calculate verifiable uses as a percent of total production? yes
- 4. Did your agency complete a full-scale audit during this report year? no
- 5. Does your agency maintain in-house records of audit results or the completed AWWA audit worksheets for the completed audit? no
- 6. Does your agency operate a system leak detection program? yes
 - a. If yes, describe the leak detection program:

Leak detection methods include zone usage monitoring, zone pressure monitoring, and surface conditions. Repairs are made on an as-needed basis. The Agency has an on going main line replacement program in effect. A full zone distribution system water audit is scheduled for 2004.

B. Survey Data

- 1. Total number of miles of distribution system line. 435
- 2. Number of miles of distribution system line surveyed. 0

C. System Audit / Leak Detection Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	60000
2. Actual Expenditures	0	

D. "At Least As Effective As"

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
 - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

DWR grant for 60,000 in 2004 & 2005

Reported as of 10/2

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

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2003**

A. Implementation

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

n/a
- 3. Number of previously unmetered accounts fitted with meters during report year. 0

B. Feasibility Study

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

N/A
- 2. Number of CII accounts with mixed-use meters. 0
- 3. Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period. 0

C. Meter Retrofit Program Expenditures

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

D. "At Least As Effective As"

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
 - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

0

E. Comments

All PCWA customers are metered with increasing tier rates. Mixed use meters are unknown, probably around 90%.

Reported as of 10/2

BMP 05: Large Landscape Conservation Programs and Incentives

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2003**

A. Water Use Budgets

- | | |
|--|-----|
| 1. Number of Dedicated Irrigation Meter Accounts: | 315 |
| 2. Number of Dedicated Irrigation Meter Accounts with Water Budgets: | 58 |
| 3. Budgeted Use for Irrigation Meter Accounts with Water Budgets (AF): | 0 |
| 4. Actual Use for Irrigation Meter Accounts with Water Budgets (AF): | 0 |
| 5. Does your agency provide water use notices to accounts with budgets each billing cycle? | no |

B. Landscape Surveys

- | | |
|--|------------|
| 1. Has your agency developed a marketing / targeting strategy for landscape surveys? | yes |
| a. If YES, when did your agency begin implementing this strategy? | 01/01/2002 |
| b. Description of marketing / targeting strategy: | |

PCWA offers a free landscape to any customer requesting a survey. PCWA is working with the RWA to enhance this program with improvement grants

- | | |
|---|-----|
| 2. Number of Surveys Offered. | 24 |
| 3. Number of Surveys Completed. | 24 |
| 4. Indicate which of the following Landscape Elements are part of your survey: | |
| a. Irrigation System Check | yes |
| b. Distribution Uniformity Analysis | yes |
| c. Review / Develop Irrigation Schedules | yes |
| d. Measure Landscape Area | yes |
| e. Measure Total Irrigable Area | yes |
| f. Provide Customer Report / Information | yes |
| 5. Do you track survey offers and results? | yes |
| 6. Does your agency provide follow-up surveys for previously completed surveys? | no |
| a. If YES, describe below: | |

We do not provide follow up surveys at this time.

C. Other BMP 5 Actions

- | | |
|---|----|
| 1. An agency can provide mixed-use accounts with ETo-based landscape budgets in lieu of a large landscape survey program. Does your agency provide mixed-use accounts with landscape budgets? | no |
| 2. Number of CII mixed-use accounts with landscape budgets. | 0 |
| 3. Do you offer landscape irrigation training? | no |

4. Does your agency offer financial incentives to improve landscape water use efficiency? no

Type of Financial Incentive:	Budget (Dollars/Year)	Number Awarded to Customers	Total Amount Awarded
a. Rebates	0	0	0
b. Loans	0	0	0
c. Grants	0	0	0

5. Do you provide landscape water use efficiency information to new customers and customers changing services? No

a. If YES, describe below:

n/a

6. Do you have irrigated landscaping at your facilities? yes

a. If yes, is it water-efficient? yes

b. If yes, does it have dedicated irrigation metering? yes

7. Do you provide customer notices at the start of the irrigation season? yes

8. Do you provide customer notices at the end of the irrigation season? yes

D. Landscape Conservation Program Expenditures

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

E. "At Least As Effective As"

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

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

0

F. Comments

We need to identify dedicated meters, mixed use meters and landscape areas, we will start collecting information in 2005. Budgets are not available at this time.

Reported as of 10/2

BMP 06: High-Efficiency Washing Machine Rebate Programs

Reporting Unit:

Placer County Water Agency - Retail

BMP Form Status:
100% Complete

Year:
2003

A. Implementation

1. Do any energy service providers or waste water utilities in your service area offer rebates for high-efficiency washers? yes

a. If YES, describe the offerings and incentives as well as who the energy/waste water utility provider is.

PG&E

2. Does your agency offer rebates for high-efficiency washers? no

3. What is the level of the rebate? 0

4. Number of rebates awarded. 0

B. Rebate Program Expenditures

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

C. "At Least As Effective As"

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

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

Start program in 2005.

D. Comments

Reported as of 10/2

BMP 07: Public Information Programs

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2003**

A. Implementation

1. Does your agency maintain an active public information program to promote and educate customers about water conservation? yes

a. If YES, describe the program and how it's organized.

PCWA partners with the RWA & Water Education Foundation for Public and School programs. PCWA has booths at public events and is available for presentations.

2. Indicate which and how many of the following activities are included in your public information program.

Public Information Program Activity	Yes/No	Number of Events
a. Paid Advertising	yes	1
b. Public Service Announcement	yes	2
c. Bill Inserts / Newsletters / Brochures	yes	6
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	yes	1
f. Special Events, Media Events	yes	3
g. Speaker's Bureau	no	
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

B. Conservation Information Program Expenditures

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

C. "At Least As Effective As"

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

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

0

D. Comments

PCWA is actively participating in public awareness of water efficiency practices. Budgets will be developed in 2004.

Reported as of 10/2

BMP 08: School Education Programs

Reporting Unit:

**Placer County Water Agency -
Retail**

BMP Form Status:
100% Complete

Year:
2003

A. Implementation

1. Has your agency implemented a school information program to promote water conservation? yes

2. Please provide information on your school programs (by grade level):

Grade	Are grade-appropriate materials distributed?	No. of class presentations	No. of students reached	No. of teachers' workshops
Grades K-3rd	yes	1	300	0
Grades 4th-6th	yes	1	300	0
Grades 7th-8th	no	0	0	0
High School	no	0	0	0

3. Did your Agency's materials meet state education framework requirements? yes

4. When did your Agency begin implementing this program? 01/01/2003

B. School Education Program Expenditures

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

C. "At Least As Effective As"

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

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

0

D. Comments

PCWA partners with the RWA & Water Education Foundation for Public and School programs. PCWA is fully implementating this BMP.

Reported as of 10/2

BMP 09: Conservation Programs for CII Accounts

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2003**

A. Implementation

- 1. Has your agency identified and ranked COMMERCIAL customers according to use? yes
- 2. Has your agency identified and ranked INDUSTRIAL customers according to use? yes
- 3. Has your agency identified and ranked INSTITUTIONAL customers according to use? yes

Option A: CII Water Use Survey and Customer Incentives Program

- 4. Is your agency operating a CII water use survey and customer incentives program for the purpose of complying with BMP 9 under this option? yes

CII Surveys	Commercial Accounts	Industrial Accounts	Institutional Accounts
a. Number of New Surveys Offered	418	0	0
b. Number of New Surveys Completed	41	0	0
c. Number of Site Follow-ups of Previous Surveys (within 1 yr)	0	0	0
d. Number of Phone Follow-ups of Previous Surveys (within 1 yr)	0	0	0
CII Survey Components	Commercial Accounts	Industrial Accounts	Institutional Accounts
e. Site Visit	yes	yes	yes
f. Evaluation of all water-using apparatus and processes	yes	yes	yes
g. Customer report identifying recommended efficiency measures, paybacks and agency incentives	yes	yes	yes
Agency CII Customer Incentives	Budget (\$/Year)	No. Awarded to Customers	Total \$ Amount Awarded
h. Rebates	0	0	0
i. Loans	0	0	0
j. Grants	2300	2300	2300
k. Others	0	0	0

Option B: CII Conservation Program Targets

-
- | | |
|---|-----|
| 5. Does your agency track CII program interventions and water savings for the purpose of complying with BMP 9 under this option? | yes |
| 6. Does your agency document and maintain records on how savings were realized and the method of calculation for estimated savings? | no |
| 7. Estimated annual savings (AF/yr) from site-verified actions taken by agency since 1991. | 0 |
| 8. Estimated annual savings (AF/yr) from non-site-verified actions taken by agency since 1991. | 0 |

B. Conservation Program Expenditures for CII Accounts

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	3500	

C. "At Least As Effective As"

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

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

0

D. Comments

PCWA participated in the CUWCC rinse and save program in 2003. We are still doing site visits to establish a data base by eoy 2005.

Reported as of 10/2

BMP 09a: CII ULFT Water Savings

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2003**

1. Did your agency implement a CII ULFT replacement program in the reporting year? No
 If No, please explain why on Line B. 10.

A. Targeting and Marketing

1. What basis does your agency use to target customers for participation in this program? CII Sector or subsector
CII ULFT Study subsector targeting
 Check all that apply.

a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.

Effort on this BMP is difficult, not a lot of interest in CII ulft. We will try a different program in 2004

2. How does your agency advertise this program? Check all that apply. Direct letter
Bill message
Newsletter
Web page
Newspapers

a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.

None

B. Implementation

1. Does your agency keep and maintain customer participant information? (Read the Help information for a complete list of all the information for this BMP.) no

2. Would your agency be willing to share this information if the CUWCC did a study to evaluate the program on behalf of your agency? No

3. What is the total number of customer accounts participating in the program during the last year ? 4

4. CII Subsector	Number of Toilets Replaced			
	Standard Gravity Tank	Air Assisted	Valve Floor Mount	Valve Wall Mount
a. Offices	4	0	0	0
b. Retail / Wholesale	0	0	0	0
c. Hotels	0	0	0	0
d. Health	0	0	0	0
e. Industrial	0	0	0	0
f. Schools: K to 12	0	0	0	0
g. Eating	0	0	0	0
h. Government	0	0	0	0

i. Churches	0	0	0	0
j. Other	0	0	0	0

5. Program design.

Rebate or voucher

6. Does your agency use outside services to implement this program? No

a. If yes, check all that apply.

7. Participant tracking and follow-up.

No follow-up

8. Based on your program experience, please rank on a scale of 1 to 5, with 1 being the least frequent cause and 5 being the most frequent cause, the following reasons why customers refused to participate in the program.

- a. Disruption to business 5
- b. Inadequate payback 4
- c. Inadequate ULFT performance 1
- d. Lack of funding 4
- e. American's with Disabilities Act 1
- f. Permitting 1
- g. Other. Please describe in B. 9. 5

9. Please describe general program acceptance/resistance by customers, obstacles to implementation, and other issues affecting program implementation or effectiveness.

owner not on premise

10. Please provide a general assessment of the program for this reporting year. Did your program achieve its objectives? Were your targeting and marketing approaches effective? Were program costs in line with expectations and budgeting?

PCWA was not a CUWCC member, we were not part of the 3 year intrim program.

C. Conservation Program Expenditures for CII ULFT

1. CII ULFT Program: Annual Budget & Expenditure Data

	Budgeted	Actual Expenditure
a. Labor	500	500
b. Materials	0	0
c. Marketing & Advertising	0	0
d. Administration & Overhead	300	300
e. Outside Services	0	0
f. Total	800	800

2. CII ULFT Program: Annual Cost Sharing

- a. Wholesale agency contribution 0
- b. State agency contribution 0

c. Federal agency contribution	50
d. Other contribution	0
e. Total	50

D. Comments

PCWA is participating in the Sacramento Water Forum Conservation Plan. This is the the least compliant BMP of the WF plan.

Reported as of 10/2

BMP 11: Conservation Pricing

Reporting Unit:

Placer County Water Agency - Retail

BMP Form

Status:

100% Complete

Year:

2003**A. Implementation****Rate Structure Data Volumetric Rates for Water Service by Customer Class****1. Residential**

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	\$5509952
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$0

2. Commercial

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	\$183545
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$0

3. Industrial

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	\$334700
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$0

4. Institutional / Government

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	\$291513
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$0

5. Irrigation

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	\$377887
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$0

6. Other

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	\$500250

d. Total Revenue from Non-Volumetric
Charges, Fees and other Revenue Sources \$8797367

B. Conservation Pricing Program Expenditures

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

C. "At Least As Effective As"

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

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

0

D. Comments

All rates are inclining tiers.

Reported as of 10/2

BMP 12: Conservation Coordinator

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2003**

A. Implementation

- 1. Does your Agency have a conservation coordinator? yes
- 2. Is this a full-time position? yes
- 3. If no, is the coordinator supplied by another agency with which you cooperate in a regional conservation program ?
- 4. Partner agency's name:
- 5. If your agency supplies the conservation coordinator:
 - a. What percent is this conservation coordinator's position? 50%
 - b. Coordinator's Name Harley Lukenbill
 - c. Coordinator's Title Deputy Director of Customer Service
 - d. Coordinator's Experience and Number of Years 10
 - e. Date Coordinator's position was created (mm/dd/yyyy) 01/01/2000
- 6. Number of conservation staff, including Conservation Coordinator. 2

B. Conservation Staff Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	86000	

C. "At Least As Effective As"

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no
 - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

0

D. Comments

Two additional staff and budget in 2004

Reported as of 10/2

BMP 13: Water Waste Prohibition

Reporting Unit:

**Placer County Water Agency -
Retail**

BMP Form Status:
100% Complete

Year:
2003

A. Requirements for Documenting BMP Implementation

1. Is a water waste prohibition ordinance in effect in your service area? yes

a. If YES, describe the ordinance:

The ordinance prohibits the wasting of water, the offense if not corrected could lead to disconnection of water service.

2. Is a copy of the most current ordinance(s) on file with CUWCC? no

a. List local jurisdictions in your service area in the first text box and water waste ordinance citations in each jurisdiction in the second text box:

n/a0

n/a

B. Implementation

1. Indicate which of the water uses listed below are prohibited by your agency or service area.

- a. Gutter flooding yes
- b. Single-pass cooling systems for new connections no
- c. Non-recirculating systems in all new conveyor or car wash systems no
- d. Non-recirculating systems in all new commercial laundry systems no
- e. Non-recirculating systems in all new decorative fountains no
- f. Other, please name no

0

2. Describe measures that prohibit water uses listed above:

Any observed or reported water waste is investigated and appropriate action taken to stop the waste.

Water Softeners:

3. Indicate which of the following measures your agency has supported in developing state law:

- a. Allow the sale of more efficient, demand-initiated regenerating DIR models. no
- b. Develop minimum appliance efficiency standards that:
 - i.) Increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per pound of common salt used. no
 - ii.) Implement an identified maximum number of gallons discharged per gallon of soft water produced. no
- c. Allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply. no

4. Does your agency include water softener checks in home water audit programs? no

5. Does your agency include information about DIR and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models? no

C. Water Waste Prohibition Program Expenditures

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

D. "At Least As Effective As"

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

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

0

E. Comments

PCWA will need a more stringint water waste ordinance, a new ordinance is planned for 2005. The Agency is unaware of any water softner regulations, we would support CUWCC efforts.

Reported as of 10/2

BMP 14: Residential ULFT Replacement Programs

Reporting Unit: **Placer County Water Agency - Retail** BMP Form Status: **100% Complete** Year: **2003**

A. Implementation

	Single-Family Accounts	Multi-Family Units
1. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	yes	yes
Number of Toilets Replaced by Agency Program During Report Year		
Replacement Method	SF Accounts	MF Units
2. Rebate	150	10
3. Direct Install	0	0
4. CBO Distribution	0	0
5. Other	0	0
Total	150	10

6. Describe your agency's ULFT program for single-family residences.

A \$75 rebate is available for all customers. Advertised in flyers and newsletters. Most are 50-50 grants with the USBR.

7. Describe your agency's ULFT program for multi-family residences.

A \$75 rebate is available for all customers. Advertised in flyers and newsletters. Most are 50-50 grants with the USBR.

8. Is a toilet retrofit on resale ordinance in effect for your service area? no

9. List local jurisdictions in your service area in the left box and ordinance citations in each jurisdiction in the right box:

n/a n/a

B. Residential ULFT Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	10000	7500
2. Actual Expenditures	10000	

C. "At Least As Effective As"

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

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

n/a

D. Comments

PCWA has 3 field service grants with the USBR for 833 ULFT toilet

replacements through 2005.

Reported as of 10/2

Water Supply & Reuse

Reporting Unit:

Placer County Water Agency - Wholesale

Year:

2004

Water Supply Source Information

Supply Source Name	Quantity (AF) Supplied	Supply Type
--------------------	------------------------	-------------

PG&E	7980	Local Watershed
------	------	-----------------

Total AF: 7980

Purchaser Information

Name of Agency	Quantity (AF) Supplied	Retailer or Wholesaler
----------------	------------------------	------------------------

Total AF:

Reported as of 10/2

BMP 03: System Water Audits, Leak Detection and Repair

Reporting Unit:

Placer County Water Agency - Wholesale

BMP Form Status:
100% Complete

Year:
2004

A. Implementation

- 1. Has your agency completed a pre-screening system audit for this reporting year? yes
- 2. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production:
 - a. Determine metered sales (AF) 7980
 - b. Determine other system verifiable uses (AF) 0
 - c. Determine total supply into the system (AF) 7980
 - d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required. 1.00
- 3. Does your agency keep necessary data on file to verify the values used to calculate verifiable uses as a percent of total production? no
- 4. Did your agency complete a full-scale audit during this report year? no
- 5. Does your agency maintain in-house records of audit results or the completed AWWA audit worksheets for the completed audit? no
- 6. Does your agency operate a system leak detection program? yes
 - a. If yes, describe the leak detection program:

PCWA conducts annual distribution inspections to check all meters, valves and transmission pipelines. Staff reviews wholesale metered sales and compares to metered production. Most transmission lines are placed underground through rural residential properties. The District relies on its customers to report suspected water leaks. In addition, the district routinely checks the sales as a total percent of production.

B. Survey Data

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

C. System Audit / Leak Detection Program Expenditures

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

D. "At Least As Effective As"

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
 - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

n/a

E. Comments

PCWA wheels water to our wholesale customers through existing retail pipelines. BMP 3 is discussed further on the retail report.

Reported as of 10/2

BMP 07: Public Information Programs

Reporting Unit: **Placer County Water Agency - Wholesale** BMP Form Status: **100% Complete** Year: **2004**

A. Implementation

1. Does your agency maintain an active public information program to promote and educate customers about water conservation? yes

a. If YES, describe the program and how it's organized.

PCWA participates in the Auburn Home Show, Kaiser Earth Day and various other public events in Placer County. As a member of the RWA public outreach is available to out retail customers.

2. Indicate which and how many of the following activities are included in your public information program.

Public Information Program Activity	Yes/No	Number of Events
a. Paid Advertising	yes	6
b. Public Service Announcement	yes	6
c. Bill Inserts / Newsletters / Brochures	yes	6
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	yes	1
f. Special Events, Media Events	yes	3
g. Speaker's Bureau	yes	1
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

B. Conservation Information Program Expenditures

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

C. "At Least As Effective As"

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

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

n/a

D. Comments

Budgeted and actual costs are the same as the PCWA retail report.

Reported as of 10/2

BMP 08: School Education Programs

Reporting Unit:
Placer County Water Agency - Wholesale

BMP Form Status:
100% Complete

Year:
2004

A. Implementation

1. Has your agency implemented a school information program to promote water conservation? yes

2. Please provide information on your school programs (by grade level):

Grade	Are grade-appropriate materials distributed?	No. of class presentations	No. of students reached	No. of teachers' workshops
Grades K-3rd	yes	13	1840	1
Grades 4th-6th	yes	13	1840	1
Grades 7th-8th	no	0	0	0
High School	no	0	0	0

3. Did your Agency's materials meet state education framework requirements? yes

4. When did your Agency begin implementing this program? 5/20/2002

B. School Education Program Expenditures

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

C. "At Least As Effective As"

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

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

n/a

D. Comments

Expenses are included in the retail report. PCWA participated with the Water Education Foundatio and the Regional Water Authority using South Yuba River Citizens League for presentations. Retailer are invited to participate.

Reported as of 10/2

BMP 10: Wholesale Agency Assistance Programs

Reporting Unit:

**Placer County Water Agency -
Wholesale**

BMP Form Status:
100% Complete

Year:
2004

Report Not Filed

BMP 11: Conservation Pricing

Reporting Unit:
Placer County Water Agency - Wholesale

BMP Form
 Status:
100% Complete

Year:
2004

A. Implementation

Rate Structure Data Volumetric Rates for Water Service by Customer Class

1. Residential

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue \$
Sources

2. Commercial

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue \$
Sources

3. Industrial

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue \$
Sources

4. Institutional / Government

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue \$
Sources

5. Irrigation

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue \$
Sources

6. Other

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure Service Not Provided
- c. Total Revenue from Volumetric Rates \$2934425

d. Total Revenue from Non-Volumetric
Charges, Fees and other Revenue Sources \$0

B. Conservation Pricing Program Expenditures

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

C. "At Least As Effective As"

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

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

n/a

D. Comments

Zone 1 resale to Roseville, Cal American, Northridge etc. No non volumetric charges.

Reported as of 10/2

BMP 12: Conservation Coordinator

Reporting Unit: **Placer County Water Agency - Wholesale** BMP Form Status: **100% Complete** Year: **2004**

A. Implementation

- 1. Does your Agency have a conservation coordinator? yes
- 2. Is this a full-time position? no
- 3. If no, is the coordinator supplied by another agency with which you cooperate in a regional conservation program? yes
- 4. Partner agency's name: Regional Water Authority
- 5. If your agency supplies the conservation coordinator:
 - a. What percent is this conservation coordinator's position? 0%
 - b. Coordinator's Name Harley Lukenbill
 - c. Coordinator's Title Deputy Director of Customer Service
 - d. Coordinator's Experience and Number of Years 10
 - e. Date Coordinator's position was created (mm/dd/yyyy) 01/01/2000
- 6. Number of conservation staff, including Conservation Coordinator. 3

B. Conservation Staff Program Expenditures

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

C. "At Least As Effective As"

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no
 - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

n/a

D. Comments

Actual and budgeted expenditures are included in our retail report.
Percent of time is included in retail

Reported as of 10/2

Water Supply & Reuse

Reporting Unit:

Placer County Water Agency - Wholesale

Year:

2003

Water Supply Source Information

Supply Source Name

Quantity (AF) Supplied

Supply Type

PG&E

5283

Local Watershed

Total AF: 5283

Purchaser Information

Name of Agency

Quantity (AF) Supplied

Retailer or Wholesaler

Total AF:

Reported as of 10/2

BMP 03: System Water Audits, Leak Detection and Repair

Reporting Unit:

Placer County Water Agency - Wholesale

BMP Form Status:

100% Complete

Year:

2003

A. Implementation

- | | |
|--|------|
| 1. Has your agency completed a pre-screening system audit for this reporting year? | yes |
| 2. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production: | |
| a. Determine metered sales (AF) | 5283 |
| b. Determine other system verifiable uses (AF) | 0 |
| c. Determine total supply into the system (AF) | 5383 |
| d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required. | 0.98 |
| 3. Does your agency keep necessary data on file to verify the values used to calculate verifiable uses as a percent of total production? | no |
| 4. Did your agency complete a full-scale audit during this report year? | no |
| 5. Does your agency maintain in-house records of audit results or the completed AWWA audit worksheets for the completed audit? | no |
| 6. Does your agency operate a system leak detection program? | yes |
| a. If yes, describe the leak detection program: | |

PCWA conducts annual distribution inspections to check all meters, valves and transmission pipelines. Staff reviews wholesale metered sales and compares to metered production. Most transmission lines are placed underground through rural residential properties. The District relies on its customers to report suspected water leaks. In addition, the district routinely checks the sales as a total percent of production.

B. Survey Data

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

C. System Audit / Leak Detection Program Expenditures

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

D. "At Least As Effective As"

- | | |
|--|----|
| 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? | No |
| a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as." | |

E. Comments

PCWA wheels water to our wholesale customers through existing retail pipelines. BMP 3 is discussed further on the retail report.

Reported as of 10/2



BMP 07: Public Information Programs

Reporting Unit: **Placer County Water Agency - Wholesale** BMP Form Status: **100% Complete** Year: **2003**

A. Implementation

1. Does your agency maintain an active public information program to promote and educate customers about water conservation? yes
- a. If YES, describe the program and how it's organized.

PCWA participates in the Auburn Home Show, Kaiser Earth Day and various other public events. As a member of the RWA public announcements and literature are distributed.

2. Indicate which and how many of the following activities are included in your public information program.

Public Information Program Activity	Yes/No	Number of Events
a. Paid Advertising	yes	6
b. Public Service Announcement	yes	6
c. Bill Inserts / Newsletters / Brochures	yes	6
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	yes	1
f. Special Events, Media Events	yes	3
g. Speaker's Bureau	yes	0
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

B. Conservation Information Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	10000
2. Actual Expenditures	0	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

Budgeted and actual costs are included in our retail report.

Reported as of 10/2

BMP 08: School Education Programs

Reporting Unit:
**Placer County Water
 Agency - Wholesale**

BMP Form Status:
100% Complete

Year:
2003

A. Implementation

1. Has your agency implemented a school information program to promote water conservation? yes

2. Please provide information on your school programs (by grade level):

Grade	Are grade-appropriate materials distributed?	No. of class presentations	No. of students reached	No. of teachers' workshops
Grades K-3rd	yes	1	300	0
Grades 4th-6th	yes	1	300	0
Grades 7th-8th	no	0	0	0
High School	no	0	0	0

3. Did your Agency's materials meet state education framework requirements? yes

4. When did your Agency begin implementing this program? 5/20/2002

B. School Education Program Expenditures

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

C. "At Least As Effective As"

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

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

D. Comments

PCWA has partnered with the Sacramento Regional Water Authority and supports the Newspapers in Education program. The RWA has presented a number of school water efficiency presentations.

Reported as of 10/2

BMP 10: Wholesale Agency Assistance Programs

Reporting Unit:

Placer County Water Agency - Wholesale

BMP Form Status:
100% Complete

Year:
2003

A. Implementation

1. Financial Support by BMP

BMP	Financial Incentives Offered?	Budgeted Amount	Amount Awarded	BMP	Financial Incentives Offered?	Budgeted Amount	Amount Awarded
1	No	0	0	8	No	0	0
2	No	0	0	9	No	0	0
3	No	0	0	10	No	0	0
4	No	0	0	11	No	0	0
5	No	0	0	12	No	0	0
6	No	0	0	13	No	0	0
7	No	0	0	14	No	0	0

2. Technical Support

- a. Has your agency conducted or funded workshops addressing CUWCC procedures for calculating program savings, costs and cost-effectiveness? No
- b. Has your agency conducted or funded workshops addressing retail agencies' BMP implementation reporting requirements? No
- c. Has your agency conducted or funded workshops addressing:
 - 1) ULFT replacement No
 - 2) Residential retrofits No
 - 3) Commercial, industrial, and institutional surveys No
 - 4) Residential and large turf irrigation No
 - 5) Conservation-related rates and pricing No

3. Staff Resources by BMP

Qualified	No. FTE	Qualified	No. FTE
-----------	---------	-----------	---------

BMP	Staff Available for BMP?	Staff Assigned to BMP	BMP	Staff Available for BMP?	Staff Assigned to BMP
1	No	0	8	No	0
2	No	0	9	No	0
3	No	0	10	No	0
4	No	0	11	No	0
5	No	0	12	No	0
6	No	0	13	No	0
7	No	0	14	No	0

4. Regional Programs by BMP

BMP	Implementation/ Management Program?	BMP	Implementation/ Management Program?
1	yes	8	yes
2	yes	9	No
3	yes	10	yes
4	yes	11	yes
5	yes	12	yes
6	No	13	yes
7	yes	14	yes

B. Wholesale Agency Assistance Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	10000
2. Actual Expenditures	0	

C. "At Least As Effective As"

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

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

0

D. Comments

PCWA has the ability to provide technical assistance to its wholesale agencies. PCWA participates in the Sacramento Regional Water Authority and supports regional landscape classes, public events and school education.

Reported as of 10/2

BMP 11: Conservation Pricing

Reporting Unit:
Placer County Water Agency - Wholesale

BMP Form
 Status:
100% Complete

Year:
2003

A. Implementation

Rate Structure Data Volumetric Rates for Water Service by Customer Class

1. Residential

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

2. Commercial

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

3. Industrial

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

4. Institutional / Government

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

5. Irrigation

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

6. Other

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure Service Not Provided
- c. Total Revenue from Volumetric Rates \$1864075

d. Total Revenue from Non-Volumetric
Charges, Fees and other Revenue Sources \$0

B. Conservation Pricing Program Expenditures

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

C. "At Least As Effective As"

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

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

0

D. Comments

0

Reported as of 10/2

BMP 12: Conservation Coordinator

Reporting Unit:

**Placer County Water Agency -
Wholesale**BMP Form Status:
100% CompleteYear:
2003**A. Implementation**

- | | | |
|---|------------------|-----|
| 1. Does your Agency have a conservation coordinator? | | yes |
| 2. Is this a full-time position? | | yes |
| 3. If no, is the coordinator supplied by another agency with which you cooperate in a regional conservation program ? | | no |
| 4. Partner agency's name: | 0 | |
| 5. If your agency supplies the conservation coordinator: | | |
| a. What percent is this conservation coordinator's position? | 100% | |
| b. Coordinator's Name | Harley Lukenbill | |
| c. Coordinator's Title | Manager | |
| d. Coordinator's Experience and Number of Years | 10 | |
| e. Date Coordinator's position was created (mm/dd/yyyy) | 01/01/2000 | |
| 6. Number of conservation staff, including Conservation Coordinator. | 2 | |

B. Conservation Staff Program Expenditures

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

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

Actual and budgeted expenditure are included in our retail report.

Reported as of 10/2

APPENDIX C

Water Shortage Contingency Plan

APPENDIX C

Water Shortage Contingency Plan

As a water purveyor, Placer County Water Agency must provide the minimum health and safety water needs of the community at all times. The Agency has created a water shortage contingency plan to help meet this goal during water shortages. The Agency's approval of the 2005 Urban Water Management Plan is considered to also be approval of the water shortage contingency plan.

The contingency plan contains stages or rationing to reflect the severity of the shortage. Rationing stages may be triggered by a shortage in one water source or a combination of sources. Although an actual shortage may occur at any time during the year, a shortage (if one occurs) is usually determined by the Agency in March of each year. If it appears that it may be a dry year, the Agency contacts its agricultural customers in March. This will allow the Agency adequate time to adjust untreated water deliveries that normally begin on April 15th of each year. If supplies change after this determination has been made, the Agency will re-evaluate its supplies and determine a new delivery supply.

Water allocations are established for all customers according to the following ranking system:

- Minimum health and safety allocations for interior residential needs (includes single family, multi-family, hospitals and convalescent facilities, retirement and mobile home communities, and student housing, and fire fighting and public safety);
- Commercial, industrial, institutional/governmental operations (where water is used for manufacturing and for minimum health and safety allocations for employees and visitors), to maintain jobs and economic base of the community (not for landscape uses);
- Permanent agriculture (orchards, vineyards, and other commercial agriculture which would require at least five years to return to production);
- Annual agriculture (floriculture, strawberries, other truck crops)
- Existing landscaping;
- New customers, i.e., proposed projects without permits when shortage declared.

Stages of Action

The Agency has developed a five stage rationing plan to invoke during declared water shortages as shown in Table C-1. The rationing plan includes voluntary and mandatory rationing, depending on the causes, severity, and anticipated duration of the water supply shortage.

Table C-1. Water Shortage Contingency Plan Stages

Stage	Type of Rationing Program	Percent shortage
Stage 1	Supplies available to meet all demands	None
Stage 2	Probability that supplies will not meet demands	Up to 10%
Stage 3	Supplies will not be able to meet expected demands	10-25%
Stage 4	Supplies not meeting current demands	25-30%
Stage 5	Major failure of a supply, storage, or distribution system	30% and greater

The Agency's potable water sources are from varied sources. Rationing stages may be triggered by a supply shortage or by contamination in one source or a combination of sources. Because shortages overlap stages, triggers automatically implement the more restrictive stage.

Criteria for triggering the Agency's rationing stages are:

Stage 1, "Normal Conditions" - Under stage 1 conditions, the Agency shall;

1. Continue to encourage all customers to conserve water.
2. Continue to operate and maintain the water system in an efficient and economical manner.

Stage 2, "Water Alert", 10% Shortage - Under stage 2 conditions, in addition to all the above. The Agency shall:

1. Strongly encourage all customers to conserve water.
2. Request that the service of providing drinking water be prohibited except upon the request of the customer.
3. Discourage the use of water for washing driveways, parking lots, or other hard surfaces.

Stage 3, "Water Warning", 25% Shortage - Under stage 3 conditions, in addition to all the above, the Agency shall:

1. Require that all untreated water customers reduce their untreated water usage by 15% from what they purchased under Stage 1 conditions.
2. Require that all parks, golf courses, schools grounds, and all other public grounds reduce their water usage by 15% from water they purchased under Stage 1 conditions.
3. Prohibit residential lawn, garden, and landscape irrigation during the hottest portion of the day (10 am to 6 pm).
4. Prohibit the use of treated water for non-essential flushing of mains and fire hydrants.

Stage 4, "Water Emergency", 35% Shortage - Under stage 4 conditions, in addition to all the above, the Agency shall:

1. Require that all untreated water customers reduce their untreated water usage by 35% from what they purchased under Stage 1 conditions.
2. Require the use of reclaimed water for dust control, earthwork, or road construction.
3. Implement strong conservation pricing on treated water.

4. Suspend all new untreated water connections.

Stage 5, “Critical Water Emergency”, 50% Shortage- Under stage 5 conditions, In addition to all the above, the Agency Shall:

1. Require that all untreated water customers reduce their untreated water usage by 50% from what they purchased under Stage 1 conditions.
2. Suspend all new treated water connections.
3. Prohibit residential lawn, garden, and landscape irrigation except for those customers who utilize water efficient irrigation systems.

The majority of untreated water is sold in miner’s inches as a continuous flow of water through an orifice. Untreated water usage can be reduced by installing a smaller sized orifice and encouraging customer to use water over longer periods of time. It is expected that during a supply shortage, the Agency will install, as it did in 1977, smaller orifices that will result in the required percent reduction in water usage. Mandatory restrictions on untreated water are proposed for stages 3, 4, and 5 of a water supply shortage.

Catastrophic Supply Interruption Plan

The Agency has prepared a security vulnerability assessment and maintains an emergency response plan to address responding to catastrophic supply interruptions as well as other emergencies. Table C-2 summarizes the responses to major catastrophes.

Table C-2. Preparation Actions for a Catastrophe

Possible catastrophe	Summary of actions
Regional Power Outage	Command chain is defined that dispatches crews to operate generators and monitor operations. Criteria and procedures provided to return system to normal operation. A plan contains contact information for responsible parties and support services. Water shortage contingency plan stages will be implemented as required by the situation.
Earthquake	Command chain is defined that dispatches crews to inspect infrastructure and critical operations. Operations response crews assigned to monitor system operations and modify as necessary. Communication command chain is defined to coordinate with other local water agencies and emergency response officials as necessary. Criteria and procedures provided to return system to normal operation. A plan contains contact information for responsible parties and support services. Water shortage contingency plan stages will be implemented as required by the situation.

Prohibitions, Penalties, and Consumption Reduction Methods

Mandatory prohibition consumption reduction methods and penalties are discussed above in each stage description, and summarized below in Tables C-3 through C-5. The Agency maintains and enforces a water waste ordinance.

Table C-3. Mandatory Prohibitions

Prohibitions	Stage when prohibition is voluntarily requested	Stage when prohibition becomes mandatory
Street/sidewalk cleaning	2	3
New connection restrictions	2	4
Reduce overall usage	3	3
Lawns/landscape watering restrictions	2	3
Non-essential flushing	3	3
Mandatory reclaimed water use where appropriate	4	4

Table C-4. Consumption Reduction Methods

Consumption reduction methods	Stage when method takes effect	Projected reduction (%)
Education Program	1	0-5%
Use prohibitions	1	0-5%
Demand reduction program	2	6-10%
Mandatory rationing	2	6-10%
Percentage reduction by customer type	2	6-10%
Limited landscape and pasture irrigation	2	6-10%
Irrigation allowed only during off-peak hours	2	6-10%
Restrict building permits (long-term only)	5	>50%
Restrict for only priority uses	5	>50%

Table C-5. Penalties and Charges

Examples of Penalties and Charges	Stage when penalty takes effect
Penalties for not reducing consumption	3
Termination of service and reconnect fee	4

Analysis of Revenue Impacts of Reduced Sales During Shortages

The Agency's revenue from water sales for 1995 was approximately \$9,551,000. Treated water accounted for about \$7,670,000 and untreated accounted for about \$1,881,000.

During a normal year, revenue from water sales is used to fund the Agency's water systems operating expenses and maintenance costs. During a water supply shortage, reduced revenue and higher operating and maintenance costs are anticipated due to:

1. Reduced water deliveries.
2. Pumping costs to supply water from the American River.
3. Higher field operating labor costs to install smaller untreated water orifices and closer regulation of canal flows.
4. Higher administration costs for billing changes, customer notifications, customer inquiries, customer usage monitoring, and promoting greater conservation.

Tables C-6 through C-9 present the projected revenue impacts per the Plan requirements. Impacts based on economic analysis presented in 2000 UWMP.

Table C-6. Actions and Conditions that Impact Revenues

Type	Anticipated revenue reduction
Reduced sales	Reduction from 0 up to approximately 30 percent, based on activated stage.

Table C-7. Actions and Conditions that Impact Expenditures

Category	Anticipated cost
Increase staff cost	Increase from 0 up to approximately \$58,000, based on activated stage.
Increased Operations and Maintenance cost	Increase from 0 up to approximately \$51,000, based on activated stage.
Increased American River Pumping Station pumping costs	Increase from 0 up to approximately \$1,000,000, based on activated stage.
Increased administrative costs	Increase from 0 up to approximately \$40,000, based on activated stage.

Table C-8. Proposed Measures to Overcome Revenue Impacts

Name of measures	Summary of effects
Rate adjustment	Rates will be increased to cover actual expenditures.

Table C-9. Proposed Measures to Overcome Expenditure Impacts

Name of measures	Summary of effects
Rate adjustment	Rates will be increased to cover actual expenditures.

Draft Ordinance and Use Monitoring Procedures

The Agency maintains a draft water shortage contingency resolution that is adopted during water shortages.

Under normal water supply conditions, potable water production figures are recorded daily. Totals are reported weekly to the Field Services Director. Totals are reported monthly and incorporated into a water supply report.

During a Stage 1 or Stage 2 water shortage, daily production figures are reported to the field services director. Weekly production is compared to the target weekly production to verify that the reduction goal is being met. Weekly reports are forwarded to the department heads and general manager's office. Monthly reports are sent to the general manager and are included the Board of Directors meeting materials. If reduction goals are not met, the general manager will notify the Board of Directors that corrective action can be taken.

During a Stage 3, 4, or 5 water shortage, the procedure listed above will be followed, with the addition of a daily production report to the water treatment plant superintendent.

During emergency shortages, production figures are reported to the lead operator hourly or as needed, and to the field services director and department heads daily. Reports will also be provided to the general manager and board of directors.

Table C-10 summarizes the monitoring procedures.

Table C-10. Water Use Monitoring Mechanisms

Mechanism for determining actual reduction	Type and quality of data expected
Treatment plant production volume	Daily production will be monitored from the plants production meters. Production meters are accurate within AWWA standards.
Customer records	With the District's new billing system, customer accounts can be grouped by type or by specific customers to monitor usage. Data will be evaluated depending on situation. Data is based on customer meters which are accurate within AWWA standards.