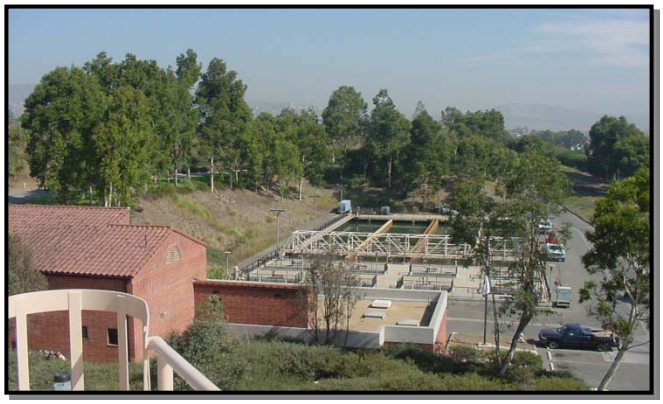
Sweetwater Authority
2010 Urban Water Management Plan

Final
Adopted June 8, 2011



2010 Urban Water Management Plan

Adopted by the Sweetwater Authority Governing Board
June 8, 2011

Prepared by
Sweetwater Authority
and

RMC
Water and Environment

Sweetwater Authority
505 Garrett Avenue
Chula Vista, CA 91910
www.sweetwater.org

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2010 Urban Water Management Plan
June 2011

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Acronyms and Abbreviations

20x2020	Requirements of Senate Bill x7-7 (Water Conservation Act of 2009)
acft	Acre-feet
Act	Urban Water Management Planning Act
AFY	Acre-feet per year
BMP	Best Management Practice
CII	Commercial, Industrial, and Institutional
CIMIS	California Irrigation Management Information System
CUWCC	California Urban Water Conservation Council
CVWD	Coachella Valley Water District
Desalination Facility	Richard A. Reynolds Groundwater Desalination Facility
DWR	California Department of Water Resources
EOC	Emergency Operations Center
ESP	San Diego County Water Authority's Emergency Storage Program
ETo	Evapotranspiration
gpcd	Gallons per capita per day
gpf	Gallons per flush
GPM	Gallons per minute

GPU	General Plan Update
HET	High Efficiency Toilets
HEW	High Efficiency Washers
IID	Imperial Irrigation District
MBR	Membrane Bioreactor Study
MCB	Marine Corps Base
Metro System	City of San Diego's Metropolitan Wastewater System
Metropolitan	Metropolitan Water District
MGD	Million gallons per day
MOU	Memorandum of Understanding
MTBE	Methyl tertiary butyl ether
Otay	Otay Water District
PALM	Professional Assistance for Landscape Management
Perdue Plant	Robert A. Perdue Water Treatment Plant
Port	Unified Port of San Diego
QSA	Quantification Settlement Agreement
PLWWTP	Point Loma Wastewater Treatment Plant
R/O	Reverse osmosis
RHNA	Regional Housing Needs Assessment
SANDAG	San Diego Association of Governments
SBID	South Bay Irrigation District
SBWRF	South Bay Water Reclamation Facility
SBx7-7	Senate Bill x7-7, also known as the Water Conservation Act of 2009
SCADA	Supervisory Control and Data Acquisition
SVSD	Spring Valley Sanitation District
Sweetwater	Sweetwater Authority
SWP	State Water Project
TDS	Total dissolved solids
THM	Trihalomethane
TOC	Total organic carbon
ULFT	Ultra Low Flow Toilets
URDS	Sweetwater Authority's Urban Runoff Diversion System
USGS	United States Geologic Survey
UWMP	Urban Water Management Plan
Water Authority	San Diego County Water Authority
WSDRP	Water Shortage and Drought Response Plan

1 Plan Preparation

Sweetwater Authority (Sweetwater) prepares an Urban Water Management Plan (UWMP) every five years in accordance with California Water Code Sections 10610 – 10656 of the Urban Water Management Planning Act of 1983 (Act), which were added by Statute 1983, Chapter 1009, and became effective on January 1, 1984. The Act, which was Assembly Bill 797, requires that every urban water supplier providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 acre-feet of water annually, shall prepare and adopt an UWMP in accordance with the prescribed requirements.

The Act requires urban water suppliers to file plans with the California Department of Water Resources (DWR) describing and evaluating reasonable and practical efficient water uses, reclamation, and conservation activities. As required by law, Sweetwater Authority's UWMP includes projected water supplies required to meet future demands. Sweetwater Authority prepared UWMPs in 1985, 1990, 1995, 2000, and 2005 and filed those plans with DWR.

The Water Conservation Act of 2009, enacted on November 10, 2009, requires all water suppliers to further increase water use efficiency. The legislation, which was Senate Bill x7-7 (SBx7-7), sets an overall goal of reducing per capita urban water use by 20% by 2020. The state shall make incremental progress towards this goal by reducing per capita water use by at least 10% by 2015. SBx7-7 requires that every urban water supplier shall include in its UWMP due July 2011 the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use. As such, this UWMP contains these SBx7-7 required elements in Section 3.4 (Baselines and Targets).

The California Urban Water Management Planning Act of 1983, as amended, and the Water Conservation Act of 2009 are included in **Appendix A**.

1.1 Sweetwater's 2010 Urban Water Management Plan

This 2010 UWMP was prepared by the staff of Sweetwater Authority and RMC Water & Environment, and constitutes the 2010 update to Sweetwater's 2005 UWMP. This plan is intended to ensure that adequate water supplies are available to meet existing and future demands in Sweetwater Authority's service area, which includes the western and central portions of the City of Chula Vista, all of the City of National City, and unincorporated areas of the County of San Diego (Bonita). Demands and supplies are assessed for a 25-year planning horizon and various demand scenarios are considered. Recently, the City of National City drafted a General Plan Update (GPU), and the Unified Port of San Diego (Port) and City of Chula Vista adopted the Chula Vista Bayfront Master Plan. These planning efforts are currently not reflected in future population projections developed by the San Diego Association of Governments (SANDAG). Therefore, Sweetwater Authority adjusted the SANDAG population projections to account for this potential future development and the potential water demands generated.

DWR has prepared a "Review for Completeness" checklist for use by DWR staff in their review of 2010 UWMPs. To assist DWR in their review of Sweetwater's 2010 UWMP, this checklist has been filled out and is included as **Appendix B**.

1.2 Agency Coordination

CWC 10620(d)(2): "#4: Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

CWC 10642: #55. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.

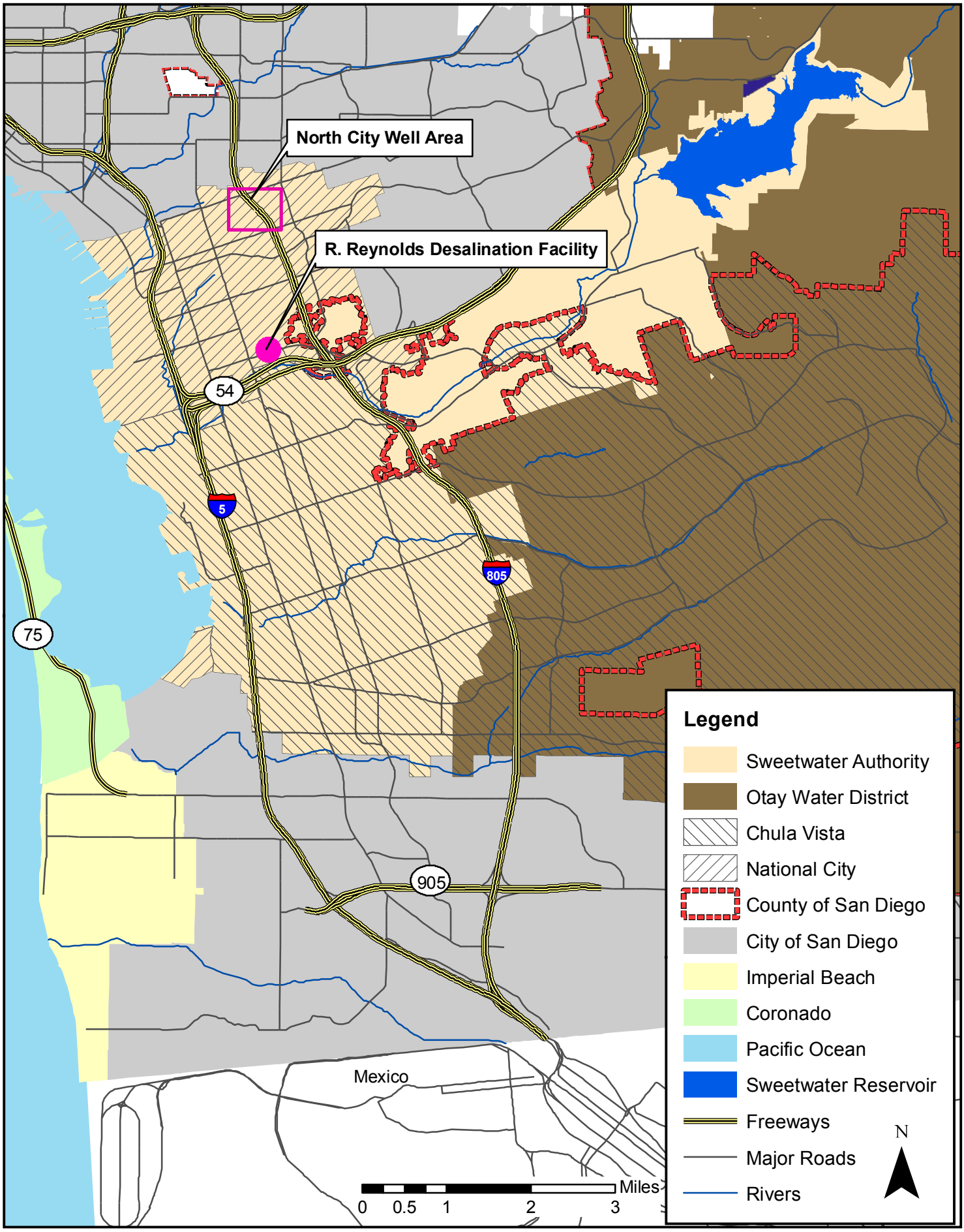
While preparing the 2010 UWMP, Sweetwater Authority coordinated its effort with a number of agencies and municipalities to ensure that the Plan accurately reflects future planning for Sweetwater's service area. In coordination with DWR, the Metropolitan Water District of Southern California (Metropolitan), the San Diego County Water Authority (Water Authority), and Sweetwater Authority attended a number of workshop sessions to discuss the requirements of the Act and to coordinate the regional UWMP planning efforts of Metropolitan, the Water Authority, and Water Authority member agencies. Sweetwater Authority participated in the development, reviewed, and provided comments to the Water Authority on its draft 2010 UWMP.

The agencies and municipalities with which Sweetwater Authority coordinated its Plan development are shown in **Table 1-1**. As described above, Sweetwater Authority coordinated with Metropolitan and the Water Authority as the wholesale water suppliers for the region. Sweetwater Authority also coordinated with the City of Chula Vista, City of National City, and County of San Diego as the land use authorities within the service area. These jurisdictions establish land use and housing growth policies that affect Sweetwater's water use projections. Finally, Sweetwater Authority coordinated with the Unified Port of San Diego, who has partnered with the City of Chula Vista on a large-scale waterfront planned development on San Diego Bay. **Figure 1-1** provides a map showing all of the relevant agencies and municipalities.

Table 1-1: Agency Coordination

DWR Table 1							
Coordination with Appropriate Agencies							
Coordinating Agencies	Participated in developing the plan	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
Metropolitan Water District of Southern California	✓						
San Diego County Water Authority	✓			✓	✓	✓	
City of Chula Vista		✓		✓	✓	✓	
City of National City				✓	✓	✓	
San Diego County				✓	✓	✓	
Unified Port of San Diego				✓			

Figure 1-1: Sweetwater Authority Service Area and Neighboring Agencies



Source: San Diego Geographic Information Source, 2009 and San Diego Association of Governments, 2005.

1.3 Plan Adoption, Submittal, and Implementation

CWC 10621(b): #6. Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

CWC 10621(c): #7. The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

CWC 10635(b): #54. The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

CWC10642: #56: Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area.

CWC 10642: #57. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

CWC 10643: #58. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

CWC 10644(a): #59. An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption.

CWC 10645: #60. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

At least 60 days prior to the public hearing on this 2010 UWMP, Sweetwater Authority notified the municipalities within its service area – the City of Chula Vista, City of National City, and County of San Diego – that the Plan was undergoing review and revision. This effort was intended to inform the municipalities of the planning effort and solicit comments and input. **Appendix C** contains copies of the city and county notifications.

Prior to adoption of the 2010 UWMP, Sweetwater Authority mailed the Plan to these municipalities and made the Plan available for public review. Section 10642 of the Act requires that the Plan shall be made available for public hearing to allow for comments from the general public, as well as comments from the local governmental agencies. Notice was published in the San Diego Union-Tribune on two subsequent weeks prior to the public hearing to inform interested parties. **Appendix C** contains copies of the public notices. In accordance with the Act, the draft 2010 UWMP was made available for public review on Sweetwater's website (www.sweetwater.org) and at Sweetwater's Administration Offices at 505 Garrett Avenue, Chula Vista, CA.

A public hearing, conducted by Sweetwater Authority, was held on June 8, 2011, at 505 Garrett Avenue, Chula Vista, CA, for the purpose of obtaining public comments and input on the draft UWMP. There were two public comments submitted to Sweetwater Authority: one submitted via email from the City of Chula Vista addressing population projections for the Chula Vista Bayfront Master Plan, and one stated orally at the hearing requesting development of a cash-for-grass incentive program. This final UWMP was adopted by the Sweetwater Authority Board of Directors after the public hearing by Resolution 11-11, which is included as **Appendix D**.

Within 30 days of submitting the UWMP to DWR, the adopted 2010 UWMP will be submitted to the California State Library, City of Chula Vista, City of National City, and County of San Diego. The adopted 2010 UWMP is available for public review on Sweetwater's website (www.sweetwater.org) and at Sweetwater's Administration Offices at 505 Garrett Avenue, Chula Vista, CA.

Sweetwater Authority shall implement this UWMP in accordance with the requirements set forth in the Urban Water Management Planning Act of 1983, as amended, and the Water Conservation Act of 2009.

2 System Description

Chapter 2 provides a description of Sweetwater Authority's history, service area, water supply system, population, climate, and demographics.

2.1 About Sweetwater Authority

10631(a): #8. Describe the service area of the supplier.

It is Sweetwater Authority's goal to diversify its supplies in order to maximize reliability and minimize cost to consumers. Sweetwater accomplishes this goal by maximizing its use of local resources to the greatest extent feasible, and through continuous and aggressive water conservation and efficiency programs. Examples of how Sweetwater Authority accomplishes this goal include: use of local potable groundwater supply, ongoing use and pursuit to increase brackish groundwater treatment and production, continued operation of two local surface water sources, construction and operation of the Urban Runoff Diversion System to protect surface water quality in the Sweetwater Reservoir, implementation of upgrades to its treatment plant to meet future water quality regulations, investigations into the feasibility of using recycled water within its service area, and participation in regional conservation programs.

2.1.1 History

The mission of Sweetwater Authority is to provide its current and future customers with a safe, reliable, and affordable water supply through the use of the best available technology, sound management practices, public participation, and a balanced approach to human and environmental needs.

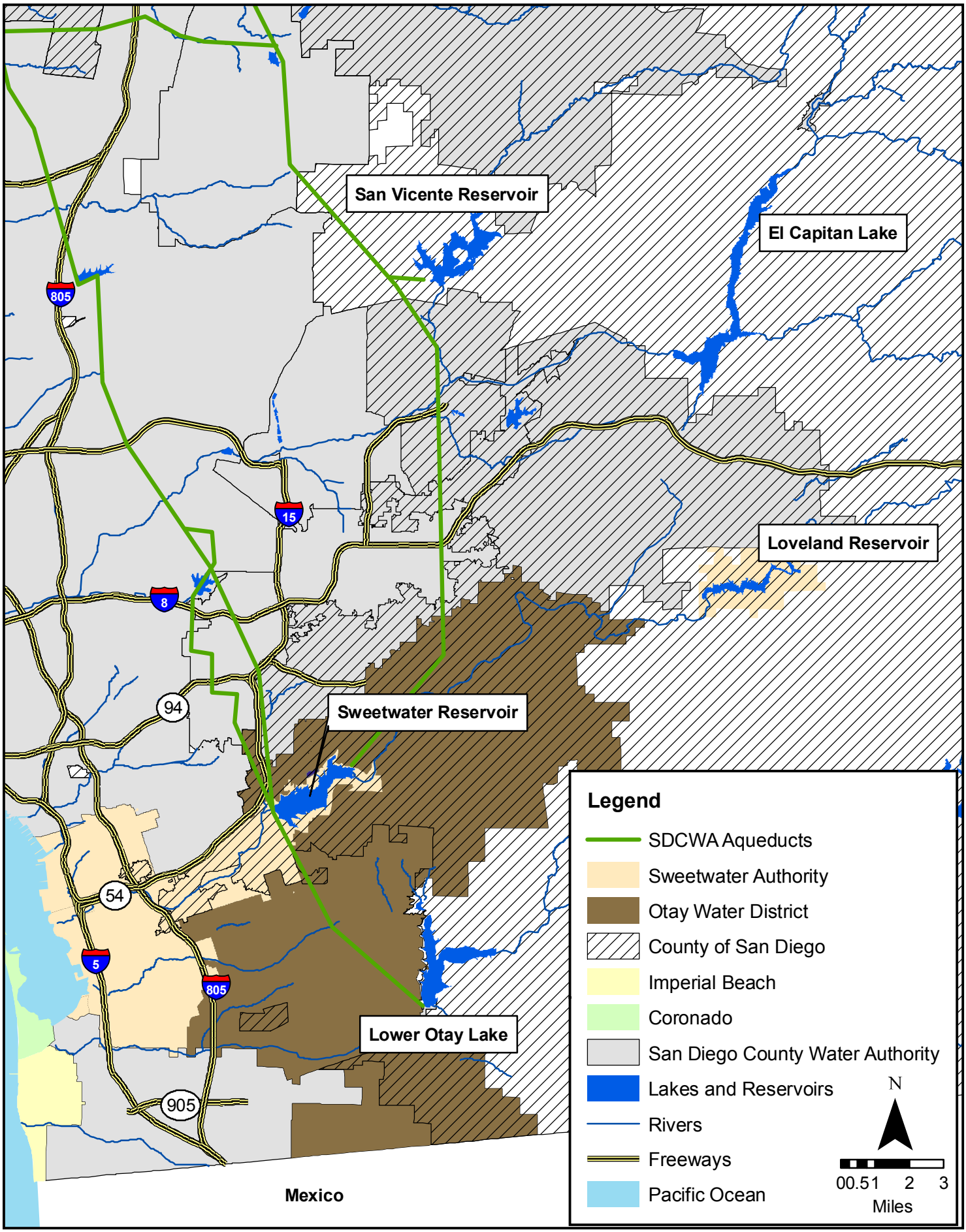
The South Bay Irrigation District (SBID) was formed during March 1951, under the Irrigation Law of California (Division 11, Section 20500 *et seq* of the Water Code), and includes the western portion of the City of Chula Vista and unincorporated areas within and adjacent to the Sweetwater River Valley. SBID's service area also overlaps small segments of the City of National City and the City of San Diego. The City of National City is part of the urbanized South Bay region of the San Diego metropolitan area located on San Diego Bay. Incorporated in 1887, National City is the second oldest city in San Diego County. SBID and the City of National City are both members of the Water Authority.

A condemnation suit was filed by SBID and the City of National City on May 10, 1968, and was finalized on August 30, 1977. SBID and the City of National City formed Sweetwater Authority by the Joint Powers Agreement of February 1, 1972. The Agreement was amended and re-adopted on July 22, 1977. Sweetwater Authority was formed pursuant to the provisions of Article 1, Chapter 5, Division 7, Title 1 (Section 6500 *et seq*) of the Government Code of the State of California. Sweetwater Authority is empowered through the Joint Powers Agreement to acquire, own, lease, operate, manage, maintain, and improve the water system. On May 1, 1990, SBID transferred ownership of its water system, including all of the property deeds and easements, to Sweetwater Authority.

2.1.2 Service Area

Sweetwater's water system provides water service to a population of approximately 177,288 within the western and central portions of the City of Chula Vista, all of the City of National City, and unincorporated areas of the County of San Diego (Bonita). The Sweetwater Authority service area covers 36.5 square miles and contains approximately 32,605 service connections. At the present time, there are no plans for expansion of Sweetwater's service area. Sweetwater's service area and the regional water system are shown in **Figure 2-1**.

Figure 2-1: Regional Water System



Source: San Diego Geographic Information Source, 2009 and San Diego Association of Governments, 2005.

2.1.3 Conveyance Treatment and Distribution Facilities

Sweetwater Authority obtains its water supply from four sources: imported treated and untreated water from the Water Authority; surface runoff from the Sweetwater River watershed, which is fully appropriated to Sweetwater Authority; the National City well field; and the Richard A. Reynolds Desalination Facility (Desalination Facility), a brackish groundwater desalination facility. In addition, the system has emergency water connections to three other water agencies, including Otay Water District, the City of San Diego, and the California American Water Company.

Sweetwater Authority owns and operates two surface water reservoirs: Sweetwater Reservoir and Loveland Reservoir. Sweetwater Reservoir was constructed in 1888 and has an approximate capacity of 28,079 acre-feet. Loveland Reservoir was constructed in 1945 and has an approximate capacity of 25,387 acre-feet. The Sweetwater River watershed is approximately 230 square miles. Sweetwater Reservoir is approximately 17 miles downstream of Loveland Reservoir.

Sweetwater Authority operates the Robert A. Perdue Water Treatment Plant (Perdue Plant) located adjacent to the Sweetwater Reservoir. The Perdue Plant has a treatment capacity of 30 million gallons per day (MGD) and is capable of treating surface runoff stored at Sweetwater Reservoir or imported raw water from the Water Authority. The plant currently includes four filters, chemical storage and feed equipment, and pretreatment facilities, including flocculation and dissolved air flotation basins. A 10 million-gallon reservoir at the site serves as clearwell storage for the Perdue Plant and as the point of delivery into the distribution system.

Sweetwater Authority operates the National City Wells that produce potable groundwater, and the Desalination Facility that produces drinking water from brackish groundwater. Both well fields pump from the San Diego Formation. The National City Wells consist of three wells: Nos. 2, 3, and 4. Well Nos. 3 and 4 operate, while Well No. 2, which is the oldest well, serves as a backup. Sweetwater has produced an average of 1,810 acre-feet per year from the National City Wells from 1954 to 2010.

The Desalination Facility commenced operation in January 2000. The facility was designed to extract groundwater from four alluvial wells and five deep San Diego Formation wells, located on the north side of the Sweetwater River. A sixth San Diego Formation well was constructed in 2006. The Desalination Facility treats brackish groundwater using reverse osmosis (R/O) technology. The Desalination Facility was initially designed to produce 4.0 MGD of drinking water; however, it was constructed with space to accommodate an expansion to produce up to 8 MGD.

Sweetwater Authority has 20 storage tanks that represent approximately 43.5 million gallons of treated water throughout its system, including a major buried reservoir with a capacity of 18 million gallons. The system has 23 pumping stations, with a total pumping capacity of approximately 36,000 gallons per minute (GPM) from all distribution pumping sources. Pipeline sizes range from 2-inch to 48-inch, with a collective length of approximately 388 miles.

2.2 Service Area Characteristics

10631(a): #9. Describe the service area climate.

10631(a): #10. Describe the service area current and projected population…The projected population estimates shall be based on data from the state, regional, or local service area population projections within the service area of the urban water supplier…

10631(a): #11. (Population projections) shall be in five-year increments to 20 years or as far as data is available.

10631(a): #12: Describe…other demographic factors affecting the supplier's water management plan.

2.2.1 Climate

Climate conditions within Sweetwater's service area are characteristically Mediterranean along the coast, with mild temperatures year-round. The majority of the service area is within two miles of San Diego Bay. However, the Bonita area and the two reservoirs are located farther inland, and experience slightly hotter summers and colder winters. More than 80% of the region's

rainfall occurs from December through March. Average annual rainfall is approximately 11.3 inches per year at the Sweetwater Reservoir, based on records dating back to 1888. Climate data for Sweetwater Reservoir is included in **Table 2-1**, which consists of 122 years of data (1888-2010) for monthly rainfall and 49 years of data (1961-2010) for monthly high temperatures. Average monthly evapotranspiration (ETo) data was obtained from the California Irrigation Management Information System (CIMIS) website for the Otay Lakes Station. Sweetwater's 30-year rainfall totals are shown on **Figure 2-2** and average monthly climate data are shown on **Figure 2-3**.

Table 2-1: Sweetwater Authority Climate Data

Sweetwater Authority Climate Data												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Average precipitation[1] (inches)	2.15	2.16	1.95	0.87	0.34	0.07	0.04	0.06	0.19	0.61	1.06	1.88
Average temperature[2] (ºF)	68.7	69.1.	69.1	71.8	72.9	76.2	81.4	84.1	82.8	79.0	73.6	68.9
Evapotranspiration Rate[3] (ETo)	0.98	1.43	2.44	3.31	4.03	4.49	4.64	4.03	3.31	2.44	1.18	0.61

Figure 2-2: Sweetwater Reservoir 30-Year Precipitation

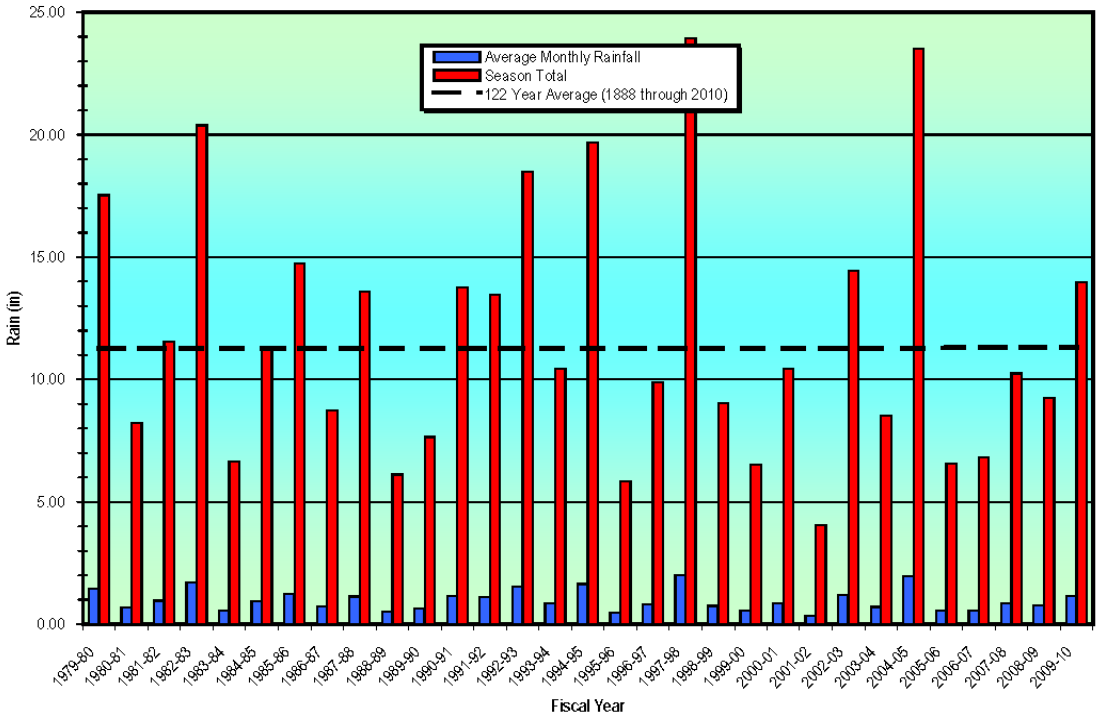
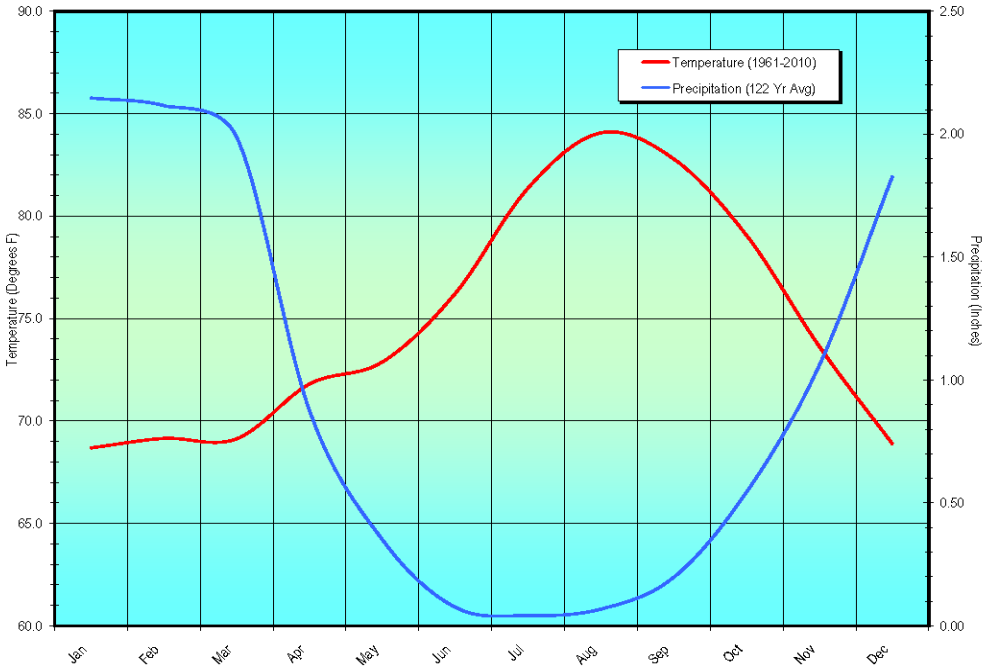


Figure 2-3: Sweetwater's Average Climate



2.2.2 Service Area Population

Population and housing growth data for Sweetwater Authority was obtained from SANDAG's 2050 Regional Growth Forecast (Series 12) for years 2010 through 2035. The Regional Growth Forecast does not include the projected increase in population due to the City of National City GPU, currently released in draft for public review, nor the Port and City of Chula Vista's adopted Chula Vista Bayfront Master Plan. However, the forecast does include other redevelopment projects identified in Chula Vista's Vision 2020 General Plan, and National City's Downtown Specific Plan and Westside Specific Plan.

In order to incorporate all projected population increases, Sweetwater Authority identified the land uses and densities associated with the National City GPU and the Chula Vista Bayfront Master Plan, and recalculated its estimated service area population. Population projections are shown in **Table 2-2**.

Table 2-2: Current and Projected Service Area Population

DWR Table 2							
Population — Current and Projected							
	2010	2015	2020	2025	2030	2035	Data source
SANDAG 2050 Population Projection	177,288	181,531	185,122	190,096	195,069	201,454	SANDAG 2050 Regional Growth Forecast
National City General Plan Update (GPU)	0	4,710	9,421	14,131	18,841	23,551	National City GPU
Port and Chula Vista Bayfront Master Plan	0	0	905	2,051	3,181	3,870	Port and Chula Vista Bayfront Master Plan
Service Area Population	177,288	186,241	195,448	206,278	217,091	228,875	

2.2.3 Demographics

Projected water use in Sweetwater's service area was generated using the projection of long-term demographics (population, housing, and employment) from the SANDAG 2050 Regional Growth Forecast and information provided by the cities of Chula Vista and National City. In addition to accounting for future demographic trends, Sweetwater's water use forecasts also incorporate current and future conservation efforts.

Due to widespread conservation efforts, demands within Sweetwater's service area have decreased over the past 25 years. Several changes in demographics are anticipated to increase water use in the future. Development of the Chula Vista Bayfront and redevelopment, including densification and mixed-use construction in the Chula Vista and National City downtown areas, will significantly increase the residential population in areas that are now predominantly commercial and retail in nature, except for property along the Chula Vista Bayfront, which is currently vacant land. This transition from undeveloped and formerly commercial to residential properties is anticipated to result in an increase in overall water demands within the service area. However, as new buildings replace existing buildings, water efficiency standards for toilets, showerheads, faucets, and urinals, as well as associated changes in outdoor irrigation practices to more "California friendly" landscapes, will cause the per capita water usage to decrease.

3 Water Demands

Chapter 3 describes Sweetwater's urban water system demands, including calculations of its baseline water use and urban water use targets. Current water system demand is quantified by category and projected over the UWMP planning horizon.

3.1 Historic Water Demands

> *10631(e)(1) and (2): #25. Quantify, to the extend records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to all of the following uses: single-family residential, multifamily, commercial, industrial, institutional and governmental, landscape, sales to other agencies, saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; agricultural.*

Sweetwater Authority categorizes water demands by residential, commercial, industrial, institutional, agricultural, and other uses. Residential includes domestic and irrigation use for single- and multi-family homes, as well as mobile homes. Commercial use includes retail and other businesses, restaurants, and golf courses. Industrial use generally includes manufacturing. Public use includes all governmental agencies, including the United States Navy and civic use such as schools, libraries, and park irrigation. Other use includes construction meters. **Figure 3-1** illustrates the water use breakdown for fiscal year 2009-2010.

Figure 3-1: Fiscal Year 2009-2010: Water Use by Sector

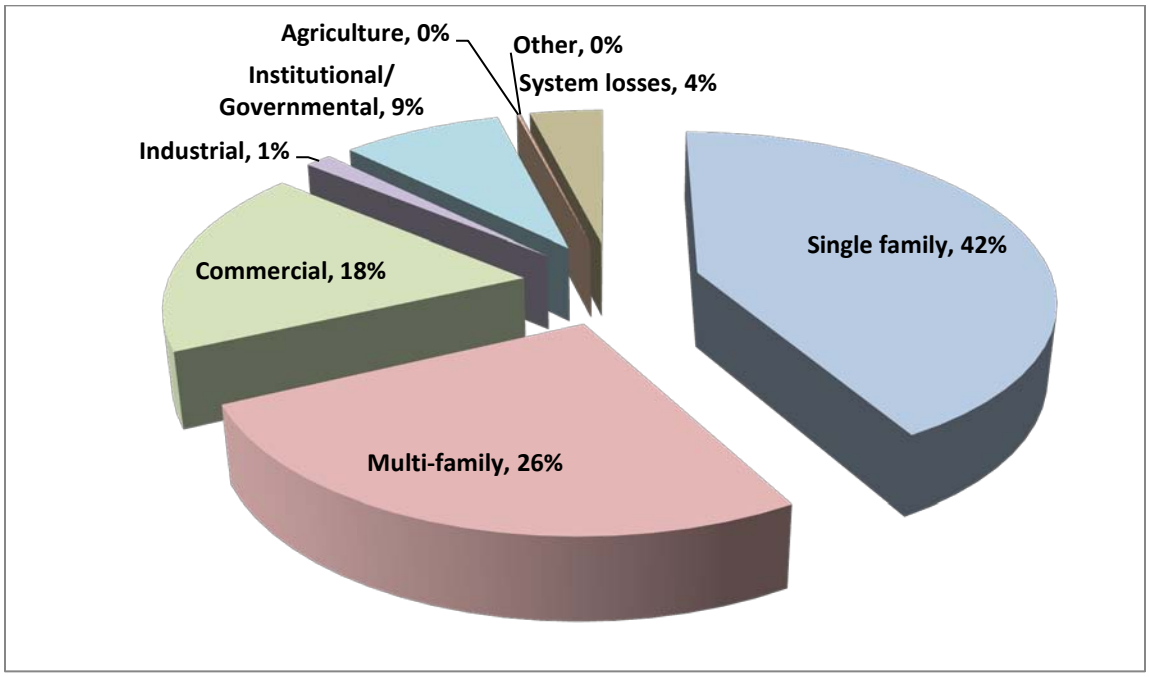


Table 3-1 shows past water demands from 2000 to 2010 by water use sector. **Table 3-2** highlights water demands and number of accounts by water use sector for the years 2005 and 2010.

Table 3-1: Historic and Current Water Deliveries (Sales) by Sector (2000 – 2010)

Historic and Current Water Deliveries by Sector (2000 – 2010)									
Fiscal Year[1]		Single Family	Multi Family	Commercial[2]	Industrial	Institutional/ Governmental	Agriculture	Other[3]	Total
2000	No. Meters	29,648	Unknown	3,396	47	513	11	26	33,641
	Usage (acft)	9,987	6,897	4,320	411	1,742	44	18	23,419
2001	No. Meters	29,664	Unknown	3,409	47	532	11	30	33,693
	Usage (acft)	9,518	6,827	4,327	442	1,964	46	20	23,144
2002	No. Meters	26,394	3,321	3,383	46	536	11	36	33,727
	Usage (acft)	9,902	6,844	4,289	419	1,825	53	29	23,361
2003	No. Meters	26,490	3,319	3,412	47	544	9	35	33,856
	Usage (acft)	9,701	6,709	4,349	367	2,360	48	27	23,561
2004	No. Meters	26,494	3,324	3,415	46	563	9	38	33,889
	Usage (acft)	10,046	6,736	4,549	408	2,110	51	39	23,939
2005	No. Meters	26,037	3,347	3,173	41	536	8	38	33,180
	Usage (acft)	9,507	6,586	4,407	405	1,897	31	42	22,875
2006	No. Meters	26,324	3,382	3,191	38	570	8	40	33,553
	Usage (acft)	9,919	6,505	4,425	382	2,375	35	44	23,685
2007	No. Meters	26,117	3,385	2,775	38	438	8	42	32,803
	Usage (acft)	10,998	5,713	4,866	376	2,119	31	44	24,147
2008	No. Meters	25,891	3,387	2,689	38	486	8	37	32,536
	Usage (acft)	10,203	6,026	4,235	386	1,597	27	40	22,514
2009	No. Meters	25,922	3,397	2,608	38	551	6	38	32,560
	Usage (acft)	9,627	5,862	4,044	415	1,917	22	19	21,906
2010	No. Meters	25,985	3,400	2,654	29	459	6	34	32,567
	Usage (acft)	8,689	5,462	3,721	292	1,781	21	16	19,982

1. *Fiscal Year July 1 through June 30.*
2. *Commercial includes domestic and irrigation for businesses and golf courses.*
3. *"Other" category includes construction meters.*

Table 3-2: Actual Water Deliveries, 2005 and 2010

DWR Tables 3 and 4				
Water Deliveries — Actual, 2005 and 2010				
	2005		2010	
	Metered[1]		Metered[1]	
Water use sectors	# of accounts	Volume	# of accounts	Volume
Single family	26,037	9,507	25,985	8,689
Multi-family	3,347	6,586	3,400	5,462
Commercial	3,173	4,407	2,654	3,721
Industrial	41	405	29	292
Institutional/Governmental	536	1,897	459	1,781
Agriculture	8	31	6	21
Landscape	N/A	N/A	N/A	N/A
Other[2]	38	42	34	16
Total Potable Demands	33,180	22,875	32,567	19,982
Unaccounted for Water	N/A	694	N/A	813
Total with Losses	33,180	23,569	32,567	20,795

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*

1. *All accounts in Sweetwater Authority's service area are metered.*
2. *"Other" category includes construction meters.*

3.2 Projected Water Demands

10631(e)(1) and (2): #25. Quantify, to the extend records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to all of the following uses: single-family residential, multifamily, commercial, industrial, institutional and governmental, landscape, sales to other agencies, saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; agricultural.

10631.1(a): #34. The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079 of the Health and Safety Code, as defined in the housing element of any city or county, or any city and county in the service area of the supplier.

Sweetwater Authority's demand projections are shown in **Tables 3-3 and 3-4** below. As previously stated, to fully quantify probable demands, Sweetwater Authority has included in its projections those demands that would be generated through future redevelopment and residential densification within Sweetwater Authority's service area. Sweetwater Authority has also added City of National City GPU and Chula Vista Bayfront Master Plan population growth into its demand projections, because they are not reflected in the SANDAG 2050 Regional Growth Forecast. Sweetwater Authority, under Senate Bill 610, has recently prepared Water Supply Assessments for the City of Chula Vista Urban Core Specific Plan, the Port and Chula Vista's Bayfront Master Plan, National City Westside Plan, and National City GPU.

The projected water demands are based on an assumed water demand of approximately 105 gallons per capita per day (gpcd). Water demands throughout Sweetwater's service area were 108 gpcd in 2009 and dropped to 105 gpcd in 2010. This reduction was a result of the adoption of drought response policies and voluntary conservation measures. Sweetwater Authority anticipates that water demands will remain at approximately 2010 levels once the current Drought Watch is lifted; changes in customer behavior, landscaping trends, and water efficient appliances are expected to remain. As such, Sweetwater Authority has assumed a straight-line projection of water demands through 2035 based on an average 105 gpcd. **Figure 3-2** illustrates historical and projected water demands for Sweetwater's service area.

Table 3-3: Projected Water Demands (2015 and 2020)

DWR Tables 5 and 6				
Water Deliveries — Projected, 2015 and 2020				
	2015		2020	
	Metered[1]		Metered[1]	
Water use sectors	# of accounts	Volume	# of accounts	Volume
Single family	27,371	9,152	28,724	9,605
Multi-family	3,581	5,753	3,758	6,038
Commercial	2,796	3,919	2,934	4,113
Industrial	31	308	32	323
Institutional/Governmental	483	1,876	507	1,969
Agriculture	6	22	7	23
Landscape	N/A	N/A	N/A	N/A
Other[2]	36	17	38	18
Total Potable Demands	34,304	21,048	36,000	22,088
Unaccounted for Water	N/A	842	N/A	884
Total with Losses	34,304	21,890	36,000	22,972

Units (circle one): acre-feet per year million gallons per year cubic feet per year

1. *All accounts in Sweetwater Authority's service area are metered.*
2. *"Other" category includes construction meters.*

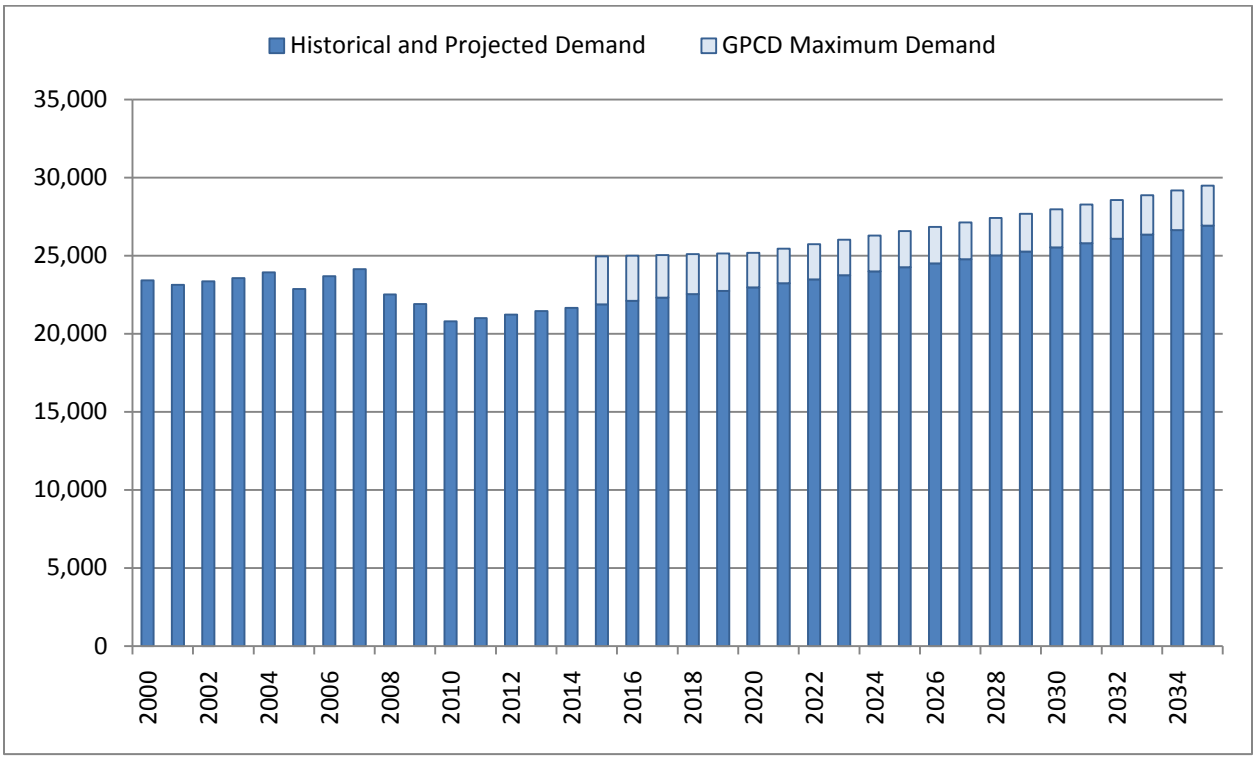
Table 3-4: Projected Water Demands (2025, 2030, and 2035)

DWR Table 7 Water Deliveries — Projected 2025, 2030, and 2035						
	2025		2030		2035	
	Metered[1]		Metered[1]		Metered[1]	
Water use sectors	# of accounts	Volume	# of accounts	Volume	# of accounts	Volume
Single family	30,316	10,137	31,905	10,669	33,637	11,248
Multi-family	3,967	6,372	4,175	6,706	4,401	7,070
Commercial	3,096	4,341	3,259	4,569	3,436	4,817
Industrial	34	341	36	359	38	378
Institutional/governmental	535	2,078	564	2,187	594	2,305
Agriculture	7	24	7	26	8	27
Landscape	N/A	N/A	N/A	N/A	N/A	N/A
Other[2]	40	19	42	20	44	21
Total Potable Demands	37,995	23,312	39,986	24,534	42,157	25,866
Unaccounted for Water	N/A	948	N/A	998	N/A	1,052
Total with Losses	37,995	24,261	39,986	25,532	42,157	26,918

Units (circle one): acre-feet per year million gallons per year cubic feet per year

1. *All accounts in Sweetwater Authority's service area are metered.*
2. *"Other" category includes construction meters.*

Figure 3-2: Historical and Projected Water Demands (acre-feet)



3.2.1 Low-Income Residential Water Use

Sweetwater Authority's service area includes the western and central portions of the City of Chula Vista, all of the City of National City, and unincorporated areas of the County of San Diego (Bonita). Each of these municipalities is projected to develop low-income housing units in accordance with the Regional Housing Needs Assessment (RHNA) established by the State of California and SANDAG. Due to the limited amount of land within the City of San Diego's jurisdiction that is served by Sweetwater, the City of San Diego was not considered within the analysis of low-income residential water use.

The Housing Element of the Chula Vista General Plan (City of Chula Vista 2006) notes that the western portion of Chula Vista, which includes the Bayfront Master Plan area and is served by Sweetwater Authority, would be expected to assume a total of 7,153 additional low-income housing units in the future (Chula Vista 2006). The General Plan notes that all RHNA allocation units would be multi-family at a minimum density of 30 dwelling units per acres, and that the average population density for Chula Vista is 3.3 people per dwelling unit. The General Plan also indicates that with existing zoning there is only capacity for an additional 834 units within western Chula Vista, and that it would require substantial up-zoning and infill development to increase capacity beyond its existing level. Utilizing the demographics stated above, and assuming existing zoning, this analysis assumed that 834 low income units, and therefore 2,752 low-income persons, would be distributed in the Sweetwater Authority's service area in Chula Vista between 2015 and 2035. Assuming that these residents consume water in accordance with targets set for SBx7-7 (see Section 3.4 below for more information), the City of Chula Vista would require 74 AFY for low income households in 2015, and 71 AFY from 2020 to 2035.

The Housing Element of the National City General Plan (National City 2007) demonstrates that the city's RHNA allocation was 117 units from 2005 to 2010. Past data regarding low-income housing shows that 93% of past low-income projects have been for multi-family residential housing, whereas 7% of low-income projects were for single-family units. These proportions were used to project future low-income residences in National City, which were expected to remain at 117 units every five years. Using the same multi- to single-family residential proportions, this analysis assumes that National City would require an additional 8 single-family and 109 multi-family residential units every five years. Assuming that housing density remains constant at its current value of 3.4 people per dwelling unit, the Sweetwater Authority would need to provide water to 28 persons in single family houses and 369 persons in multi-family houses every five years beginning in 2015. As with the City of Chula Vista, this analysis assumed that the new 1,983 low-income persons in National City would consume water in accordance with targets set for SBx7-7. In total, Sweetwater Authority would need to provide 4 AFY for low-income single family residents every five years, and 50 AFY for multi-family residents in 2015 and 48 AFY to those residents every five years from 2020 to 2035.

The Community of Bonita lies within the Sweetwater Community Planning Area of San Diego County, which is governed by the Sweetwater Community Plan (County of San Diego 2005). Approximately 50% of the Sweetwater Community Planning Area is designated for the Community of Bonita and, therefore, Sweetwater Authority provides water to approximately 50% of the Sweetwater Community Planning Area. The RHNA allocation for the Sweetwater Community Planning Area was projected to be 35 units every year, or 175 units every five years. Assuming that 50% of these units would be allocated to Bonita, Bonita would acquire approximately 87.5 low-income units every five years. The Sweetwater Community Plan states that, "any multi-family residential should be considered for its potential for meeting some of the fair share, low-income housing goals of the Sweetwater Community Plan," therefore it was assumed that all of Bonita's low-income housing would be comprised of multi-family units. Using the Countywide average housing density of 3 persons per dwelling unit, it is anticipated that Bonita would provide housing to 263 low income persons every five years or 1,315 persons through 2035. As with Chula Vista and National City, this analysis assumed that low-income households would consume water in accordance with targets set for SBx7-7. In total, Sweetwater Authority would need to provide 35 AFY to low-income residential units in 2015, and 34 AFY to low-income units every five years from 2020 to 2035.

Table 3-5 below demonstrates the projected water uses of low-income housing units utilizing the analysis described above. All of these low-income water demands are accounted for in Tables 3-2 and 3-3 above.

Table 3-5: Projected Future Water Demands for Low Income Residential Units

DWR Table 8					
Low-Income Projected Water Demands					
Low Income Water Demands	2015	2020	2025	2030	2035
Chula Vista single-family residential	0	0	0	0	0
Chula Vista multi-family residential	74	71	71	71	71
National City single-family residential	4	4	4	4	4
National City multi-family residential	50	48	48	48	48
Bonita single-family residential	0	0	0	0	0
Bonita multi-family residential	35	34	34	34	34
Single-Family Residential Total	4	4	4	4	4
Multi-Family Residential Total	159	152	152	152	152
Total	163	156	156	156	156
Units (circle one): acre-feet per year million gallons per year cubic feet per year					

3.2.2 Water Sales

Sweetwater Authority currently transfers and exchanges water on an emergency basis with three neighboring water districts. Sweetwater has five interconnections with the City of San Diego, which borders to the north and south; six interconnections with Otay Water District, which borders to the east and south; and one interconnection with California American Water Company, which borders to the south. At the present time, the agency interconnections are used for emergencies and planned shutdowns. The interconnections with California-American Water Company benefit both agencies, and the interconnections with the City of San Diego and Otay Water District only benefit Sweetwater due to hydraulic gradient differentials. However, pumps could be temporarily connected to the City of San Diego and Otay Water District interconnections in order to serve these municipalities.

When Sweetwater Reservoir is at full capacity and spilling, Sweetwater Authority has in the past sold excess water to California-American Water Company. In the winter of 1995, Sweetwater sold excess water to California-American Water Company for several months. However, such occurrence is not a planned sale and therefore is not included within Sweetwater's projections. **Table 3-6** reports that potential sales will be excess supply only.

Table 3-6: Past, Current, and Future Projected Sales to Other Water Agencies

DWR Table 9							
Sales to Other Water Agencies							
Water distributed	2005	2010	2015	2020	2025	2030	2035
California-American Water Company	0	0	Excess only	Excess only	Excess only	Excess only	Excess only
Total	0	0	0	0	0	0	0
Units (circle one): acre-feet per year million gallons per year cubic feet per year							

3.2.3 Other Water Demands

Sweetwater Authority does not generally have other water demands on its system, other than system losses identified as unreported leaks or unaccounted for water. Sweetwater's water system operation is in good condition, demonstrated by system losses of approximately 3-6%, compared to the industry average of 10% (Sweetwater Authority 2008b). **Table 3-7** reports past, current, and projected system losses at an ongoing rate of 4%. These losses are also reported in Tables 3-2 through 3-4 above.

Table 3-7: Other Water Demands

DWR Table 10							
Additional Water Uses and Losses							
Water use[1]	2005	2010	2015	2020	2025	2030	2035
System losses[1]	694	813	842	884	948	998	1,052
Total	694	813	842	884	948	998	1,052

Units (circle one): acre-feet per year million gallons per year cubic feet per year
1. This is defined as water that was used due to unreported leaks or water use (SWA 2008b).

Table 3-8 provides a summary of the past, current, and projected water use in the Sweetwater Authority service area. This table includes total water deliveries, sales to other agencies, and system losses. Total water use within the Sweetwater Authority service area is anticipated to increase from approximately 20,800 acre-feet in 2010 to 26,900 acre-feet in 2035.

Table 3-8: Total Water Use (2005 – 2035)

DWR Table 11							
Total Water Use							
Water Use	2005	2010	2015	2020	2025	2030	2035
Total water deliveries	22,875	19,982	21,048	22,088	23,312	24,534	25,866
Sales to other water agencies	0	0	0	0	0	0	0
Additional water uses and losses	694	813	842	884	948	998	1,052
Total	23,569	20,795	21,890	22,972	24,261	25,532	26,918

Units (circle one): acre-feet per year million gallons per year cubic feet per year

3.3 Wholesale Water Use Projections

10631(k): #33. Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available…

Table 3-9 shows the Water Authority's projected water sales to Sweetwater Authority. Water sales were calculated using SBx7-7 compliant baseline demands for each member agency, minus verifiable local supply projections. Therefore, the projected imported water sales are directly tied to the success of local supply development and compliance with SBx7-7 conservation savings requirements. These sales projections were calculated by the Sweetwater Authority based on projected future imported water demands. The Water Authority has projected higher demands for the Sweetwater Authority than those presented within **Table 3-9** within their 2010 UWMP Draft because they assumed water demands using the SBx7-7 targets (see Section 3.4 below). As described above, Sweetwater Authority assumed water demands of 105 gpcd due to increased water conservation activities, which are anticipated to lower Sweetwater's imported water demand.

Table 3-9: Sweetwater Authority Demand Projections to San Diego County Water Authority

DWR Table 12							
Retail Agency Demand Projections Provided to Wholesale Supplier							
Wholesaler	Contracted Volume	2010	2015	2020	2025	2030	2035
San Diego County Water Authority	No Set Limit	14,543	8,690	4,572	5,861	7,132	8,518

3.4 Baselines and Targets

10608.20(e): #1. An urban retail water supplier shall include in its urban water management plan…due in 2010 the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

10608.26: #2. Urban wholesale water suppliers shall include in the urban water management plans…an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part. Urban retail water suppliers are to prepare a plan for implementing the Water Conservation Bill of 2009 requirements and conduct a public meeting which includes consideration of economic impacts.

3.4.1 Baseline Water Use

The Water Conservation Bill of 2009 (SBx7-7) was enacted in California in November 2009. The overall goal of this legislation is to reduce per capita urban water use by 20% by the year 2020 (known as 20x2020). To determine if a water retailer meets stipulations set forth within SBx7-7, it must first determine a baseline daily per capita water use. This baseline should detail the amount of water used within the urban water supplier's distribution service area on a per capita basis, using water use and population estimates from two defined baseline periods. The two baseline periods to be used during the calculation of base daily per capita water use are:

- 10- to 15-year continuous base period – A 10-year baseline should be used if the water retailer used less than 10% recycled water in 2008; a 15-year baseline should be used if the amount of recycled water delivered is 10% or greater in 2008.
- 5-year continuous base period – The 5-year period is used to determine whether the 2020 per capita water use target meets the legislation's minimum water use reduction requirements of at least a 5 percent reduction in per capita water use.

Tables 3-10, 3-11, and 3-12 below provide an overview of the base period ranges.

Table 3-10: Baseline Water Use Assumptions

DWR Table 13			
Base Period Ranges			
Base	Parameter	Value	Units
10- to 15-year base period	2008 total water deliveries	20,042	*AFY*
	2008 total volume of delivered recycled water	0	*AFY*
	2008 recycled water as a percent of total deliveries	0	percent
	Number of years in base period	10	years
	Year beginning base period range	1997	
	Year ending base period range	2006	
5-year base period	Number of years in base period	5	years
	Year beginning base period range	2003	
	Year ending base period range	2007	
Units (circle one): (*acre-feet per year*) *million gallons per year* *cubic feet per year*			

10-Year Baseline

Because Sweetwater Authority does not have the capabilities to deliver recycled water to its customers at this time (0% recycled water in 2008), Sweetwater has used a 10-year baseline to develop its per capita water use targets. This baseline was established based on the period of 1997 – 2006, which resulted in a base daily per capita water use of 124 gpcd. **Table 3-11** shows the 10-year baseline calculations.

Table 3-11: 10-Year Base Daily per Capita Water Use

DWR Table 14				
Base Daily Per Capita Water Use — 10- to 15-year Range				
Base period year		Distribution System Population	Daily system gross water use (gpd)	Annual daily per capita water use (gpcd)
Sequence Year	Calendar Year			
Year 1	1997	171,800	21,468,671	125
Year 2	1998	172,537	20,800,007	121
Year 3	1999	175,482	21,143,713	120
Year 4	2000	175,500	23,067,573	131
Year 5	2001	172,000	22,141,799	129
Year 6	2002	175,000	22,498,896	129
Year 7	2003	175,000	22,093,591	126
Year 8	2004	177,000	22,670,302	128
Year 9	2005	180,000	21,041,940	117
Year 10	2006	184,874	21,737,386	118
			Base Daily Per Capita Water Use	124

5-Year Baseline

Sweetwater Authority further calculated water use for a 5-year baseline period, and used that value to determine a minimum required reduction in water use by 2020. The 5-year baseline was established based on the period of 2003 – 2007, which resulted in a base daily per capita water use of 121 gpcd. Sweetwater's minimum water use reduction target was then calculated as 95% of the 5-year base daily per capita water use or 115 gpcd. **Table 3-12** shows the 5-year baseline calculations.

Table 3-12: 5-Year Base Daily per Capita Water Use

DWR Table 15				
Base Daily Per Capita Water Use — 5-year Range				
Base period year		Distribution System Population	Daily system gross water use (mgd)	Annual daily per capita water use (gpcd)
Sequence Year	Calendar Year			
Year 1	2003	175,000	22,093,591	126
Year 2	2004	177,000	22,670,302	128
Year 3	2005	180,000	21,041,940	117
Year 4	2006	184,874	21,737,386	118
Year 5	2007	184,874	21,542,768	117
			Base Daily Per Capita Water Use	121
			Minimum Water Use Reduction Target	115

3.4.2 Water Use Targets

After establishing its baseline water use, Sweetwater Authority set an urban water use target that demonstrates planned daily per capita water use within the service area, taking into account existing and planned water conservation and future projects. Sweetwater Authority also established an interim urban water use target that demonstrates the planned daily per capita water use in 2015. **Table 3-13** provides a summary of Sweetwater's 2020 and interim 2015 water use targets, established in accordance with SBx7-7.

2020 Water Use Target

DWR has established four technical methodologies that may be used to support a water supplier in determining its urban water use targets. Sweetwater Authority originally selected *Method 3: 95 Percent of Hydrologic Region Target* as its means to determine a 2020 water use target. This method is defined within California Water Code Section 10608.20(b)(3) and is calculated as 95% of the 20x2020 target established for the hydrologic region within which the water supplier is located. Sweetwater Authority is located within the South Coast Hydrologic Region, for which DWR has established 180 gpcd as the baseline water use, 165 gpcd as the 2015 interim target, and 149 gpcd as the 2020 water use target. According to Method 3, Sweetwater's water use target would be established as 142 gpcd (95% of 149 gpcd).

Although Sweetwater Authority selected Method 3, SBx7-7 stipulates that urban water suppliers must calculate a minimum water use reduction target using a 5-year baseline shown in **Table 3-12**. When Sweetwater Authority confirmed this target by comparing it against the minimum water use reduction target of 115 gpcd determined by its 5-year baseline, the minimum reduction target was lower. Therefore, Sweetwater Authority could not use the Method 3 calculation, and must use the minimum reduction target of 115 gpcd as its 2020 water use target.

2015 Interim Target

The 2015 interim target was established by calculating the sum of the base daily per capita water use of 124 gpcd and the 2020 target of 115 gpcd, and dividing in half. This results in a 2015 interim target of 120 gpcd.

Table 3-13: Sweetwater Authority's 2015 and 2020 Water Use Targets

Sweetwater Authority's 2020 and 2015 Water Use Targets	
Base Daily Per Capita Water Use	124 gpcd
2020 Water Use Target – 95% of 5-Year Base Daily Per Capita Water Use (Minimum Reduction Target)	115 gpcd
2015 Interim Target	120 gpcd

4 Sweetwater's Supplies

Water used in Sweetwater's service area comes from various sources, including: local groundwater, a brackish groundwater desalination facility, local surface water, and imported water. The imported water is from the Colorado River and the State Water Project (SWP) and is delivered by the Water Authority, which is either purchased from or wheeled by Metropolitan. Chapter 4 describes these water sources, potential limitations (physical or political), water quality, and planned water supply projects.

As shown in **Figure 4-1**, local sources currently meet approximately 59% of the water needs within Sweetwater's service area, while the 41% balance is met with imported water. The percentage of local to imported water varies greatly each year due to local rainfall patterns. The chart below details the availability of water supply for 22,300 acre-feet annual demand, which is the three-year average from 2008 – 2010. In a normal water year, Sweetwater estimates availability of 7,400 acre-feet from local surface water (33%), 2,200 acre-feet from the National City Wells (10%), and 3,600 acre-feet from the Desalination Facility (16%). **Table 4-1** provides a summary of Sweetwater Authority's current and projected water supply sources, described in detail in the following sections.

Figure 4-1: Estimated Current Source of Supply

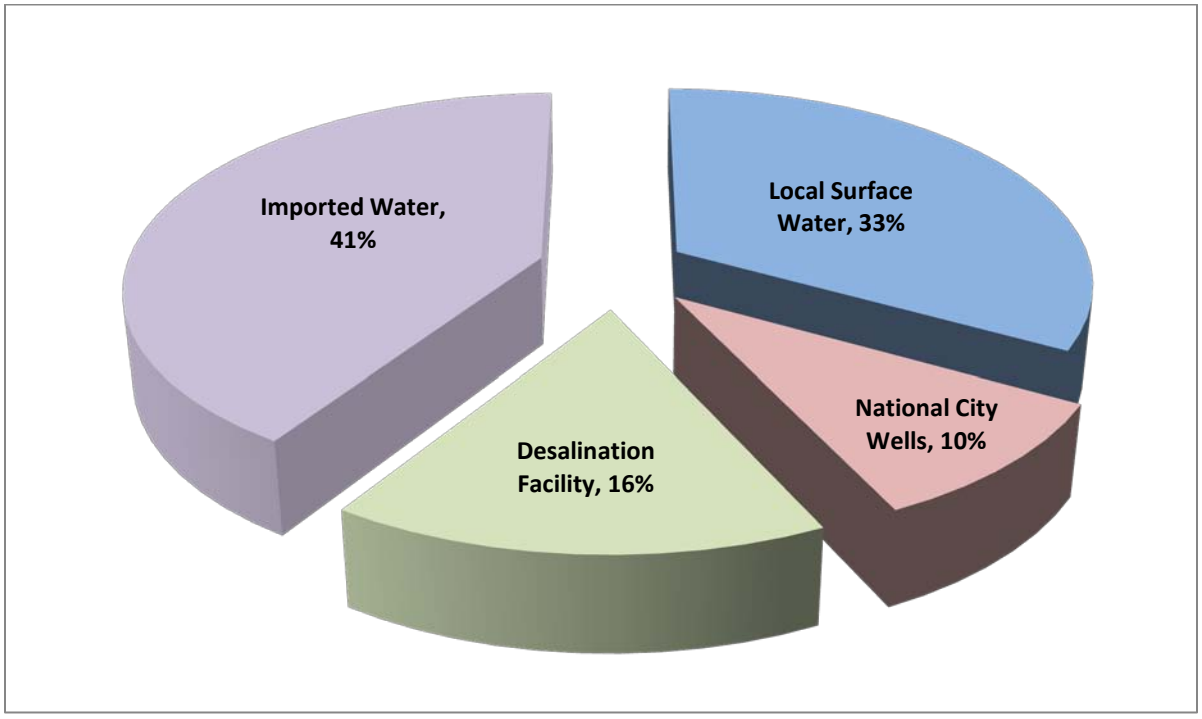


Table 4-1: Current and Projected Water Supplies

DWR Table 16							
Water Supplies — Current and Projected							
Water Supply Sources		2010	2015	2020	2025	2030	2035
Water purchased from:	Wholesaler supplied volume						
San Diego County Water Authority	yes	14,543	8,690	4,572	5,861	7,132	8,518
Supplier-produced groundwater		5,351	5,800	11,000	11,000	11,000	11,000
Supplier-produced surface water		901	7,400	7,400	7,400	7,400	7,400
Total		20,795	21,890	22,972	24,261	25,532	26,918
Units (circle one): acre-feet per year million gallons per year cubic feet per year							

4.1 Local Supplies

10631(b): #13. Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).

Sweetwater Authority obtains its local supply from three sources: surface runoff from the Sweetwater River watershed, which is fully appropriated to Sweetwater; the National City well field; and a brackish groundwater desalination facility. Sweetwater's historic and projected normal year local supplies are shown in **Table 4-2**. Normal year surface supply projections are based on the 50-year average production from the Perdue Plant. Projected average year groundwater supplies are limited by pumping and treatment capacity.

Table 4-2: Historic and Projected Normal Water Year Local Supplies

Historic and Projected Normal Water Year Local Supplies				
Fiscal Year	Total Local Supply (acre-feet)	Local Supply (acre-feet)		
		Reservoirs	National City Wells	Desalination Facility
1980	18,700	17,392	1,308	---
1985	21,271	20,052	1,219	---
1990	1853	---	1,853	---
1995	17,247	15,855	1,392	---
2000	20,319	16,302	1,899	2,118
2005	12,228	8,449	1,793	1,986
2010	6,252	901	2,175	3,176
2015	13,200	7,400	2,200	3,600
2020	18,400	7,400	2,200	8,800
2025	18,400	7,400	2,200	8,800
2030	18,400	7,400	2,200	8,800
2035	18,400	7,400	2,200	8,800

4.1.1 Surface Water

Sweetwater Authority owns and operates two surface water reservoirs: Sweetwater Reservoir and Loveland Reservoir. Sweetwater Reservoir was constructed in 1888 and has an approximate capacity of 28,079 acre-feet. Part of this reservoir's capacity, 1,700 acre-feet, is kept as emergency storage based on average demands for one month in the Sweetwater service area. Loveland Reservoir was constructed in 1945 and has an approximate capacity of 25,387 acre-feet. Loveland Reservoir has an emergency pool that holds three months of average demand plus enough to cover transfer losses from Loveland Reservoir to Sweetwater Reservoir, for a total of 6,375 acre-feet held in emergency storage.

The Sweetwater River watershed is approximately 230 square miles. Sweetwater Reservoir is approximately 17 miles downstream of Loveland Reservoir. Water captured in Loveland Reservoir is either released or naturally spilled to the Sweetwater River channel for conveyance downstream to the Sweetwater Reservoir. Because the Sweetwater River is an unlined channel, normal transmission losses are about 20% of the water released from Loveland Reservoir.

Sweetwater Authority operates the Perdue Plant located adjacent to the Sweetwater Reservoir. The Perdue Plant has a treatment capacity of 30 mgd and is capable of treating surface runoff stored at Sweetwater Reservoir or imported raw water from the Water Authority. The plant currently includes four filters, chemical storage and feed equipment, and pretreatment facilities, including flocculation and dissolved air flotation basins. A 10 million-gallon reservoir at the site serves as clearwell storage for the plant and as the point of delivery into the distribution system.

Local supply from Sweetwater Reservoir varies from zero to nearly 100% depending on local rainfall and runoff conditions. During wet years, when Sweetwater and Loveland Reservoirs are at or near full capacity, they are capable of providing up to a two-year supply for Sweetwater Authority consumers.

4.1.2 Groundwater

10631(b): #14 (Is) groundwater…identified as an existing or planned source of water available to the supplier…?

10631(b)(1): #15. (Provide a) copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75…

10631(b)(2): #16. (Provide a) description of any groundwater basin or basins from which the urban water supplier pumps groundwater.

10631(b)(2): #17. For those basins for which a court or the board has adjudicated the rights to pump groundwater…

10631(b)(2): #18. (Provide) a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree…

10631(b)(2): #19. For basins that have not been adjudicated, (provide) information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue... and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

10631(b)(3): #20. (Provide a) detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

10631(b)(4): #21. (Provide a) detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

Sweetwater Authority produces groundwater from the Sweetwater Valley Groundwater Basin identified in DWR's *Bulletin 118: California's Groundwater Update 2003* as Basin Number 9-17. Sweetwater Authority has adopted an interim groundwater management plan that governs groundwater management. The interim groundwater management plan is included as **Appendix E**.

The 9.3-square mile Sweetwater Valley Groundwater Basin underlies an alluvial valley that empties into the San Diego Bay and is bounded on the east by the impermeable Santiago Peak volcanic rocks. The north and south boundaries are Pliocene and Pleistocene semi-permeable terrestrial deposits, which constitute valley walls. The western boundary is San Diego Bay. Basin

recharge is derived from seasonal runoff from precipitation, discharge from the Sweetwater and Loveland Reservoirs, and underflow from the reservoirs (DWR 2004).

Two water-bearing formations in the basin are the Sweetwater River Basin Alluvial Aquifer and the San Diego Formation. The Alluvial Aquifer underlies the Sweetwater River from the Sweetwater Reservoir to San Diego Bay. The alluvial deposits are composed of sand, silt, and cobbles, and are estimated to be as much as 250 feet thick. Depth to groundwater varies between zero at I-805 to 20 feet at the Sweetwater Dam (Sweetwater Authority 2009). Underlying the Alluvial Aquifer is the San Diego Formation, which extends north to the San Diego River valley and south to the U.S./Mexico border. The San Diego Formation is comprised of sediments deposited under the San Diego Bay and Sweetwater River valley, estimated to vary in thickness from 800 to 2,400 feet. The connectivity of the San Diego Formation and the Alluvial Aquifer is not well understood, but recent studies have suggested that there is not a well-defined confining unit between the two units (Sweetwater Authority 2009). The dominant slope of the water table is toward the west and northwest, and groundwater levels are significantly above sea level.

The Water Authority has estimated a groundwater storage capacity of 13,000 acre-feet in the Alluvial Aquifer and about 960,000 acre-feet in the San Diego Formation (Water Authority 1997). These values suggest a total storage capacity of about 973,000 acre-feet for this basin. The Sweetwater Valley Groundwater Basin is not an adjudicated basin; therefore there has never been any restriction on the rate of extraction since groundwater production began. According to Sweetwater Authority records, water levels in production wells near National City have remained stable since about 1950. In addition, the Sweetwater Valley Groundwater Basin has not been identified in DWR's *Bulletin 118* as in overdraft condition.

Sweetwater Authority operates the National City Wells that produce potable groundwater, and the Desalination Facility that produces drinking water from brackish groundwater. Both well fields pump from the San Diego Formation. The National City Wells consist of three wells: Nos. 2, 3, and 4. Well Nos. 3 and 4 currently operate, while Well No. 2, which is the oldest well, serves as a backup. Sweetwater has produced an average of 1,810 acre-feet per year from the National City Wells from 1954 to 2010. The recent addition of Well No.4 has increased the average production from the National City Wells to approximately 2,200 acre-feet per year.

The Desalination Facility commenced operation in January 2000. The facility was designed to extract brackish groundwater from four alluvial wells and five deep San Diego Formation wells, located on the north side of the Sweetwater River. A sixth San Diego Formation well was constructed in 2006. The Desalination Facility was initially designed to produce 4.0 MGD of drinking water; however, it was constructed with space to accommodate an expansion to produce up to 8.0 MGD. Sweetwater Authority is in the design phase to expand the facility to a maximum 10 MGD capacity with an average production of 8.0 MGD (see discussion below in Section 4.5). Additionally, Sweetwater is currently participating in studies with the United States Geologic Survey (USGS) to evaluate the San Diego Formation and make safe use of the available yield from the aquifer.

The Desalination Facility removes total dissolved solids (TDS) from the brackish groundwater using R/O technology. Currently, the four alluvial wells that are part of the Desalination Facility are not operated for the following reasons: 1) summertime vegetative distress in the Sweetwater River, 2) surface water influence on the relatively shallow alluvial formation and 3) the R/O membranes are not approved for surface water treatment. Groundwater production for the past five years is included in **Table 4-3**. Groundwater production has ranged from 16 – 26% of total water supply over the past five years, with an average of 23%.

Table 4-3: Past Groundwater Supply (2006 to 2010)

DWR Table 18						
Groundwater — Volume Pumped, 2006 - 2010						
Basin name(s)	Metered or Unmetered	2006	2007	2008	2009	2010
San Diego Formation – National City Wells	Metered	1,670	2,161	2,180	1,945	2,175
San Diego Formation – Reynolds Desalination Facility	Metered	2,271	3,237	3,699	3,454	3,176
Total groundwater pumped		3,941	5,398	5,879	5,399	5,351
Percent of total water supply		16%	22%	25%	24%	26%
Units (circle one): acre-feet per year million gallons per year cubic feet per year						

Table 4-4 provides projected groundwater pumping volumes for 2015 – 2035. These projections were based on estimated pumping volumes for the existing National City Well Nos. 3 and 4 and the Reynolds Desalination Facility, as well as planned future expansion of the Desalination Facility. Sweetwater Authority is in the design phase to expand the Desalination Facility to a maximum 10 MGD capacity with an average production of 8.0 MGD; this would result in approximately 8,800 acre-feet of production each year. The planned expansion is anticipated to be complete by 2016. Groundwater production is projected to increase from approximately 26% of total water supply in 2015 to an average of 44% after completion of the expansion.

Table 4-4: Projected Groundwater Supply (2015 to 2035)

DWR Table 19					
Groundwater — Volume Projected, 2015 - 2035					
Basin name(s)	2015	2020	2025	2030	2035
San Diego Formation – National City Wells	2,200	2,200	2,200	2,200	2,200
San Diego Formation – Reynolds Desalination Facility	3,600	8,800	8,800	8,800	8,800
Total groundwater pumped	5,800	11,000	11,000	11,000	11,000
Percent of total water supply	26%	48%	45%	43%	41%
Units (circle one): acre-feet per year million gallons per year cubic feet per year					

4.1.3 Transfers and Exchanges

10631(d): #24. Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

Sweetwater Authority currently transfers and exchanges water on an emergency basis with three neighboring water districts: five interconnections with the City of San Diego, which borders to the north and south; six interconnections with Otay Water District, which borders to the east and south; and one interconnection with California American Water Company, which borders to the south. At the present time, the agency interconnections are used for emergencies and planned shutdowns. These interconnections play a vital role in maintaining service to Sweetwater Authority customers should there be interruption of service due to tanks, water mains, or pump stations. The interconnections with California-American Water Company benefit both agencies, and the interconnections with the City of San Diego and Otay Water District only benefit Sweetwater Authority due to hydraulic gradient differentials. However, pumps could be temporarily connected to the City of San Diego and Otay Water District interconnections to serve these municipalities.

When Sweetwater Reservoir is at full capacity and spilling, Sweetwater Authority has in the past sold excess water to California-American Water Company. In the winter of 1995, Sweetwater sold excess water to California-American Water Company for several months. However, such occurrence is not a planned transfer and therefore is not included within Sweetwater's projections.

Table 4-5: Transfer and Exchange Opportunities

DWR Table 20			
Transfer and Exchange Opportunities			
Transfer agency	Transfer or exchange	Short term or long term	Proposed Volume
City of San Diego	Transfer	Emergency	Emergency
Otay Water District	Transfer	Emergency	Emergency
California American Water Company	Transfer	Emergency	Emergency
		Total	N/A
Units (circle one): acre-feet per year million gallons per year cubic feet per year			

4.1.4 Desalinated Water

10631(i): #31. Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater as a long-term supply.

Sweetwater's brackish groundwater desalination facility is described and quantified above in Section 4.2.1. The facility was designed to extract groundwater from four alluvial wells and five deep San Diego Formation wells, located on the north side of the Sweetwater River. A sixth San Diego Formation well was constructed in 2006. Sweetwater Authority is in the design phase to expand the facility to a maximum 10 MGD capacity with an average production of 8.0 MGD.

Sweetwater Authority is not currently pursuing seawater desalination. Rather, the Water Authority is pursuing construction of a regional seawater desalination plant, described under Section 4.4 below.

4.1.5 Water Recycling Opportunities

10633: #44. Provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.

10633(a): #45. Describe the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

10633(b): #46. Describe the quantity of treated wastewater that meets RW standards, is being discharged, and is otherwise available for use in a recycled water project.

10633(c): #47. (Describe) the recycled water currently being used in the supplier's service area, including but not limited to the type, place, and quantity of use.

10633(d): #48. (Describe and quantify) the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, IPR, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

10633(e): #49. (Describe) the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

10633(f): #50. (Describe the) actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

10633(g): #51. Provide a plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use (10633(g).

Sweetwater Authority currently does not produce or distribute recycled water. Past planning efforts assessed the potential for development of recycled water sources to serve new development and/or redevelopment. Such projects include the planned construction of a new South Bay Power Plant with a potential to produce up to 5 MGD of recycled water demand. However, current political, legal, environmental, and other factors have delayed this project to the extent that it may no longer move

forward. Other planned developments include the Chula Vista Bayfront project being proposed by City of Chula Vista in conjunction with the Unified Port District of San Diego. This project would cover approximately 550 acres along the San Diego Bay and would include land uses such as parks and open space that could potentially increase demands for potable water.

Due to these developments, Sweetwater Authority prepared a *Recycled Water Master Plan* for the distribution of recycled water within its service area. Additionally, Sweetwater Authority has participated in a study with the Water Authority to analyze potential water recycling plant locations within Sweetwater's service area. While the current status of the two aforementioned developments is unknown at this time, the following sections provide summaries of recycled water planning efforts completed by the Sweetwater Authority to potentially provide recycled water if supplies and demands are available.

Sweetwater's Recycled Water Master Plan

Sweetwater's *Recycled Water Master Plan* (Sweetwater Authority 2005) evaluated eight recycled water system alternatives with demands ranging from 4,300 acre-feet per year to 5,470 acre-feet per year. Recycled water sources included both a new recycled water plant that would be constructed by Sweetwater Authority and the City of Chula Vista, and a supply from the City of San Diego's South Bay Water Reclamation Facility (SBWRF). The preferred alternative included demands of 4,300 acre-feet per year and supply from SBWRF. However, approximately 2,700 acre-feet per year of the projected demands are related to the development of the new water-cooled South Bay Power Plant that is unlikely to be constructed. Without the development of the power plant, it is unlikely that development of a recycled water system within Sweetwater's service area would be economically feasible.

Water Authority's Membrane Bioreactor Study

Sweetwater Authority participated in the Water Authority's *Regional Membrane Bioreactor Study* (Water Authority 2005). Recent technology advancements have made satellite treatment plants utilizing membrane bioreactor (MBR) technology a feasible and cost-effective alternative to traditional centralized wastewater treatment plants. The ability of MBR technology to comply with strict effluent requirements, operate reliably with minimal operator attendance, and occupy less space than traditional systems allows it to be easily sited close to the recycled water consumers. The Feasibility Study includes evaluation of "scalping" plants that would take raw sewage from the City of Chula Vista by intercepting existing regional sewer lines, treat it locally through a miniature version of a wastewater treatment plant, and put the residuals back in the sewer downstream of the withdrawal point.

A second *Membrane Bioreactor Feasibility Study* (Sweetwater Authority 2007) was a collaborative project involving Otay Water District (Otay) and the City of Chula Vista, with Sweetwater Authority as the lead agency. The intent was to determine if an MBR Recycled Water Treatment Plant (MBR Plant) is feasible in order to provide recycled water to both, or either, Sweetwater and Otay, as well as to determine if the City of Chula Vista can find an alternative to acquiring needed wastewater capacity from the City of San Diego's Metropolitan Wastewater System. The results of the study showed the cost of installing a recycled water distribution system in Sweetwater's service area is prohibitively expensive. Therefore, Sweetwater Authority has determined that it will not participate in any near-term studies regarding construction of an MBR Plant to serve recycled water in its service area. An MBR plant, however, may be feasible for Otay and the City of Chula Vista and is being pursued independently by those agencies.

Wastewater Collection and Treatment

Collection and Disposal of Wastewater

Sweetwater Authority's service area consists of the western and central portions of the City of Chula Vista, all of the City of National City, and unincorporated areas of the County of San Diego (Bonita). Each of the communities within Sweetwater's service area has individual collection systems, which ultimately connect to the City of San Diego's Metropolitan Wastewater System (Metro System). The total length of sewer pipeline within Sweetwater's service area is approximately 360 miles as calculated using data

from the aforementioned agencies. However, Sweetwater Authority is not a sewer agency, and does not have jurisdiction over the sewer conveyance system within its service area.

The City of San Diego's comprehensive wastewater collection system is known as the Metro System. Portions of Sweetwater Authority's service area are within the City of San Diego's Southern Service Area. Wastewater from the Southern Service Area flows to SBWRF through the South Metro Interceptor, where it is treated to secondary levels and discharged to the Pacific Ocean via the South Bay Ocean Outfall, or treated to tertiary levels and used as recycled water (City of San Diego 2005). In addition, some wastewater flows are sent to the Point Loma Wastewater Treatment Plant (PLWWTP) where they are treated to secondary levels and discharged to the Pacific Ocean through the Point Loma Ocean Outfall. Currently, tertiary-treated recycled water from SBWRF is used within Otay's service area. There are no recycled water connections from SBWRF to Sweetwater Authority's service area. Along with the City of San Diego, the cities of Chula Vista and National City are Participating Agencies of the Metro System. These two cities both maintain independent sewer collection systems that connect to the Metro System for treatment and disposal.

The County of San Diego maintains its own wastewater collection system, which includes the Spring Valley Sanitation District (SVSD). SVSD collects sewage within various unincorporated communities, including Bonita within Sweetwater Authority's service area (County of San Diego 2010). In addition, SVSD also serves outlying portions of the City of Chula Vista that lie within Sweetwater Authority's service area (City of Chula Vista 2005). Collection facilities for SVSD include the Spring Valley Interceptor, which collects wastewater from both the City of Chula Vista and Bonita and conveys it to the Metro System for treatment and disposal (County of San Diego 2010).

Recycled Water Uses

As noted above, wastewater flows from Sweetwater Authority's service area ultimately flow to the SBWRF or the PLWWTP where they are treated to secondary levels and discharged to the Pacific Ocean, or treated to tertiary levels at the SBWRF and utilized as recycled water. In 2005, SBWRF discharged approximately 9.0 MGD of secondary treated effluent to the Pacific Ocean, and had agreed to treat and sell 6.0 MGD of tertiary-treated recycled water to Otay Water District (City of San Diego 2005). Projections from the City of San Diego demonstrate that wastewater collection (inflow) into SBWRF is expected to gradually increase every five years from 2005 to 2020, and that SBWRF is expected to reach its maximum capacity of 15 MGD by 2025. Similarly, the maximum recycled water capacity of SBWRF is expected to increase gradually until 2025 when it reaches its maximum value of 13.5 MGD.

To assess wastewater collection and treatment within Sweetwater Authority's service area, this analysis assumed that the wastewater volumes produced were based on the 10-years average of the lowest month water demand in the Sweetwater Authority service area, which is January with an average potable demand of 1,332 acre-feet. As such, the 2005 and 2010 wastewater volumes were estimated at approximately 15,980 acre-feet (12 months x 1,332 acre-feet). Projected future wastewater volumes were estimated to grow proportionally with population growth (refer to Table 2-1). The volume of wastewater that meets recycled water standards was estimated based on the City of San Diego's projections for SBWRF and averages approximately 66% of projected wastewater effluent. This proportion is based on the ratio of recycled water to ocean discharges currently utilized at SBWRF. The estimated wastewater collection and treatment values for Sweetwater Authority's service area are shown in **Table 4-6**. As described above, the Metro System does not include recycled water connections within Sweetwater's service area; recycled water is distributed to Otay's service area.

Table 4-6: Wastewater Collection and Treatment

DWR Table 21							
Recycled Water — Wastewater Collection and Treatment							
Type of Wastewater	2005	2010	2015	2020	2025	2030	2035
Wastewater Collected and Treated in Service Area (Delivered to SBWRF and/or PLWWTP)	15,984	15,984	16,730	16,697	16,780	16,742	16,813
Volume That Meets Recycled Water Standard (Produced at SBWRF and Distributed to Otay Water District Service Area)	10,549	10,549	11,082	11,047	11,133	11,103	11,122
Units (circle one): acre-feet per year million gallons per year cubic feet per year							

Wastewater from SBWRF is treated to tertiary levels and distributed to non-potable users within Otay's service area, or treated to secondary levels and disposed through the South Bay Ocean Outfall. Wastewater from PLWWTP is treated to secondary levels and disposed through the Point Loma Ocean Outfall. In addition to these disposal methods, small amounts of wastewater are returned to the Metro System as sludge or reclaimed and reused on the SBWRF site (City of San Diego 2005). These additional uses are minimal, and were not considered within this analysis. **Table 4-7** below shows the total projected amount of wastewater effluent flows attributable to Sweetwater's service area that would be treated to secondary levels and disposed of through the South Bay Ocean Outfall or the Point Loma Ocean Outfall from 2010 to 2035.

Table 4-7: Non-Recycled Wastewater Disposal

DWR Table 22							
Recycled Water — Non-Recycled Wastewater Disposal							
Method of disposal	Treatment Level	2010	2015	2020	2025	2030	2035
Effluent Discharged Through South Bay Ocean Outfall or Point Loma Ocean Outfall	Secondary	5,435	5,648	5,650	5,647	5,639	5,691
	Total	5,435	5,648	5,650	5,647	5,639	5,691
Units (circle one): acre-feet per year million gallons per year cubic feet per year							

Due to uncertainties surrounding potential new developments and associated non-potable demand, the implementation of recycled water service within Sweetwater's service area is considered cost prohibitive at this time. Therefore, projections for future recycled water use by Sweetwater's customers have not been considered in the preparation of this UWMP update.[1]

4.2 Imported Supplies

Sweetwater Authority represents two (the City of National City and SBID) of the 24 member agencies of the Water Authority. Member agency status entitles Sweetwater to directly purchase water from the Water Authority on a wholesale basis. One hundred percent of Sweetwater's imported water is purchased from the Water Authority. The Water Authority is one of 26 member agencies of Metropolitan. The statutory relationships between the Water Authority and its member agencies, and Metropolitan and its member agencies, respectively, establish the scope of Sweetwater's entitlements to water from these two agencies. The quantities of water purchased from the Water Authority by Sweetwater Authority are shown on **Table 4-8**. The 26-year average annual imported water purchase from 1985 – 2010 is 13,104 acre-feet. **Table 4-9** provides future projected supplies to be purchased from the Water Authority through 2035.

1 Note: Because recycled water service in Sweetwater's service area is considered cost prohibitive at this time, DWR's Tables 23 – 25 were not included within this UWMP update.

Table 4-8: Historic Imported Water Supplies (1985 – 2010)

Historic Imported Water Supplies (1985 – 2010)			
Fiscal Year	Total Imported Water (acre-feet)	Source (acre-feet)	
		Untreated	Treated
1985	4,634	---	4,634
1986	20,842	---	20,842
1987	16,384	---	16,384
1988	20,514	---	20,514
1989	19,519	---	19,519
1990	24,019	---	24,019
1991	20,508	---	20,508
1992	14,722	---	14,722
1993	6,188	---	6,188
1994	1,387	---	1,387
1995	5,045	---	5,045
1996	1,589	---	1,589
1997	14,230	---	14,230
1998	8,452	---	8,452
1999	---	---	---
2000	5,520	5,429	91
2001	14,381	14,381	48
2002	19,552	19,409	143
2003	20,271	20,226	45
2004	20,526	19,456	1,070
2005	11,342	11,234	108
2006	7,723	7,723	---
2007	12,102	11,987	115
2008	16,838	16,650	8
2009	12,864	11,312	1,552
2010	14,548	11,375	3,173

Table 4-9: Existing and Planned Sources of Wholesale Water Supplies

DWR Table 17						
Wholesale Supplies — Existing and Planned Sources of Water						
Wholesale sources	Contracted Volume	2015	2020	2025	2030	2035
San Diego County Water Authority	No Set Limit	8,690	4,572	5,806	7,076	8,460
Units (circle one): acre-feet per year *million gallons per year* *cubic feet per year*						

The Water Authority was organized on June 9, 1944 under the County Water Authority Act for the sole purpose of importing Colorado River Water into San Diego County. The imported water, now a combination of Colorado River and SWP water, is sold wholesale to the 24 member agencies of the Water Authority. The member agencies are autonomous and their City Councils or Board of Directors set local policies and pricing structures.

Imported water delivered by the Water Authority is either purchased from or wheeled by Metropolitan from Metropolitan facilities located just south of the San Diego County/Riverside County line. Metropolitan is a public agency organized in 1928 by a vote of the electorates of 13 Southern California cities. Since its formation, Metropolitan has grown to include 26 member agencies of

which the Water Authority is the largest. Metropolitan was formed for the purpose of developing, storing, and distributing water to the residents of Southern California.

Imported water may be delivered either raw or treated to Sweetwater Authority through the Water Authority's Pipelines 3 and 4. Pipeline 3 delivers raw water, while Pipeline 4 delivers treated water. Typically, Sweetwater Authority takes raw water from the Water Authority pipelines. Once this water is taken, it is treated at the Perdue Plant before being delivered for consumption.

Metropolitan supplies consist of both Colorado River and SWP supplies from the State of California. While water deliveries from Metropolitan vary over time, the Water Authority received 331,825 acre-feet or approximately 21% of its water supply from Metropolitan in 2010. The Water Authority anticipates that these supplies will decrease as they are supplemented with other local and transfer supplies.

In 1998, the Water Authority formalized a Transfer Agreement as part of the *Quantification Settlement Agreement (QSA) for the Colorado River*. The QSA was executed by the Water Authority, Coachella Valley Water District (CVWD), Imperial Irrigation District (IID), Metropolitan, and the State of California. This agreement provides California a transition period to implement water transfers and supply programs that will reduce California's over-dependence upon the Colorado River and reduce the State's draw to its 4.4 million acre-foot basic annual apportionment. The QSA includes a water transfer from IID to the Water Authority. In 2010, the Water Authority received 70,000 AF of imported water through the QSA, and this supply is anticipated to increase each year until 2021 when the Water Authority expects to receive their full allocation amount of 200,000 AFY.

The Water Authority also receives an additional 77,000 AF of water in exchange for projects to line the All-American and Coachella canals, which are part of the QSA. These projects are anticipated to stop the loss of water through seepage, thereby conserving 77,000 AF of water, which the Water Authority is contracted to receive for 110 years. In addition, the Water Authority could potentially receive up to an additional 4,850 AFY through this exchange agreement, for a total of up to 81,150 AFY. This will provide the San Diego region with an additional 8.5 million acre-feet of water over the 110-year life of the agreement. The Water Authority has secured for the San Diego region a major, new, 110-year water supply that is highly reliable, drought-proof, and cost competitive. However, in November 2003, multiple suits were filed regarding the QSA, and in January 2010, the California Superior Court ruled that the QSA and 11 related agreements were invalid and in violation of the California Constitution. Although the Water Authority is still seeking validation of their water contracts, the courts have decided that transfer agreements will continue to be implemented while litigation on this matter continues.

While the Water Authority and its member agencies have historically relied on imported water for the majority of their water supplies, the region has made a determined effort to diversify its supply portfolio. The Water Authority has diversified its imported water portfolio through the IID transfer and All-American and Coachella canal-lining projects, and is planning additional diversification through seawater desalination (see Section 4.4 below). Member agencies, such as Sweetwater Authority, have diversified through expanded use of local surface water, groundwater, recycled water, and aggressive conservation.

4.2.1 Desalinated Water

The Water Authority is working on developing a desalinated water supply as documented in the Water Authority's *2004 Annual Water Supply Report – Supply Reliability Through Diversification* and the Water Authority's *2010 UWMP*. The development of seawater desalination in San Diego County will assist the region in diversifying its water resources, reducing dependence on imported supplies, and providing a drought-proof, locally treated water supply. The Water Authority has been evaluating seawater desalination as a potential reliable local water resource since the 1990s. The cost of seawater desalination has decreased over the last 15 years due to the technological advances in the development and manufacture of reverse osmosis membranes used in the desalination process. The Water Authority expects desalinated water to provide 8% of the region's supply by the year 2020 (Water Authority 2010b).

The Water Authority's current seawater desalination efforts are focused on the Carlsbad Seawater Desalination Project, because it is fully-permitted and a conveyance pipeline for the system is under construction. The project, located at the Encina Power Station in Carlsbad, is being constructed by Poseidon, a private investor-owned company that develops water and wastewater infrastructure. In July 2010, the Water Authority Board of Directors approved a Term Sheet between the Water Authority and Poseidon and directed staff to prepare a Water Purchase Agreement based on its provisions. This desalination project is expected to provide a highly-reliable 56,000 AFY supply for the region by 2020.

In addition, two other seawater desalination efforts are currently being considered by the Water Authority. The Marine Corps Base (MCB) Camp Pendleton Seawater Desalination Project would be constructed on MCB Camp Pendleton in northern San Diego County. This project is in the conceptual design phase, and a feasibility study for a potential 50 to 150 MGD seawater desalination project near the mouth of the Santa Margarita River was finalized in 2009. In April 2010, the Water Authority formalized a Memorandum of Understanding with MCB Camp Pendleton, which would facilitate completion of further technical evaluations for this project. The Beach Binational Desalination Plant Project is considered a conceptual-level project, and would potentially involve development of a 25 to 50 MGD seawater desalination plant at Rosarito Beach in Baja California, Mexico.

4.3 Future Water Projects

10631(h): #30. (Describe) all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use… The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs… that the urban water supplier may implement to increase the amount of water supply available to the urban water supplier in average, single-dry, and multiple-dry water years…

Sweetwater Authority is currently in the design phase to expand the Desalination Facility to a maximum 10 MGD capacity with an average production of 8.0 MGD (see **Table 4-10** for increased supply). The expansion will add three new R/O treatment trains to operate in parallel with the existing three trains. A R/O bypass system with a capacity of 1.0 MGD has been installed to remove iron and manganese, and another 1.0 MGD system will be installed as part of the expansion. Source water will come from the San Diego Formation and five new wells will be added to the system (Wells No. 7, 8, 9, 10, and 11). Sweetwater Authority has decided not to make any design provisions for raw water from the existing, unused, Alluvial wells.

Because the building that houses the Desalination Facility was sized from the beginning for the possibility of expansion, that cost does not need to be incurred. Expansion costs include the additional wells to produce the water, R/O membranes, pumps and pipeline to convey raw water from proposed wells, and R/O bypass system to process the water.

The Phase II expansion of the Desalination Facility is anticipated to begin in 2013 and end in 2016. The normal water year supply is anticipated to be 8,800 acre-feet after the expansion in normal, single dry, and multiple dry years. Groundwater supply is considered a drought-proof supply and production will be increased as needed to meet customer demands. The water volumes presented here are accounted for in Table 4-1 above.

Table 4-10: Future Water Supply Projects

DWR Table 26								
Future Water Supply Projects								
Project name	Projected start date	Projected completion date	Potential project constraints	Normal-year supply	Single-dry year supply	Multiple-dry year 1 supply	Multiple-dry year 2 supply	Multiple-dry year 3 supply
Reynolds Desalination Facility Phase II	2013	2016	Potential for vegetation stress in the Sweetwater River channel. Yield of the San Diego Formation. Need for brine disposal.	8,800[1]	8,800[1]	8,800[1]	8,800[1]	8,800[1]
		Total		8,800	8,800	8,800	8,800	8,800

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*

1. *Total includes Phase I and Phase II of Desalination Facility.*

5 Water Supply Reliability

The reliability assessment required by the Act requires urban water suppliers to compare the total projected water use with the expected supply over the 20-year planning period in five year increments. Chapter 5 assesses the overall reliability of future supplies regardless of drought or emergency conditions.

> *10620(f): #5. An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize the resources and minimize the need to import water from other regions.*
>
> *10631(c)(2): #23. For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.*

Sweetwater Authority faces a number of challenges in meeting future water demands. These challenges include supply uncertainty as a result of potential shortages due to drought or emergency seismic conditions; management of the Sweetwater and Loveland Reservoir watershed lands, given the presence of endangered species; high TDS levels in urban runoff to the reservoirs and in imported water supplies; significant demand and supply variability due to weather; potential for future legal challenges associated with yield of the San Diego Formation; the need for brine disposal from the Desalination Facility; and the need for plant upgrades due to emerging regulations. **Table 5-1** provides a summary of potential factors resulting in inconsistency of supply. Water quality factors are described in more detail below.

Table 5-1: Factors Resulting in Inconsistency of Supply

DWR Table 29						
Factors Resulting in Inconsistency of Supply						
Water supply sources	Specific source name, if any	Limitation quantification	Legal	Environmental	Water quality	Climatic
San Diego County Water Authority	Colorado River, SWP, IID, and Canal-lining	N/A	Litigation over Delta fisheries. Litigation over QSA.	Supply uncertainty due to Delta fisheries. Invasion by quagga mussels. Supply interruption in case of seismic emergency.	High TDS in Colorado River water. Organics and bromide in SWP water.	Supply uncertainty due to drought.
Local Surface Water	Sweetwater and Loveland Reservoirs	N/A	--	Endangered species present. Recovery from the Harris Fire of 2007.	High TDS levels in urban runoff. Need for plant upgrades due to emerging regulations.	Supply variability due to weather.
Supplier-Produced Groundwater	National City Wells	N/A	Yield of the San Diego Formation.	--	Threat of MTBE contamination.	--
Supplier-Produced Groundwater	Desalination Facility	N/A	Yield of the San Diego Formation.	Potential for vegetation stress in the Sweetwater River channel.	Need for brine disposal.	--

5.1 Water Quality

10634: #52. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

5.1.1 Surface Water

A large portion of the drinking water supplied to Sweetwater's customers comes from the Sweetwater Reservoir. The reservoir stores both local runoff from the 230 square-mile Sweetwater River watershed, and imported raw water purchased from the Water Authority. The Sweetwater River watershed, whose surface water quality is directly affected by land use, is divided into three basins. The lower basin is below the Sweetwater Reservoir and drains into San Diego Bay. In the middle basin, continued urbanization over the next 20 years will negatively impact the quality of runoff into the reservoir. Turbidity events (produced by storm runoff) or algal blooms can create conditions where water treatment performance is affected and plant capacity restricted (Sweetwater Authority 2008a). However, low quality runoff can be diverted around the reservoir by Sweetwater's Urban Runoff Diversion System (URDS), constructed in two phases in 1991 and 1999. The URDS system includes a series of ponds and conveyances designed to capture dry weather flows, the first flush from early seasonal storms, or hazardous spills in the watershed, and divert the flows around the reservoir. Accidental sewage or hazardous spills can be contained in the ponds until they can be properly dealt with. The upper basin, which flows into the Loveland Reservoir, is largely undeveloped, and therefore, runoff is generally of better quality. Sweetwater's staff continually monitors development projects within the watershed and requires that developers include measures in their plans to mitigate any negative water quality impacts to the reservoirs. In addition, Sweetwater Authority has completed a sanitary watershed assessment as required by the California Department of Public Health.

5.1.2 Groundwater

Three potable groundwater wells at the National City Wells supply up to 2.0 MGD to Sweetwater's service area. The wells are located in a fairly urbanized area with several potential contaminating activities nearby. Although screened at levels low enough that the threat of contamination from surface activity should be considered remote, degradation of the groundwater supply by surface contamination could lead to costly treatment or possible discontinued use of the well field.

The biggest risk to the water in the San Diego Formation is contamination with methyl tertiary butyl ether (MTBE). MTBE is an oxygenate added to gasoline to reduce emissions of carbon monoxide and other pollutants. Although leaking underground storage tanks have been confirmed at the Shell and former EZ Serve stations in National City, quarterly groundwater reports from the stations indicate that no MTBE has been detected in monitoring wells greater than 120 feet from the tank. At the Shell station location, a soil vapor extraction system is currently cleaning up contaminated groundwater. Although it is the responsibility of the gasoline station owner to monitor and remediate contaminated groundwater at this facility, Sweetwater Authority is currently monitoring the National City well field on a monthly basis for MTBE contamination. None of the monitoring has indicated contamination to date (Sweetwater Authority 2008a).

The Desalination Facility currently treats water from six brackish groundwater wells. The high TDS in the brackish water supply are removed through R/O treatment. The process decreases the TDS from an average of 2,200 mg/l to 100 mg/l. The treated water is then blended with other water to bring the TDS back up to 400-500 mg/l for distribution, so that water will not be corrosive to the distribution mains (Sweetwater Authority 2008a). The brackish water wells are located within two miles of the San Diego Bay and within three miles of the Pacific Ocean.

As designed, the Desalination Facility recovers approximately 80% of the water treated. The remaining 20% contains high concentrations of TDS and is discharged to the Sweetwater River, near the mouth at the San Diego Bay. The concentrate discharge is permitted by the San Diego RWQCB and includes limits for four metals. Changes in the influent concentration of the

metals could negatively impact the concentration in the discharge. Although considered unlikely, any increase in concentration of the metals above the discharge limits could limit the ability to treat the well water without additional treatment of the discharge, at a considerable capital expenditure.

5.1.3 Imported Water

As described in Chapter 3, the makeup of the Water Authority's imported supply includes water from the Colorado River and the SWP. In the near future, as part of the Water Authority's Emergency Storage Program (ESP), the imported water supply may also be blended with water from other local reservoirs. Water quality threats to the imported supply include total organic carbon (TOC) levels in SWP water, salinity and perchlorate levels in Colorado River water, and the potential future use of reclaimed water in ESP storage reservoirs. SWP water typically contains high levels of bromide and TOC, most likely due to seawater intrusion and agricultural drainage from peat soil islands in the Sacramento-San Joaquin Bay-Delta. Bromide and TOC can combine with chemicals used in the water treatment process to form THMs.

Colorado River supplies typically contain high salinity levels. Water imported from the Colorado River has TDS averaging around 650 mg/l during normal water years. To reduce these levels, Metropolitan approved a Salinity Management Policy in April 1999 which blends Colorado River water with lower-salinity SWP supplies. Perchlorate is an oxidizing anion that originates from the dissolution of ammonium, potassium, magnesium, or sodium salts. It is an ingredient in rocket fuels and is used in the manufacture of fireworks. The source of Colorado River perchlorate contamination has been speculated to be linked to a chemical manufacturing site in Henderson, Nevada. Metropolitan has been monitoring perchlorate levels in raw and treated water since 1997 and has demonstrated that Colorado River supplies are at or below the maximum containment level (drinking water standard) (Sweetwater Authority 2008). Any changes or degradation of water quality in this imported supply will lead to increased treatment and potential capital improvement costs.

Based on the above, Sweetwater Authority does not anticipate any significant threats to the quality of either the imported or local supplies that are likely to lead to reduced or discontinued use.[2] Any significant degradation of the quality of either supply, however, could lead to significant capital expenditures in order to ensure continued compliance with drinking water regulations.

5.2 Potential Effects of Climate Change

In 2009, DWR released an update of the California Water Plan which provides strategies and information designed to address statewide priorities for water management. This document notes that climate change has already impacted statewide water resources by reducing California's snowpack and increasing the frequency and intensity of floods (DWR 2009).

The California Water Plan Update 2009 also describes future anticipated impacts of climate change, which include impacts to water supply, ecosystems, water and power operations, flooding and drought, and coast and Delta resources. **Table 5-2** describes possible changes that DWR anticipates will occur to California's water regime as a result of climate change (DWR 2009).

2 Note: Because Sweetwater Authority does not anticipate a reduction in water supply due to water quality impacts, DWR's Table 30 was not included within this UWMP update.

Table 5-2: Potential Climate Change Impacts

Potential Climate Change Impacts
Water Supply: • Reductions in the California snowpack will change water supplies; • Changes in river flows may impact water supply, water quality, fisheries, and recreational activities.
Ecosystems: • Forests, which are important contributors to water supply and water quality will be more vulnerable to pests, disease, changes in species composition, and fire; • Increases in water temperature and reductions in cold water in upstream reservoirs may hurt spawning and recruitment success of native fishes; • Lower streamflows will tend to concentrate urban and agricultural runoff, creating more water quality problems.
Water and Power Operations: • Operation of the water system for urban, agricultural, and environmental water supply and for flood management will become increasingly difficult because of the decisions and trade-offs that must be made; • California's hydroelectric power generation may be less reliable. At the same time, higher air temperatures may increase energy consumption through increased use of air conditioning; • Water supply reliability will be compromised; • Warmer temperatures will affect water demands.
Flooding and Drought: • Increased flooding potentially causes more damage to California's levee system; • Higher temperatures and changes in precipitation will lead to droughts.
Coast and Delta Resources: • Higher water temperatures will make the Bay-Delta intolerable to some native species and also more attractive to some non-native invasive species that may compete with natives for resources; • Increased salinity in the Bay-Delta will degrade drinking and agricultural water quality and alter ecosystem conditions; • Sea level rise threatens coastal communities and infrastructure, in particular the water system in the Bay-Delta where the existing levees were not designed or constructed to withstand these higher water levels.
Source: DWR California Water Plan 2009 Update

In addition to DWR's climate change assessment discussed above, the Water Authority's 2010 UWMP analyzes the potential influence climate change may have on the San Diego region's projected water resource portfolio. This document notes that while there are many uncertainties on the precise impacts that climate change will have on water resources, it is possible that climate change would influence long-term water supply reliability.

5.3 Drought Planning

10631(c)(1): #22. Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following: (A) an average water year, (B) a single dry water year, (C) multiple dry water years.

10632(b): #36. An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.

10632(i): #43. A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis

10635(a): #53. Include a management plan, an assessment of the reliability of the water service to the supplier's customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the supplier with the total projected water use over the next 20 year, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

To assess water service reliability during drought events, the Urban Water Management Planning Act requires each urban water supplier to prepare single dry and multiple dry year demand and supply projections in five-year increments. Estimates for usable runoff were calculated using the Perdue Plant production data for the 50-year period from 1960 and 2010. Based on this data,

the historical amount of surface water production for normal, single, and multiple dry years was determined. The normal water year is based on average Sweetwater Reservoir production from years 2000-2010, the single dry year is the year with the lowest runoff (2003), and the multiple dry year period is the lowest average runoff for a consecutive four-year period (2001 – 2004). Due to ongoing drought conditions, the availability of local water supply from Sweetwater Reservoir declined from 16,300 acre-feet in 2000 to zero in 2003. This reflects the importance of the Water Authority's imported water in providing reliable supplies to meet local customer demands. **Table 5-3** provides the basis of water year data and **Table 5-4** reports the historic conditions associated with the water year data. As shown in Table 5-4, water demands in Sweetwater's service area were consistently greater than average demands throughout the multiple dry period.

Table 5-3: Basis of Water Year Data

DWR Table 27	
Basis of Water Year Data	
Water Year Type	Base Year(s)
Average Water Year	2000–2010 Average
Single-Dry Water Year	2003
Multiple-Dry Water Years	2001-2004

Table 5-4: Basis of Water Year Data (AFY)

DWR Table 28					
Supply Reliability — Historic Conditions					
Average / Normal Water Year	Single Dry Water Year	Multiple Dry Water Years			
		Year 1	Year 2	Year 3	Year 4
24,094	24,748	24,802	25,202	24,748	25,394
Percent of Average/Normal Year:	102.7%	102.9%	104.6%	102.7%	105.4%

Table 5-5 lays out the assumptions used in the following drought planning for normal, single dry, and multiple dry year scenarios. Demands are expected to increase in dry periods, but would be capped at the SBx7-7 GPCD targets in accordance with the Water Conservation Act of 2009. Given the countywide adoption of drought response policies over the last few years, however, it is expected that water demands will peak in the first and second years of future multiple-year dry periods and then declined sharply as customers implemented voluntary conservation measures.

Local surface supplies are estimated as zero production in a single dry water year (when zero supplies are available from Sweetwater Reservoir) and an average of 1,927 acre-feet annually in multiple dry years. The National City Wells and the Desalination Facility are relatively fixed supplies that are not weather dependent; therefore, the production from these sources has not been reduced during a drought event. The Water Authority reports that if Metropolitan, Water Authority, and member agency supplies are developed as planned, along with achievement of the SBx7-7 water conservation targets, adequate water supply is anticipated within the Water Authority's service area for normal/average and single dry years through 2035 (Water Authority 2010b). Supply limitations that arise in multiple dry year scenarios must be addressed through implementation of extraordinary water conservation measures.

Table 5-5: Assumptions Used in Drought Planning

Assumptions Used in Drought Planning					
Water Year Type	Demand	Adjusted Demand	Imported Supply	Local Surface Water	Groundwater
Average/Normal Water Year	Based on projected SANDAG build-out and National City GPU demand for service area.	Assumes DMMs are implemented and GPCD targets are met.	Assumes supply is available.	Assumes 10-year average.	Assumed to be 'drought-resistant' supply, meeting demands.
Single-Dry Water Year	Assumes 2.7% increase in demand due to hot and dry weather.	Assumes DMMs are implemented and GPCD targets are met.	Assumes supply is available.	Zero acre-feet supply in 2003	Assumed to be 'drought-resistant' supply, meeting demands.
Multiple-Dry Water Years	Assumes 2.7% increase in first and second years, followed by sharp decrease in demand as conservation measures are implemented.	Assumes DMMs are implemented and GPCD targets are met.	Assumes supply is available.	Average of 1,927 acre-feet annual supply from 2001-2004.	Assumed to be 'drought-resistant' supply, meeting demands.

Table 5-6 shows the forecasted normal, single dry, and multiple dry water year supply for current water sources, based on the 10-year average presented above. The table shows continued production of 2,200 acre-feet annually from the National City Wells and 3,600 acre-feet annually from the Desalination Facility, both considered drought-proof water supplies, for all water years. The single dry year surface water supply was assumed to be zero, based on actual Sweetwater Reservoir production in 2003. Multiple dry surface water supplies were assumed to be 1,927 acre-feet annually based on the four-year average from 2001 – 2004. The table also shows the required imported supplies necessary to meet projected demand. This demonstrates that if imported and local supplies are available, as anticipated, there will be adequate water supplies to serve the projected service area population.

Table 5-6: Current Water Source Reliability

DWR Table 31					
Supply Reliability — Current Water Sources					
Water supply sources[1]	Average / Normal Water Year Supply	Single Dry Water Year	Multiple Dry Water Year Supply		
			Year 1	Year 2	Year 3
Local Surface Water	7,400	0	1,927	1,927	1,927
National City Wells	2,200	2,200	2,200	2,200	2,200
Desalination Facility	3,600	3,600	3,600	3,600	3,600
Imported Supplies	10,894	18,948	17,021	17,516	14,992
Total Supply	24,094	24,748	24,748	25,243	22,719
Percent of normal year:	100.0%	102.7%	102.7%	104.8%	94.3%
Units (circle one): acre-feet per year *million gallons per year* *cubic feet per year*					

5.3.1 Normal Year Assessment

Table 5-7 shows the forecasted normal water year projections for Sweetwater's service area. The projections show that Sweetwater Authority assumes to have adequate water supplies to meet projected demands.

Table 5-7: Normal Year Water Supply and Water Demand Comparison

DWR Table 32					
Supply and demand comparison — normal year					
	2015	2020	2025	2030	2035
Supply totals (from Table 16)	21,890	22,972	24,261	25,532	26,918
Demand totals (From Table 11)	21,890	22,972	24,261	25,532	26,918
Difference	0	0	0	0	0
Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Units (circle one): acre-feet per year million gallons per year cubic feet per year					

5.3.2 Single Dry Year Assessment

Studies have shown that hot, dry weather may generate urban water demands greater than normal demands. **Table 5-8** utilizes the 2.7% increase in demands observed in the 2003 dry year to generate the dry year demands shown for 2015 through 2035. Note that Sweetwater's single dry year scenario projections are lower than the SBx7-7 targets for urban water use (see Table 5-10 below), which were used in the Water Authority's supply planning scenarios. If projected imported and local supplies are available, as anticipated, no shortages are anticipated within the Sweetwater's service area in the single dry year scenario. No extraordinary conservation measures beyond the DMMs are reflected in the demand projections.

Table 5-8: Single Dry Year Supply and Demand Comparisons, 2015 to 2035

DWR Table 33					
Supply and demand comparison — single dry year					
	2015	2020	2025	2030	2035
Supply totals[1]	22,484	23,595	24,919	26,225	27,649
Demand totals	22,484	23,595	24,919	26,225	27,649
Difference	0	0	0	0	0
Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Units (circle one): acre-feet per year million gallons per year cubic feet per year					

1. Additional imported water supply necessary to meet increased demands (beyond normal year projections in Table 5-7 above) will be obtained from the Water Authority.

5.3.3 Multiple Dry Year Assessment

Table 5-9 reports supplies and demands anticipated in multiple dry year periods. This analysis assumes an increase in water demands in the first (2.7% over normal) and second (2.0% additional over first year) years of a dry period, followed by a sharp decline in the third year (11% below second year) due to implementation of voluntary conservation measures (shown also in Table 5-6).

In accordance with the Water Authority's 2010 UWMP, wholesale water supplies from the Water Authority are projected to increase as needed to meet customer demands, except in the third year of several multiple dry year scenarios. The Water Authority's supply reliability analysis indicates that third-year supplies are anticipated to be reduced in accordance with the Water Authority's preferential right allocation from Metropolitan (Water Authority 2010b). Sweetwater's ability to meet its customer demands in dry years is based on the Water Authority's ability to provide a reliable wholesale water supply through its IID

transfer, canal lining projects, and the Carlsbad Seawater Desalination Project. However, near-term shortages may occur before IID transfer supplies have fully ramped up and long-term shortages may occur after 2030 when regional demands outgrow supplies. In line with projected regional shortages, Sweetwater Authority has assumed a substantial reduction in demands in the third year of multiple dry years (11% below second year and 94% of normal). Table 5-9 assumes that because Sweetwater customers will substantially reduce demands in the third year of multiple dry year periods with voluntary conservation measures, adequate water supplies will be available.

It is important to recognize that the demand projections contained in Table 5-9 – namely in the second year of a multiple dry period where demand is 104.8% of normal – do not exceed the 2015 and 2020 urban water use targets established by SBx7-7. **Table 5-10** provides a comparison of these demands.

Table 5-9: Multiple Dry-Year Supply and Demand Comparisons, 2015 to 2035

DWR Table 34						
Supply and Demand Comparison — Multiple Dry-Year Events						
		2015	2020	2025	2030	2035
Multiple-dry year first year supply	Supply totals	22,484	23,595	24,919	26,225	27,649
	Demand totals[2]	22,484	23,595	24,919	26,225	27,649
	Difference	0	0	0	0	0
	Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Multiple-dry year second year supply	Supply totals	22,934	24,067	25,418	26,750	28,202
	Demand totals	22,934	24,067	25,418	26,750	28,202
	Difference	0	0	0	0	0
	Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Multiple-dry year third year supply	Supply totals	20,640	21,661	22,876	24,075	25,382
	Demand totals	20,640	21,661	22,876	24,075	25,382
	Difference	0	0	0	0	0
	Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*						

Table 5-10: Comparison of Projected Dry Year Demands and SBx7-7 Targets

Comparison of Projected Dry Year Demands and SBx7-7 Targets					
	2015	2020	2025	2030	2035
Projected Normal Year Demands	21,890	22,972	24,261	25,532	26,918
Projected Single Dry Year Demands	22,484	23,595	24,919	26,225	27,649
Projected Multiple Dry Year Demands – first year	22,484	23,595	24,919	26,225	27,649
Projected Multiple Dry Year Demands – second year	22,934	24,067	25,418	26,750	28,202
Projected Multiple Dry Year Demands – third year	20,640	21,661	22,876	24,075	25,382
Maximum Water Demands Based on SBx7-7 Targets	24,968	25,180	26,575	27,968	29,486
Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*					

The water reliability assessment presented above verifies that there will be sufficient water supply to serve the projected Sweetwater Authority service area population in normal, single dry, and multiple dry year scenarios. An adequate supply is further confirmed by Metropolitan's 2010 Regional UWMP, Metropolitan's Integrated Resources Plan, and the Water Authority's 2010 UWMP. However, while Sweetwater is developing new local water supplies, and Metropolitan retain its conclusion of available surplus supplies, Sweetwater advises the customers within its service area that given current water supply issues including a) drought conditions in California and the Colorado River basin and b) legal and regulatory issues involving utilization of the Sacramento-San Joaquin Delta to convey SWP water, Sweetwater cannot guarantee that at some time in the future, Metropolitan and the Water Authority may not project availability of surplus water necessary to meet demands. As such, implementation of voluntary conservation measures throughout the service area is essential to managing future water consumption.

6 Shortage Contingency Analysis

Chapter 6 contains a detailed discussion of the water shortage contingency planning undertaken by Sweetwater Authority to prepare for, and implement during, a catastrophic interruption of water supplies. This chapter also addresses Sweetwater's s mandatory prohibitions and penalties associated with excess water use.

Effective management of water supply deficits is an important responsibility of Sweetwater Authority. Possible deficits in Sweetwater Authority's supplies may be caused by droughts, failures of major water transmission facilities during earthquakes, contamination of supplies due to chemical spills, or other adverse conditions. For these reasons, Sweetwater Authority has established Board resolutions that currently serve as Sweetwater Authority's Shortage Contingency Plan and provide guidance for development of Board resolutions during future drought events.

6.1 Sweetwater's Local Groundwater Supplies

Sweetwater's local supplies consist of surface and groundwater supplies, including potable wells and brackish groundwater desalination. By 2015, Sweetwater's groundwater sources will be able to produce a total of 5,800 acre-feet per year, and this amount is anticipated to increase to 11,000 acre-feet per year by 2020. In total, groundwater will comprise approximately 26% of Sweetwater Authority's normal-year supplies in 2015 and approximately 44% of supplies from 2020 to 2035.

Groundwater supplies are considered drought resistant, because the groundwater aquifer utilized by Sweetwater Authority is a deep-water formation that does not rely on surface-water recharge. Therefore, groundwater supplies are anticipated to remain consistent even in dry years. Table 5-6 (in the previous chapter) demonstrates that in a normal water year, groundwater will comprise approximately 23% of Sweetwater's total supplies, because other supplies such as imported water and local surface water would likely be decreased. Therefore, Sweetwater Authority's local groundwater supplies play an important role in drought contingency planning, as they provide a reliable and consistent water supply.

6.2 Water Authority's Drought Management Plan

The Water Authority, in conjunction with its member agencies, developed a *Water Shortage and Drought Response Plan* (WSDRP) in 2006 to guide water shortage and drought management activities in the event that the region faces supply shortages due to drought conditions. The goal of this plan is to provide a balanced, flexible, systematic approach to identifying regional actions necessary to reduce water impacts that occur from shortages. This plan includes three stages, voluntary supply management, supply enhancement, and mandatory cutbacks. During each of the stages the San Diego County Water Authority may implement voluntary or mandatory drought contingency measures to prepare and respond to drought conditions.

The WSDRP also includes provisions whereby the Water Authority would implement and utilize supplies governed by the Emergency Storage Project (ESP) during a prolonged drought or other water shortage situation where imported and local supplies do not meet 75% of the Water Authority's member agencies urban demands. The ESP is a system of reservoirs, pipelines, and other facilities designed to store and move water around the County of San Diego in the event of a natural disaster. A natural disaster such as an earthquake could potentially disrupt water service in San Diego, especially because the pipelines that carry imported water to San Diego County from the Metropolitan Water District of Southern California cross several major fault lines on their way to San Diego County. When completed, the ESP will provide 90,100 AF of stored water for emergency purposes to meet the county's needs through at least 2030.

6.3 Sweetwater's Shortage Contingency Plan

10632(c): #37. Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, or other disaster.

10632(h): #42. A draft water shortage contingency resolution or ordinance.

In 2007, the general managers from Water Authority member agencies (including Sweetwater Authority) started working together with Water Authority staff to develop a model drought ordinance for the agencies to use so that reduction levels, water use guidelines, and timing would be similar among all agencies. This regional similarity is intended to make customer education and news coverage of a water supply situation easier, since local media is county-wide.

The response levels and water use reduction goals in Sweetwater Authority's Shortage Contingency Plan are similar to the model drought ordinance and most ordinances created by other local water agencies. However, due to extremely low water demands within Sweetwater Authority's service area, this plan may differ from others in that it makes an effort to recognize and reward past conservation efforts of Sweetwater's customers. For example, unlike other water supply shortage response ordinances, Sweetwater Authority customers are expected to achieve water savings goals through self-directed actions, using whatever conservation method they choose instead of having to comply with mandatory water use restrictions.

For use during emergency conditions, such as drought or catastrophic interruptions in service where additional water use restrictions are necessary, Sweetwater Authority has developed a four-level drought response plan allowing for water use cutbacks up to 40% or more, and has established an allocation method of rationing water during drought levels. The plan sets customer guidelines for water conservation. Resolution 09-12, included in **Appendix F**, passed May 27, 2009 amended the *Sweetwater Authority Drought Response Plan* and associated conservation pricing structure that were previously established in 2008 under Resolution 08-19.

6.3.1 Response to Last Drought

On December 10, 2008, a Level 1 Drought Watch was declared, which officially urged customers within Sweetwater Authority's service area to voluntarily cut water use by up to 10%. This resolution was passed in response to potential cutbacks to the region's imported water supply. On April 23, 2009, the Water Authority called for member agencies to reduce water consumption by up to 8%. Because Sweetwater Authority customers were already meeting or exceeding water use reduction goals established by the Water Authority, the Level 1 Drought Watch conservation measures remained in effect. In the years that followed, Sweetwater Authority continued to meet mandatory water use reduction goals through voluntary customer actions.

6.4 Sweetwater Emergency Response Plan

A *Vulnerability Assessment* was completed for Sweetwater Authority in February 2003 that quantitatively identified the critical facilities and vulnerabilities of Sweetwater's water system. Though the *Vulnerability Assessment* addressed issues related to terrorism, the findings can be applied to natural disasters in that the same scenarios (i.e., loss of critical pump stations, etc.) were used to determine damage assessment. Because the *Vulnerability Assessment* specifically points out system areas of weakness that could be used against the system and as this UWMP is a publically-available document, it is not included nor is any part of it reproduced in this UWMP.

Sweetwater Authority's *Emergency Response and Recovery Plan* was updated subsequent to the *Vulnerability Assessment* in August 2003, and is in compliance with Section 1443 (b) of the Safe Drinking Water Act, as amended by the Public Health Security and Bioterrorism Preparedness Act of 2002. The plan has been designed for conformance with Homeland Security Presidential Directive 5 of the National Incident Management System and Government Code Section 8607 of the Standardized Emergency Management System, and should be used in conjunction with the State Emergency Plan and local emergency plans. The *Emergency Response*

and Recovery Plan is too large to include as an appendix or to reproduce in this UWMP; however, a summary of portions relevant to the UWMP is provided below.

The *Emergency Response and Recovery Plan* was designed to prepare Sweetwater Authority for a planned response to emergency situations associated with natural disasters, technological incidents, and national security emergencies in, or affecting, Sweetwater Authority's facilities and service area. The plan describes the following:

- Sweetwater Authority's emergency management organization which is required to assist in mitigating any significant emergency or disaster;
- Authorities, policies, responsibilities, and procedures which are required to protect the health and safety of customers, personnel, and facility property;
- Operational concepts and procedures associated with field response to emergencies, Emergency Operations Center (EOC) activities, and the recovery process;
- Implementation of the National Incident Management System (NIMS) for use within the United States, along with the Standardized Emergency Management System (SEMS) for use within the San Diego County operational area, regional, and State systems;
- Multi-agency and multi-jurisdictional coordination, particularly between Sweetwater Authority and local, state, and federal agencies in emergency operations; and
- Pre-event emergency planning as well as emergency operations procedures.

Detailed procedures, including action plans, are addressed in the *Emergency Response and Recovery Plan* for extensive power or communications failure; water treatment failure at Purdue Plant; imported water supply failure; structure failure of Sweetwater's storage, pumping, and transmission facilities; physical, biological, or radiological contamination; natural disaster, bombs and explosions, and reservoir controlled releases.

6.5 Levels of Action

10632(a): #35. Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50% reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.

10632(d): #38. Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

10632(e): #39. Consumption of reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

As described above, Resolution 09-12 amended and adopted the Sweetwater Authority's *Drought Response Plan*, which contains a four-level drought response plan that designates voluntary and mandatory consumption reduction methods to achieve a variety of demand reduction goals. The following provides an explanation of each of Sweetwater Authority's established drought levels, and **Table 6-1** provides a summary of the Sweetwater Authority's drought plan in accordance with drought response levels determined by the Water Authority. Please note that in the sections below "the Base" (base period) is the annual average of potable water used by all Sweetwater Authority customers during the immediately preceding three consecutive years in which no water use restrictions were implemented.

According to the *Drought Response Plan*, "when customers of Sweetwater Authority can no longer meet water use reduction goals as defined for any drought level through voluntary efforts, or when the amount of water supply available to Sweetwater Authority for service to customers is determined to be inadequate to the extent that there would be insufficient water for human consumption, sanitation and fire protection, and this condition is likely to exist until precipitation and inflow dramatically

increases, the Governing Board may activate by resolution mandatory water use reductions and/or conditions in accordance with California Water Code 350."

At each stage, the demand reduction measures will be implemented in varying combinations and monitored to ensure the demand reduction goals are met. During normal times, production figures are recorded daily and reported on a monthly basis. During Level 1, totals are reported weekly to the Director of Water Quality and monthly to the General Manager. In Levels 2, 3 and 4, daily production figures will be reported to the Director of Water Quality. The Director of Water Quality compares the weekly production to the target weekly production to verify that the reduction goal is being met and forwards reports to the General Manager. Monthly reports will be sent to the Governing Board. If reduction goals are not met, the General Manager will notify the Governing Board so that corrective action can be taken.

Level 1 Drought Watch. A Drought Watch condition may occur when a program is initiated by the Water Authority and/or Metropolitan to reach up to a 10% water use reduction goal. Customers of Sweetwater Authority are requested to reduce consumption up to 10% from the Base. At this level, the current water pricing structure remains in effect with no imposition of allocation-based conservation water pricing. The General Manager shall declare a Drought Watch condition.

Level 2 Drought Alert. A Drought Alert condition may occur when a program is initiated by the Water Authority and/or Metropolitan to reach up to a 20% water use reduction goal. Customers of Sweetwater Authority are requested to reduce consumption up to 20% from the Base. At this level, allocation-based conservation water pricing, which includes drought penalties for customers using 11 or more units may be implemented as noted in the *Supplement to Sweetwater Authority Rates and Rules*. Should allocation-based conservation water pricing be implemented, the Governing Board shall declare a Drought Alert condition in the manner and on the criteria provided in California Water Code Section 350. Also, the Adjustment to Customer's Water Bill policy shall be suspended.

Level 3 Drought Critical. A Drought Critical condition may occur when a program is initiated by the Water Authority and/or Metropolitan to reach up to a 40% water use reduction goal. Customers of Sweetwater Authority are requested to reduce consumption up to 40% from the Base. At this level, allocation-based conservation water pricing, which includes drought penalties for all customers is implemented as noted in the *Supplement to Sweetwater Authority Rates and Rules*. The Governing Board shall declare a Drought Critical condition in the manner and on the criteria provided in California Water Code Section 350. Also, the Adjustment to Customer's Water Bill policy shall be suspended.

Level 4 Drought Emergency. A Drought Emergency condition may occur when a program is initiated by the Water Authority and/or Metropolitan to reach in excess of a 40% water use reduction goal. Customers of Sweetwater Authority are requested to reduce consumption by more than 40% from the Base. At this level, allocation-based conservation water pricing, which includes drought penalties for all customers is implemented as noted in the *Supplement to Sweetwater Authority Rates and Rules*. The Governing Board shall declare a Drought Emergency condition in the manner and on the criteria provided in California Water Code Section 350. Also, the Adjustment to Customer's Water Bill policy shall be suspended.

Table 6-1: Water Shortage Contingency – Rationing Stages

DWR Table 35			
Water Shortage Contingency — Rationing Stages to Address Water Supply Shortages			
Stage No.	Water Supply Conditions	% Shortage	Program Type
Level 1	Drought program initiated by Water Authority or Metropolitan or declaration of a Drought Watch condition	Up to 10%	Voluntary
Level 2	Drought program initiated by Water Authority or Metropolitan or declaration of a Drought Alert condition	Up to 20%	Pricing Signals and Penalties
Level 3	Drought program initiated by Water Authority or Metropolitan or declaration of a Drought Critical condition	Up to 40%	Pricing Signals and Penalties
Level 4	Drought program initiated by Water Authority or Metropolitan or declaration of a Drought Emergency Condition	More than 40%	Pricing Signals and Penalties

Table 6-2 provides a summary of voluntary and mandatory prohibitions and consumption reduction methods established within Sweetwater Authority's *Drought Response Plan*. Voluntary water conservation measures are implemented in Sweetwater's service area in order to meet the mandatory water use restrictions. Customers can select the specific water conservation measures/actions that are most appropriate for their setting; however, water use reductions are mandatory and monetary penalties are levied on customers who do not meet them. Sweetwater's *Supplement to Sweetwater Authority Rates and Rules*, effective January 1, 2010, provides a tiered rate structure with increasing water rates for each level of drought response.

Table 6-2: Mandatory and Voluntary Prohibitions and Consumption Reduction Methods

DWR Tables 36 and 37	
Water Shortage Contingency — Mandatory Prohibitions And Consumption Reduction Methods	
Prohibition/Consumption Reduction Method	Prohibition Contributes to Mandatory Use Reduction
Water should be used reasonably and productively at all times.	Level 1 Mandatory
Customers are to keep water from draining onto adjacent properties, public or private roadways, and streets.	Level 1 Mandatory
Customers are to repair major water leaks immediately and minor water leaks within twenty-four hours of discovery.	Level 1 Mandatory
Customers are encouraged to restrict hose washing of sidewalks, driveways, parking areas, tennis courts, patios, or other paved areas to periods of immediate safety or sanitary hazards.	Level 1 Voluntary
Customers are encouraged to use drip methods or hand-irrigation whenever possible and prudent, and to restrict sprinkler operation to the hours of 4:00 p.m. to 9:00 a.m. the following morning, except for the first thirty days necessary to establish a new lawn.	Level 1 Voluntary
Customers are encouraged to use an automatic shut-off nozzle when using a hand-held hose for spraying, lawn watering, vehicle washing, or structure washing.	Level 1 Voluntary
Customers are encouraged to use re-circulating systems for decorative fountains and landscape water features.	Level 1 Voluntary
Serve and refill water in restaurants and other food service establishments only upon requests.	Level 1 Voluntary
Offer guests in hotels, motels and other commercial lodging establishments the option of not laundering towels and linens daily.	Level 1 Voluntary
Customers are encouraged to limit residential and commercial landscape irrigation to no more than three days per week.	Level 2 Voluntary
Customers are encouraged to limit lawn watering and landscape irrigation using sprinklers to no more than ten minutes per watering station per day. This recommendation does not apply to landscape irrigation systems using water efficient devices, including but not limited to weather-based controllers, drip/micro-irrigation systems and stream rotor sprinklers.	Level 2 Voluntary
Customers are encouraged to only use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped areas, including trees and shrubs that are not irrigated by a landscape irrigation system.	Level 2 Voluntary
Customers are encouraged to stop operating ornamental fountains or similar decorative water features unless recycled water is used.	Level 2 Voluntary
Level 2	20% Reduction

DWR Tables 36 and 37 Water Shortage Contingency — Mandatory Prohibitions And Consumption Reduction Methods	
Prohibition/Consumption Reduction Method	Prohibition Contributes to Mandatory Use Reduction
Customers are encouraged to stop filling or re-filling pools, ornamental lakes and/or ponds, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a drought response level under this ordinance.	Level 3 Voluntary
Customers are encouraged to stop washing vehicles except at commercial carwashes that re-circulate (reclaim) water onsite, or by high pressure/low volume wash systems.	Level 3 Voluntary
No new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as will serve letters, certificates, or letters of availability) shall be issued, except under the following circumstances: • A valid, unexpired building permit has been issued for the project; or • The project is necessary to protect the public's health, safety and welfare; or • The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of Sweetwater Authority. This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted for a period of one year or less.	Level 3 Mandatory
Level 3	40% Reduction
Customers are encouraged to stop all landscape irrigation except: • Crops and landscape products of commercial growers and nurseries • Maintenance of existing landscaping necessary for fire protection as specified by the fire marshal of the local fire protection agency having jurisdiction over the property to be irrigated • Maintenance of existing landscaping for erosion control • Maintenance of plant materials identified to be rare or essential to the well-being of rare animals • Maintenance of landscaping within active public parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week • Watering of livestock • Public works projects and actively irrigated environmental mitigation projects	Level 4 Voluntary
Level 4	>40% Reduction

6.6 Penalties and Charges

10632(f): #40.Penalties or charges for excessive use, where applicable.

Penalties for violators of the drought response stages include notification followed by implementation of drought penalties consistent with Section 377 and Section 356 of the California Water Code. Customers will be given one full billing cycle to come into compliance with target water allocations associated with each drought reduction stage. Failure to correct violations will result in the following:

- Each violation of Resolution 09-12 may be prosecuted as a misdeamenor offence punishable by imprisonment in the county jail for not more than thirty days, or by a fine not exceeding one thousand dollars, or by both.
- Violations of mandatory conservation measures may be enforced by discontinuing service to the property at which the violation occurs.
- The *Supplement to Sweetwater Authority Rates and Rules*, effective January 1, 2010, provides a tiered rate structure with increasing water rates for each level of drought response. The commodity rate for all water used increases as Levels 1–4 of the *Drought Response Plan* are initiated by the Board of Directors to achieve mandatory water use reductions.

Table 6-3 describes that penalties and charges that are levied when customers use excess water beyond the Water Allocation established for each property served by Sweetwater Authority.

Table 6-3: Water Shortage Contingency – Penalties and Charges

DWR Table 38	
Water shortage contingency — penalties and charges	
Penalties or Charges	Stage When Penalty Takes Effect
Financial and/or legal penalty for violating Target Water Allocations	Level 2
Drought Pricing – Implementation of the *Supplement to Sweetwater Authority Rates and Rules*	Levels 1-4

6.7 Analysis of Revenue and Expenditure Impacts

10632(g): #41. An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments

Section 10632(g) of the California Water Code requires an analysis of the impacts of each of the actions taken for conservation and water restriction on the revenues and expenditures of the water supplier. Sweetwater Authority's revenue is directly related to sales of water. A reduction in water use throughout the service area in response to drought conditions would result in an associated reduction in revenues. Sweetwater Authority's rate structure (effective September 1, 2010) has a stable ratio of fixed to variable costs in order to buffer against the variability in use. Single family residential commodity rates, which include Water Authority surcharges, are tiered per 100 cubic-foot of water to require high water users to pay higher rates. Construction and agricultural rates are fixed volumetric rates. Fixed fees include bi-monthly meter fees.

Sweetwater Authority anticipates that capital outlay would be reduced to keep a surplus of revenues for each stage of drought response described above. During a drought, both revenues and expenses are reduced. For example, a reduction in water use would have a corresponding reduction in Sweetwater Authority expenditures for the treatment and distribution of the water supply at the Purdue Plant. Since revenues decrease faster than expenses, however, reductions in capital outlay are necessary. Sweetwater's policy has been to account for revenue from surcharges separately, and to use those monies only for water conservation activities or projects which explore or develop new water supplies.

In order to mitigate the financial impacts of a water shortage, Sweetwater Authority has established drought pricing in the *Supplement to Sweetwater Authority Rates and Rules*, effective January 1, 2010. The *Supplement to Sweetwater Authority Rates and Rules* provides a tiered rate structure with increasing water rates for each level of drought response to both penalize customers who are not achieving the mandatory use reductions and provide needed revenue during periods of limited water deliveries.

7 Demand Management Measures

Chapter 7 provides a description of the mechanisms that Sweetwater Authority implements to increase water conservation. Additionally, this chapter provides a description of Sweetwater's water use reduction plan in compliance with the Water Conservation Bill of 2009.

10631(f)(1) and (2): #26. Describe and provide a schedule of implementation for each water demand measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures.

10631(f)(3): #27. A description of methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

10631(f)(4): #28. An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.

10631(g): #29. An evaluation of each water demand management measures listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation.

Sweetwater Authority recognizes water conservation and demand management as a priority in its water use planning. The long-term goal of Sweetwater Authority's water conservation program is to achieve and maintain water use efficiency goals for various use categories that are reasonable for that category. Specific objectives of Sweetwater Authority's conservation program are to:

- Eliminate wasteful practices in water use;
- Continue to develop information on both current and potential water conservation practices;
- Ongoing, timely implementation of conservation practices; and
- Public information and education activities to spread knowledge of efficient water use techniques and devices.

Sweetwater Authority started a water conservation program in 1990. Initial efforts included a long-term public information program and cooperation with the conservation efforts of the Water Authority. The water conservation program expanded significantly during the 1987-1992 drought, and the backbone of a long-term conservation program was formed. Since that time, Sweetwater Authority has continued to revamp the conservation program by developing a variety of innovative and effective approaches to demand management.

Water conservation programs are developed and implemented on the premise that water conservation increases water supply by reducing the demand on available supply, which is vital to the optimal use of the region's supply resources. Sweetwater Authority actively participates in countywide and regional conservation programs through the Water Authority and Metropolitan. As a member of the Water Authority, Sweetwater Authority benefits from regional programs performed on behalf of its member agencies. Sweetwater Authority also participates in water conservation programs operated on a shared-cost basis among the Water Authority, Metropolitan, and their member agencies.

The vast majority of water savings result from the installation of residential and commercial Ultra Low Flow Toilets (ULFT), High Efficiency Toilets (HET), and High Efficiency Washers (HEW). In 2008, Sweetwater Authority shifted emphasis towards more water efficient landscaping and commercial appliances. These programs continue to evolve. The resulting savings in supply from these programs directly relates to additional available water in the San Diego region for beneficial use within the Water Authority's service area, including Sweetwater Authority. In partnership with the Water Authority and San Diego County, Sweetwater Authority's water conservation efforts are expected to grow and expand.

Sweetwater Authority's fiscal year 2010-11 budget included $119,700 for conservation programs that are anticipated to save approximately 2,400 acre-feet for the year. This fiscal year financial commitment represents an average cost of approximately $50 per acre-foot of projected water sales. Conservation programs also reduce imported water demand.

7.1 Best Management Practices

Demonstrating its commitment to conservation, Sweetwater Authority officials became an original signatory to the *Memorandum of Understanding (MOU) Regarding Urban Water Conservation in California*, which created the California Urban Water Conservation Council (CUWCC) in 1991 in an effort to reduce California's long-term water demands. As defined in the MOU, a water conservation Best Management Practice (BMP) is:

> *"A policy, program, practice, rule, regulation or ordinance or the use of devices, equipment or facilities which meets either of the following criteria: (a) An established and generally accepted practice among water suppliers that results in more efficient use or conservation of water; (b) A practice for which sufficient data are available from existing water conservation projects to indicate that significant conservation or conservation related benefits can be achieved; that the practice is technically and economically reasonable and not environmentally or socially unacceptable; and that the practice is not otherwise unreasonable for most water suppliers to carry out."*

Since becoming a signatory in 1991, Sweetwater Authority has made implementation of the BMPs a foundational element of its conservation programs, and a key component in its water resource management strategy. When finalized, Sweetwater Authority's 2009-2010 CUWCC BMP Annual Report will be provided as **Appendix G**. Sweetwater Authority is in full compliance with the CUWCC MOU. Since 2008, the BMPs have been updated to include current technology and credit agencies for their innovative water conservation programs. These revisions have been incorporated into Sweetwater's conservation program and resulting demand management measures. The current demand management measures implemented by Sweetwater Authority are described below.

Foundational: Utility Operations

- **System Water Audits, Leak Detection, and Repair**– Sweetwater Authority's system water audits, leak detection, and repair programs contribute to better water management and reduction in water loss.

  Water Audits. Sweetwater Authority conducts a monthly audit of its overall system for unbilled and unaccounted for water loss. Using these comparisons, Sweetwater Authority can evaluate the need for implementation of a formal water loss reduction program. System loss is determined by comparing total water use with total water production. Sweetwater Authority's 12-month average water loss was 4 percent between 2000 – 2010.

  Leak Detection. A Supervisory Control and Data Acquisition (SCADA) system was installed in the distribution system in 2001, and is used to monitor water flow throughout the system. Rapid changes in water quantity and/or pressure at any of the monitoring points within the system are immediately evaluated. On the rare occasion a leak is discovered, it is quickly detected and corrected. A leak detection survey was performed on 19.49 miles of the distribution system in September 2002. There was no total annual water loss for surveyed portions of the system.

  Water System Improvements. Routine and preventative maintenance is performed on the distribution system. In addition, Sweetwater Authority implements a capital improvement program to maintain and renew transmission, distribution, and storage facilities.

  Facility Inspection. Critical facilities, including pump stations and valve vaults, are inspected bi-weekly. Other distribution facilities are inspected weekly. As part of Sweetwater Authority's preventative maintenance program, each system valve is exercised at least every three years, and each fire hydrant is visually inspected and maintained every one to two years.

  Meter Maintenance and Replacement Program. A 15-year repair/replacement program covers every service meter within the Sweetwater Authority system. Meters sized below ⅝-inch are calibrated and replaced as needed. Meters sized 1-½ to 2-inches are calibrated and rebuilt as necessary. Meters sized at 3-inches and larger are calibrated and maintained annually.

Water Theft. Sweetwater Authority monitors incidents of water theft, and has the ability to charge up to three times the water service rate when it is determined that water theft has occurred.

- **Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections**– Sweetwater Authority requires the installation of water meters on all services throughout its distribution system, and bills by volume of water metered.
- **Wholesale Agency Assistance Program**– This demand management measure applies only to wholesale agencies. The Water Authority provides conservation-related technical support and information to its member agencies, and typically manages the programs on behalf of its member agencies. Sweetwater Authority, the Water Authority, and Metropolitan share funding for some conservation incentives.
- **Retail Conservation Pricing**– Sweetwater Authority's water rate structure is set up as an increasing block rate, which increases the cost of water in three steps for residential use. This encourages residential users to limit their water use by charging more for units above a base amount. A new inclining block rate structure for single family residential accounts was adopted in 2010. The increasing rate structure was implemented with a higher rate starting at the 50th percentile of the average consumer use, to encourage average consumers to reduce their use below 28 units per billing cycle to avoid the higher rate. All other water users such as multi-family, commercial, industrial, public, and agricultural are billed at a single uniform rate, which is between the second and third tier rate of the residential customer. This rate is higher than the second tier rate for residential consumers, in order to encourage large users to control excess use of water. Sweetwater Authority currently offers a financial incentive ($.35 per unit) for single-family residential consumers who use less than 10 units per billing cycle.
- **Water Conservation Coordinator**– Sweetwater Authority first designated a Conservation Coordinator in 1991. During this same year, Sweetwater Authority used three temporary staff positions to handle the increased volume of conservation-related activities caused by the drought. In June 1992, a Water Conservation – Information Specialist staff position was created.

  Sweetwater Authority currently has a Program Supervisor and Conservation Coordinator who manages and administers the water conservation program.
- **Water Waste Prohibition** – The following water waste prohibitions are designed to encourage efficient water use within the region, and provide a method for meeting demand reduction goals, should an extended water shortage occur.

  Region. The County of San Diego enforces several state and local ordinances requiring water conservation, to assure available water resources are put to beneficial use for all citizens of the county. California Plumbing Code, Section 402, requires the installation of water conserving fixtures in new construction. Section 67.101 of the County's Code of Regulatory Ordinances simply prohibits water waste: "No person shall waste or cause or permit to be wasted any water furnished or delivered by any agency distributing for public benefit any water dedicated to or provided for public use within the unincorporated territory of the county of San Diego."

  In addition, the State Legislature determined in the Water Conservation in Landscaping Act (Government Code sections 65591 et seq.) that the State's water resources are in limited supply. The Legislature also recognized that while landscaping is essential to the quality of life in California, landscape design, installation, maintenance and management must be water efficient. Land use agencies including the cities and counties are required by the Act to enforce California's Model Water Efficient Landscape Ordinance, or a similar ordinance which as at least as effective.

  For property within the County of San Diego, Section 6717c.1 of the County's Zoning Ordinance meets this requirement as it applies to new and rehabilitated public and private landscapes that require a permit on developer installed residential landscapes. The County's Water Conservation and Landscape Design Manual implements Zoning Ordinance Section 6712 (d), which requires efficient irrigation uses (including rain sensors), transitional zones, use of native

plantings, restriction on turf, use of mulch, the preservation of existing vegetation and natural features, and the use of reclaimed water when available.

Within the City of Chula Vista, the landscape water efficiency is regulated through the City of Chula Vista Landscape Water Conservation Ordinance (Chapter 20.12). The general purpose of this chapter is to establish water use standards for landscapes in Chula Vista that implement the landscape design requirements established by the Water Conservation in Landscaping Act. Similarly, the City Council of the City of National City passed Ordinance 2010-2331 amending Title 18 of the Municipal Code by amending Chapter 18.54 establishing water efficient landscape regulations.

Agency. Resolution 09-12, attached in **Appendix F**, passed on May 27, 2009 and amended the drought response plan and associated conservation pricing structure established in Resolution 08-19. For use during emergency conditions such as drought or catastrophic interruption in service where additional water use restrictions are necessary, Sweetwater Authority has developed a four-level drought response plan allowing for water use cutbacks up to 40 percent or more, and has established an allocation method of rationing water during drought levels. The plan sets customer guidelines for water conservation.

On December 10, 2008, a Level 1 Drought Watch was declared that officially urges water consumers in the Sweetwater Authority's service area to voluntarily cut water use up to 10 percent. This resolution was passed in response to potential cutbacks to the region's imported water supply. On April 23, 2009, the Water Authority took action to call for member agencies to reduce water consumption by up to 8 percent. Because Sweetwater Authority customers were already meeting or exceeding water use reduction goals, the Level 1 conservation measure remained in effect.

Level 1 Drought Watch. Demand reduction goal up to 10 percent. Encourages measures to use water wisely.

Level 2 Drought Alert. Designed to reduce water consumption up to 20 percent. Calls for voluntary compliance with measures to reduce water use and increase the efficiency of water use throughout the service area. Target water allocations, an allocation based conservation water pricing structure and penalties for willful violations drive customers to meet mandatory water use goals. Should allocation-based water conservation pricing be implemented, the Governing Board shall declare a Water Shortage Emergency Condition in the manner and on the criteria provided in California Water Code Section 350.

Level 3 Drought Critical. Designed to reduce water consumption up to 40 percent. In addition to target water allocations, an allocation based conservation water pricing structure and penalties, the Governing Board shall declare a Water Shortage Emergency Condition in the manner and on the criteria provided in California Water Code Section 350.

Level 4 Drought Emergency. Designed to reach in excess of a 40 percent water use reduction goal. In addition to target water allocations, an allocation based conservation water pricing structure and penalties, the Governing Board shall declare a Water Shortage Emergency Condition in the manner and on the criteria provided in California Water Code Section 350.

According to the *Drought Response Plan*, "When customers of Sweetwater Authority can no longer meet water use reduction goals as defined for any drought level through voluntary efforts, or when the amount of water supply available to Sweetwater Authority for service to customers is determined to be inadequate to the extent that there would be insufficient water for human consumption, sanitation and fire protection, and this condition is likely to exist until precipitation and inflow dramatically increases, the Governing Board may activate by resolution mandatory water use reductions and/or conditions in accordance with California Water Code 350."

Foundational: Education

- **Public Information Programs**– Sweetwater Authority promotes water conservation in coordination with the Water Conservation Garden, neighboring water agencies, the Water Authority, and Metropolitan. Regional activities include: public service announcements, demonstration gardens, conservation strategy meetings, water awareness month activities, water efficiency workshops, and landscape water use classes and contests. Sweetwater Authority independently distributes public information through its website, bill inserts, on-hold telephone messages, annual Consumer Confidence Report/Calendar, newsletters, news releases, brochures, keynote speakers, classroom presentations, facility tours, video library, and participation in year-round special events and community festivals. Sweetwater Authority participates in regional drought, conservation, and environmental stewardship public outreach programs including the 20 Gallon Challenge, WaterSmart programs, Climate Change Workgroups, and city Clean-Green programs.

  Literature-Brochures. Sweetwater Authority provides brochures and literature on a variety of water conservation topics including gray water, lawn watering, Xeriscape planting, WaterSmart and California Friendly gardening, drip irrigation, swimming pool maintenance, leak detection, and general household conservation tips. These are made available to residents through a literature rack at Sweetwater Authority's Administration Office and website, through individual and group mailings, through distribution to residential complex managers, and through distribution at public appearances by Sweetwater Authority Board members and staff. Sweetwater Authority Customer Service Representatives also distribute Conservation Policy Brochures to new and other water consumers, while out in the field. The brochures contain leak detection information and water-saving tips. Most materials are available in English and Spanish.

  Videos and Electronic Media. Sweetwater Authority has distributed "Water Wise Gardening," a video on Xeriscape plants and efficient irrigation, to all public libraries in its service area. Upon request, Sweetwater Authority makes available informational videos produced by Sweetwater Authority, which promote conservation as a source for future water needs. Computer CD's packed with water saving tips, titled the *Southern California Heritage Gardening Guide*, and the *Frugal Gardener* are distributed at community events and speaking engagements.

  Newsletters/Brochures. Sweetwater Authority publishes a consumer newsletter, "Customer Connections" quarterly, incorporating conservation tips and programs. Brochures are developed and distributed to deal with specific conservation issues and to provide detailed information on drought response measures. Drought Information is provided in English and Spanish and bulk mailed to all physical addresses in Sweetwater Authority's service area.

  Personal Letters and Emails. Sweetwater Authority sends a personalized letter or email to notify consumers of reported or observed water waste on their property. These documents are sent to elicit cooperation in Sweetwater Authority's efforts to use water efficiently, and are sent with appropriate conservation materials, such as a lawn-watering guide, leak detection information, or general conservation tips.

  Seminars. Sweetwater Authority works with local agencies to cooperatively host periodic conservation seminars for groups of water users, targeted toward high water use consumers, or toward specific types of use. These seminars include information on current water saving methods and devices, and contacts for additional assistance and information, as well as a summary of local agency information and contact persons for cooperative efforts between Sweetwater Authority and its consumers.

  Speakers Bureau. Sweetwater Authority staff and its Board of Directors are available to address civic and community groups, clubs, associations, and other organizations on a wide variety of water issues. Speakers provide conservation handouts to interested audience members at these appearances. The Sweetwater Authority speakers' bureau is promoted through involvement in civic groups, through the customer newsletter, through letters to local libraries and schools, and through periodic newspaper announcements of availability.

Committees. Sweetwater Authority maintains a permanent Communications Committee to provide assistance and suggestions to staff regarding water awareness issues. This committee can be convened as needed to provide assistance and suggestions to staff regarding conservation issues and address consumer concerns resulting from water reduction allocations.

Exhibits and Related Materials. Sweetwater Authority is an agency member of the Water Conservation Garden at Cuyamaca College. This garden promotes water conservation, has nearly 5 acres of displays, and offers a variety of water conservation educational programs. Sweetwater Authority also participates in local business and community fairs to distribute water-saving devices, conservation literature, and to answer consumer questions face-to-face. Materials are provided to local merchants and libraries for their distribution and displays on general water conservation issues. Sweetwater Authority also partners with neighboring water agencies to put on water conservation public awareness events, including water-efficiency technology expos and landscape contests.

Sweetwater Authority partners with the Chula Vista Nature Center to provide displays featuring relationship of good water stewardship to environmental sustainability. Sweetwater Authority also promotes sustainable water practices and water conservation through partnerships with the City of Chula Vista's Green programs, Climate Change Initiatives, and Naturescape Program.

Tours and Open Houses. Sweetwater Authority provides tours of its Perdue Plant in Spring Valley and its Desalination Facility in Chula Vista. Open houses at Sweetwater facilities which feature water supply and water conservation displays are also periodically held. Bus fees are reimbursed for any tour provided to elementary and secondary school students within the service area. Tours are also provided for college and military students, community groups, after school programs, and student enrichment clubs (i.e. scouting, boys and girls clubs). Leadership tours of facilities are offered periodically to local business leaders, elected officials, and representatives from high-use water consumers. Lessons and information presented during the tours incorporate information about the limited water supply for the region and efficient water use practices.

News Relations. Sweetwater Authority provides formal press releases and feature story information to the Chula Vista Star News, the San Diego Union Tribune, and local radio and television reporters, as well as to trade and special interest publications.

Advertising. Sweetwater Authority has purchased advertising or content space in local newspapers, school and city newsletters and chamber publications to promote water conservation and understanding of water issues. Additional advertising has been provided in the Star News through that newspaper's co-sponsorship of a Sweetwater Authority water conservation poster contest.

- **School Education Programs**– Since 1991, Sweetwater Authority has had an active school education program, which includes water conservation messages. In 2000, Sweetwater Authority created a regular education specialist position to support, in addition to other activities, the school education program. Sweetwater Authority's Education Specialist provides instructional assistance, educational materials, and classroom lessons that identify urban, agricultural, and environmental issues and conditions in the local watershed.

  Sweetwater Authority also participates in the Water Authority's countywide education programs. The Water Authority offers students from kindergarten through high school, a wide array of educational opportunities including water testing kits, and computer programs.

  Elementary School Education Program. A professional teacher provides classroom lessons in elementary schools throughout the service area, teaching students about the water cycle and watershed protection. Each of these lessons includes discussion of wise water use practices. The Water Conservation Garden at Cuyamaca College also has an

Education Department. Sweetwater Authority funds tours of the Garden and pays for the Garden's Education Coordinator, Ms. Smarty Plants, to hold assemblies at elementary schools in the Sweetwater Authority's service area.

Sweetwater Authority has provided copies of water conservation videos and books to each elementary school library in the service area. Water conservation games, books, and posters have been distributed to each classroom, and Sweetwater Authority has provided each elementary student with promotional gifts reinforcing water conservation during various water awareness month campaigns. Sweetwater Authority also participates in the Metropolitan poster contest. The contest has a theme every year and winning submissions from the local elementary schools are submitted to Metropolitan. Winning selections are printed in their annual calendar.

Sweetwater Authority provides web-based learning for elementary students on its website. Its teachers also prepare and present specialized lessons for science fairs, extended day programs, and classrooms upon request, and promote the use of the Water Authority and Metropolitan education programs. Staff from Sweetwater Authority has received training and is certified in Project Wet Curriculum. Workshops are held annually to train local teachers on the curriculum so that they can implement water education into their lesson plans

Junior and Senior High School Education Programs. Sweetwater Authority's professional teachers have developed secondary-school classroom lessons on water treatment, groundwater, and water supply issues, all with a discussion of efficient water use practices. Laboratory equipment issued by the Water Authority is provided to secondary school teachers for classroom use. Sweetwater staff promotes use of Metropolitan and the Water Authority secondary school education programs on conservation gardening, water quality, water sources, and the effects of the political process on water supplies. Sweetwater Authority has been an active partner in programs geared toward local secondary school students, including a program to encourage student activities to benefit the Sweetwater River Watershed coordinated by the Resource Conservation District of Greater San Diego. Staff from throughout Sweetwater Authority has participated in career-based events with the local schools, and were featured in "Water Works," a curriculum unit developed by the Water Authority and Metropolitan. Sweetwater Authority has provided a variety of water resources for use at local schools, including water maps and issues guides, distributed to social science and science teachers, and "The Cadillac Desert," an eight-hour video series produced by public television, distributed to secondary schools and public libraries in the service area.

Sweetwater Authority hosts an annual High School Photo Contest with schools in its service area. The winning photos are selected and used in the annual Water Quality Report which also serves as a calendar. Cash prizes are awarded to the students.

Mini-Grant Program for Local Schools. Sweetwater Authority provides mini-grants to teachers for the development and presentation of water-based lessons, to assist with providing conservation demonstration gardens at local school sites, and to host use of San Diego County's Splash Science Lab and Green Machine at local schools.

Programmatic: Residential

In addition to the programmatic DMMs discussed below, additional programs may be developed as technology improves or as needed to ensure appropriate water use.

- **Water Survey Programs for Single-Family and Multi-Family Residential Consumers** – The Residential Survey Program is free to both single-family and multi-family residential consumers, and has been available since 1995. The program helps consumers learn how to save water in their own homes, which in turn saves the consumers money. The survey includes a review of landscaping, outdoor irrigation system, indoor use, identification of indoor leaks, a complete educational packet, information about other water conservation programs, and free faucet aerators and low-flow showerheads. An irrigation surveyor will perform a meter leak detection test, check the irrigation system, suggest seasonal adjustments for a consumer's individual

water schedule, check the soil to ensure that watering coincides with moisture absorption, discuss proper lawn maintenance, and offer low water use landscape information.

- **Residential Plumbing Retrofit** – Retrofit water conservation device packages, which include toilet tank displacement devices and shower head flow restrictors, were made available to essentially all households within Sweetwater Authority's service area in 1977 as part of DWR's pilot water conservation study. Sweetwater Authority offered retrofit devices, which included low-flow showerheads, toilet tank displacement kits, and faucet aerators to its customers from 1991 through 2003. By 1999, Sweetwater Authority had distributed 20,833 low-flow showerheads. The Water Authority and its member agencies distributed over 550,000 showerheads between 1991 and 2002. Since January 1, 1994, showerheads manufactured in the United States must be in compliance with 2.5 GPM maximum flow. Data gathered from the Residential Survey Program showed 80 to 90 percent saturation of low-flow showerheads in homes surveyed. Since 2002, customers have had access to a limited number of pre-purchase vouchers and/or after-purchase rebates for installing water efficient toilets, washers, and other appliances through the through programs administered by the Water Authority and Metropolitan.
- **High-Efficiency Washing Machine Rebate Program**– Since 2000, Sweetwater Authority has participated in the Water Authority's rebate program. New technology in washing machine design provides for more efficient water use and savings. Residential and commercial consumers have taken advantage of the up to $185 rebates to replace their standard top-loading washers with low-water use, energy-efficient models. Prior to March 10, 2004, high-efficiency washers had water efficiency factor values of 9.5 or less. With greater availability of ultra-high efficiency washers, rebates are now limited to machines with water efficiency factor values of 5.0 or less. The water efficiency factor is determined by the amount of water it takes to wash a cubic foot of laundry. The lower the water efficiency factor, the greater the water efficiency of the clothes washer.
- **Residential Toilet Replacement Program**– Since 1991, Sweetwater Authority has participated in the Water Authority's Ultra Low Flow and High Efficiency Toilet voucher and/or rebate programs. The current program offers rebates to multi-family residential consumers who have purchased water efficient devices to replace older, less efficient units.

  Since 1992, toilets manufactured in the United States must comply with a 1.6 gallons per flush (gpf) maximum flow. Toilets with consistently lower water use continue to be developed. Beginning in 2008, rebates are only available for high efficiency and dual flush toilets to encourage customers to install toilets that have met more rigorous water efficiency standards.

Programmatic: Landscape

- **Large Landscape Conservation Programs and Incentives**– From 1991 to 2004, large landscape (defined as landscape with one acre or more) irrigation surveys were available to consumers at no charge through the *Professional Assistance for Landscape Management (PALM)* program, sponsored by the Water Authority. Using methodology developed by the Irrigation Training and Research Center at California Polytechnic State University at San Luis Obispo, the surveyor performs catch can tests, makes numerous soil and plant observations, and calculates ETo based irrigation schedule.

  Beginning in 2005, residential and commercial consumers with large landscapes (initially defined as over 2,000 square feet) receive the following services at no charge through the *Smart Landscape* program, sponsored by Sweetwater Authority, the Water Authority, Metropolitan, and DWR:

  Landscape Irrigation Audits. Audits are available at no charge to residential and commercial consumers with a minimum of 1 acre of irrigated landscaping. Site audits include a review of irrigation conditions, watering schedule, and sprinkler distribution uniformity, by a trained technician. Landscape area measurement and water use recommendations are provided.

Weather-Based Irrigation Controllers. Rebates are available to residential and commercial consumers with irrigated landscaping for weather-based irrigation controllers to retrofit old timers.

Rotating Irrigation Nozzles. Rebates are available for rotating irrigation nozzles. Rebates are only available for devices listed on the Qualified Product List, maintained by Metropolitan. No site size minimum applies to this incentive program; however the current rotating nozzle rebate is only available in quantities of 25 or greater per eligible customer.

Irrigation System Upgrade Grants. Grants up to $2,500 per irrigated acre, up to $5,000 for commercial sites and $10,000 for public sites, in matching funds are available through the Commercial Landscape Incentive Program. Sites must have a minimum of one acre of irrigated landscape, and be currently over-irrigated to qualify.

Water Budgets. A voluntary program for consumers with dedicated irrigation meters was developed by the Water Authority for member agencies. Using a custom software application, water use data is converted into web-accessible water budgets. Each billing cycle, participating consumer water use can be charted against previous use to calculate landscape water needs. Water budgets can help consumers determine the right amount of water required to maintain healthy landscaped areas, given weather conditions. Water budgets may decrease outside water use by 20 percent. This software application is currently being transitioned from the Water Authority to the member agencies.

Water Savings Performance Program. Until the program ended in 2010, Metropolitan provided $195 per acre foot of water saved or about $3 per 1,000 gallons saved to sites within Sweetwater Authority's service area. The incentive was based on the potential for savings over 5 years. Eligible project costs included labor, hardware and up to one year of water management fees.

Synthetic Turf. Synthetic Turf is becoming increasingly popular for sports fields, golf courses, parks, and public spaces, as well as residential properties. For a limited period, a 50¢ per square foot incentive was available for synthetic turf.

Programmatic: Commercial, Industrial, and Institutional

- **Conservation Programs for Commercial, Industrial, and Institutional (CII) Accounts**– Sweetwater Authority participates in the Metropolitan's *Save Water, Save a Buck* program which offers rebates to consumers for water-efficient devices. A limited number of rebates are available for commercial plumbing fixtures (high efficiency toilets, high efficiency ultra low-flow and waterless urinals), cleaning equipment (single and multi-load commercial clothes washers and water brooms) water efficient medical equipment (X-ray processors, dry vacuum pumps, and steam sterilizer retrofits), food service equipment (connectionless food steamers, air cooled ice machines, and spray valves used for pre-rinsing dishes in commercial kitchens), and cooling tower conductivity controllers. New rebates are added to the program, and rebate values are adjusted as water savings potentials are validated. The rebates reduce the costs for businesses, and the equipment produces long-term savings in water, sewer, and energy costs.

  As more and better data are collected over time, the BMPs and their associated demand management measures are refined and revised based upon the most objective criteria available. The CUWCC MOU sets agency-specific implementation schedules and coverage goals based on standardized criteria, including signatory date and base year data. Per the CUWCC, compliance with the BMP water saving goals can be accomplished in one of three ways including: accomplishing the specific measures listed in each BMP; accomplishing a set of measures which achieves equal or greater water savings; and accomplishing set water savings goals as measured in gallons per capita per day consumption. As a BMP signatory, Sweetwater Authority may elect to adopt additional or alternative conservation measures, in part or in any combination provided that the demonstrated water savings in the selected activities are equal to or greater than the water savings that would be achieved by the stated BMP measures.

7.2 Best Management Practices Not Fully Implemented

The MOU recognizes specific BMP goals may be delayed or remain unmet due to varying local conditions and provides for good faith efforts towards implementation. Sweetwater Authority has achieved or surpassed all BMP water savings goals and/or is making the following good faith efforts:

- **Water Survey Programs for Single-Family and Multi-Family Residential Customers**– Sweetwater Authority's Customer Service Staff performs high bill investigations each billing cycle on all accounts to assist consumers in identifying leaks on their premises. Plumbing code changes and improvements in the efficiency of water fixtures have significantly reduced the water savings potential from performing indoor residential water surveys. Equivalent water savings has been achieved through the toilet and clothes washer rebate programs and Sweetwater Authority's aggressive water leak investigation practices.
- **Metering with Commodity Rates for all New Connections and Retrofit of Existing**– All service connections are metered. Sweetwater Authority has submitted the CUWCC meter testing and replacement program documentation, which was a new 2007 coverage requirement.
- **Conservation Programs for CII Accounts** – Targeting conservation program resources to achieve the greatest savings across all water use sectors was an underlying theme for the 2008 BMP revision process. Although coverage goals for this measure were not met during the 2007-2008 reporting period, Sweetwater Authority is well aligned with the new BMP methodology. Rather than focusing on commercial water use audits, Sweetwater Authority is achieving equivalent water savings through rebate and public information and education programs.
- **Water Waste Prohibition**– This demand management measure requires enforceable measures to prohibit single-pass cooling systems in new connections, non-recirculating systems in all new conveyer car wash businesses, commercial laundry systems, and non-recycling decorative water fountains. These measures have not been specifically addressed in regional, local, and agency policies; however, water waste ordinances and regulations have been enacted for general water waste and for areas not specifically addressed. Sweetwater Authority continues to participate in local and regional workgroups to encourage agencies with the appropriate legal authority to adopt water efficient ordinances.

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Appendix A

California Urban Water Management Planning Act of 1983 and Water Conservation Act of 2009

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

CALIFORNIA WATER CODE DIVISION 6
PART 2.6. URBAN WATER MANAGEMENT PLANNING

CHAPTER 1. GENERAL DECLARATION AND POLICY

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

10610.2. (a) The Legislature finds and declares all of the following:

(1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.

(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.

(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.

(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in

its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.

(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.

(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

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

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

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

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

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

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

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

CHAPTER 2. DEFINITIONS

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

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

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

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

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

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

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

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

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

CHAPTER 3. URBAN WATER MANAGEMENT PLANS
Article 1. General Provisions

10620.

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

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

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

(d)

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

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

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

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

10621.

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

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

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

Article 2. Contents of Plans

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

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

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

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

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

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

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

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

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

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

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

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

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

(e)

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

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

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

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

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

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

(B) Residential plumbing retrofit.

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

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

(E) Large landscape conservation programs and incentives.

(F) High-efficiency washing machine rebate programs.

(G) Public information programs.

(H) School education programs.

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

(J) Wholesale agency programs.

(K) Conservation pricing.

(L) Water conservation coordinator.

(M) Water waste prohibition.

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

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

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

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

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

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

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

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

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

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

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

(j) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council

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

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

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

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

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

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

(c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including,

but not limited to, a regional power outage, an earthquake, or other disaster.

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

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

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

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

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

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

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

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

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

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

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

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

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

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

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

Article 2.5 Water Service Reliability

10635.

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

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

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

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

Articl 3. Adoption and Implementation of Plans

10640. Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630).

The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

10641. An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

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

10643. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

10644.

(a) An urban water supplier shall file with the department and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the

plans shall be filed with the department and any city or county within which the supplier provides water supplies within 30 days after adoption.

(b) The department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part. The report prepared by the department shall identify the outstanding elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has filed its plan with the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

CHAPTER 4. MISCELLANEOUS PROVISIONS

10650. Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.

10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

10652. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the "Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

10657.

(a) The department shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with Section 10631, as amended by the act that adds this section, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.

(b) This section shall remain in effect only until January 1, 2006, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.

Senate Bill No. 7

CHAPTER 4

An act to amend and repeal Section 10631.5 of, to add Part 2.55 (commencing with Section 10608) to Division 6 of, and to repeal and add Part 2.8 (commencing with Section 10800) of Division 6 of, the Water Code, relating to water.

[Approved by Governor November 10, 2009. Filed with Secretary of State November 10, 2009.]

LEGISLATIVE COUNSEL'S DIGEST

SB 7, Steinberg. Water conservation.

(1) Existing law requires the Department of Water Resources to convene an independent technical panel to provide information to the department and the Legislature on new demand management measures, technologies, and approaches. "Demand management measures" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

This bill would require the state to achieve a 20% reduction in urban per capita water use in California by December 31, 2020. The state would be required to make incremental progress towards this goal by reducing per capita water use by at least 10% on or before December 31, 2015. The bill would require each urban retail water supplier to develop urban water use targets and an interim urban water use target, in accordance with specified requirements. The bill would require agricultural water suppliers to implement efficient water management practices. The bill would require the department, in consultation with other state agencies, to develop a single standardized water use reporting form. The bill, with certain exceptions, would provide that urban retail water suppliers, on and after July 1, 2016, and agricultural water suppliers, on and after July 1, 2013, are not eligible for state water grants or loans unless they comply with the water conservation requirements established by the bill. The bill would repeal, on July 1, 2016, an existing requirement that conditions eligibility for certain water management grants or loans to an urban water supplier on the implementation of certain water demand management measures.

(2) Existing law, until January 1, 1993, and thereafter only as specified, requires certain agricultural water suppliers to prepare and adopt water management plans.

This bill would revise existing law relating to agricultural water management planning to require agricultural water suppliers to prepare and adopt agricultural water management plans with specified components on or before December 31, 2012, and update those plans on or before December

31, 2015, and on or before December 31 every 5 years thereafter. An agricultural water supplier that becomes an agricultural water supplier after December 31, 2012, would be required to prepare and adopt an agricultural water management plan within one year after becoming an agricultural water supplier. The agricultural water supplier would be required to notify each city or county within which the supplier provides water supplies with regard to the preparation or review of the plan. The bill would require the agricultural water supplier to submit copies of the plan to the department and other specified entities. The bill would provide that an agricultural water supplier is not eligible for state water grants or loans unless the supplier complies with the water management planning requirements established by the bill.

(3) The bill would take effect only if SB 1 and SB 6 of the 2009–10 7th Extraordinary Session of the Legislature are enacted and become effective.

The people of the State of California do enact as follows:

SECTION 1. Part 2.55 (commencing with Section 10608) is added to Division 6 of the Water Code, to read:

PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION

Chapter 1. General Declarations and Policy

10608. The Legislature finds and declares all of the following:

(a) Water is a public resource that the California Constitution protects against waste and unreasonable use.

(b) Growing population, climate change, and the need to protect and grow California's economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.

(c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.

(d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.

(e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.

(f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.

(g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.

(h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.

(i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

10608.4. It is the intent of the Legislature, by the enactment of this part, to do all of the following:

(a) Require all water suppliers to increase the efficiency of use of this essential resource.

(b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.

(c) Measure increased efficiency of urban water use on a per capita basis.

(d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.

(e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.

(f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.

(g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.

(h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.

(i) Require implementation of specified efficient water management practices for agricultural water suppliers.

(j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.

(k) Advance regional water resources management.

10608.8. (a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

(2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an

administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

(3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.

(b) This part does not limit or otherwise affect the application of Chapter 3.5 (commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.

(c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.

(d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

Chapter 2. Definitions

10608.12. Unless the context otherwise requires, the following definitions govern the construction of this part:

(a) "Agricultural water supplier" means a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. "Agricultural water supplier" includes a supplier or contractor for water, regardless of the basis of right, that distributes or sells water for ultimate resale to customers. "Agricultural water supplier" does not include the department.

(b) "Base daily per capita water use" means any of the following:

(1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

(2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of

a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

(3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.

(c) "Baseline commercial, industrial, and institutional water use" means an urban retail water supplier's base daily per capita water use for commercial, industrial, and institutional users.

(d) "Commercial water user" means a water user that provides or distributes a product or service.

(e) "Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.

(f) "Disadvantaged community" means a community with an annual median household income that is less than 80 percent of the statewide annual median household income.

(g) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:

(1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.

(2) The net volume of water that the urban retail water supplier places into long-term storage.

(3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.

(4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.

(h) "Industrial water user" means a water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development.

(i) "Institutional water user" means a water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.

(j) "Interim urban water use target" means the midpoint between the urban retail water supplier's base daily per capita water use and the urban retail water supplier's urban water use target for 2020.

(k) "Locally cost effective" means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater than or equal to the present value of the local cost of implementing that measure.

(*l*) "Process water" means water used for producing a product or product content or water used for research and development, including, but not limited to, continuous manufacturing processes, water used for testing and maintaining equipment used in producing a product or product content, and

water used in combined heat and power facilities used in producing a product or product content. Process water does not mean incidental water uses not related to the production of a product or product content, including, but not limited to, water used for restrooms, landscaping, air conditioning, heating, kitchens, and laundry.

(m) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050, that is used to offset potable demand, including recycled water supplied for direct use and indirect potable reuse, that meets the following requirements, where applicable:

(1) For groundwater recharge, including recharge through spreading basins, water supplies that are all of the following:

(A) Metered.

(B) Developed through planned investment by the urban water supplier or a wastewater treatment agency.

(C) Treated to a minimum tertiary level.

(D) Delivered within the service area of an urban retail water supplier or its urban wholesale water supplier that helps an urban retail water supplier meet its urban water use target.

(2) For reservoir augmentation, water supplies that meet the criteria of paragraph (1) and are conveyed through a distribution system constructed specifically for recycled water.

(n) "Regional water resources management" means sources of supply resulting from watershed-based planning for sustainable local water reliability or any of the following alternative sources of water:

(1) The capture and reuse of stormwater or rainwater.

(2) The use of recycled water.

(3) The desalination of brackish groundwater.

(4) The conjunctive use of surface water and groundwater in a manner that is consistent with the safe yield of the groundwater basin.

(o) "Reporting period" means the years for which an urban retail water supplier reports compliance with the urban water use targets.

(p) "Urban retail water supplier" means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.

(q) "Urban water use target" means the urban retail water supplier's targeted future daily per capita water use.

(r) "Urban wholesale water supplier," means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

Chapter 3. Urban Retail Water Suppliers

10608.16. (a) The state shall achieve a 20-percent reduction in urban per capita water use in California on or before December 31, 2020.

(b) The state shall make incremental progress towards the state target specified in subdivision (a) by reducing urban per capita water use by at least 10 percent on or before December 31, 2015.

10608.20. (a) (1) Each urban retail water supplier shall develop urban water use targets and an interim urban water use target by July 1, 2011. Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis, as provided in subdivision (a) of Section 10608.28, and may determine the targets on a fiscal year or calendar year basis.

(2) It is the intent of the Legislature that the urban water use targets described in subdivision (a) cumulatively result in a 20-percent reduction from the baseline daily per capita water use by December 31, 2020.

(b) An urban retail water supplier shall adopt one of the following methods for determining its urban water use target pursuant to subdivision (a):

(1) Eighty percent of the urban retail water supplier's baseline per capita daily water use.

(2) The per capita daily water use that is estimated using the sum of the following performance standards:

(A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2016 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.

(B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.

(C) For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, and institutional water use by 2020.

(3) Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.

(4) A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010. The method developed by the department shall identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, the department shall do all of the following:

(A) Consider climatic differences within the state.

(B) Consider population density differences within the state.

(C) Provide flexibility to communities and regions in meeting the targets.

(D) Consider different levels of per capita water use according to plant water needs in different regions.

(E) Consider different levels of commercial, industrial, and institutional water use in different regions of the state.

(F) Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.

(c) If the department adopts a regulation pursuant to paragraph (4) of subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).

(d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.

(e) An urban retail water supplier shall include in its urban water management plan required pursuant to Part 2.6 (commencing with Section 10610) due in 2010 the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

(f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.

(g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).

(h) (1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:

(A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area population, indoor residential water use, and landscaped area water use.

(B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.

(2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its Internet Web site, and make written copies

available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.

(i) (1) The department shall adopt regulations for implementation of the provisions relating to process water in accordance with subdivision (*l*) of Section 10608.12, subdivision (e) of Section 10608.24, and subdivision (d) of Section 10608.26.

(2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

(j) An urban retail water supplier shall be granted an extension to July 1, 2011, for adoption of an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) due in 2010 to allow use of technical methodologies developed by the department pursuant to paragraph (4) of subdivision (b) and subdivision (h). An urban retail water supplier that adopts an urban water management plan due in 2010 that does not use the methodologies developed by the department pursuant to subdivision (h) shall amend the plan by July 1, 2011, to comply with this part.

10608.22. Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

10608.24. (a) Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015.

(b) Each urban retail water supplier shall meet its urban water use target by December 31, 2020.

(c) An urban retail water supplier's compliance daily per capita water use shall be the measure of progress toward achievement of its urban water use target.

(d) (1) When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:

(A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.

(B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.

(C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.

(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

(e) When developing the urban water use target pursuant to Section 10608.20, an urban retail water supplier that has a substantial percentage of industrial water use in its service area, may exclude process water from the calculation of gross water use to avoid a disproportionate burden on another customer sector.

(f) (1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.

(2) An urban retail water supplier, that is also an agricultural water supplier, is not subject to the requirements of Chapter 4 (commencing with Section 10608.48), if the agricultural water use is incorporated into its urban water use target pursuant to paragraph (1).

10608.26. (a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

(b) In complying with this part, an urban retail water supplier may meet its urban water use target through efficiency improvements in any combination among its customer sectors. An urban retail water supplier shall avoid placing a disproportionate burden on any customer sector.

(c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's implementation plan for complying with this part shall consider the United States Department of Defense military installation's requirements under federal Executive Order 13423.

(d) (1) Any ordinance or resolution adopted by an urban retail water supplier after the effective date of this section shall not require existing customers as of the effective date of this section, to undertake changes in product formulation, operations, or equipment that would reduce process water use, but may provide technical assistance and financial incentives to those customers to implement efficiency measures for process water. This section shall not limit an ordinance or resolution adopted pursuant to a declaration of drought emergency by an urban retail water supplier.

(2) This part shall not be construed or enforced so as to interfere with the requirements of Chapter 4 (commencing with Section 113980) to Chapter 13 (commencing with Section 114380), inclusive, of Part 7 of Division 104 of the Health and Safety Code, or any requirement or standard for the protection of public health, public safety, or worker safety established by federal, state, or local government or recommended by recognized standard setting organizations or trade associations.

10608.28. (a) An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement, by any of the following:

(1) Through an urban wholesale water supplier.

(2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).

(3) Through a regional water management group as defined in Section 10537.

(4) By an integrated regional water management funding area.

(5) By hydrologic region.

(6) Through other appropriate geographic scales for which computation methods have been developed by the department.

(b) A regional water management group, with the written consent of its member agencies, may undertake any or all planning, reporting, and implementation functions under this chapter for the member agencies that consent to those activities. Any data or reports shall provide information both for the regional water management group and separately for each consenting urban retail water supplier and urban wholesale water supplier.

10608.32. All costs incurred pursuant to this part by a water utility regulated by the Public Utilities Commission may be recoverable in rates subject to review and approval by the Public Utilities Commission, and may be recorded in a memorandum account and reviewed for reasonableness by the Public Utilities Commission.

10608.36. Urban wholesale water suppliers shall include in the urban water management plans required pursuant to Part 2.6 (commencing with Section 10610) an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

10608.40. Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.

10608.42. The department shall review the 2015 urban water management plans and report to the Legislature by December 31, 2016, on progress towards achieving a 20-percent reduction in urban water use by December 31, 2020. The report shall include recommendations on changes to water efficiency standards or urban water use targets in order to achieve

the 20-percent reduction and to reflect updated efficiency information and technology changes.

10608.43. The department, in conjunction with the California Urban Water Conservation Council, by April 1, 2010, shall convene a representative task force consisting of academic experts, urban retail water suppliers, environmental organizations, commercial water users, industrial water users, and institutional water users to develop alternative best management practices for commercial, industrial, and institutional users and an assessment of the potential statewide water use efficiency improvement in the commercial, industrial, and institutional sectors that would result from implementation of these best management practices. The taskforce, in conjunction with the department, shall submit a report to the Legislature by April 1, 2012, that shall include a review of multiple sectors within commercial, industrial, and institutional users and that shall recommend water use efficiency standards for commercial, industrial, and institutional users among various sectors of water use. The report shall include, but not be limited to, the following:

(a) Appropriate metrics for evaluating commercial, industrial, and institutional water use.

(b) Evaluation of water demands for manufacturing processes, goods, and cooling.

(c) Evaluation of public infrastructure necessary for delivery of recycled water to the commercial, industrial, and institutional sectors.

(d) Evaluation of institutional and economic barriers to increased recycled water use within the commercial, industrial, and institutional sectors.

(e) Identification of technical feasibility and cost of the best management practices to achieve more efficient water use statewide in the commercial, industrial, and institutional sectors that is consistent with the public interest and reflects past investments in water use efficiency.

10608.44. Each state agency shall reduce water use on facilities it operates to support urban retail water suppliers in meeting the target identified in Section 10608.16.

Chapter 4. Agricultural Water Suppliers

10608.48. (a) On or before July 31, 2012, an agricultural water supplier shall implement efficient water management practices pursuant to subdivisions (b) and (c).

(b) Agricultural water suppliers shall implement all of the following critical efficient management practices:

(1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).

(2) Adopt a pricing structure for water customers based at least in part on quantity delivered.

(c) Agricultural water suppliers shall implement additional efficient management practices, including, but not limited to, practices to accomplish all of the following, if the measures are locally cost effective and technically feasible:

(1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.

(2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.

(3) Facilitate the financing of capital improvements for on-farm irrigation systems.

(4) Implement an incentive pricing structure that promotes one or more of the following goals:

(A) More efficient water use at the farm level.

(B) Conjunctive use of groundwater.

(C) Appropriate increase of groundwater recharge.

(D) Reduction in problem drainage.

(E) Improved management of environmental resources.

(F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.

(5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.

(6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.

(7) Construct and operate supplier spill and tailwater recovery systems.

(8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.

(9) Automate canal control structures.

(10) Facilitate or promote customer pump testing and evaluation.

(11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.

(12) Provide for the availability of water management services to water users. These services may include, but are not limited to, all of the following:

(A) On-farm irrigation and drainage system evaluations.

(B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.

(C) Surface water, groundwater, and drainage water quantity and quality data.

(D) Agricultural water management educational programs and materials for farmers, staff, and the public.

(13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.

(14) Evaluate and improve the efficiencies of the supplier's pumps.

(d) Agricultural water suppliers shall include in the agricultural water management plans required pursuant to Part 2.8 (commencing with Section 10800) a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future. If an agricultural water supplier determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination.

(e) The data shall be reported using a standardized form developed pursuant to Section 10608.52.

(f) An agricultural water supplier may meet the requirements of subdivisions (d) and (e) by submitting to the department a water conservation plan submitted to the United States Bureau of Reclamation that meets the requirements described in Section 10828.

(g) On or before December 31, 2013, December 31, 2016, and December 31, 2021, the department, in consultation with the board, shall submit to the Legislature a report on the agricultural efficient water management practices that have been implemented and are planned to be implemented and an assessment of the manner in which the implementation of those efficient water management practices has affected and will affect agricultural operations, including estimated water use efficiency improvements, if any.

(h) The department may update the efficient water management practices required pursuant to subdivision (c), in consultation with the Agricultural Water Management Council, the United States Bureau of Reclamation, and the board. All efficient water management practices for agricultural water use pursuant to this chapter shall be adopted or revised by the department only after the department conducts public hearings to allow participation of the diverse geographical areas and interests of the state.

(i) (1) The department shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement in paragraph (1) of subdivision (b).

(2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

Chapter 5. Sustainable Water Management

10608.50. (a) The department, in consultation with the board, shall promote implementation of regional water resources management practices through increased incentives and removal of barriers consistent with state and federal law. Potential changes may include, but are not limited to, all of the following:

(1) Revisions to the requirements for urban and agricultural water management plans.

(2) Revisions to the requirements for integrated regional water management plans.

(3) Revisions to the eligibility for state water management grants and loans.

(4) Revisions to state or local permitting requirements that increase water supply opportunities, but do not weaken water quality protection under state and federal law.

(5) Increased funding for research, feasibility studies, and project construction.

(6) Expanding technical and educational support for local land use and water management agencies.

(b) No later than January 1, 2011, and updated as part of the California Water Plan, the department, in consultation with the board, and with public input, shall propose new statewide targets, or review and update existing statewide targets, for regional water resources management practices, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff.

Chapter 6. Standardized Data Collection

10608.52. (a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.

(b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24 and an agricultural water supplier's compliance with implementation of efficient water management practices pursuant to subdivision (a) of Section 10608.48. The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

10608.56. (a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

(b) On and after July 1, 2013, an agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

(c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(d) Notwithstanding subdivision (b), the department shall determine that an agricultural water supplier is eligible for a water grant or loan even though the supplier is not implementing all of the efficient water management practices described in Section 10608.48, if the agricultural water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the efficient water management practices. The supplier may request grant or loan funds to implement the efficient water management practices to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.

(f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

10608.60. (a) It is the intent of the Legislature that funds made available by Section 75026 of the Public Resources Code should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for grants to implement this part. In the allocation of funding, it is the intent of the

Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.

(b) It is the intent of the Legislature that funds made available by Section 75041 of the Public Resources Code, should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for direct expenditures to implement this part.

Chapter 8. Quantifying Agricultural Water Use Efficiency

10608.64. The department, in consultation with the Agricultural Water Management Council, academic experts, and other stakeholders, shall develop a methodology for quantifying the efficiency of agricultural water use. Alternatives to be assessed shall include, but not be limited to, determination of efficiency levels based on crop type or irrigation system distribution uniformity. On or before December 31, 2011, the department shall report to the Legislature on a proposed methodology and a plan for implementation. The plan shall include the estimated implementation costs and the types of data needed to support the methodology. Nothing in this section authorizes the department to implement a methodology established pursuant to this section.

SEC. 2. Section 10631.5 of the Water Code is amended to read:

10631.5. (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay-Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

(i) Compliance on an individual basis.

(ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.

(B) The department may require additional information for any determination pursuant to this section.

(3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

(c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).

(d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.

(e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

(f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

SEC. 3. Part 2.8 (commencing with Section 10800) of Division 6 of the Water Code is repealed.

SEC. 4. Part 2.8 (commencing with Section 10800) is added to Division 6 of the Water Code, to read:

PART 2.8. AGRICULTURAL WATER MANAGEMENT PLANNING

Chapter 1. General Declarations and Policy

10800. This part shall be known and may be cited as the Agricultural Water Management Planning Act.

10801. The Legislature finds and declares all of the following:

(a) The waters of the state are a limited and renewable resource.

(b) The California Constitution requires that water in the state be used in a reasonable and beneficial manner.

(c) Urban water districts are required to adopt water management plans.

(d) The conservation of agricultural water supplies is of great statewide concern.

(e) There is a great amount of reuse of delivered water, both inside and outside the water service areas.

(f) Significant noncrop beneficial uses are associated with agricultural water use, including streamflows and wildlife habitat.

(g) Significant opportunities exist in some areas, through improved irrigation water management, to conserve water or to reduce the quantity of highly saline or toxic drainage water.

(h) Changes in water management practices should be carefully planned and implemented to minimize adverse effects on other beneficial uses currently being served.

(i) Agricultural water suppliers that receive water from the federal Central Valley Project are required by federal law to prepare and implement water conservation plans.

(j) Agricultural water users applying for a permit to appropriate water from the board are required to prepare and implement water conservation plans.

10802. The Legislature finds and declares that all of the following are the policies of the state:

(a) The conservation of water shall be pursued actively to protect both the people of the state and the state's water resources.

(b) The conservation of agricultural water supplies shall be an important criterion in public decisions with regard to water.

(c) Agricultural water suppliers shall be required to prepare water management plans to achieve conservation of water.

Chapter 2. Definitions

10810. Unless the context otherwise requires, the definitions set forth in this chapter govern the construction of this part.

10811. "Agricultural water management plan" or "plan" means an agricultural water management plan prepared pursuant to this part.

10812. "Agricultural water supplier" has the same meaning as defined in Section 10608.12.

10813. "Customer" means a purchaser of water from a water supplier who uses water for agricultural purposes.

10814. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of that entity.

10815. "Public agency" means any city, county, city and county, special district, or other public entity.

10816. "Urban water supplier" has the same meaning as set forth in Section 10617.

10817. "Water conservation" means the efficient management of water resources for beneficial uses, preventing waste, or accomplishing additional benefits with the same amount of water.

Chapter 3. Agricultural Water Management Plans

Article 1. General Provisions

10820. (a) An agricultural water supplier shall prepare and adopt an agricultural water management plan in the manner set forth in this chapter on or before December 31, 2012, and shall update that plan on December 31, 2015, and on or before December 31 every five years thereafter.

(b) Every supplier that becomes an agricultural water supplier after December 31, 2012, shall prepare and adopt an agricultural water management plan within one year after the date it has become an agricultural water supplier.

(c) A water supplier that indirectly provides water to customers for agricultural purposes shall not prepare a plan pursuant to this part without the consent of each agricultural water supplier that directly provides that water to its customers.

10821. (a) An agricultural water supplier required to prepare a plan pursuant to this part shall notify each city or county within which the supplier provides water supplies that the agricultural water supplier will be preparing the plan or reviewing the plan and considering amendments or changes to the plan. The agricultural water supplier may consult with, and obtain comments from, each city or county that receives notice pursuant to this subdivision.

(b) The amendments to, or changes in, the plan shall be adopted and submitted in the manner set forth in Article 3 (commencing with Section 10840).

Article 2. Contents of Plans

10825. (a) It is the intent of the Legislature in enacting this part to allow levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

(b) This part does not require the implementation of water conservation programs or practices that are not locally cost effective.

10826. An agricultural water management plan shall be adopted in accordance with this chapter. The plan shall do all of the following:

(a) Describe the agricultural water supplier and the service area, including all of the following:

(1) Size of the service area.

(2) Location of the service area and its water management facilities.

(3) Terrain and soils.

(4) Climate.

(5) Operating rules and regulations.
(6) Water delivery measurements or calculations.
(7) Water rate schedules and billing.
(8) Water shortage allocation policies.

(b) Describe the quantity and quality of water resources of the agricultural water supplier, including all of the following:
(1) Surface water supply.
(2) Groundwater supply.
(3) Other water supplies.
(4) Source water quality monitoring practices.
(5) Water uses within the agricultural water supplier's service area, including all of the following:
(A) Agricultural.
(B) Environmental.
(C) Recreational.
(D) Municipal and industrial.
(E) Groundwater recharge.
(F) Transfers and exchanges.
(G) Other water uses.
(6) Drainage from the water supplier's service area.
(7) Water accounting, including all of the following:
(A) Quantifying the water supplier's water supplies.
(B) Tabulating water uses.
(C) Overall water budget.
(8) Water supply reliability.

(c) Include an analysis, based on available information, of the effect of climate change on future water supplies.

(d) Describe previous water management activities.

(e) Include in the plan the water use efficiency information required pursuant to Section 10608.48.

10827. Agricultural water suppliers that are members of the Agricultural Water Management Council, and that submit water management plans to that council in accordance with the "Memorandum of Understanding Regarding Efficient Water Management Practices By Agricultural Water Suppliers In California," dated January 1, 1999, may submit the water management plans identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of Section 10826.

10828. (a) Agricultural water suppliers that are required to submit water conservation plans to the United States Bureau of Reclamation pursuant to either the Central Valley Project Improvement Act (Public Law 102-575) or the Reclamation Reform Act of 1982, or both, may submit those water conservation plans to satisfy the requirements of Section 10826, if both of the following apply:

(1) The agricultural water supplier has adopted and submitted the water conservation plan to the United States Bureau of Reclamation within the previous four years.

(2) The United States Bureau of Reclamation has accepted the water conservation plan as adequate.

(b) This part does not require agricultural water suppliers that are required to submit water conservation plans to the United States Bureau of Reclamation pursuant to either the Central Valley Project Improvement Act (Public Law 102-575) or the Reclamation Reform Act of 1982, or both, to prepare and adopt water conservation plans according to a schedule that is different from that required by the United States Bureau of Reclamation.

10829. An agricultural water supplier may satisfy the requirements of this part by adopting an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) or by participation in areawide, regional, watershed, or basinwide water management planning if those plans meet or exceed the requirements of this part.

Article 3. Adoption and Implementation of Plans

10840. Every agricultural water supplier shall prepare its plan pursuant to Article 2 (commencing with Section 10825).

10841. Prior to adopting a plan, the agricultural water supplier shall make the proposed plan available for public inspection, and shall hold a public hearing on the plan. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned agricultural water supplier pursuant to Section 6066 of the Government Code. A privately owned agricultural water supplier shall provide an equivalent notice within its service area and shall provide a reasonably equivalent opportunity that would otherwise be afforded through a public hearing process for interested parties to provide input on the plan. After the hearing, the plan shall be adopted as prepared or as modified during or after the hearing.

10842. An agricultural water supplier shall implement the plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan, as determined by the governing body of the agricultural water supplier.

10843. (a) An agricultural water supplier shall submit to the entities identified in subdivision (b) a copy of its plan no later than 30 days after the adoption of the plan. Copies of amendments or changes to the plans shall be submitted to the entities identified in subdivision (b) within 30 days after the adoption of the amendments or changes.

(b) An agricultural water supplier shall submit a copy of its plan and amendments or changes to the plan to each of the following entities:

(1) The department.

(2) Any city, county, or city and county within which the agricultural water supplier provides water supplies.

(3) Any groundwater management entity within which jurisdiction the agricultural water supplier extracts or provides water supplies.

(4) Any urban water supplier within which jurisdiction the agricultural water supplier provides water supplies.

(5) Any city or county library within which jurisdiction the agricultural water supplier provides water supplies.

(6) The California State Library.

(7) Any local agency formation commission serving a county within which the agricultural water supplier provides water supplies.

10844. (a) Not later than 30 days after the date of adopting its plan, the agricultural water supplier shall make the plan available for public review on the agricultural water supplier's Internet Web site.

(b) An agricultural water supplier that does not have an Internet Web site shall submit to the department, not later than 30 days after the date of adopting its plan, a copy of the adopted plan in an electronic format. The department shall make the plan available for public review on the department's Internet Web site.

10845. (a) The department shall prepare and submit to the Legislature, on or before December 31, 2013, and thereafter in the years ending in six and years ending in one, a report summarizing the status of the plans adopted pursuant to this part.

(b) The report prepared by the department shall identify the outstanding elements of any plan adopted pursuant to this part. The report shall include an evaluation of the effectiveness of this part in promoting efficient agricultural water management practices and recommendations relating to proposed changes to this part, as appropriate.

(c) The department shall provide a copy of the report to each agricultural water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearing designed to consider the effectiveness of plans submitted pursuant to this part.

(d) This section does not authorize the department, in preparing the report, to approve, disapprove, or critique individual plans submitted pursuant to this part.

Chapter 4. Miscellaneous Provisions

10850. (a) Any action or proceeding to attack, review, set aside, void, or annul the acts or decisions of an agricultural water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(1) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

(2) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 120 days after submitting the plan or amendments to the plan to entities in accordance with Section 10844 or the taking of that action.

(b) In an action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an agricultural water supplier, on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse

of discretion is established if the agricultural water supplier has not proceeded in a manner required by law, or if the action by the agricultural water supplier is not supported by substantial evidence.

10851. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part. This part does not exempt projects for implementation of the plan or for expanded or additional water supplies from the California Environmental Quality Act.

10852. An agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

10853. No agricultural water supplier that provides water to less than 25,000 irrigated acres, excluding recycled water, shall be required to implement the requirements of this part or Part 2.55 (commencing with Section 10608) unless sufficient funding has specifically been provided to that water supplier for these purposes.

SEC. 5. This act shall take effect only if Senate Bill 1 and Senate Bill 6 of the 2009–10 Seventh Extraordinary Session of the Legislature are enacted and become effective.

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Appendix B

Department of Water Resources Review for Completeness Checklist

Table 1
Coordination with appropriate agencies

Coordinating Agencies[1,2]	Participated in developing the plan	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
Metropolitan Water District of Southern California	√						
San Diego County Water Authority	√			√	√	√	
City of Chula Vista		√		√	√	√	
City of National City				√	√	√	
San Diego County				√	√	√	
Unified Port of San Diego				√			

[1] *Indicate the specific name of the agency with which coordination or outreach occurred.*

[2] *Check at least one box in each row.*

Table 2
Population — current and projected

	2010	2015	2020	2025	2030	2035 - optional	Data source[2]
SANDAG 2050 Population Projection	177,288	181,531	185,122	190,096	195,069	201,454	SANDAG 2025 Forecast
National City General Plan Update	0	4,710	9,421	14,131	18,841	23,551	National City GPU
Port and Chula Vista Bayfront Master Plan	0	0	905	2,051	3,181	3,870	Unified Port of San Diego and City of Chula Vista Bayfront Master Plan
Service area population[1]	177,288	186,241	195,448	206,278	217,091	228,875	

[1] *Service area population is defined as the population served by the distribution system. See Technical Methodology 2: Service Area Population (2010 UWMP Guidebook, Section M).*

[2] *Provide the source of the population data provided.*

Table 3
Water deliveries — actual, 2005

	2005				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume (AFY)	# of accounts	Volume	Volume
Single family	26,037	9,507	N/A	N/A	9,507
Multi-family	3,347	6,586	N/A	N/A	6,586
Commercial	3,173	4,407	N/A	N/A	4,407
Industrial	41	405	N/A	N/A	405
Institutional/governmental	536	1,897	N/A	N/A	1,897
Agriculture	8	31	N/A	N/A	31
Landscape	N/A	N/A	N/A	N/A	N/A
Other	38	42	N/A	N/A	42
Total Potable Demands	33,180	22,875	0	0	22,875
Unaccounted for water	N/A	694	N/A	N/A	694
Total	33,180	23,569	0	0	23,569

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 4
Water deliveries — actual, 2010

	2010				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume	# of accounts	Volume	Volume
Single family	25,985	8,689	N/A	N/A	8,689
Multi-family	3,400	5,462	N/A	N/A	5,462
Commercial	2,654	3,721	N/A	N/A	3,721
Industrial	29	292	N/A	N/A	292
Institutional/governmental	459	1,781	N/A	N/A	1,781
Agriculture	6	21	N/A	N/A	21
Landscape	N/A	N/A	N/A	N/A	N/A
Other	34	16	N/A	N/A	16
Total Potable Demands	32,567	19,982	0	0	19,982
Unaccounted for water	N/A	813	N/A	N/A	813
Total	32,567	20,795	0	0	20,795

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 5
Water deliveries — projected, 2015

	2015				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume	# of accounts	Volume	Volume
Single family	27,371	9,152	N/A	N/A	9,152
Multi-family	3,581	5,753	N/A	N/A	5,753
Commercial	2,796	3,919	N/A	N/A	3,919
Industrial	31	308	N/A	N/A	308
Institutional/governmental	483	1,876	N/A	N/A	1,876
Agriculture	6	22	N/A	N/A	22
Landscape	N/A	N/A	N/A	N/A	N/A
Other	36	17	N/A	N/A	17
Total Potable Demands	34,304	21,048	0	0	21,048
Unaccounted for water	N/A	842	N/A	N/A	842
Total	34,304	21,890	0	0	21,890

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 6
Water deliveries — projected, 2020

	2020				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume	# of accounts	Volume	Volume
Single family	28,724	9,605	N/A	N/A	9,605
Multi-family	3,758	6,038	N/A	N/A	6,038
Commercial	2,934	4,113	N/A	N/A	4,113
Industrial	32	323	N/A	N/A	323
Institutional/governmental	507	1,969	N/A	N/A	1,969
Agriculture	7	23	N/A	N/A	23
Landscape	N/A	N/A	N/A	N/A	N/A
Other	38	18	N/A	N/A	18
Total Potable Demands	36,000	22,088	0	0	22,088
Unaccounted for water	N/A	884	N/A	N/A	884
Total	36,000	22,972	0	0	22,972

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 7
Water deliveries — projected 2025, 2030, and 2035

	2025		2030		2035 - optional	
	metered		metered		metered	
Water use sectors	# of accounts	Volume	# of accounts	Volume	# of accounts	Volume
Single family	30,316	10,137	31,905	10,669	33,637	11,248
Multi-family	3,967	6,372	4,175	6,706	4,401	7,070
Commercial	3,096	4,341	3,259	4,569	3,436	4,817
Industrial	34	341	36	359	38	378
Institutional/governmental	535	2,078	564	2,187	594	2,305
Agriculture	7	24	7	26	8	27
Landscape	N/A	N/A	N/A	N/A	N/A	N/A
Other	40	19	42	20	44	21
Total Potable Demands	37,995	23,312	39,986	24,534	42,157	25,866
Unaccounted for water	N/A	948	N/A	998	N/A	1,052
Total	37,995	24,261	39,986	25,532	42,157	26,918

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*

Table 8
Low-income projected water demands

Low Income Water Demands[1]	2015	2020	2025	2030	2035 - opt
Chula Vista single family residential	0	0	0	0	0
Chula Vista multi-family residential	74	71	71	71	71
National City single family residential	4	4	4	4	4
National City multi-family residential	50	48	48	48	48
Bonita single family residential	0	0	0	0	0
Bonita multi-family residential	35	34	34	34	34
Single Family Residential Total	4	4	4	4	4
Multi-Family Residential Total	159	152	152	152	152
Total	163	156	156	156	156

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*

[1] *Provide demands either as directly estimated values or as a percent of demand.*

Table 9
Sales to other water agencies

Water distributed	2005	2010	2015	2020	2025	2030	2035 - opt
California-American Water Company	0	0	Excess only	Excess only	Excess only	Excess only	Excess only
name of agency							
name of agency							
Total	0	0	0	0	0	0	0

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*

Table 10
Additional water uses and losses

Water use[1]	2005	2010	2015	2020	2025	2030	2035 -opt
Saline barriers	-	-	-	-	-	-	-
Groundwater recharge	-	-	-	-	-	-	-
Conjunctive use	-	-	-	-	-	-	-
Raw water	-	-	-	-	-	-	-
Recycled water	-	-	-	-	-	-	-
System losses	694	813	842	884	948	998	1,052
Other (define)	-	-	-	-	-	-	-
Total	694	813	842	884	948	998	1,052

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*

[1] *Any water accounted for in Tables 3 through 7 are not included in this table.*

Table 11
Total water use

Water Use	2005	2010	2015	2020	2025	2030	2035 - opt
Total water deliveries (from Tables 3 to 7)	22,875	19,982	21,048	22,088	23,312	24,534	25,866
Sales to other water agencies (from Table 9)	0	0	0	0	0	0	0
Additional water uses and losses (from Table 10)	694	813	842	884	948	998	1,052
Total	23,569	20,795	21,890	22,972	24,261	25,532	26,918

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*

Table 12
Retail agency demand projections provided to wholesale suppliers

Wholesaler	Contracted Volume[3]	2010	2015	2020	2025	2030	2035 -opt
San Diego County Water Authority	No Set Limit	14,543	8,690	4,572	5,861	7,132	8,518

Table 13
Base period ranges

Base	Parameter	Value	Units
10- to 15-year base period	2008 total water deliveries	20,042	*AFY*
	2008 total volume of delivered recycled water	0	*AFY*
	2008 recycled water as a percent of total deliveries	0	percent
	Number of years in base period[1]	10	years
	Year beginning base period range	1997	
	Year ending base period range[2]	2006	
5-year base period	Number of years in base period	5	years
	Year beginning base period range	2003	
	Year ending base period range[2]	2007	

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*

[1] *If the 2008 recycled water percent is less than 10 percent, then the first base period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first base period is a*

[2] *The ending year must be between December 31, 2004 and December 31, 2010.*

[2] *The ending year must be between December 31, 2007 and December 31, 2010.*

Table 14
Base daily per capita water use — 10- to 15-year range

Base period year		Distribution System Population	Daily system gross water use (gpd)	Annual daily per capita water use (gpcd)
Sequence Year	Calendar Year			
Year 1	1997	171,800	21,468,671	125
Year 2	1998	172,537	20,800,007	121
Year 3	1999	175,482	21,143,713	120
Year 4	2000	175,500	23,067,573	131
Year 5	2001	172,000	22,141,799	129
Year 6	2002	175,000	22,498,896	129
Year 7	2003	175,000	22,093,591	126
Year 8	2004	177,000	22,670,302	128
Year 9	2005	180,000	21,041,940	117
Year 10	2006	184,874	21,737,386	118
Year 11	N/A	N/A	N/A	N/A
Year 12	N/A	N/A	N/A	N/A
Year 13	N/A	N/A	N/A	N/A
Year 14	N/A	N/A	N/A	N/A
Year 15	N/A	N/A	N/A	N/A
			Base Daily Per Capita Water Use[1]	124

[1] *Add the values in the column and divid by the number of rows.*

Table 15
Base daily per capita water use — 5-year range

Base period year		Distribution System Population	Daily system gross water use (gpd)	Annual daily per capita water use (gpcd)
Sequence Year	Calendar Year			
Year 1	2003	175,000	22,093,591	126
Year 2	2004	177,000	22,670,302	128
Year 3	2005	180,000	21,041,940	117
Year 4	2006	184,874	21,737,386	118
Year 5	2007	184,874	21,542,768	117
			Base Daily Per Capita Water Use[1]	121

[1] *Add the values in the column and divid by the number of rows.*

Table 16
Water supplies — current and projected

Water Supply Sources		2010	2015	2020	2025	2030	2035 - opt
Water purchased from[1]:	Wholesaler supplied volume (yes/no)						
Wholesaler 1 (San Diego County Water Authority)	Yes	14,543	8,690	4,572	5,861	7,132	8,518
Wholesaler 2 (enter agency name)							
Wholesaler 3 (enter agency name)							
Supplier-produced groundwater[2]		5,351	5,800	11,000	11,000	11,000	11,000
Supplier-produced surface water		901	7,400	7,400	7,400	7,400	7,400
Transfers in							
Exchanges In							
Recycled Water							
Desalinated Water							
Other							
Other							
Total		20,795	21,890	22,972	24,261	25,532	26,918

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*

[1] *Volumes shown here should be what was purchased in 2010 and what is anticipated to be purchased in the future. If these numbers differ from what is contracted, show the contracted quantities in Table 17.*

[2] *Volumes shown here should be consistent with Tables 17 and 18.*

Table 17
Wholesale supplies — existing and planned sources of water

Wholesale sources[1,2]	Contracted Volume[3]	2015	2020	2025	2030	2035 - opt
San Diego County Water Authority	No Set Limit	8,690	4,572	5,806	7,076	8,460
(source 2)						
(source 3)						

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*

[1] *Water volumes presented here should be accounted for in Table 16.*

[2] *If the water supplier is a wholesaler, indicate all customers (excluding individual retail customers) to which water is sold. If the water supplier is a retailer, indicate each wholesale supplier, if more than one.*

[3] *Indicate the full amount of water*

Table 18
Groundwater — volume pumped

Basin name(s)	Metered or Unmetered[1]	2006	2007	2008	2009	2010
San Diego Formation -- National City Wells	Metered	1,670	2,161	2,180	1,945	2,175
San Diego Formation -- Reynolds Desalination Facility	Metered	2,271	3,237	3,699	3,454	3,176
Total groundwater pumped		3,941	5,398	5,879	5,399	5,351
Groundwater as a percent of total water supply		16%	22%	25%	24%	26%

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*

[1] *Indicate whether volume is based on volumeteric meter data or another method*

Table 19
Groundwater — volume projected to be pumped

Basin name(s)	2015	2020	2025	2030	2035 - opt
San Diego Formation -- National City Wells	2,200	2,200	2,200	2,200	2,200
San Diego Formation -- Reynolds Desalination Facility	3,600	8,800	8,800	8,800	8,800
Total groundwater pumped	5,800	11,000	11,000	11,000	11,000
Percent of total water supply	26%	48%	45%	43%	41%

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*
include future planned expansion

Table 20
Transfer and exchange opportunities

Transfer agency	Transfer or exchange	Short term or long term	Proposed Volume
City of San Diego	Transfer	Emergency	Emergency
Otay Water District	Transfer	Emergency	Emergency
California American Water Company	Transfer	Emergency	Emergency
Total			N/A

Units (circle one): *acre-feet per year* *million gallons per year* *cubic feet per year*

Table 21
Recycled water — wastewater collection and treatment

Type of Wastewater	2005	2010	2015	2020	2025	2030	2035 - opt
Wastewater collected & treated in service area (Delivered to SBWRF and/or PLWWTP)	15,984	15,984	16,730	16,697	16,780	16,742	16,813
Volume that meets recycled water standard (Produced at SBWRF and Distributed to Otay Wate	10,549	10,549	11,082	11,047	11,133	11,103	11,122

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 22
Recycled water — non-recycled wastewater disposal

Method of disposal	Treatment Level	2010	2015	2020	2025	2030	2035 - opt
Effluent discharged through South Bay Ocean Outfall	secondary	5,435	5,648	5,650	5,647	5,639	5,691
Name of method							
Name of method							
Name of method							
	Total	5,435	5,648	5,650	5,647	5,639	5,691

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 23
Recycled water — potential future use

User type	Description	Feasibility[1]	2015	2020	2025	2030	2035 - opt
Agricultural irrigation	Not Applicable						
Landscape irrigation[2]							
Commercial irrigation[3]							
Golf course irrigation							
Wildlife habitat							
Wetlands							
Industrial reuse							
Groundwater recharge							
Seawater barrier							
Getothermal/Energy							
Indirect potable reuse							
Other (user type)							
Other (user type)							
	Total	0	0	0	0	0	0

Units (circle one): acre-feet per year million gallons per year cubic feet per year

[1] Technical and economic feasibility.

[2] Includes parks, schools, cemeteries, churches, residential, or other public facilities)

[3] Includes commercial building use such as landscaping, toilets, HVAC, etc) and commercial uses (car washes, laundries, nurseries, etc)

Table 24
Recycled water — 2005 UWMP use projection compared to 2010 actual

Use type	2010 actual use	2005 Projection for 2010[1]
Agricultural irrigation	Not Applicable	
Landscape irrigation[2]		
Commercial irrigation[3]		
Golf course irrigation		
Wildlife habitat		
Wetlands		
Industrial reuse		
Groundwater recharge		
Seawater barrier		
Getothermal/Energy		
Indirect potable reuse		
Other (user type)		
Other (user type)		
Total	0	0

Units (circle one): acre-feet per year million gallons per year cubic feet per year

[1] From the 2005 UWMP. There has been some modification of use types. Data from the 2005 UWMP can be left in the existing catagories or modified to the new catagories, at the discretion of

[2] Includes parks, schools, cemeteries, churches, residential, or other public facilities)

[3] Includes commercial building use such as landscaping, toilets, HVAC, etc) and commercial uses (car washes, laundries, nurseries, etc)

Table 25
Methods to encourage recycled water use

Actions	Projected Results					
	2010	2015	2020	2025	2030	2035 - opt
Financial incentives						
Not Applicable						
name of action						
Total	0	0	0	0	0	0

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 26
Future water supply projects

Project name[1]	Projected start date	Projected completion date	Potential project constraints[2]	Normal-year supply[3]	Single-dry year supply[3]	Multiple-dry year first year supply[3]	Multiple-dry year second year supply[3]	Multiple-dry year third year supply[3]
Reynolds Desalination Facility Phase II	2013	2016	Potential for vegetation stress in the Sweetwater River Channel. Yield of the San Diego Formation. Need for brine disposal.	8,800	8,800	8,800	8,800	8,800
Total			0	8,800	8,800	8,800	8,800	8,800

Units (circle one): acre-feet per year million gallons per year cubic feet per year

[1] Water volumes presented here should be accounted for in Table 16.

2Indicate whether project is likely to happen and what constraints, if any, exist for project implementation.

[3] Provide estimated supply benefits, if available.

Table 27
Basis of water year data

Water Year Type	Base Year(s)
Average Water Year	2000-2010 Average
Single-Dry Water Year	2003
Multiple-Dry Water Years	2001-2004

Table 28
Supply reliability — historic conditions

Average / Normal Water Year	Single Dry Water Year	Multiple Dry Water Years			
		Year 1	Year 2	Year 3	Year 4
24,094	24,748	24,802	25,202	24,748	25,394
Percent of Average/Normal Year:	102.7%	102.9%	104.6%	102.7%	105.4%

Table 29
Factors resulting in inconsistency of supply

Water supply sources[1]	Specific source name, if any	Limitation quantification	Legal	Environmental	Water quality	Climatic	Additional information
San Diego County Water Authority	Colorado River, SWP, IID, and Canal-lining	N/A	Litigation over Delta fisheries. Litigation over QSA.	Supply uncertainty due to Delta fisheries. Invasion by quagga mussels. Supply interruption in case of seismic emergency.	High TDS in Colorado River water. Organics and bromide in SWP water.	Supply uncertainty due to drought.	N/A
Local Surface Water	Sweetwater and Loveland Reservoirs	N/A	--	Endangered species present. Recovery from the Harris Fire of 2007.	High TDS levels in urban runoff. Need for plant upgrades due to emerging regulations.	Supply variability due to weather.	N/A
Supplier-Produced Groundwater	National City Wells	N/A	Yield of the San Diego Formation.	--	Threat of MTBE contamination.	--	N/A
Supplier-Produced Groundwater	Desalination Facility	N/A	Yield of the San Diego Formation.	Potential for vegetation stress in the Sweetwater River channel.	Need for brine disposal.	--	N/A

Units (circle one): acre-feet per year million gallons per year cubic feet per year

[1] *From Table 16.*

Table 30
Water quality — current and projected water supply impacts

Water source	Description of condition	2010	2015	2020	2025	2030	2035 - opt
Not Applicable							

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 31
Supply reliability — current water sources

Water supply sources[1]	Average / Normal Water Year Supply[2]	Single Dry Water Year	Multiple Dry Water Year Supply[2]		
			Year 1	Year 2	Year 3
Local Surface Water	7,400	0	1,927	1,927	1,927
National City Wells	2,200	2,200	2,200	2,200	2,200
Desalination Facility	3,600	3,600	3,600	3,600	3,600
Imported Supplies	10,894	18,948	17,021	17,516	14,992
Total Sweetwater Authority Supply	24,094	24,748	24,748	25,243	22,719
Percent of normal year:	100.0%	102.7%	102.7%	104.8%	94.3%

Units (circle one): acre-feet per year million gallons per year cubic feet per year

[1] *From Table 16.*

[2] *See Table 27 for basis of water type years.*

Table 32
Supply and demand comparison — normal year

	2015	2020	2025	2030	2035 - opt
Supply totals (from Table 16)	21,890	22,972	24,261	25,532	26,918
Demand totals (From Table 11)	21,890	22,972	24,261	25,532	26,918
Difference	0	0	0	0	0
Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%

Units are in acre-feet per year.

Projected GPD Based on Population + GPCD Targets	*22,290,152*	*22,479,217*	*23,724,816*	*24,968,461*	*26,323,783*
Projected AFY Based on Population + GPCD Targets	*24,968*	*25,180*	*26,575*	*27,968*	*29,486*

Table 33
Supply and demand comparison — single dry year

	2015	2020	2025	2030	2035 - opt
Supply totals[1,2]	22,484	23,595	24,919	26,225	27,649
Demand totals[2,3,4]	22,484	23,595	24,919	26,225	27,649
Difference	0	0	0	0	0
Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%

Units are in acre-feet per year.

[1] *Consider the same sources as in Table 16. If new sources of water are planned, add a column to the table and specify the source, timing, and amount of water.*

[2] *Provide in the text of the UWMP text that discusses how single-dry-year water supply volumes were determined.*

[3] *Consider the same demands as in Table 3. If new water demands are anticipated, add a column to the table and specify the source, timing, and amount of water.*

[4] *The urban water target determined in this UWMP will be considered when developing the 2020 water demands included in this table.*

Table 34
Supply and demand comparison — multiple dry-year events

		2015	2020	2025	2030	2035 - opt
Multiple-dry year first year supply	Supply totals[1,2]	22,484	23,595	24,919	26,225	27,649
	Demand totals[2,3,4]	22,484	23,595	24,919	26,225	27,649
	Difference	0	0	0	0	0
	Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Multiple-dry year second year supply	Supply totals[1,2]	22,934	24,067	25,418	26,750	28,202
	Demand totals[2,3,4]	22,934	24,067	25,418	26,750	28,202
	Difference	0	0	0	0	0
	Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Multiple-dry year third year supply	Supply totals[1,2]	20,640	21,661	22,876	24,075	25,382
	Demand totals[2,3,4]	20,640	21,661	22,876	24,075	25,382
	Difference	0	0	0	0	0
	Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%

Units are in acre-feet per year.

[1] *Consider the same sources as in Table 16. If new sources of water are planned, add a column to the table and specify the source, timing, and amount of water.*

[2] *Provide in the text of the UWMP text that discusses how single-dry-year water supply volumes were determined.*

[3] *Consider the same demands as in Table 3. If new water demands are anticipated, add a column to the table and specify the source, timing, and amount of water.*

[4] *The urban water target determined in this UWMP will be considered when developing the 2020 water demands included in this table.*

Table 35
Water shortage contingency — rationing stages to address water supply shortages

Stage No.	Water Supply Conditions	% Shortage	Program Type
1	Drought program initiated by Water Authority or Metropolitan or declaration of a Drought Watch condition	Up to 10%	Voluntary
2	Drought program initiated by Water Authority or Metropolitan or declaration of a Drought Alert condition	Up to 20%	Pricing Signals and Penalties
3	Drought program initiated by Water Authority or Metropolitan or declaration of a Drought Critical condition	Up to 40%	Pricing Signals and Penalties
4	Metropolitan or declaration of a Drought Emergency condition	More than 40%	Pricing Signals and Penalties

[1] *One of the stages of action must be designed to address a 50 percent reduction in water supply.*

Table 36
Water shortage contingency — mandatory prohibitions

Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
Using potable water for street washing	
Water should be used reasonably and productively at all times.	Level 1 Mandatory
Customers are to keep water from draining onto adjacent properties, public or private roadways, and streets.	Level 1 Mandatory
Customers are to repair major water leaks immediately and minor water leaks within twenty-four hours of discovery.	Level 1 Mandatory
Customers are encouraged to restrict hose washing of sidewalks, driveways, parking areas, tennis courts, patios, or other paved areas to periods of immediate safety or sanitary hazards.	Level 1 Voluntary
Customers are encouraged to use drip methods or hand-irrigation whenever possible and prudent, and to restrict sprinkler operation to the hours of 4:00 p.m. to 9:00 a.m. the following morning, except for the first thirty days necessary to establish a new lawn.	Level 1 Voluntary
Customers are encouraged to use an automatic shut-off nozzle when using a hand-held hose for spraying, lawn watering, vehicle washing, or structure washing.	Level 1 Voluntary
Customers are encouraged to use re-circulating systems for decorative fountains and landscape water features.	Level 1 Voluntary
Serve and refill water in restaurants and other food service establishments only upon requests.	Level 1 Voluntary
Offer guests in hotels, motels and other commercial lodging establishments the option of not laundering towels and linens daily.	Level 1 Voluntary
Customers are encouraged to limit residential and commercial landscape irrigation to no more than three days per week.	Level 2 Voluntary
Customers are encouraged to limit lawn watering and landscape irrigation using sprinklers to no more than ten minutes per	Level 2 Voluntary
Customers are encouraged to only use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped	Level 2 Voluntary
Customers are encouraged to stop operating ornamental fountains or similar decorative water features unless recycled water is	Level 2 Voluntary
Customers are encouraged to stop filling or re-filling pools, ornamental lakes and/or ponds, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a drought response level under this ordinance.	Level 3 Voluntary
Customers are encouraged to stop washing vehicles except at commercial carwashes that re-circulate (reclaim) water onsite, or by high pressure/low volume wash systems.	Level 3 Voluntary
No new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as will serve letters, certificates, or letters of availability) shall be issued, except under the following circumstances: *• A valid, unexpired building permit has been issued for the project; or* *• The project is necessary to protect the public's health, safety and welfare; or* *• The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of Sweetwater Authority.* *This provision shall not be construed to preclude the resetting or turn-on of me* ters to provide continuation of water service or to restore service that has been interrupted for a period of one year or less.	Level 3 Mandatory
Customers are encouraged to stop all landscape irrigation except: • Crops and landscape products of commercial growers and nurseries • Maintenance of existing landscaping necessary for fire protection as specified by the fire marshal of the local fire protection agency having jurisdiction over the property to be irrigated • Maintenance of existing landscaping for erosion control • Maintenance of plant materials identified to be rare or essential to the well-being of rare animals • Maintenance of landscaping within active public parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week • Watering of livestock • Public works projects and actively irrigated environmental mitigation projects	Level 4 Voluntary

Table 37
Water shortage contingency — consumption reduction methods

Consumption Reduction Methods	Stage When Method Takes Effect	Projected Reduction (%)
Customers are to keep water from draining onto adjacent properties, public or private roadways, and streets.	Level 1 Mandatory	Up to 10%
Customers are to repair major water leaks immediately and minor water leaks within twenty-four hours of discovery.	Level 1 Mandatory	Up to 10%
Customers are encouraged to restrict hose washing of sidewalks, driveways, parking areas, tennis courts, patios, or other paved areas to periods of immediate safety or sanitary hazards.	Level 1 Mandatory	Up to 10%
Customers are encouraged to use drip methods or hand-irrigation whenever possible and prudent, and to restrict sprinkler operation to the hours of 4:00 p.m. to 9:00 a.m. the following morning, except for the first thirty days necessary to establish a new lawn.	Level 1 Voluntary	Up to 10%
Customers are encouraged to use an automatic shut-off nozzle when using a hand-held hose for spraying, lawn watering, vehicle washing, or structure washing.	Level 1 Voluntary	Up to 10%
Customers are encouraged to use re-circulating systems for decorative fountains and landscape water features.	Level 1 Voluntary	Up to 10%
Serve and refill water in restaurants and other food service establishments only upon requests.	Level 1 Voluntary	Up to 10%
Offer guests in hotels, motels and other commercial lodging establishments the option of not laundering towels and linens daily.	Level 1 Voluntary	Up to 10%
Customers are encouraged to limit residential and commercial landscape irrigation to no more than three days per week.	Level 1 Voluntary	Up to 20%
Customers are encouraged to limit lawn watering and landscape irrigation using sprinklers to no more than ten minutes per watering station per day. This recommendation does not apply to landscape irrigation systems using water efficient devices, including but not limited to weather-based controllers, drip/micro-irrigation systems and stream rotor sprinklers.	Level 2 Voluntary	Up to 20%
Customers are encouraged to only use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped areas, including trees and shrubs that are not irrigated by a landscape irrigation system.	Level 2 Voluntary	Up to 20%
Customers are encouraged to stop operating ornamental fountains or similar decorative water features unless recycled water is used.	Level 2 Voluntary	Up to 20%
Customers are encouraged to stop filling or re-filling pools, ornamental lakes and/or ponds, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a drought response level under this ordinance.	Level 3 Voluntary	Up to 40%
Customers are encouraged to stop washing vehicles except at commercial carwashes that re-circulate (reclaim) water onsite, or by high pressure/low volume wash systems.	Level 3 Voluntary	Up to 40%
No new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as will serve letters, certificates, or letters of availability) shall be issued, except under the following circumstances: • A valid, unexpired building permit has been issued for the project; or • The project is necessary to protect the public's health, safety and welfare; or • The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of Sweetwater Authority. This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted for a period of one year or less.	Level 3 Mandatory	Up to 40%
Customers are encouraged to stop all landscape irrigation except: • Crops and landscape products of commercial growers and nurseries • Maintenance of existing landscaping necessary for fire protection as specified by the fire marshal of the local fire protection agency having jurisdiction over the property to be irrigated • Maintenance of existing landscaping for erosion control • Maintenance of plant materials identified to be rare or essential to the well-being of rare animals • Maintenance of landscaping within active public parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week • Watering of livestock • Public works projects and actively irrigated environmental mitigation projects	Level 4 Voluntary	>40%

Table 38
Water shortage contingency — penalties and charges

Penalties or Charges	Stage When Penalty Takes Effect	
Penalty for excess use		
Charge for excess use		
Financial and/or legal penalty for violating Target Water Allocations	Level 2	
Drought Pricing -- Implementation of the Drought Supplement to the Rates and Rules	Levels 1-4	

Appendix C

City and County Notification Letters and Public Notices

Cor

SWEETWATER AUTHORITY

505 GARRETT AVENUE
POST OFFICE BOX 2328
CHULA VISTA, CALIFORNIA 91912-2328
(619) 420-1413
FAX (619) 425-7469
http://www.sweetwater.org

March 16, 2011

Mr. Eric Gibson
County of San Diego
Department of Planning and Land Use
5201-B Ruffin Road
San Diego, CA 92123

Re: SWEETWATER AUTHORITY 2010 URBAN WATER MANAGEMENT PLAN UPDATE
SWA GEN. FILE: URBAN WATER MANAGEMENT PLAN 2010

Dear Mr. Gibson:

This letter is to inform you that Sweetwater Authority (Authority) is updating its Urban Water Management Plan (UWMP). California state law requires each urban water supplier to prepare and adopt an urban water management plan every five years. The Authority is currently preparing an update to its UWMP which was last adopted in 2005. The UWMP documents the Authority's plans to ensure adequate water supplies to meet existing and future demands for water under a range of water supply conditions, including water shortages.

In conformance with California Water Code Division 6, Part 2.6, Section 10621, this letter serves as a notification to all city and county agencies within which the Authority provides water supplies, that the UWMP is being reviewed and updated. It is anticipated that the draft UWMP will be available for public review by June 2011. The final UWMP will be adopted by July 1, 2011 and submitted to the California Department of Water Resources by August 1, 2011.

Please contact Mr. Michael Garrod at (619) 409-6752, or mgarrod@sweetwater.org if you would like additional information or to set up a meeting to discuss the Authority's 2010 UWMP Update.

Sincerely,

SWEETWATER AUTHORITY

Marguerite S. Strand
Assistant General Manager

MSS:MG:ss

I:\engr\Gen\Urban Water Management Plan 2010\Cor\Ltr - Agency Notice - County of San Diego - 3-16-11.doc

Cor

SWEETWATER AUTHORITY

505 GARRETT AVENUE
POST OFFICE BOX 2328
CHULA VISTA, CALIFORNIA 91912-2328
(619) 420-1413
FAX (619) 425-7469
http://www.sweetwater.org

March 16, 2011

Mr. Ray Pe
City of National City
Planning Department
1243 National City Boulevard
National City, CA 91950-4301

Re: SWEETWATER AUTHORITY 2010 URBAN WATER MANAGEMENT PLAN UPDATE
SWA GEN. FILE: URBAN WATER MANAGEMENT PLAN 2010

Dear Mr. Pe:

This letter is to inform you that Sweetwater Authority (Authority) is updating its Urban Water Management Plan (UWMP). California state law requires each urban water supplier to prepare and adopt an urban water management plan every five years. The Authority is currently preparing an update to its UWMP which was last adopted in 2005. The UWMP documents the Authority's plans to ensure adequate water supplies to meet existing and future demands for water under a range of water supply conditions, including water shortages.

In conformance with California Water Code Division 6, Part 2.6, Section 10621, this letter serves as a notification to all city and county agencies within which the Authority provides water supplies, that the UWMP is being reviewed and updated. It is anticipated that the draft UWMP will be available for public review by June 2011. The final UWMP will be adopted by July 1, 2011 and submitted to the California Department of Water Resources by August 1, 2011.

Please contact Mr. Michael Garrod at (619) 409-6752, or mgarrod@sweetwater.org if you would like additional information or to set up a meeting to discuss the Authority's 2010 UWMP Update.

Sincerely,

SWEETWATER AUTHORITY

Marguerite S. Strand
Assistant General Manager

MSS:MG:ss

I:\engr\Gen\Urban Water Management Plan 2010\Cor\Ltr - Agency Notice - City of National City - 3-16-11.doc

Cor

SWEETWATER AUTHORITY

505 GARRETT AVENUE
POST OFFICE BOX 2328
CHULA VISTA, CALIFORNIA 91912-2328
(619) 420-1413
FAX (619) 425-7469
http://www.sweetwater.org

March 16, 2011

Mr. Gary Halbert
City of Chula Vista
Planning and Building Department
276 Fourth Avenue
Chula Vista, CA 91910-2631

Re: SWEETWATER AUTHORITY 2010 URBAN WATER MANAGEMENT PLAN UPDATE
SWA GEN. FILE: URBAN WATER MANAGEMENT PLAN 2010

Dear Mr. Halbert:

This letter is to inform you that Sweetwater Authority (Authority) is updating its Urban Water Management Plan (UWMP). California state law requires each urban water supplier to prepare and adopt an urban water management plan every five years. The Authority is currently preparing an update to its UWMP which was last adopted in 2005. The UWMP documents the Authority's plans to ensure adequate water supplies to meet existing and future demands for water under a range of water supply conditions, including water shortages.

In conformance with California Water Code Division 6, Part 2.6, Section 10621, this letter serves as a notification to all city and county agencies within which the Authority provides water supplies, that the UWMP is being reviewed and updated. It is anticipated that the draft UWMP will be available for public review by June 2011. The final UWMP will be adopted by July 1, 2011 and submitted to the California Department of Water Resources by August 1, 2011.

Please contact Mr. Michael Garrod at (619) 409-6752, or mgarrod@sweetwater.org if you would like additional information or to set up a meeting to discuss the Authority's 2010 UWMP Update.

Sincerely,

SWEETWATER AUTHORITY

Marguerite S. Strand
Assistant General Manager

MSS:MG:ss

I:\engr\Gen\Urban Water Management Plan 2010\Cor\Ltr - Agency Notice - City of Chula Vista- 3-16-11.doc

COR

SWEETWATER AUTHORITY

505 GARRETT AVENUE
POST OFFICE BOX 2328
CHULA VISTA, CALIFORNIA 91912-2328
(619) 420-1413
FAX (619) 425-7469
http://www.sweetwater.org

March 16, 2011

Mr. Bill Anderson
City of San Diego
City Planning and Community Investment
Mail Station 5A
202 C Street
San Diego, CA 92101

Re: SWEETWATER AUTHORITY 2010 URBAN WATER MANAGEMENT PLAN UPDATE
SWA GEN. FILE: URBAN WATER MANAGEMENT PLAN 2010

Dear Mr. Anderson:

This letter is to inform you that Sweetwater Authority (Authority) is updating its Urban Water Management Plan (UWMP). California state law requires each urban water supplier to prepare and adopt an urban water management plan every five years. The Authority is currently preparing an update to its UWMP which was last adopted in 2005. The UWMP documents the Authority's plans to ensure adequate water supplies to meet existing and future demands for water under a range of water supply conditions, including water shortages.

In conformance with California Water Code Division 6, Part 2.6, Section 10621, this letter serves as a notification to all city and county agencies within which the Authority provides water supplies, that the UWMP is being reviewed and updated. It is anticipated that the draft UWMP will be available for public review by June 2011. The final UWMP will be adopted by July 1, 2011 and submitted to the California Department of Water Resources by August 1, 2011.

Please contact Mr. Michael Garrod at (619) 409-6752, or mgarrod@sweetwater.org if you would like additional information or to set up a meeting to discuss the Authority's 2010 UWMP Update.

Sincerely,

SWEETWATER AUTHORITY

Marguerite S. Strand
Assistant General Manager

MSS:MG:ss

I:\engr\Gen\Urban Water Management Plan 2010\Cor\Ltr - Agency Notice - City of San Diego - 3-16-11.doc

COR

SWEETWATER AUTHORITY

505 GARRETT AVENUE
POST OFFICE BOX 2328
CHULA VISTA, CALIFORNIA 91912-2328
(619) 420-1413
FAX (619) 425-7469
http://www.sweetwater.org

March 16, 2011

Ms. Kelley Gage
Senior Water Resources Specialist
San Diego County Water Authority
4677 Overland Avenue
San Diego, CA 92123-1233

Re: SWEETWATER AUTHORITY 2010 URBAN WATER MANAGEMENT PLAN UPDATE
SWA GEN. FILE: URBAN WATER MANAGEMENT PLAN 2010

Dear Ms. Gage:

This letter is to inform you that Sweetwater Authority (Authority) is updating its Urban Water Management Plan (UWMP). California state law requires each urban water supplier to prepare and adopt an urban water management plan every five years. The Authority is currently preparing an update to its UWMP which was last adopted in 2005. The UWMP documents the Authority's plans to ensure adequate water supplies to meet existing and future demands for water under a range of water supply conditions, including water shortages.

In conformance with California Water Code Division 6, Part 2.6, Section 10621, this letter serves as a notification to all city and county agencies within which the Authority provides water supplies, that the UWMP is being reviewed and updated. It is anticipated that the draft UWMP will be available for public review by June 2011. The final UWMP will be adopted by July 1, 2011 and submitted to the California Department of Water Resources by August 1, 2011.

Please contact Mr. Michael Garrod at (619) 409-6752, or mgarrod@sweetwater.org if you would like additional information or to set up a meeting to discuss the Authority's 2010 UWMP Update.

Sincerely,

SWEETWATER AUTHORITY

Marguerite S. Strand
Assistant General Manager

MSS:MG:ss

I:\engr\Gen\Urban Water Management Plan 2010\Cor\Ltr - Agency Notice - San Diego County Water Authority - 3-16-11.doc

The San Diego Union-Tribune. SIGN ON SAN DIEGO enlace. Classifieds

P.O. Box 120191, San Diego, CA 92112-0191

AFFIDAVIT OF PUBLICATION

RMC WATER AND ENVIRONMENT
4225 EXECUTIVE SQUARE, STE. 750
ATTN: CRYSTAL MOHR
LA JOLLA, CA 92037

STATE OF CALIFORNIA} ss.
County of San Diego}

The Undersigned, declares under penalty of perjury under the laws of the State of California: That she is a resident of the County of San Diego. That she is and at all times herein mentioned was a citizen of the United States, over the age of twenty-one years, and that she is not a party to, nor interested in the above entitled matter; that she is Chief Clerk for the publisher of

The San Diego Union-Tribune

a newspaper of general circulation , printed and published daily in the City of San Diego, County of San Diego, and which newspaper is published for the dissemination of local news and intelligence of a general character, and which newspaper at all the times herein mentioned had and still has a bona fide subscription list of paying subscribers, and which newspaper has been established, printed and published at regular intervals in the said City of San Diego, County of San Diego, for a period exceeding one year next preceding the date of publication of the notice hereinafter referred to, and which newspaper is not devoted to nor published for the interests, entertainment or instruction of a particular class, profession, trade, calling, race, or denomination, or any number of same; that the notice of which the annexed is a printed copy, has been published in said newspaper in accordance with the instructions of the person(s) requesting publication, and not in any supplement thereof on the following dates, to wit:

May 25, 2011, Jun 1, 2011

Susan Dellar
Chief Clerk for the Publisher

6-2-11
Date

Affidavit of Publication of

Legal Advertisement
Ad # 0010516313
ORDERED BY: CRYSTAL MOHR

Notice of Public Hearing for the Sweetwater Authority 2010 Urban Water Management Plan

The Sweetwater Authority will hold a public hearing to consider adoption of the 2010 Urban Water Management Plan (UWMP), including compliance with Senate Bill x7-7, at a meeting of the Sweetwater Authority Board of Directors on June 8, 2011. The public hearing will be held at 6:00pm at the Sweetwater Authority offices located at 505 Garrett Avenue in Chula Vista, California.

The 2010 UWMP is being prepared in accordance with the California Urban Water Management Planning Act of 1983 and the Water Conservation Act of 2009 (Senate Bill x7-7). The public hearing will allow members of the public to provide comments and feedback on the 2010 UWMP, water use reduction targets, and target implementation plan, as well as provide information regarding the potential economic impacts of the target implementation plan.

The draft Sweetwater Authority 2010 UWMP is available at: www.sweetwater.org. In addition, copies of the 2010 UWMP can be found at the following public libraries:

- City of Chula Vista Library, 365 F Street, Chula Vista, CA 91910
- City of National City Library, 1401 National City Blvd, National City, CA 91950
- Bonita County Library, 4375 Bonita Road, Bonita, CA 91902

For more information, please contact Michael Garrod by phone at (619) 409-6752 or by email at mgarrod@sweetwater.org.

Appendix D

Sweetwater's Governing Board Resolution Adopting the 2010 UWMP

RESOLUTION 11-11

RESOLUTION OF THE GOVERNING BOARD OF SWEETWATER AUTHORITY ADOPTING THE 2010 URBAN WATER MANAGEMENT PLAN

WHEREAS, *the California Urban Water Management Planning Act, Water Code section 10610 et seq. (the Act) mandates that every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, prepare and update an Urban Water Management Plan (UWMP) at least once every five years on or before December 31, in years ending five and zero; and*

WHEREAS, *Sweetwater Authority (Authority) is an urban water supplier for purposes of the Act, and approved and adopted its most recent UWMP on or before December 31, 2005, and submitted its 2005 UWMP to the California Department of Water Resources (DWR); and*

WHEREAS, *the Water Conservation Act of 2009, Water Code section 10608 et seq. (SBX7-7), extended the time by which urban retail water suppliers must adopt their 2010 UWMPs to July 1, 2011 and, among other things, established requirements for urban retail water suppliers to prepare urban water use targets in accordance with the goals of SBX7-7 to reduce statewide per capita water use by fifteen percent by the year 2015 and twenty percent by the year 2020; and*

WHEREAS, *the Authority is an "urban retail water supplier" for purposes of SBX7-7 because it directly provides potable municipal water to more than 3,000 end users and supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes; and*

WHEREAS, *in accordance with the requirements of the Act and SBX7-7, the Authority has prepared its 2010 UWMP and has undertaken certain coordination, notice, public involvement, public comment, and other procedures in relation to its 2010 UWMP; and*

WHEREAS, *as authorized by section 10620(e) of the Act, the Authority has prepared its 2010 UWMP with its own staff, with the assistance of consulting professionals, and in cooperation with other governmental agencies, and has utilized and relied upon industry standards and the expertise of industry professionals in preparing its UWMP, and has also utilized and relied upon the DWR Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan (March 2011) and the Department of Water Resources (DWR) Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use (for the Consistent Implementation of the Water Conservation Act of 2009) (February 2011) in preparing its 2010 UWMP; and*

RESOLUTION 11-11

***WHEREAS**, in accordance with applicable law, including Water Code sections 10608.26 and 10642, and Government Code section 6066, a notice of public hearing regarding the Authority's 2010 UWMP was published within the jurisdiction of the Authority on May 25, 2011 and June 1, 2011; and*

***WHEREAS**, in accordance with applicable law, a public hearing was held on June 8, 2011 at 6:00 p.m., or soon thereafter, in the Authority's boardroom at 505 Garrett Avenue, Chula Vista, California, 91910, in order to provide members of the public and other interested entities with the opportunity to be heard in connection with the 2010 UWMP and the proposed adoption thereof; and*

***WHEREAS**, pursuant to said public hearing on the 2010 UWMP, the Authority, among other things, encouraged the active involvement of diverse social, cultural, and economic elements of the population within the Authority's service area with regard to the preparation of the UWMP, allowed community input regarding the Authority's implementation plan for complying with SBX7-7, considered the economic impacts of the Authority's implementation plan for complying with SBX7-7, and adopted Method 3 for purposes of Water Code section 10608.20(b); and*

***WHEREAS**, the Governing Board of the Authority has reviewed and considered the purposes and requirements and of the Urban Water Management Planning Act and SBX7-7, the contents of the 2010 UWMP, and the documentation contained in the administrative record in support of the 2010 UWMP, and has determined that the factual analyses and conclusions set forth in the 2010 UWMP are supported by substantial evidence.*

NOW THEREFORE, BE IT RESOLVED, DETERMINED, AND ORDERED BY THE GOVERNING BOARD OF THE AUTHORITY, AS FOLLOWS:

1. The Authority hereby adopts Method 3 for purposes of Water Code section 10608.20(b) and the 2010 Urban Water Management Plan is hereby approved and adopted, and ordered filed with the Secretary of the Board.

2. The General Manager of the Authority is hereby authorized and directed to include a copy of this Resolution in the Authority's 2010 Urban Water Management Plan and, in accordance with Water Code section 10644(a), to file the 2010 Urban Water Management Plan with the California Department of Water Resources, the California State Library, and any city or county within which the Authority provides water supplies within thirty (30) days after this date.

3. The General Manager is hereby authorized and directed, in accordance with Water Code section 10645, to make the 2010 Urban Water Management Plan available for public review during normal business hours not later than thirty (30) days after filing a copy thereof with the California Department of Water Resources.

4. The General Manager is hereby authorized and directed, in accordance with Water Code section 10635(b), to provide that portion of the 2010 Urban Water Management Plan prepared pursuant to Water Code section 10635(a) to any city or county within which the Authority provides water supplies not later than sixty (60) days after filing a copy thereof with the California Department of Water Resources.

5. The General Manager is hereby authorized and directed to implement the components of the 2010 Urban Water Management Plan in accordance with the Urban Water Management Planning Act and SBX7-7, including, but not limited to, the Authority's Water Conservation Programs and its Water Shortage Contingency Plan.

6. The General Manager is hereby authorized and directed to recommend to the Governing Board additional steps necessary or appropriate to effectively carry out the implementation of the 2010 Urban Water Management Plan.

PASSED AND ADOPTED *at a regular meeting of the Governing Board of Sweetwater Authority held on the 8th day of June 2011, by the following vote, to wit:*

Ayes:	*Directors Morrison, Pocklington, Preciado, Thomas, Van Deventer, and Welsh*
Noes:	*None*
Absent:	*Director Rubalcaba*
Abstain:	*None*

Ron Morrison, Chair

ATTEST:

Janet Gonzalez, Board Secretary

Appendix E

Sweetwater's Interim Groundwater Management Plan

ATTACHMENT A

RESOLUTION 01-19

RESOLUTION OF THE GOVERNING BOARD OF SWEETWATER AUTHORITY ADOPTING AN INTERIM GROUNDWATER MANAGEMENT PLAN

WHEREAS, Sweetwater Authority and its predecessors have been engaged in groundwater management activities associated with the Authority's groundwater projects in the Sweetwater Valley (Department of Water Resources Basin Number 9-17) and the San Diego Formation for over one hundred and thirty-two years, and

WHEREAS, the Governing Board of Sweetwater Authority, by approval of Budget Project Number 99-21A approved funding of the preparation of a Groundwater Management Plan, and

WHEREAS, Sweetwater has plans to contract with an engineering consultant to work with staff to prepare a formal Groundwater Management Plan pursuant to Water Code Section 10750 et seq. (AB 3030), and

WHEREAS, the Governing Board wishes to memorialize it's existing groundwater management activities as an interim Groundwater Management Plan,

NOW, THEREFORE, BE IT RESOLVED by the Governing Board of Sweetwater Authority that, the attached Interim Groundwater Management Plan is adopted to guide the groundwater management activities of Sweetwater Authority until such time as it is replaced by a subsequent Groundwater Management Plan under Water Code Section 10750 et Seq. (AB 3030) or other statutes.

PASSED AND ADOPTED at a regular meeting of the Governing Board of Sweetwater Authority held on this 9th day of November, 2001 by the following vote, to wit:

Ayes: Directors Doud, Jarrett, Pocklington, Waters, Welsh, Wolniewicz, and Wright

Noes: None

Absent: None

Abstain: None

/s/ Margaret Cook Welsh
Margaret Cook Welsh, Chair

Attest:

/s/ Marisa Farpon-Friedman
Marisa Farpon-Friedman, Secretary

SWEETWATER AUTHORITY INTERIM GROUNDWATER MANAGEMENT PLAN

A. Interim Plan

This interim groundwater management plan shall govern the groundwater management activities of the Sweetwater Authority until a subsequent Groundwater Management Plan is adopted by the Sweetwater Authority Governing Board, pursuant to Water Code Section 10750 et seq. (AB 3030).

B. Groundwater Management Area Boundaries

Sweetwater Authority shall engage in groundwater management in the area of the Sweetwater Valley basin. This basin is as described in the State of California Department of Water Resources Bulletin Number 118 as the Sweetwater Valley Basin Number 9-17. Also included in the groundwater management activities are the watershed of the Sweetwater River and the underlying San Diego Formation within the Service area of the Sweetwater Authority.

C. Groundwater Management Strategies

1. Maintain static groundwater levels

It shall be the policy and goal of Sweetwater Authority groundwater management to extract from the San Diego Formation so as to not cause a decline in the long term static water levels. In the Sweetwater Valley basin alluvial areas, the policy and goal of Sweetwater Authority groundwater management shall be to extract groundwater to not increase seawater intrusion or cause environmental impacts or damage other producers in the alluvial portion of the basin through the operations of Sweetwater Authority's groundwater projects.

2. Protect groundwater from pollution by manmade activities

Sweetwater Authority shall work with the San Diego Regional Water Quality Control Board (Region 9) to ensure that the groundwater quality within the Sweetwater Valley Basin and the San Diego Formation is protected from contamination.

3. Monitor seawater intrusion

Sweetwater Authority shall monitor groundwater levels, quality and seawater intrusion to ensure that activities of Sweetwater Authority are not causing seawater intrusion.

4. Monitor groundwater quality and quantity

Sweetwater Authority shall periodically monitor the levels and quality of groundwater in the monitoring wells shown in Appendix A. The Authority shall maintain a database of this period information for display on the Sweetwater Authority web page located at www.sweetwater.org.

5. Sweetwater Authority Groundwater Projects

Current Sweetwater Authority groundwater projects include the following:

a. Existing National City Wells
b. Existing Richard A. Reynolds Brackish Groundwater Desalination Facility and its nine groundwater extraction wells.
c. Monitoring of existing groundwater monitoring wells and maintenance of a groundwater level and groundwater quality database.
d. Proposed National City Aquifer Storage and Recovery (ASR) Project.

6. Develop new or expanded groundwater supplies

Staff shall perform activities to develop new groundwater supplies and expand existing groundwater supplies and provide Budget Requests for the Governing Board's approval for these activities, as follows:

a. Investigate the development of new wells to extract potable or brackish groundwater to facilitate expansion of existing groundwater projects as in paragraph C.5. above.
b. Investigate new technologies and their application to existing groundwater sources.
c. Explore conjunctive use activities to augment or expand existing groundwater supplies.

7. Development of relationships with state and local regulation agencies – Bur. Rec. – USGS

Sweetwater Authority has worked and consulted with the Bureau of Reclamation and the United States Geological Survey to receive funding and develop groundwater projects and to study water quality issues. These relationships have been ongoing since 1997. Sweetwater Authority is currently involved with a contract with the USGS to study groundwater quality issues in the San Diego Formation.

D. Implementation

Sweetwater Authority shall work within the watershed of the Sweetwater River, the Sweetwater Valley Basin (Number 9-17) and the San Diego Formation within the service area of the Sweetwater Authority to manage groundwater levels and protect groundwater quality. By adoption of this document, the Sweetwater Authority Governing Board hereby authorizes staff to maintain databases and perform groundwater management activities as described in this interim groundwater management plan.

E. Data Collection and Management

Sweetwater Authority shall maintain a database of groundwater levels and water quality for the existing monitoring wells shown in Appendix A. Staff shall, to the best of its abilities, carry out groundwater management activities using the strategies in Section C of this interim groundwater management plan.

F. Education

The Sweetwater Authority Stakeholder Survey identifies issues important to stakeholders in the watershed of the Sweetwater River, the Sweetwater Valley basin and the San Diego Formation within the Sweetwater Authority service area. As a part of the groundwater management activities to be carried out under the auspices of this interim groundwater management plan, Sweetwater Authority staff is directed to meet with other public entities and the public interested in the groundwater activities of the Sweetwater Authority. The purpose of these meetings shall be to coordinate information about Sweetwater Authority groundwater management activities and projects, receive input and responses from the public and public entities. Also these meetings shall strive to develop a base of support and a forum for constructive criticism and input to Sweetwater Authority for the groundwater management activities of the Authority.

G. Resolutions of the Governing board, Sweetwater Authority Policy and Legal Authority

1. Resolutions of the Governing Board

Adoption of the attached Resolution 01-19 establishes governing board adoption of this interim groundwater management plan and provides authorization for Sweetwater Authority staff to proceed with the activities described within.

2. Sweetwater Authority Policy concerning groundwater management

Sweetwater Authority's policies regarding groundwater management activities are described within this plan and any subsequent amendments to this interim groundwater management plan authorized by the Governing Board.

3. Legal Authority

Sweetwater Authority operates under the legal authority contained in Irrigation District Law as included in water code section 20500 et seq. Under this authorization the Sweetwater Authority may control,

distribute, store, spread, sink, treat, purify, recapture and salvage any water for the beneficial use of the district. Further Sweetwater Authority according to water code 22078 may do any act to put to any beneficial use any water under its control.

Also under water code section 22076 Sweetwater Authority has, though its groundwater management practices have not been previously memorialized in an AB 3030 plan (Water Code section 10750 et seq.) programs that relate to the following:

a. the control of saline water intrusion
b. identification of and management of wellhead protection areas and recharge areas
c. replenishment of groundwater
d. monitoring of groundwater levels and storage
e. construction and operation of a brackish groundwater demineralization facility
f. development of state and federal partnerships in the funding of groundwater management activities
g. review and coordination of land use permitting with the County of San Diego to access development activities and their impact on groundwater
h. management of its groundwater resources by Sweetwater Authority as a local agency thereby making state-controlled groundwater management unnecessary

H. Program Coordination

The General Manager and the Operations Manager of Sweetwater Authority shall be responsible to the Governing Board for the performance of the groundwater management activities described in this interim groundwater management plan.

APPENDIX A

SWEETWATER AUTHORITY MONITORING WELLS

1. ALLUVIAL MONITORING WELL (AMW) #1
2. AMW #2
3. AMW #3
4. AMW #4
5. AMW #5
6. AMW #6
7. AMW #7
8. AMW #8
9. AMW #9

10. SAN DIEGO FORMATION MONITORING WELL (SDFMW) #1 (STEIN FARM)
11. SDFMW #2 (DIXIE LINE)
12. SDFMW #3 (OPS WELL)
13. SDFMW #4 (ALBERTSON WELL)
14. SDFMW #5 (DEMIN PROPERTY)
15. ABRIGO MONITORING WELL
16. EL TOYON MONITORING WELL

Appendix F

Sweetwater's Governing Board Resolution 09-12

RESOLUTION 09-12

RESOLUTION OF THE GOVERNING BOARD OF SWEETWATER AUTHORITY AMENDING THE DROUGHT RESPONSE PLAN AND ASSOCIATED CONSERVATION PRICING STRUCTURE ESTABLISHED IN RESOLUTION O8-19

WHEREAS, *the Colorado River, snow pack in the Sierras , and state water deliveries to Southern California from the Bay-Delta continue to endure extended periods of less than average precipitation and delivery system limitations; and*

WHEREAS, *by Resolution 08-19 Sweetwater Authority adopted its Drought Response Plan including an allocation based conservation water pricing structure and the criteria required to adopt this structure; and*

WHEREAS, *Sweetwater Authority has been presented with information and data demonstrating that the Metropolitan Water District of Southern California and San Diego County Water Authority are experiencing water shortage conditions and are, in response to those water shortage conditions, imposing mandatory conservation measures on Sweetwater Authority, and*

WHEREAS, *on April 23, 2009, the San Diego County Water Authority Board of Directors took action to call for member agencies to reduce water consumption by up to eight percent; and*

WHEREAS, *Sweetwater Authority customers have, for the past nine months, reduced water consumption within the service area in excess of eight percent through voluntary actions;*

WHEREAS, *it is the desire and intent of the Governing Board of Sweetwater Authority to make all required reductions through self-directed efforts on the part of all customers; and*

WHEREAS, *in order to achieve mandatory reduction levels, recognize voluntary water use reductions already achieved, and preserve the ability to allocate available water supplies should conditions change, flexibility to declare the appropriate drought level to meet pre-defined water reduction goals is necessary.*

NOW THEREFORE BE IT RESOLVED *by the Governing Board of Sweetwater Authority, as follows:*

SECTION 1. The Governing Board of Sweetwater Authority hereby adopts the attached amended Drought Response Plan including an allocation based conservation water pricing structure to guide the drought response activities of Sweetwater Authority until such time as it is replaced by a subsequent Drought Response Plan.

SECTION 2. The Governing Board of Sweetwater Authority hereby directs the General Manager to continue the implementation of the conservation measures identified in the Drought Response Plan for Level 1.

SECTION 3. This Resolution shall become effective as of the date of adoption and shall be published within ten days of adoption, pursuant to California Water Code Section 376.

SECTION 4. All previous water conservation measures including Resolution 08-19 under which prior water conservation and drought response programs were established are hereby rescinded and replaced by this Resolution.

SECTION 5. This Resolution has been adopted, following a Public Hearing which was noticed on the May 27, 2009 Governing Board meeting agenda.

***PASSED, APPROVED, AND ADOPTED** by the Governing Board of Sweetwater Authority at a regular meeting duly held on the 27th day of May, 2009, by the following roll call vote:*

AYES:	*Directors Morrison, Muehleisen, Pocklington, Preciado, Rubalcaba, Thomas and Welsh*
NOES:	*None*
ABSENT:	*None*
ABSTAIN:	*None*

_____
W.D. Pocklington, Chair

Attest:

_____
Rita Schoonderwoerd, Secretary

SWEETWATER AUTHORITY
DROUGHT RESPONSE PLAN

SECTION 1. Declaration of Policy. California Water Code Section 375 et seq. permits public entities which supply water at retail to adopt and enforce water conservation programs to reduce the quantity of water used by water customers for the purpose of conserving the water supplies of such public entity. The Governing Board hereby establishes a comprehensive water conservation program, including an allocation-based conservation water pricing structure pursuant to California Water Code Section 375 et seq., based upon the need to conserve water supplies and to avoid or minimize the effects of any future shortage.

SECTION 2. Findings. The Governing Board finds and determines that a water shortage could exist based upon the occurrence of one or more of the following conditions:

A) A general extended water supply shortage due to increased demand or limited supplies.

B) The supply and/or distribution of water by the San Diego County Water Authority or certain other agencies becomes inadequate.

C) A major failure of the supply, storage, and distribution facilities of the Metropolitan Water District of Southern California, the San Diego County Water Authority, or Sweetwater Authority occurs.

The Governing Board also finds and determines that the conditions prevailing in the San Diego region require that the water resources available be put to maximum beneficial use, and that the waste or unreasonable use, or unreasonable method of use of water be discouraged and that the conservation of such water be encouraged to achieve the maximum reasonable and beneficial use thereof in the interest of the customers of Sweetwater Authority and for the public welfare.

SECTION 3. CEQA Exemption. Sweetwater Authority finds that resolution and action taken hereafter pursuant to the Resolution are exempt from the California Environmental Quality Act as specific actions necessary to prevent or mitigate an emergency pursuant to Public Resources Code Section 21080(b) (4) and the California Environmental Quality Act Guidelines Section 15269(c). The General Manager of Sweetwater Authority is hereby authorized and directed to file a Notice of Exemption as soon as possible following the adoption of this Resolution.

SECTION 4. Application. This Resolution shall apply to all persons who use any water provided by Sweetwater Authority.

A) This Resolution is only intended to further the conservation of water. It is not intended to implement any provision of federal, state, or local statutes, ordinances, or regulations relating to the protection of water quality or control of drainage or runoff.

B) Nothing in this Resolution is intended to limit the ability of Sweetwater Authority to declare and respond to an emergency, including an emergency that affects the ability of Sweetwater Authority to supply water.

C) The provisions of this Resolution do not apply to use of water from private wells.

SECTION 5. Authorization. Sweetwater Authority's General Manager or a designated representative, is hereby authorized and directed to implement the provisions of this Resolution.

SECTION 6. Revenue Neutral Water Conservation Pricing Structure. Sweetwater Authority intends to establish a revenue neutral water conservation pricing structure, which will enable Sweetwater Authority to retain current revenue projections and encourage customer conservation by adopting changes to its inclining block rate structure. The pricing structure involves changes in water commodity rates and charges in current block rate tiers or the addition of new block rate tiers, to encourage conservation by water users. Adoption of any such water conservation pricing structure shall be the subject of a Proposition 218 Notice and hearing procedure.

SECTION 7. Reduction Levels. The identified water conservation levels enable Sweetwater Authority to control water use demands, assure reasonable and beneficial use of water, prevent unreasonable use of water within Sweetwater Authority's service area, and plan and implement water management measures in a fair and orderly manner for the benefit of the public.

Water use reduction goals are percentage water reductions from a base ("the Base"). The Base is the annual average of potable water used by all Sweetwater Authority customers during the immediately preceding three consecutive years in which no water use restrictions were implemented. The three-year period is between July 1, 2004 and June 30, 2007.

Customer target water allocations ("Target Water Allocations") will be established for each parcel based upon each parcel's average historic water use between July 1, 2004, and June 30, 2007. Details concerning the method of calculation of Target Water Allocations shall be set forth in the Supplement to the Sweetwater Authority Rates and Rules.

The four levels of drought are defined as:

A) *Level 1 - Drought Watch. A Drought Watch condition may occur when a program is initiated by the San Diego County Water Authority and/or Metropolitan Water District of Southern California to reach up to a ten percent (10%) water use reduction goal. Customers of Sweetwater Authority are requested to reduce consumption up to ten percent (10%) from the Base. At this level, the current water pricing structure remains in effect with no imposition of allocation-based conservation water pricing. The General Manager shall declare a Drought Watch condition.*

B) *Level 2 - Drought Alert. A Drought Alert condition may occur when a program is initiated by the San Diego County Water Authority and/or Metropolitan Water District of Southern California to reach up to a twenty percent (20%) water use reduction goal. Customers of Sweetwater Authority are requested to reduce consumption up to twenty percent (20%) from the Base. At this level, allocation-based conservation water pricing, which includes drought penalties for customers using eleven (11) or more units may be implemented as noted in the Supplement to the Sweetwater Authority Rates and Rules. Should allocation-based conservation water pricing be implemented, the Governing Board shall declare a Drought Alert condition in the manner and on the criteria provided in California Water Code Section 350. Also, the Adjustment to Customer's Water Bill policy shall be suspended.*

C) *Level 3 - Drought Critical. A Drought Critical condition may occur when a program is initiated by the San Diego County Water Authority and/or Metropolitan Water District of Southern California to reach up to a forty percent (40%) water use reduction goal. Customers of Sweetwater Authority are requested to reduce consumption up to forty percent (40%) from the Base. At this level, allocation-based conservation water pricing, which includes drought penalties for all customers is implemented as noted in the Supplement to the Sweetwater Authority Rates and Rules. The Governing Board shall declare a Drought Critical condition in the manner and on the criteria provided in California Water Code Section 350. Also, the Adjustment to Customer's Water Bill policy shall be suspended.*

D) *Level 4 - Drought Emergency. A Drought Emergency condition may occur when a program is initiated by the San Diego County Water Authority and/or Metropolitan Water District of Southern California to reach in excess of a forty percent (40%) water use reduction goal. Customers of Sweetwater Authority are requested to reduce consumption by more than forty percent (40%) from the Base. At this level, allocation-based conservation water pricing, which includes drought penalties for all customers is implemented as noted in the Supplement to the Sweetwater Authority Rates and Rules. The Governing Board shall declare a Drought Emergency condition in the manner and on the criteria provided in California Water Code Section 350. Also, the Adjustment to Customer's Water Bill policy shall be suspended.*

SECTION 8. Water Conservation Guidelines. These guidelines are established to encourage all customers to ensure that they use available water wisely and take all reasonable steps to reduce their water use and are designed to increase the efficiency of water use throughout the service area. Sweetwater Authority customers are encouraged to carefully manage indoor and outdoor water use and eliminate water waste. "Use Water Wisely" is the underlying theme designed to encourage a voluntary water conservation ethic for all customers, which is especially important during the drought.

The following measures shall apply at all times:

1. *Water should be used reasonably and productively at all times.*

2. *Customers are to keep water from draining onto adjacent properties, public or private roadways, and streets.*

3. *Customers are to repair major water leaks immediately and minor water leaks within twenty-four (24) hours of discovery.*

4. *Customers are encouraged to restrict hose washing of sidewalks, driveways, parking areas, tennis courts, patios, or other paved areas to periods of immediate safety or sanitary hazards.*

5. *Customers are encouraged to use drip methods or hand-irrigation whenever possible and prudent, and to restrict sprinkler operation to the hours of 4:00 p.m. to 9:00 a.m. the following morning, except for the first thirty (30) days necessary to establish a new lawn.*

6. *Customers are encouraged to use an automatic shut-off nozzle when using a hand-held hose for spraying, lawn watering, vehicle washing, or structure washing.*

7. *Customers are encouraged to use re-circulating systems for decorative fountains and landscape water features.*

8. *Serve and refill water in restaurants and other food service establishments only upon requests.*

9. *Offer guests in hotels, motels and other commercial lodging establishments the option of not laundering towels and linens daily.*

These additional measures are encouraged during a Drought Alert – Level 2:

1. *Customers are encouraged to limit residential and commercial landscape irrigation to no more than three (3) days per week.*

2. *Customers are encouraged to limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per watering station per day. This recommendation does not apply to landscape irrigation systems using water efficient devices, including but not limited to weather-based controllers, drip/micro-irrigation systems and stream rotor sprinklers.*

3. *Customers are encouraged to only use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped areas, including trees and shrubs that are not irrigated by a landscape irrigation system.*

4. *Customers are encouraged to stop operating ornamental fountains or similar decorative water features unless recycled water is used.*

These additional measures are encouraged during a Drought Critical – Level 3:

1. *Customers are encouraged to stop filling or re-filling pools, ornamental lakes and/or ponds, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a drought response level under this ordinance.*

2. *Customers are encouraged to stop washing vehicles except at commercial carwashes that re-circulate (reclaim) water onsite, or by high pressure/low volume wash systems.*

3. *No new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as will serve letters, certificates, or letters of availability) shall be issued, except under the following circumstances:*

    a. *A valid, unexpired building permit has been issued for the project; or*

    b. *The project is necessary to protect the public's health, safety, and welfare; or*

c. *The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of Sweetwater Authority.*

This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted for a period of one (1) year or less.

These additional measures are encouraged during a Drought Emergency – Level 4:

1. *Customers are encouraged to stop all landscape irrigation, except:*

   a. *Crops and landscape products of commercial growers and nurseries*

   b. *Maintenance of existing landscaping necessary for fire protection as specified by the fire marshal of the local fire protection agency having jurisdiction over the property to be irrigated*

   c. *Maintenance of existing landscaping for erosion control*

   d. *Maintenance of plant materials identified to be rare or essential to the well-being of rare animals*

   e. *Maintenance of landscaping within active public parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week*

   f. *Watering of livestock*

   g. *Public works projects and actively irrigated environmental mitigation projects*

SECTION 9. <u>Mandatory Restrictions</u>. When customers of Sweetwater Authority can no longer meet water use reduction goals as defined for any drought level through voluntary efforts, or when the amount of water supply available to Sweetwater Authority for service to customers is determined to be inadequate to the extent that there would be insufficient water for human consumption, sanitation and fire protection, and this condition is likely to exist until precipitation and inflow dramatically increases, the Governing Board may activate by resolution mandatory water use reductions and/or conditions in accordance with California Water Code 350.

During such mandatory water use reductions, any time a Drought Alert, Drought Critical, or Drought Emergency level is declared, no customer account shall use more than the Target Water Allocation for that parcel. This Target Water Allocation is the average historic water use between July 1, 2004 and June 30, 2007 for the same billing period for the same parcel, less the percentage reduction goal of the particular drought Level. The Target Water Allocation will be printed on each bill for both the current and next billing period. This will allow all customers to see their Target Water Allocation for the next billing cycle.

SECTION 10. Violations and Penalties. Customers using more than the Target Water Allocation, will be notified of their overage and given one (1) full billing cycle to bring their usage below Target Water Allocation. Failure to do so may result in the implementation of drought penalties as shown in the Supplement and/or other measures that Sweetwater Authority may determine at a later date.

Should mandatory water use reductions and/or conditions be activated by resolution, any person who used, causes to be used, or permits the use of water in violation of such resolution is guilty of an offense punishable as provided herein.

1. *Each violation of this Resolution may be prosecuted as a misdemeanor punishable by imprisonment in the county jail for not more than thirty (30) days or by a fine not exceeding one thousand dollars ($1,000) (U.S.A. currency), or by both, as provided in California Water Code Section 377.*

2. *Willful violations of mandatory conservation measures which may be put into place during any drought level may be enforced by discontinuing service to the property at which the violation occurs, as provided by California Water Code Section 356.*

3. *All remedies provided herein, both civil and criminal, shall be cumulative, and not exclusive.*

SECTION 11. Exemptions and Appeals. In order to encourage the efficient use of water for sanitary, health care, and conservation benefit purposes, specific customer classes are exempted from the water use reduction penalties as noted in the Supplement to the Sweetwater Authority Rates and Rules.

Any customer desiring to initiate a Target Water Allocation Appeal may do so at any time. Any customer desiring to appeal a penalty may do so within two (2) weeks of receipt of the bi-monthly or monthly bill. Any such request must be in writing utilizing the appeal form and filed with the General Manager, or their designee. Customers shall have the right to appeal the decision of the General Manager or their designee to the Governing Board by filing a written appeal within seven days of receipt of the written decision of the General Manager, or their designee. The Governing Board may delegate to a committee of its members the authority to consider and rule upon the written appeal.

SECTION 12. Activation and Deactivation. The Governing Board of Sweetwater Authority hereby directs the General Manager to implement this Plan by making appropriate declarations, determinations and findings necessary and establishing Level 1 conditions set forth in this Resolution. The declaration of any change in Level 1 shall be reported to the Governing Board at its next Regular Meeting. The establishment of Level 2, Level 3 and Level 4 conditions shall be made by the Governing Board, in accordance with the provisions hereof.

Following the establishment of Levels pursuant to this Resolution, the General Manager shall implement the Drought Response Plan and make appropriate public announcements and notices. The Level designated shall become effective immediately upon announcement, unless otherwise stated at the time of resolution by the Governing Board.

When the shortage of water is no longer declared, the requirements for reduction shall be deactivated by resolution of the Governing Board.

SECTION 13. Effective Date and Publication. This Resolution shall become effective as of the date of adoption and shall be published within ten days of adoption, pursuant to California Water Code Section 376.

SECTION 14. Replacement of Prior Resolutions. All previous water conservation measures including Resolution 08-19 under which prior water conservation and drought response programs were established are hereby rescinded and replaced by this Resolution.

Appendix G

Sweetwater's 2009-2010
CUWCC BMP Annual Reports

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

You must enter the re... w... agency. Click here to open a table to obtain this number.

Submit Form

Base Year Data

Link to FAQs

Reporting Unit Base Year

Base Year: 2008

What is your reporting period? Fiscal

BMP 1.3 Metering

Number of unmetered accounts in Base Year: 0

BMP 3.1 & BMP 3.2 & BMP 3.3 Residential Programs

Number of Single Family Customers in Base Year: 26,329

Number of Multi Family Units in Base Year: 3,228

BMP 3.4 WaterSense Specification (WSS) Toilets

Number of Single Family Housing Units constructed prior to 1992: 23766

Number of Multi Family Units prior to 1992: 7922

Average number of toilets per single family household: 1.7

Average number of toilets per multi family household: 1.3

Five year average resale rate of single family households: .048

Five-year average resale rate of multi family households: .06

Average number of persons per single family household: 3.1

Average number of persons per multi family household: 2.4

BMP 4.0 & BMP 5.0 CII & Landscape

Total water use (in Acre Feet) by CII accounts: 4779

Number of accounts with dedicated irrigation meters: 662

Number of CII accounts without meters or with Mixed Use Meters: 2,934

Number of CII accounts: 2,934

Comments: No unmetered connections within the system at the time MOU was signed. Total number of mixed use CII accounts derived by totalling commercial, industrial and public accounts and subtracting from this amount the landscape only meters. May include "indoor only' water use.

version 1.0

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

You must enter the reporting unit numbe we have on record fo agency. Click here to open a table to obtain this number.

Submit Form

Link to FAQs

2009

BMP 1.1 Operations Practices

Comments:

See the complete MOU: View MOU

See the coverage requirements for this BMP:

Conservation Coordinator

Conservation Coordinator ◯ Yes ◯ No

Contact Information

First Name	Doug
Last Name	Roberts
Title	Water Conservation Coordinator
Phone	(619)-420-1413
Email	droberts@sweetwater.org

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

Water Waste Prevention

Water Agency shall do one or more of the following:

a. Enact and enforce an ordinance or establish terms of service that prohibit water waste
b. Enact and enforce an ordinance or establish terms of service for water efficient design in new development
c. Support legislation or regulations that prohibit water waste
d. Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
e. Support local ordinances that prohibit water waste
f. Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

a. A description of, or electronic link to, any ordinances or terms of service
b. A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
c. A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
d. description of agency support positions with respect to adoption of legislation or regulations

You can show your documentation by providing files, links (web addresses), and/or entering a description.

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

http://www.ci.national-city.ca.us/ , http://www.ci.chula-vista.ca.us/ , http://sdpublic.sdcounty.ca.gov

Enter a description:

Conservation Specialist with 15+ years conservation program experience, Communications staff, field technical staff, and support from Customer Service Lead (high bill investigations/direct customer assistance). Satffing expense only for Coordinator, Specialist and field technical support. Participation in City of Chula Vista Climate Adaptation Strategies Plannining Committee.

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

You must enter the r... agency. Click here to open a table to obtain this number.

Submit Form

Link to FAQs

2009 BMP 1.2 Water Loss Control

View MOU

AWWA Water Audit

Agency to complete a Water Audit & Balance Using The AWWA Software ○ Yes ○ No

Email to natalie@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:

2009 AWWA WLCC water audit

Water Audit Validity Score from AWWA spreadsheet: 86

Agency Completed Training In The AWWA Water Audit Method ○ Yes ○ No

Agency Completed Training In The Component Analysis Process ○ Yes ○ No

Completed/Updated the Component Analysis (at least every 4 years)? ○ Yes ○ No

Component Analysis Completed/Updated Date

Water Loss Performance

Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective ○ Yes ○ No

Recording Keeping Requirements:

Date/Time Leak Reported	Leak Location
Type of Leaking Pipe Segment or Fitting	Leak Running Time From Report to Repair
Leak Volume Estimate	Cost of Repair

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective ○ Yes ○ No

Type of Program Activities Used to Detect Unreported Leaks

A supervisory control and data acquistion (SCADA) system is used to monitor water flow throughout the system any rapid changes or abnormal readings are investigated and evaluated immediately.

Annual Summary Information

Complete the following table with annual summary information (required for reporting years 2-5 only)

Total Leaks Repaired	Economic Value Of Real Loss	Economic Value Of Apparent Loss	Miles Of System Surveyed For Leaks	Pressure Reduction Undertaken for loss reduction	Cost Of Interventions	Water Saved (AF/Year)

Comments:

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

You must enter the repo we h agency. Click here to open a table to obtain this number.

Submit Form

Link to FAQs

View MOU

2009 BMP 1.2 Water Loss Control

Did your agency complete a pre-screening system audit in 2009? Yes ◉ No ○

If yes, answer the following:

Determine metered sales in AF: 21,906.00

Definition: other accountable uses not included in metered sales, such as unbilled water use, fire suppression, etc.

Determine system verifiable uses AF: 303.00

Determine total supply into the system in AF: 22,691.00

Does your agency keep necessary data on file to verify the answers above? Yes ◉ No ○

Did your agency complete a full-scale system water audit during 2009? Yes ◉ No ○

Does your agency maintain in-house records of audit results or the completed AWWA worksheet for the completed audit which could be forwarded to CUWCC? Yes ◉ No ○

Did your agency operate a system leak detection program? Yes ◉ No ○

Comments:

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

You must enter the reporting unit number

Submit Form

agency. Click here to open a table to obtain this number.

BMP 1.3 Metering with Commodity

Link to FAQs

See the complete MOU: View MOU

See the coverage requirements for this BMP:

Implementation

Does your agency have any unmetered service connections? Yes No

If YES, has your agency completed a meter retrofit plan? Yes No

Enter the number of previously unmetered accounts fitted with meters during reporting year:

Are all new service connections being metered? Yes No

Are all new service connections being billed volumetrically? Yes No

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters? Yes No

Please Fill Out The Following Matrix

Account Type	# Metered Accounts	# Metered Accounts Read	# Metered Accounts Billed by Volume	Billing Frequency Per Year	# of estimated bills/yr
Single-Family	26,275	26,275	26,275	Bi-monthly	6
Multi-Family	3,304	3,304	3,304	Bi-monthly	6
Commericial	2,555	2,555	2,555	Bi-monthly	6
Industrial	33	33	33	Bi-monthly	6
Institutional	261	261	261	Bi-monthly	6
Agricultural	8	8	8	Bi-monthly	6
Dedicated Irrigatic	581	581	581	Bi-monthly	6
Other				Other	
Other				Other	
Other				Other	

Number of CII Accounts with Mixed-use Meters: 2,268

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period:

Feasibility Study

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? Yes No

If YES, please fill in the following information:

A. When was the Feasiblity Study conducted

B. Email or provide a link to the feasibility study (or description of):

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

General Comments about BMP 1.3:

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Link to FAQs

View MOU

BMP 1.4 Retail Conservation Pricing

2009

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to natalie@cuwcc.org.

Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)
Increasing Block	Single-Family	10,395,450.00	5,968,598.00
Uniform	Multi-Family	8,230,531.00	1,819,713.00
Uniform	Commercial	4,639,339.00	1,429,975.00
Uniform	Industrial	495,265.00	47,650.00
Uniform	Institutional	1,713,142.00	356,287.00
Uniform	Agricultural	26,466.00	5,508.00
Uniform	Dedicated Irrigation	2,305,668.00	568,398.00

Implementation Option (Conservation Pricing Option)

- ○ Use Annual Revenue As Reported
- ○ Use Canadian Water & Wastewater Association Rate Design Model

If CWWA is select, enter the file name and email the spreadsheet to natalie@cuwcc.org

Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service ○ Yes ○ No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		

Comments:

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

Click here to open a table that displays your agency name, reporting unit name and reporting unit number. Please ensure that you enter the correct information.

Submit Form

Link to FAQs

2009

BMP 2.1 Public Outreach - Retail Reporting

View MOU

Is a Wholesale Agency Performing Public Outreach?

Are there one or more wholesale agencies performing public outreach which can be counted to help your agency comply with the BMP? ○ Yes ○ No

Enter the name(s) of the wholesale agency (comma delimited): San Diego County Water Authority, Metropolitan Water District of Southern California

Is your agency performing public outreach?

Report a minimum of 4 water conservation related contacts your agency had with the public during the year.

Public Information Programs List

Did at least one contact take place during each quarter of the reporting year? ✔

Number of Public Contacts	Public Information Programs
3	Newsletter articles on conservation
197,000	Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets
5	Landscape water conservation media campaigns
4,169	General water conservation information
5,400	Website

Contact with the Media

Are there one or more wholesale agencies performing media outreach which can be counted to help your agency comply with the BMP? ◉ Yes ○ No

Enter the name(s) of the wholesale agency (comma delimited): San Diego County Water Authority, Metropolitan Water District of Southern California

OR Retail Agency (Contacts with the Media)

Media Contacts List

Did at least one contact take place during each quarter of the reporting year? ✔

Number of Media Contacts	Did at least one contact take place during each quarter of the reporting year?	Media Contact Types
2		News releases
5		Articles or stories resulting from outreach
2		Newspaper contacts
		Articles or stories resulting from outreach
		Select a type of media contact
		Select a type of media contact

Is a Wholesale Agency Performing Website Updates?

Did one or more CUWCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP? ○ Yes ○ No

Enter the name(s) of the wholesale agency (comma delimited)

San Diego County Water Authority, Metropolitan Water District of Southern California

Is Your Agency Performing Website Updates?

Enter your agency's URL (website address): www.sweetwater.org

Describe a minimum of four water conservation related updates to your agency's website that took place during the year:

1) Drought Level 1 Watch message
2) Calling all super (water savers)
3) Residential & Commercial Conservation Programs
4) Water- Effecient Lanscape Contest

Did at least one Website Update take place during each quarter of the reporting year? ○ Yes ○ No

Public Outreach Annual Budget

Enter budget for public outreach programs. You may enter total budget in a single line or brake the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

Category	Amount		Personnel Costs Included? If yes, check the box.	Comments	
Communications	$84,000		☐	Events, media, publications, print, web, oh hold	
School Education	$26,000		☐	Classroom Programs, outreach to students, tea	
Garden	$65,000		☐	Water Conservation Garden support	
Public Info.	$10,000		☐	Public Outreach	
			☐		
			☐		

Comments:

Water saving devices and items (i.e.dye tabs,shut off hose nozzles and other items) are available to customers at community fairs, lobby, walk ins, and are advert

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

Click here to open a table that displays your agenc reporting unit name reporting unit number. Please ensure that you enter the correct information.

Submit Form

Link to FAQs

2009

BMP 2.1 Public Outreach Cont'd

View MOU

Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

Expense Category	Expense Amount	Personnel Costs Included?	
Communications & Public Informati	$199,600		If yes, check the check box.
Garden Programs	$75,000		

Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts? ○ Yes ○ No

Public Outreach Additional Information

Public Information Programs	Importance	

Social Marketing Programs

Branding

Does your agency have a water conservation "brand," "theme" or mascot? ○ Yes ○ No

Describe the brand, theme or mascot. What does the Drought mean to you? messaging and outreach theme. WaterSmart trademark with Wholesaler

Market Research

Have you sponsored or participated in market research to refine your message? ○ Yes ○ No

Market Research Topic	Water usage and saving needs were based on internal data
Brand Message	Customers were encouraged to save up to 10% on their water use during the Drought Watch Level-1
Brand Mission Statement	Sweetwater Authority is your water - savings partner

Community Committees

Do you have a community conservation committee? ○ Yes ◉ No

Enter the names of the community committees:

Training

Training Type	# of Trainings	# of Attendees	Description of Other
Classroom	$5	$1	Water Smart Conference - lecture/ hands on
Classroom	$1	$1	Lecture/ hands on Troubleshooting irrigation systems

Social Marketing Expenditures

Public Outreach Social Marketing Expenses

Expense Category	Expense Amount	Description

Partnering Programs - Partners

Name	Type of Program
☐ CLCA?	Conservation Coordinator is a current member
☐ Green Building Programs?	City of Chula Vista Green Building Standards
☐ Master Gardeners?	Receive mailings and announcements
☐ Cooperative Extension?	
☐ Local Colleges?	Partnership throught inten programs
☐ Other	City of Chula Vista Climate Change Initiative/workgroups

☐ Retail and wholesale outlet; name(s) and type(s) of programs:

Partnering Programs - Newsletters

Number of newsletters per year

Number of customers per year

Partnering with Other Utilities

Describe other utilities your agency partners with, including electrical utilities

Coop training with Otay Water District on irriagtion controller training for customers

Conservation Gardens

Describe water conservation gardens at your agency or other high traffic areas or new

Supporting member of The Waterl Conservation Garden
Provide staff support at annual events
WWW.thegarden.org

Landscape contests or awards

Describe water wise landscape contest or awards program conducted by your agency

Conduct annual landscape contest with other member agencies and cities, promoting water wise gardening. Each agecy has their own winner, winner reconized at the Conservation Garden

Comments:

The fields in red are required.

Agency name: Sweetwater Authority

Division name (Reporting unit): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

Submit Form

Water Uses

2009

Potable Water Billed

Make sure to enter numbers in AF/Year.

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
	26,275.00	9,112.60			
	3,304.00	6,059.60			
Commercial	2,555.00	3,350.40			
Industrial	33.00	362.30			
Institutional	261.00	1,252.30			
Agricultural	8.00	22.20			
Dedicated Irrigation	581.00	1,743.60			
Other					
Other					
Other					
Other					
Other					
Other					

Potable Water Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					

The fields in red are required.

Agency name: Sweetwater Authority

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Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

Click here to open a table that displays your agency n reporting unit name an reporting unit number. Please ensure that you enter the correct information.

Submit Form

Link to FAQs

2009

BMP 2.2 School Education Programs, Retail Agencies

View MOU

School Programs

Is a wholesale agency implementing school programs which can be counted to help your agency comply with this BMP? ○ Yes ○ No

Enter Wholesaler Names, separated by commas: San Diego County Water Authority (SDCWA), Metropolitan Water District of Southern California (MWD)

☐ Materials meet state education framework requirements?

Description of Materials: Children's books,activity books, games, pamphlets, model & kits, posters, reference materials

☐ Materials distributed to K-6 Students?

Description of materials distributed to K-6 Students: Water for You; Let's Learn About Water; Respecting the Water Cycle; Using Water Wisely

Number of students reached: 2,000

☐ Materials distributed to 7-12 Students?

Description of materials distributed to 7-12 Students:

Number of Distribution:

Annual budget for school education program: $26,000.00

Description of all other water supplier education programs: School assembly programs, classroom presentations, materials, poster contest, plant tours

School Program Activities

Classroom presentations:

Number of presentations: 71 Number of attendees:

Large group assemblies:

Number of presentations: 0 Number of attendees: 0

Children's water festivals or other events:

Number of presentations: 0 Number of attendees: 0

Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:

Number of presentations: 0 Number of attendees: 0

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

Description: Water testing kits for teachers

Number distributed: 4

Staffing children's booths at events & festivals:

Number of booths: 0 Number of attendees: 0

Water conservation contests such as poster and photo:

Description: Elementary school poster contest in coordination with the MWD poster contest; High School Photo Contest

Number distributed: 250

Offer monetary awards/funding or scholarships to students:

Number Offered: 10 mini grants Total Funding: 3051.60

Teacher training workshops:

Number of presentations: 33 Number of attendees: 791

Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.:

Number of tours or field trips: 1 Number of participants: 35

College internships in water conservation offered:

Number of internships: 0 Total funding: 0

Career fairs/workshops:

Number of presentations: 0 Number of attendees: 0

Additional program(s) supported by agency but not mentioned above:

Description: Water Technology program Cuyamaca Comm. College

Number of events (if applicable): 6 Number of participants: 1000

Total reporting period budget expenditures for school education programs (include all agency costs): 26000

Comments

The fields in red are required.

Agency name: Sweetwater Authority

Division name (Reporting unit): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

Submit Form

2009

Service Area Population: 186907

Non- Potable Water

If you select Other for type, enter

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	

Exported Water Name	AF/YEAR	Where Exported? such as groundwater recharge, retail,

The fields in red are required.

Agency name: Sweetwater Authority

Division name (Reporting unit): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

WATER SOURCES

2009

Service Area Population: 186907

Potable Water

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Wells	1,945.00	Groundwater	
Reynolds Desal Plant	3,454.00	Groundwater	
Reservoir	4,428.00	Surface	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
San Diego County Water Authority	12,864.00	Other	State water Project / Coplorado River
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	

Exported Water Name	AF/YEAR	Where Exported?

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

You must enter the reporting unit numbe... we have on record fo... agency. Click here to open a table to obtain this number.

Submit Form

Link to FAQs

2010

BMP 1.1 Operations Practices

Comments:

See the complete MOU: View MOU

See the coverage requirements for this BMP:

Conservation Coordinator

Conservation Coordinator ◯ Yes ◯ No

Contact Information

First Name	Doug
Last Name	Roberts
Title	Water Conservation Coordinator
Phone	(619)-420-1413
Email	droberts@sweetwater.org

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

Water Waste Prevention

Water Agency shall do one or more of the following:

a. Enact and enforce an ordinance or establish terms of service that prohibit water waste
b. Enact and enforce an ordinance or establish terms of service for water efficient design in new development
c. Support legislation or regulations that prohibit water waste
d. Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
e. Support local ordinances that prohibit water waste
f. Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

a. A description of, or electronic link to, any ordinances or terms of service
b. A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
c. A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
d. description of agency support positions with respect to adoption of legislation or regulations

You can show your documentation by providing files, links (web addresses), and/or entering a description.

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

http://www.ci.national-city.ca.us/ , http://www.ci.chula-vista.ca.us/ , http://sdpublic.sdcounty.ca.gov

Enter a description:

Conservation Specialist with 15+ years conservation program experience, Communications staff, field technical staff, and support from Customer Service Lead (high bill investigations/direct customer assistance). Satffing expense only for Coordinator, Specialist and field technical support. Participation in City of Chula Vista Climate Adaptation Strategies Plannining Committee.

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Link to FAQs

2010 BMP 1.2 Water Loss Control

View MOU

AWWA Water Audit

Agency to complete a Water Audit & Balance Using The AWWA Software ○ Yes ○ No

Email to natalie@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:

2009 AWWA WLCC water audit

Water Audit Validity Score from AWWA spreadsheet: 86

Agency Completed Training In The AWWA Water Audit Method ○ Yes ○ No

Agency Completed Training In The Component Analysis Process ○ Yes ○ No

Completed/Updated the Component Analysis (at least every 4 years)? ○ Yes ○ No

Component Analysis Completed/Updated Date

Water Loss Performance

Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective ○ Yes ○ No

Recording Keeping Requirements:

Date/Time Leak Reported	Leak Location
Type of Leaking Pipe Segment or Fitting	Leak Running Time From Report to Repair
Leak Volume Estimate	Cost of Repair

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective ○ Yes ○ No

Type of Program Activities Used to Detect Unreported Leaks

A supervisory control and data acquistion (SCADA) system is used to monitor water flow throughout the system any rapid changes or abnormal readings are investigated and evaluated immediately.

Annual Summary Information

Complete the following table with annual summary information (required for reporting years 2-5 only)

Total Leaks Repaired	Economic Value Of Real Loss	Economic Value Of Apparent Loss	Miles Of System Surveyed For Leaks	Pressure Reduction Undertaken for loss reduction	Cost Of Interventions	Water Saved (AF/Year)

Comments:

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

You must enter the reporting unit number

Submit Form

agency. Click here to open a table to obtain this number.

BMP 1.3 Metering with Commodity

2010

Link to FAQs

See the complete MOU: View MOU

See the coverage requirements for this BMP:

Implementation

Does your agency have any unmetered service connections? Yes No

If YES, has your agency completed a meter retrofit plan? Yes No

Enter the number of previously unmetered accounts fitted with meters during reporting year:

Are all new service connections being metered? Yes No

Are all new service connections being billed volumetrically? Yes No

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters? Yes No

Please Fill Out The Following Matrix

Account Type	# Metered Accounts	# Metered Accounts Read	# Metered Accounts Billed by Volume	Billing Frequency Per Year	# of estimated bills/yr
Single-Family	26,275	26,275	26,275	Bi-monthly	6
Multi-Family	3,304	3,304	3,304	Bi-monthly	6
Commericial	2,555	2,555	2,555	Bi-monthly	6
Industrial	33	33	33	Bi-monthly	6
Instiitional	261	261	261	Bi-monthly	6
Agricultural	8	8	8	Bi-monthly	6
Dedicated Irrigatic	581	581	581	Bi-monthly	6
Other				Other	
Other				Other	
Other				Other	

Number of CII Accounts with Mixed-use Meters: 2,268

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period:

Feasibility Study

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? Yes No

If YES, please fill in the following information:

A. When was the Feasiblity Study conducted

B. Describe, upload or provide an electronic link to the Feasibility Study Upload File

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

Comments:

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

You must enter the reporting unit number that we have on record for your agency. Click to obtain this number.

Submit Form

CUWCC

2010

Link to FAQs

View MOU

BMP 1.4 Retail Conservation Pricing

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to natalie@cuwcc.org.

Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)
Increasing Block	Single-Family	10,395,450.00	5,968,598.00
Uniform	Multi-Family	8,230,531.00	1,819,713.00
Uniform	Commercial	4,639,339.00	1,429,975.00
Uniform	Industrial	495,265.00	47,650.00
Uniform	Institutional	1,713,142.00	356,287.00
Uniform	Agricultural	26,466.00	5,508.00
Uniform	Dedicated Irrigation	2,305,668.00	568,398.00

Implementation Option (Conservation Pricing Option)

- ○ Use Annual Revenue As Reported
- ○ Use Canadian Water & Wastewater Association Rate Design Model

If CWWA is select, enter the file name and email the spreadsheet to natalie@cuwcc.org

Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service ○ Yes ○ No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		

Comments:

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

Click here to open a table that displays your agenc reporting unit name reporting unit number. Please ensure that you enter the correct information.

Submit Form

Link to FAQs

2010

BMP 2.1 Public Outreach Cont'd

View MOU

Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

Expense Category	Expense Amount	Personnel Costs Included?	
Communications & Public Informati	$199,600		If yes, check the check box.
Garden Programs	$75,000		

Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts? ○ Yes ○ No

Public Outreach Additional Information

Public Information Programs	Importance	

Social Marketing Programs

Branding

Does your agency have a water conservation "brand," "theme" or mascot? ○ Yes ○ No

Describe the brand, theme or mascot.

What does the Drought mean to you? messaging and outreach theme. WaterSmart trademark with Wholesaler

Market Research

Have you sponsored or participated in market research to refine your message? ○ Yes ○ No

Market Research Topic	Water usage and saving needs were based on internal data
Brand Message	Customers were encouraged to save up to 10% on their water use during the Drought Watch Level-1
Brand Mission Statement	Sweetwater Authority is your water - savings partner

Community Committees

Do you have a community conservation committee? ○ Yes ◉ No

Enter the names of the community committees:

Training

Training Type	# of Trainings	# of Attendees	Description of Other
Classroom	$5	$1	Water Smart Conference - lecture/ hands on
Classroom	$1	$1	Lecture/ hands on Troubleshooting irrigation systems

Social Marketing Expenditures

Public Outreach Social Marketing Expenses

Expense Category	Expense Amount	Description

Partnering Programs - Partners

Name	Type of Program
☐ CLCA?	Conservation Coordinator is a current member
☐ Green Building Programs?	City of Chula Vista Green Building Standards
☐ Master Gardeners?	Receive mailings and announcements
☐ Cooperative Extension?	
☐ Local Colleges?	Partnership throught inten programs
☐ Other	City of Chula Vista Climate Change Initiative/workgroups

☐ Retail and wholesale outlet; name(s) and type(s) of programs:

Partnering Programs - Newsletters

Number of newsletters per year

Number of customers per year

Partnering with Other Utilities

Describe other utilities your agency partners with, including electrical utilities

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Describe water conservation gardens at your agency or other high traffic areas or new

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Landscape contests or awards

Describe water wise landscape contest or awards program conducted by your agency

Conduct annual landscape contest with other member agencies and cities, promoting water wise gardening. Each agecy has their own winner, winner reconized at the Conservation Garden

Comments:

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

Click here to open a table that displays your agency name, reporting unit name and reporting unit number. Please ensure that you enter the correct information.

Submit Form

Link to FAQs

2010

BMP 2.1 Public Outreach - Retail Reporting

View MOU

Is a Wholesale Agency Performing Public Outreach?

Are there one or more wholesale agencies performing public outreach which can be counted to help your agency comply with the BMP? ○ Yes ○ No

Enter the name(s) of the wholesale agency (comma delimited): San Diego County Water Authority, Metropolitan Water District of Southern California

Is your agency performing public outreach?

Report a minimum of 4 water conservation related contacts your agency had with the public during the year.

Public Information Programs List

Did at least one contact take place during each quarter of the reporting year? ✔

Number of Public Contacts	Public Information Programs
3	Newsletter articles on conservation
197,000	Newsletter articles on conservation
5	Newsletter articles on conservation
4,169	General water conservation information
5,400	Website

Contact with the Media

Are there one or more wholesale agencies performing media outreach which can be counted to help your agency comply with the BMP? ● Yes ○ No

Enter the name(s) of the wholesale agency (comma delimited): San Diego County Water Authority, Metropolitan Water District of Southern California

OR Retail Agency (Contacts with the Media)

Media Contacts List

Did at least one contact take place during each quarter of the reporting year? ✔

Number of Media Contacts	Media Contact Types
2	News releases
5	Articles or stories resulting from outreach
2	Newspaper contacts
	Articles or stories resulting from outreach
	Select a type of media contact
	Select a type of media contact

Is a Wholesale Agency Performing Website Updates?

Did one or more CUWCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP? ○ Yes ○ No

Enter the name(s) of the wholesale agency (comma delimited)

San Diego County Water Authority, Metropolitan Water District of Southern California

Is Your Agency Performing Website Updates?

Enter your agency's URL (website address): www.sweetwater.org

Describe a minimum of four water conservation related updates to your agency's website that took place during the year:

1) Drought Level 1 Watch message
2) Calling all super (water savers)
3) Residential & Commercial Conservation Programs
4) Water- Effecient Lanscape Contest

Did at least one Website Update take place during each quarter of the reporting year? ○ Yes ○ No

Public Outreach Annual Budget

Enter budget for public outreach programs. You may enter total budget in a single line or brake the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

Category	Amount		Personnel Costs Included? If yes, check the box.	Comments	
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School Education	$26,000		☐	Classroom Programs, outreach to students, tea	
Garden	$65,000		☐	Water Conservation Garden support	
Public Info.	$10,000		☐	Public Outreach	
			☐		
			☐		

Comments:

Water saving devices and items (i.e.dye tabs,shut off hose nozzles and other items) are available to customers at community fairs, lobby, walk ins, and are advert

The fields in red are required.

Agency name: Sweetwater Authority

Reporting unit name (District name): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

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Submit Form

Link to FAQs

2010

BMP 2.2 School Education Programs, Retail Agencies

View MOU

School Programs

Is a wholesale agency implementing school programs which can be counted to help your agency comply with this BMP? ○ Yes ○ No

Enter Wholesaler Names, separated by commas: San Diego County Water Authority (SDCWA), Metropolitan Water District of Southern California (MWD)

☐ Materials meet state education framework requirements?

Description of Materials: Children's books,activity books, games, pamphlets, model & kits, posters, reference materials

☐ Materials distributed to K-6 Students?

Description of materials distributed to K-6 Students: Water for You; Let's Learn About Water; Respecting the Water Cycle; Using Water Wisely

Number of students reached: 2,000

☐ Materials distributed to 7-12 Students?

Description of materials distributed to 7-12 Students:

Number of Distribution:

Annual budget for school education program: $26,000.00

Description of all other water supplier education programs: School assembly programs, classroom presentations, materials, poster contest, plant tours

School Program Activities

Classroom presentations:

Number of presentations: 71 Number of attendees:

Large group assemblies:

Number of presentations: 0 Number of attendees: 0

Children's water festivals or other events:

Number of presentations: 0 Number of attendees: 0

Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:

Number of presentations: 0 Number of attendees: 0

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

Description: Water testing kits for teachers

Number distributed: 4

Staffing children's booths at events & festivals:

Number of booths: 0 Number of attendees: 0

Water conservation contests such as poster and photo:

Description: Elementary school poster contest in coordination with the MWD poster contest; High School Photo Contest

Number distributed: 250

Offer monetary awards/funding or scholarships to students:

Number Offered: 10 mini grants Total Funding: 3051.60

Teacher training workshops:

Number of presentations: 33 Number of attendees: 791

Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.:

Number of tours or field trips: 1 Number of participants: 35

College internships in water conservation offered:

Number of internships: 0 Total funding: 0

Career fairs/workshops:

Number of presentations: 0 Number of attendees: 0

Additional program(s) supported by agency but not mentioned above:

Description: Water Technology program Cuyamaca Comm. College

Number of events (if applicable): 6 Number of participants: 1000

Total reporting period budget expenditures for school education programs (include all agency costs): 26000

Comments

The fields in red are required.

Agency name: Sweetwater Authority

Division name (Reporting unit): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

Water Uses

2010

Potable Water Billed

Make sure to enter numbers in AF/Year.

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
	26,275.00	9,112.60			
	3,304.00	6,059.60			
Commercial	2,555.00	3,350.40			
Industrial	33.00	362.30			
Institutional	261.00	1,252.30			
Agricultural	8.00	22.20			
Dedicated Irrigation	581.00	1,743.60			
Other					
Other					
Other					
Other					
Other					
Other					

Potable Water Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					

The fields in red are required.

Agency name: Sweetwater Authority

Division name (Reporting unit): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

Submit Form

WATER SOURCES

2010

Service Area Population: 186907

Potable Water

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Wells	1,945.00	Groundwater	
Reynolds Desal Plant	3,454.00	Groundwater	
Reservoir	4,428.00	Surface	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	

	AF/YEAR	Water Supply Type	Water Supply Description
San Diego County Water Authority	12,864.00	Other	State water Project / Coplorado River
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	

Exported Water Name	AF/YEAR	Where Exported?

The fields in red are required.

Agency name: Sweetwater Authority

Division name (Reporting unit): SweetwaterAuthority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

Submit Form

Water Uses

2010

Non-Potable Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					

Non-Potable Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Agency: Sweetwater Authority **District Name:** Sweetwtaer Authority **CUWCC Unit #:** 213
Retail

Primary Contact Sue Mosburg **Telephone** (619)-420-1413 **Email:** smosburg@sweetwater.org

Compliance Option Chosen By Reporting Agency:
(Traditional, Flex Track or GPCD)
GPCD if used:

GPCD in 2010	**101**
GPCD Target for 2018	96

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	113	100%	118
2012	2	92.8%	109	96%	113
2014	3	89.2%	105	93%	109
2016	4	85.6%	101	89%	105
2018	5	82.0%	96	82%	96

Not on Track if 2010 GPCD is > than target

GPCD in 2010	101
Highest Acceptable GPCD for 2010	118

On Track

Agency: **Sweetwater Authority** District Name: **Sweetwtaer Authority** CUWCC Unit #: **213**
Retail

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Foundational BMPs

BMP 1.1 Operational Practices

		2009	2010	
1.Conservation Coordinator provided with necessary resources to implement BMPs?	Name	Doug Roberts	Doug Roberts	Conservation Coordinator provided with necessary resources to implement BMPs?
	Title	Water Conservation Coordinator	Water Conservation Coordinator	
	Email		droberts@sweetwater.org	
		On Track	On Track	
2. Water waste prevention documentation	Descriptive File			On Track if any one of the 6 ordinance actions done, plus documentation or links provided
	Descriptive File 2010			
	URL	Conservation Specialist with 15+ years conservation program experience, Communications staff, field technical staff, and support from Customer Service Lead (high bill investigations/direct customer assistance). Satffing expense only for Coordinator, Speci		
	URL 2010		http://www.ci.national-city.ca.us/ , http://www.ci.chula-vista.ca.us/ , http://sdpublic.sdcounty.ca.gov	
	Describe Ordinance Terms	Conservation Specialist with 15+ years conservation program experience, Communications staff, field technical staff, and support from Customer Service Lead (high bill investigations/direct customer assistance). Satffing expense only for Coordinator, Speci		
	Describe Ordinance Terms 2010		Conservation Specialist with 15+ years conservation program experience, Communications staff, field technical staff, and support from	
		On Track	On Track	

Agency: **Sweetwater Authority** District Name: **Sweetwtaer Authority** CUWCC Unit #: **213**
Retail

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

BMP 1.2 Water Loss Control

	2009		
Complete a prescreening Audit	**yes**	**On Track**	On Track if Yes
Metered Sales	**21,906**		
Verifiable Other Uses	**303**		
Total Supply	**22,691**		
(Metered Sales + System uses)/ Total Supply >0.89	0.98	**On Track**	On Track if =>.89, Not on Track if No
If ratio is less than 0.9, complete a full scale Audit in 2009?	**Yes**	**On Track**	On Track if Yes
Verify Data with Records on File?	**Yes**	**On Track**	On Track if Yes
Operate a system Leak Detection Program?	**Yes**	**On Track**	On Track if Yes

	2010		
Compile Standard Water Audit using AWWA Software?	Yes	**On Track**	On Track if Yes, Not on Track if No
AWWA file provided to CUWCC?	Yes	**On Track**	On Track if Yes, Not on Track if No
AWWA Water Audit Validity Score?	86		Info only until 2012
Completed Training in AWWA Audit Method?	yes		
Completed Training in Component Analysis Process?	Yes		Info only until 2012
Complete Component Analysis?	No		Info only until 2012
Repaired all leaks and breaks to the extent cost effective?	Yes	**On Track**	On Track if Yes, Not on Track if No
Locate and repair unreported leaks to the extent cost effective.	Yes	**On Track**	On Track if Yes, Not on Track if No
Maintain a record-keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair.			Info only until 2012

Provided 7 types of Water Loss Control Info

Leaks Repaired	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost of Interventions	Water Saved
0	$ -	$ -	0	Off	$ -	0

Info only until 2012

Agency: **Sweetwater Authority** District Name: **Sweetwtaer Authority** CUWCC Unit #: **213**
Retail

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

1.3 METERING WITH COMMODITY RATES FOR ALL NEW CONNECTIONS AND RETROFIT OF EXISTING CONNECTIONS

If signed MOU prior to 31 Dec 1997, On Track if all connections metered; If signed after 31 Dec 1997, complete meter installations by 1 July 2012 or within 6 yrs of signing and 20% biannual reduction of unmetered connections.

		2009		2010		
Exemption or 'At least as Effective As' accepted by CUWCC						
Numbered Unmetered Accounts	2008	0	On Track	0	On Track	On Track if no unmetered accounts
Metered Accounts billed by volume of use		Yes	On Track	Yes	On Track	Volumetric billing required for all connections on same schedule as metering
Number of CII accounts with Mixed Use meters		2,268		2,341		Info only
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?		No		No		Required by 2012
Feasibility Study provided to CUWCC?		No		No		On Track if Yes, Not on Track if No
Completed a written plan, policy or program to test, repair and replace meters		Yes	On Track	Yes	On Track	On Track if Yes, Not on Track if No

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Agency: Sweetwater Authority **District Name:** Sweetwater Authority **CUWCC Unit #:** 213
Retail
Coverage Report Date: June 20, 2011

Primary Contact Sue Mosburg **Email:** smosburg@sweetwater.org

1.4 Retail Conservation Pricing

Metered Water Rate Structure

Date 2009 data received June 1, 2011
Date 2010 data received June 1, 2011

On Track if: Increasing Block, Uniform, Allocation, Standby Service; Not on Track if otherwise

Customer Class	2009 Rate Type	Conserving Rate?
Single-Family	Increasing Block	Yes
Multi-Family	Uniform	Yes
Commercial	Uniform	Yes
Industrial	Uniform	Yes
Institutional	Uniform	Yes
Agricultural	Uniform	Yes
Dedicated Irrigation	Uniform	Yes
	On Track	

Customer Class	2010 Rate Type	Conserving Rate?
Single-Family	Increasing Block	Yes
Multi-Family	Uniform	Yes
Commercial	Uniform	Yes
Industrial	Uniform	Yes
Institutional	Uniform	Yes
Agricultural	Uniform	Yes
Dedicated Irrigation	Uniform	Yes
	On Track	

Year Volumetric Rates began for Agencies with some Unmetered Accounts

Info only

Agencies with Partially Metered Service Areas: If signed MOU prior to 31 Dec. 1997, implementation starts no later than 1July 2010. If signed MOU after 31 Dec. 1997, implementation starts no later than 1July 2013, or within seven years of signing the MOU,

Agency: Sweetwater Authority **District Name:** Sweetwater Authority **CUWCC Unit #:** 213
Retail Coverage Report Date: June 20, 2011

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Adequacy of Volumetric Rates) for Agencies with No Unmetered Accounts

Customer Class	2009 Rate Type	2009 Volumetric Revenues $1000s	2010 Rate Type	2010 Volumetric Revenues $1000s
Single-Family	Increasing Block	$ 10,395	Single-Family	$ 10,567
Multi-Family	Uniform	$ 8,231	Multi-Family	$ 9,153
Commercial	Uniform	$ 4,639	Commercial	$ 5,122
Industrial	Uniform	$ 495	Industrial	$ 469
Institutional	Uniform	$ 1,713	Institutional	$ 1,902
Agricultural	Uniform	$ 26	Agricultural	$ 31
Dedicated Irrigation	Uniform	$ 2,306	Dedicated Irrigation	$ 2,707
Total Revenue Commodity Charges (V):		$ 27,806		$ 29,951
Total Revenue Fixed Charges (M):		$ 9,840		$ 12,183
Calculate: V / (V + M):		74%		71%
		On Track		On Track

Agency Choices for rates:

A) Agencies signing MOU prior to 13 June2007, implementation starts 1 July2007: On Track if (V / (V + M) ≥ 70% x .8 = **56% for 2009** and 70%x0.90 = **63% for 2010**; Not on track if (V / (V + M)) < 70%;

B) Use Canadian model. Agencies signing MOU after 13June2007, implementation starts July 1 of year following signing.

Canadian Water & Wastewater Rate Design Model Used and Provided to CUWCC	**No** On Track	**No** On Track
If Canadian Model is used, was 1 year or 3 year period applied?		

Wastewater Rates	**2009**	If 'No', then wastewater rate info not required.	**2010**
Does Agency Provide Sewer Service?	**No**		**No**

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

BMP 2. EDUCATION PROGRAMS

BMP 2.1 Public Outreach Actions Implemented and Reported to CUWCC

	2009	2010
1) Contacts with the public (minimum = 4 times per year)	13	9
2) Water supplier contacts with media (minimum = 4 times per year, i.e., at least quarterly).	9	6
3) An actively maintained website that is updated regularly (minimum = 4 times per year, i.e., at least quarterly).	Yes	Yes
4) Description of materials used to meet minimum requirement.	Newsletter articles on conservation Newsletter articles on conservation General water conservation information Website News releases Articles or stories resulting from outreach Newspaper contacts Articles or stories resulting from outreach	Newsletter articles on conservation Newsletter articles on conservation General water conservation information Website News releases Articles or stories resulting from outreach Newspaper contacts Articles or stories resulting from outreach
5) Annual budget for public outreach program.	$ 84,000	$ 140,000
6) Description of all other outreach programs	Description is too large for text area. Data will be stored in the BMP Reporting database when online.	Description is too large for text area. Data will be stored in the BMP Reporting database when online.
	OnTrack	**OnTrack**

All 6 action types implemented and reported to CUWCC to be 'On Track')

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

2.2 School Education Programs Implemented and Reported to CUWCC

	2009	2010	
Does a wholesale agency implement School Education Programs for this unility's benefit?	Yes	Yes	
Name of Wholesale Supplier?	San Diego County Water Authority (SDCWA), Metropolitan Water District of Southern	San Diego County Water Authority (SDCWA), Metropolitan Water	
1) Curriculum materials developed and/or provided by agency	Children's books,activity books, games, pamphlets, model & kits, posters, reference materials	Children's books,activity books, games, pamphlets, model & kits, posters, reference materials	Yes/ No
2) Materials meet state education framework requirements and are grade-level appropriate?	Yes	Yes	All 5 actions types implemented and reported to CUWCC to be 'On Track'
3) Materials Distributed to K-6?	Yes	Yes	
Describe K-6 Materials	Water for You; Let's Learn About Water; Respecting the Water Cycle; Using Water Wisely	Water for You; Let's Learn About Water; Respecting the Water Cycle; Using Water Wisely	Describe materials to meet minimum requirements
Materials distributed to 7-12 students?	No	No	Info Only
4) Annual budget for school education program.	$ 26,000	$ 25,000	
5) Description of all other water supplier education programs	School assembly programs, classroom presentations, materials, poster contest, plant tours	School assembly programs, classroom presentations, materials, poster contest, plant tours	
	See Wholesale Report	See Wholesale Report	
	On Track	On Track	