



City of San Juan Capistrano

Final Draft

2010 Urban Water Management Plan

June 2011



**MALCOLM
PIRNIE**

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The Water Division of ARCADIS



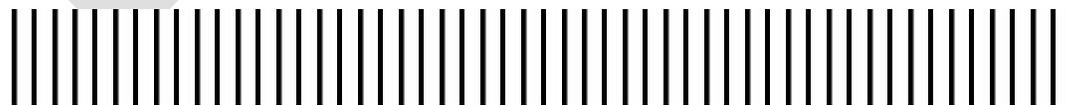
City of San Juan Capistrano

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DRAFT



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Acronyms Used in the Report

20x2020	20% water use reduction in GPCD by year 2020
Act	Urban Water Management Planning Act
AF	acre-feet
AFY	acre-feet per year
AMP	Allen-McCulloch Pipeline
Basin	San Juan Groundwater Basin
BDCP	Bay Delta Conservation Plan
BMP	Best Management Practice
Board	Metropolitan's Board of Directors
CALFED	CALFED Bay-Delta Program
CDR	Center for Demographic Research
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CII	Commercial/Industrial/Institutional
CIMIS	California Irrigation Management Information System
City	City of San Juan Capistrano
CRA	Colorado River Aqueduct
CUWCC	California Urban Water Conservation Council
CVWD	Capistrano Valley Water District
DMM	Demand Management Measure
DWR	Department of Water Resources
EIR	Environmental Impact Report
EOCF #2	East Orange County Feeder #2
ETM	Eastern Transmission Main
ETo	Evapotranspiration
Festival	Children's Water Education Festival
FY	Fiscal Year
GAC	Granulated Activated Carbon
GPCD	gallons per capita per day
gpm	gallons per minute
GWMP	Groundwater Management and Facilities Plan
GWRP	Groundwater Recovery Plant
HECW	High Efficiency Clothes Washer
HET	high efficiency toilet
HOA	Homeowners Association
IRP	Integrated Water Resources Plan
IWA	International Water Association
JPA	Joint Powers Authority
JRTM	Joint Regional Water Supply System Transmission Main

LOI	Letter of Intent
MAF	million acre-feet
Metropolitan	Metropolitan Water District of Southern California
MGD	million gallons per day
MTBE	Methyl Tert-Butyl Ether
MWDOC	Municipal Water District of Orange County
NDMA	N-nitrosodimethylamine
NOAA	National Oceanic and Atmospheric Administration
OCWD	Orange County Water District
Plan	San Juan Basin Groundwater Management and Facility Plan
Poseidon	Poseidon Resources LLC
PPCP	Pharmaceuticals and Personal Care Product
RHNA	Regional Housing Needs Assessment
RUWMP	Regional Urban Water Management Plan
SBx7-7	Senate Bill 7 as part of the Seventh Extraordinary Session
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCP	South County Pipeline
SDCWA	San Diego County Water Authority
SJBA	San Juan Basin Authority
SJBA	San Juan Basin Authority
SMWD	Santa Margarita Water district
SOCWA	South Orange County Water Authority
SWP	State Water Project
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
ULFT	ultra-low-flush toilet
UWMP	Urban Water Management Plan
WACO	Water Advisory Committee of Orange County
WEROC	Water Emergency Response Organization of Orange County
WOCWBF #2	West Orange County Water Board Feeder #2
WSAP	Water Supply Allocation Plan
WSDM	Water Surplus and Drought Management Plan

Executive Summary

This report serves as the 2010 update of the City of San Juan Capistrano's (City) Urban Water Management Plan (UWMP). The UWMP has been prepared consistent with the requirements under Water Code Sections 10610 through 10656 of the Urban Water Management Planning Act (Act), which were added by Statute 1983, Chapter 1009, and became effective on January 1, 1984. The Act requires "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" to prepare, adopt, and file an UWMP with the California Department of Water Resources (DWR) every five years. 2010 UWMP updates are due to DWR by August 1, 2011.

Since its passage in 1983, several amendments have been added to the Act. The most recent changes affecting the 2010 UWMP include Senate Bill 7 as part of the Seventh Extraordinary Session (SBx7-7) and SB 1087. Water Conservation Act of 2009 or SBx7-7 enacted in 2009 is the water conservation component of the Delta package. It stemmed from the Governor's goal to achieve a 20% statewide reduction in per capita water use by 2020 (20x2020). SBx7-7 requires each urban retail water supplier to develop urban water use targets to help meet the 20% goal by 2020 and an interim 10% goal by 2015.

Service Area and Facilities

The City provides water to a population of 40,262 throughout its 14.0 square mile service area. The City receives its water from two main sources, the San Juan Basin, which is managed by the San Juan Basin Authority (SJBA) and imported water from the Municipal Water District of Orange County (MWDOC). Groundwater is pumped from 2 domestic wells located throughout the City, and imported water is treated at the Diemer Filtration Plant and is delivered to the City through two imported water connections.

Water Demand

Currently, the total water demand for the 40,262 people served by the City is approximately 8,780 acre-feet annually consisting of 6,380 acre-feet of imported water, 1,980 of local groundwater, and 430 acre-feet of combined non-domestic and recycled water. The City is projecting an increasing water demand trend of 18% in the next 25 years.

With MWDOC's assistance, the City has selected to comply with **Option 1** of the SBx7-7 compliance options. The City is a member of the Orange County 20x2020 Regional Alliance formed by MWDOC. This regional alliance consists of 29 retail agencies in

Orange County. Under Compliance Option 1, the City's 2015 interim water use target is 198.9 GPCD and the 2020 final water use target is **176.8 GPCD**.

Water Sources and Supply Reliability

The City relies on a combination of imported water, local groundwater, and recycled water to meet its water needs. The City works together with two primary agencies, Metropolitan and MWDOC, to ensure a safe and high quality water supply, which will continue to serve the community in periods of drought and shortage. The sources of imported water supplies include the Colorado River and the State Water Project (SWP). Metropolitan's 2010 Integrated Water Resources Plan (IRP) update describes the core water resource strategy that will be used to meet full-service demands (non-interruptible agricultural and replenishment supplies) at the retail level under all foreseeable hydrologic conditions from 2015 through 2035.

The City has invested in the Groundwater Recovery Plant (GWRP) to produce up to 4,800 acre-feet per year of potable water from the groundwater basin, roughly half of the annual demand. The construction of the GWRP was completed in December 2004. Because of the MTBE and other issues, actual production for FY 2009-10 represents approximately 23% of the City's current annual potable water demands. The remainder of the City's local supply was from local groundwater previously pumped from two wells- Rosenbaum Well No. 1, and the North Open Space Well. Both wells were removed from service because of primary standards violations but are now operating.

It is required that every urban water supplier assess the reliability to provide water service to its customers under normal, dry, and multiple dry water years. Metropolitan's 2010 RUWMP finds that Metropolitan is able to meet full service demands of its member agencies with existing supplies from 2015 through 2035 during normal years, single dry year, and multiple dry years. The City is therefore capable of meeting the water demands of its customers in normal, single dry, and multiple dry years between 2015 and 2035, as illustrated in Table 3-12, Table 3-13, and Table 3-14, respectively.

Future Water Supply Projects

The City is currently working with its neighboring agencies Santa Margarita Water District and Moulton Niguel Water District to make arrangements to use recycled water, when available, from these agencies. Plans for a local recycled water treatment plant at SOCWA's J.B. Latham Plant have been indefinitely delayed.

The Groundwater Recovery Plant (GWRP) has been impacted by Methyl Tert-Butyl Ether (MTBE), cutting production in half to about 2 MGD or less since the spring of 2008. The installation of a Granular Activated Carbon Filter (GAC) is expected to allow the full 5.1 MGD by winter of 2011. The construction of 2 additional wells that were

completed in the spring of 2011 are expected to increase the treatment capacity expansion to 7 MGD by winter of 2011 when the GWRP expansion, and GAC systems are complete.

In Orange County, there are three proposed ocean desalination projects that could serve MWDOC member agencies, including one that specifically that may benefit the City. The City is participating jointly with MWDOC and four other South County agencies with a pilot plant to evaluate the feasibility for the South Orange Coastal Desalination Project, a potential 15 MGD facility.

1. Introduction

1.1. Urban Water Management Plan Requirements

Water Code Sections 10610 through 10656 of the Urban Water Management Planning Act (Act) requires "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" to prepare, adopt, and file an UWMP with the California Department of Water Resources (DWR) every five years. 2010 UWMP updates are due to DWR by August 1, 2011.

This UWMP provides DWR with information on the present and future water resources and demands and provide an assessment of the City's water resource needs. Specifically, this document will provide water supply planning for a 25-year planning period in 5-year increments. The plan will identify water supplies for existing and future demands, quantify water demands during normal year, single-dry year, and multiple-dry years, and identify supply reliability under the three hydrologic conditions. The City's 2010 UWMP update revises the 2005 UWMP. This document has been prepared in compliance with the requirements of the Act as amended in 2009, and includes the following analysis:

- Water Service Area and Facilities
- Water Sources and Supplies
- Water Use by Customer Type
- Demand Management Measures
- Water Supply Reliability
- Planned Water Supply Projects and Programs
- Water Shortage Contingency Plan
- Recycled Water

Since its passage in 1983, several amendments have been added to the Act. The most recent changes affecting the 2010 UWMP include Senate Bill 7 as part of the Seventh Extraordinary Session (SBx7-7) and SB 1087. Water Conservation Act of 2009 or SBx7-7, enacted in 2009, is the water conservation component of the historic Delta package. It stemmed from the Governor's goal to achieve a 20% statewide reduction in per capita water use by 2020 (20x2020). SBx7-7 requires each urban retail water supplier to develop urban water use targets to help meet the 20% goal by 2020 and an interim 10% goal by 2015. Each urban retail water supplier must include in its 2010 UWMPs the following information from its target-setting process:

- Baseline daily per capita water use
- 2020 Urban water use target
- 2015 Interim water use target
- Compliance method being used along with calculation method and support data

Wholesale water suppliers are required to include an assessment of present and proposed future measures, programs, and policies that would help achieve the 20 by 2020 goal.

The other recent amendment made to the UWMP Act to be included in the 2010 UWMP is set forth by SB 1087, Water and Sewer Service Priority for Housing Affordable to Low-Income Households. SB 1087 requires water and sewer providers to grant priority for service allocations to proposed developments that include low income housing. SB 1087 also requires UWMPs to include projected water use for single- and multi-family housing needed for low-income households.

The sections in this Plan correspond to the outline of the Act, specifically Article 2, Contents of Plans, Sections 10631, 10632, and 10633. The sequence used for the required information, however, differs slightly in order to present information in a manner reflecting the unique characteristics of the City's water utility. The UWMP Checklist has been completed, which identifies the location of Act requirements in this Plan and is included as Appendix A.



Figure 1-1: Regional Location of Urban Water Supplier

1.2. Agency Overview

The City provides domestic and non-domestic water service to residential, commercial and industrial customers within the City. The City also provides water service to small areas within the Cities of Dana Point and Mission Viejo.

The City is governed by a five-member City Council elected by the public to four-year terms. Council Member terms are “overlapped”, meaning that each election fills either two or three open seats. The City’s Mayor and Mayor pro tem are selected at the first meeting of each December to serve a one-year term. These positions are filled by sitting Council Members by a vote of the majority of members. The current Council Members are:

- Sam Allevato, Mayor
- Larry Kramer, Mayor Pro Tem
- Laura Freese
- Derek Reeve
- John Taylor

In 2001 the City annexed the Capistrano Valley Water District (CVWD), which was the successor agency to the Orange County Water Works District No. 4. In 2003 CVWD was dissolved and the City took over full operations of the CVWD.

Upon its formation CVWD had inherited some of the facilities and obligations of several small water purveyors that had formerly operated within its boundary. These included the Capistrano Mesa Water Company, Capistrano Heights Water Company, Capistrano Water Company and Trabuco Water Company.

The CVWD utilized local groundwater as its sole source of supply until 1965, when imported water became available. Until the commencement of operation of San Juan’s Groundwater Recovery Plant (GWRP) in December of 2004, approximately 92% of the City’s potable water supply was purchased from Metropolitan through MWDOC. The remaining 8% was from derived from local groundwater sources. Operation of the GWRP has significantly changed these percentages. However, operations issues, drought and source water MTBE contamination have prevented the GWRP from producing at full capacity for most of the past 6 years.

The City receives its water from two main sources, the San Juan Basin, which is managed by the San Juan Basin Authority (SJBA) and imported water from the Municipal Water District of Orange County (MWDOC). MWDOC is Orange County’s wholesale supplier and is a member agency of the Metropolitan Water District of Southern California (Metropolitan).

1.3. Service Area and Facilities

1.3.1. San Juan Capistrano's Service Area

The City's service area is made up of primarily of residential development and open space with small areas dedicated to commercial, agricultural and public/institutional use. The City is the site of the oldest settlement in Orange County, and is proud of its strong roots in its Spanish, Mexican and early California heritage. The area attracts tourists and visitors to its ocean views, historic landmarks and the many cultural events and activities that are sponsored year round.

The City has been primarily developed in the basins adjacent to the San Juan and Trabuco Creeks, which trisect the area. Surrounding the valley to the north, west and east are the coastal foothills that reach elevations of up to 880 ft above sea level. The San Diego Freeway (Interstate 5), which is the primary route between San Diego and Los Angeles, traverses the length of the City. Other major transportation arteries include Ortega Highway (State Highway 74) and Pacific Coast Highway (State Highway 1). The Metrolink and Amtrak rail line between Los Angeles and San Diego also passes through the City. A well used passenger station with regularly scheduled stops is located just southwest of the Mission San Juan Capistrano.

The City is situated in Orange County, approximately 60 miles south of Los Angeles and one-half mile inland from the Pacific Ocean within a scenic coastal valley. The water service boundary covers an area of approximately 14.0 square miles mostly within the corporate boundaries of the City. The City service area extends into the northeastern portion of the City of Dana Point, an area of approximately 0.40 square miles. A map of the City along with the water service area boundaries are shown in Figure 1-2.



Figure 1-2: City of San Juan Capistrano's Service Area

1.3.2. San Juan Capistrano's Water Facilities

The City has 10 reservoirs, 8 active pump stations (3 decommissioned pump stations); two imported water connections, 5 emergency interconnections, and 2 domestic wells. The City also owns and operates a 5 MGD Groundwater Recovery Plant (GWRP) with the plan to expand it up to 7 MGD.

2. Water Demand

2.1. Overview

Currently, the total water demand for the 40,262 people served by the City is approximately 8,780 acre-feet annually consisting of 6,380 acre-feet of imported water, 1,980 of local groundwater, and 430 acre-feet of combined non-domestic and recycled water. The City is projecting an increasing water demand trend of 18% in the next 25 years.

The passage of SBx7-7 will increase efforts to reduce the use of potable supplies in the future. This new law requires all of California's retail urban water suppliers serving more than 3,000 AFY or 3,000 service connections to achieve a 20% reduction in potable water demands (from a historical baseline) by 2020. Due to great water conservation efforts in the past decade, the City is on its way to meeting this requirement on its own. Moreover, the City has elected to join the Orange County 20x2020 Regional Alliance. The City together with other 28 retail agencies in Orange County are committed to reduce the region's water demand by 2020 through the leadership of MWDOC, the region's wholesale provider.

This section will explore in detail the City's current water demands by customer type and the factors which influence those demands as well as providing a perspective of its expected future water demands for the next 25 years. In addition, to satisfy SBx7-7 requirements, this section will provide details of the City's SBx7-7 compliance method selection, baseline water use calculation, and its 2015 and 2020 water use targets.

2.2. Factors Affecting Demand

Water consumption is influenced by many factors from climate characteristics of that hydrologic region, to demographics, land use characteristics, and economics. The key factors affecting water demand in the City's service area are discussed below.

2.2.1. Climate Characteristics

The City is located in an area known as the South Coast Air Basin (SCAB). The SCAB climate is characterized by southern California's "Mediterranean" climate: a semi-arid environment with mild winters, warm summers and moderate rainfall. The general region lies in the semi-permanent, high pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatologically pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The City’s average temperature ranges from 55°F in January to 69°F in August with an average annual temperature of 63°F. Annual precipitation is typically approximately 14 inches, occurring mostly between November and March (Table 2-1). The average evapotranspiration (ETo) is almost 50 inches per year, which is four times the annual average rainfall. This translates to a high demand for landscape irrigation for homes, commercial properties, parks, and golf courses. A region with low rainfall like Southern California is also more prone to droughts.

Table 2-1: Climate Characteristics

	Standard Monthly Average ETo (inches) [1]	Annual Rainfall (inches) [2]	Average Temperature (°F) [3]
Jan	2.18	2.75	55.4
Feb	2.49	2.96	56.0
Mar	3.67	2.58	57.0
Apr	4.71	0.84	59.7
May	5.18	0.25	62.5
Jun	5.87	0.13	65.6
Jul	6.29	0.04	68.7
Aug	6.17	0.12	69.3
Sep	4.57	0.35	69.2
Oct	3.66	0.47	65.4
Nov	2.59	1.23	59.6
Dec	2.25	1.84	55.5
Annual	49.63	13.56	62.0

[1] CIMIS Station #75, Irvine, California from October 1987 to Present

[2] NOAA, Laguna Beach, California 1971 to 2000, Mean Precipitation Total

[3] NOAA, Laguna Beach, California 1971 to 2000, Mean Temperature

The source of the City’s imported water supplies, the State Water Project and Colorado River Project, is influenced by weather conditions in Northern California and along the Colorado River. Both regions have recently been suffering from multi-year drought conditions and record low rainfalls which directly impact demands and supplies to Southern California.

2.2.2. Demographics

The City serves an estimated population about 40,262 people. This represents a 4% increase in population from 2005. The Center for Demographic Research (CDR) at California State University Fullerton projects a 10% increase in the City’s population over the next 25 years. This represents an average growth rate of 0.4% per year. Only

minimal changes in land use are anticipated over the next 25 years. Table 2-2 shows the population projections in five-year increments to the year 2035.

Table 2-2: Population – Current and Projected

	2010	2015	2020	2025	2030	2035-opt
Service Area Population [1]	40,262	41,039	41,816	42,539	43,370	44,147

[1] Center for Demographic Research, California State University, Fullerton 2010

2.2.3. Land Use

The City’s latest General Plan was adopted in December 1999 and amended in May 2002. The General Plan defines the various land uses within the City, which is predominantly residential development. Commercial land use is typical along Camino Capistrano and Ortega Highway, the central downtown area, and in isolated pockets along Rancho Viejo Road. Future development is planned to occur in the foothills to the east and consist primarily of estate and low density residential uses. The City is constantly updating its General Plan through amendments. See attached latest Resolution approving amendment and list of amendments since original adoption.

The portion of the service area within the City of Dana Point is 3% of the total service area. Land uses within Dana Point, served by the City is also predominantly residential with a small pocket of strip commercial located near Del Obispo and Stonehill Drive. This area of Dana Point has very little undeveloped land. Future development is anticipated to occur through in-fill, and on frontage land along the San Juan Creek in the form of small industrial businesses.

It is estimated that 85% of the City’ service area has been developed. Almost 40% of the total area in the City has been set aside as open space. The development of the remaining area is expected by the year 2015. Between 2000 and the year 2015, (the economic downturn has effectively delayed this by 5 or more years) the City projects 2,028 additional residential dwelling units to be constructed and approximately 2,741,900 square feet of new commercial/industrial development within the service area

2.3. Water Use by Customer Type

The knowledge of an agency’s water consumption by type of use or by customer class is key to developing that agency’s water use profile which identifies when, where, how, and how much water is used, and by whom within the agency’s service area. A comprehensive water use profile is critical to the assessment of impacts of prior conservation efforts as well as to the development of future conservation programs.

This section provides an overview of the City’s water consumption by customer type in 2005 and 2010, as well as projections for 2015 to 2035. The customer classes are categorized as follows: single-family residential, multi-family residential, commercial/industrial/institutional (CII), dedicated landscape, and agriculture. Other water uses including sales to other agencies and non-revenue water are also discussed in this section.

2.3.1. Overview

The City maintains 11,200 customer connections to its water distribution system. The City is expected to add 1,695 more connections by 2025. After that the City is projecting the number of service connections to remain constant through 2035. All connections in the City’s service area are metered.

Approximately 64% of the City’s water demand is residential. CII including non-potable meters consume approximately 34% of the City’s water supply. The City also provides water to a small number of agricultural customers representing 2% of the total water demand.

Tables 2-3 and 2-4 provide a summary of past, current, and projected number of water service customers and water use by customer class in five-year increments from 2005 through to 2035.

Table 2-3: Past, Current and Projected Service Accounts by Water Use Sector

Fiscal Year Ending	Number of Accounts by Water Use Sector					
	Single Family	Multi-Family	Commercial /Industrial	Non-Potable	Agriculture	Total Accounts
2005	6,747	3,049	1,038	63	16	10,913
2010	6,900	3,037	1,177	71	14	11,200
2015	7,790	3,520	1,198	73	14	12,596
2020	7,945	3,590	1,222	74	14	12,845
2025	7,975	3,604	1,227	74	14	12,895
2030	7,975	3,604	1,227	74	14	12,895
2035	7,975	3,604	1,227	74	14	12,895

Table 2-4: Past, Current and Projected Water Demand by Water Use Sector

Fiscal Year Ending	Water Demand by Water Use Sectors (AFY)					
	Single Family	Multi-Family	Commercial /Industrial	Non-Potable	Agriculture	Total Demand
2005	4,491	1,421	2,431	678	197	9,218
2010	4,282	1,355	2,317	646	188	8,789
2015	4,580	1,449	2,479	691	201	9,400
2020	4,701	1,488	2,544	710	207	9,650
2025	4,823	1,526	2,610	728	212	9,900
2030	4,945	1,565	2,676	746	217	10,150
2035	5,067	1,603	2,742	765	223	10,400

2.3.2. Residential

Residential water use accounts for the majority of the City’s water demands. The single family residential sector accounts for approximately 49% and multi-family residential accounts for 15% of the total water demand. Water consumption by the residential sector is projected to remain at about 64% through the 25-year planning horizon.

2.3.3. Non-Residential

Non-residential demand is approximately 36% of the overall demand and is expected to remain so through 2035. The City has a mix of commercial uses (markets, restaurants, etc.), public entities (such as schools, fire stations and government offices), office complexes, light industrial, warehouses and facilities serving the public. CII uses (excluding non-potable) represent a combined 26% of the City’s total demand. Demands from non-potable uses such as parks and golf courses are expected to remain at around 7% of the City’s total water demands for the next 25 years. The City has 14 agricultural connections consuming less than 2% of the City’s water supply.

2.3.4. Other Water Uses

2.3.4.1. Sales to Other Agencies

At current the City does not sell water to other agencies.

2.3.4.2. Non-Revenue Water

Non-revenue water is defined by the International Water Association (IWA) as the difference between distribution systems input volume (i.e. production) and billed authorized consumption. Non-revenue water consists of three components: unbilled authorized consumption (e.g. hydrant flushing, fire fighting, and blow-off water from well start-ups), real losses (e.g. leakage in mains and service lines), and apparent losses (unauthorized consumption and metering inaccuracies).

The City’s non-revenue water accounts for approximately 4% of the City’s total demand (Table 2-5).

Table 2-5: Additional Water Uses and Losses (AFY)

Water Use	Fiscal Year Ending						
	2005	2010	2015	2020	2025	2030	2035-opt
Saline Barriers							
Groundwater Recharge							
Conjunctive Use							
Raw Water							
Recycled Water							
Unaccounted-for System Losses	369	352	376	386	396	406	416
Total	369	352	376	386	396	406	416

2.4. SBx7-7 Requirements

2.4.1. Overview

SBx7-7, which became effective on February 3, 2010, is the water conservation component to the Delta legislative package. It seeks to implement Governor Schwarzenegger’s 2008 water use reduction goals to achieve a 20% statewide reduction in urban per capita water use by December 31, 2020. As discussed above, the bill requires each urban retail water supplier to develop urban water use targets to help meet the 20% goal by 2020 and an interim 10% goal by 2015. The bill establishes methods for urban retail water suppliers to determine targets to help achieve water reduction targets. The retail water supplier must select one of the four compliance options. The retail agency may choose to comply to SBx7-7 as an individual or as a region in collaboration with other water suppliers. Under the regional compliance option, the retail water supplier still has to report the water use target for its individual service area. The bill also includes reporting requirements in the 2010, 2015, and 2020 UWMPs. An agency that does not comply with SBx7-7 requirement will not be eligible for water related grant, or loan, from the state on and after July 16, 2016. However, if an agency that is not in compliance documents a plan and obtains funding approval to come into compliance then could become eligible for grants or loans.

2.4.2. SBx7-7 Compliance Options

DWR has established four compliance options for urban retail water suppliers to choose from. Each supplier is required to adopt one of the four options to comply with SBx7-7 requirements. The four options include:

- *Option 1* requires a simple 20% reduction from the baseline by 2020 and 10% by 2015.

- *Option 2* employs a budget-based approach by requiring an agency to achieve a performance standard based on three metrics
 - Residential indoor water use of 55 GPCD
 - Landscape water use commiserate with Model Landscape Ordinance
 - 10% reduction in baseline CII water use
- *Option 3* is to achieve 95% of the applicable state hydrologic region target as set forth in the State's 20x2020 Water Conservation Plan.
- *Option 4* requires the subtraction of Total Savings from the Base GPCD:
 - Total Savings includes indoor residential savings, meter savings, CII savings, and landscape and water loss savings.

San Juan Capistrano's Compliance Option Selection

With MWDOC's assistance in the calculation of the City's base daily per capita use and water use targets, the City has selected to comply with **Option 1**.

While each retail agency is required to choose a compliance option in 2010, DWR allows for the agency to change its compliance option in 2015. This will allow the City to determine its water use targets for Compliance Option 2 and 4 as it anticipates more data to be available for targets calculation in the future.

2.4.3. Regional Alliance

A retail agency can choose to meet the SBx7-7 targets on its own or several retail agencies may form a regional alliance and meet the water use targets as a region. The benefit for an agency that joins a regional alliance is that it has multiple means of meeting compliance.

The City is a member of the Orange County 20x2020 Regional Alliance formed by MWDOC. This regional alliance consists of 29 retail agencies in Orange County as described in MWDOC's 2010 RUWMP. The Regional Alliance Weighted 2015 target is 174 GPCD and 2020 target is 157 GPCD.

2.4.4. Baseline Water Use

The first step to calculating an agency's water use targets is to determine its base daily per capita water use (baseline water use). This baseline water use is essentially the agency's gross water use divided by its service area population, reported in gallons per capita per day (GPCD). The baseline water use is calculated as a continuous 10-year average during a period, which ends no earlier than December 31, 2004 and no later than December 31, 2010. Agencies that recycled water made up 10% or more of 2008 retail water delivery can use up to a 15-year average for the calculation.

Recycled water use represents less than 10% of the City’s retail delivery in 2008; therefore, a 10-year instead of a 15-year rolling average was calculated. The City’s baseline water use is **221.0 GPCD**, which was obtained from the 10-year period July1, 1999 to June 30, 2009.

Tables 2-6 and 2-7 provide the base period ranges used to calculate the baseline water use for the City as well as the service area population and annual water use data which the base daily per capita water use was derived. Data provided in Table 2-6 was used to calculate the continuous 10-year average baseline GPCD. Moreover, regardless of the compliance method adopted by the City, it will need to meet the minimum water use target of 5% reduction from a five-year baseline as calculated in Table 2-7.

Table 2-6: Base Daily per Capita Water Use – 10-year range

Highest Available Baseline [1]	Beginning	Ending
10 Year Avg	July 1, 1999	June 30, 2009

Fiscal Year Ending	Service Area Population	Gross Water Use (gallons per day)	Daily Per Capita Water Use
2000	36,686	8,903,678	243
2001	37,115	8,248,851	222
2002	37,665	8,446,504	224
2003	38,169	8,154,220	214
2004	38,781	9,080,084	234
2005	38,866	8,122,439	209
2006	38,909	7,853,723	202
2007	39,136	8,789,407	225
2008	39,580	8,664,244	219
2009	39,835	8,716,470	219
Base Daily Per Capita Water Use:			221.0

[1] The most recent year in base period must end no earlier than December 31, 2004, and no later than December 31, 2010. The base period cannot exceed 10 years unless at least 10% of 2008 retail deliveries were met with recycled water.

Table 2-7: Base Daily per Capita Water Use – 5-year range

Highest Available Baseline [2]		Beginning	Ending
5 Year Avg		July 1, 2003	June 30, 2008
Fiscal Year Ending	Service Area Population	Gross Water Use (gallons per day)	Daily Per Capita Water Use
2004	38,781	9,080,084	234
2005	38,866	8,122,439	209
2006	38,909	7,853,723	202
2007	39,136	8,789,407	225
2008	39,580	8,664,244	219
Base Daily Per Capita Water Use:			217.7

[1] The base period must end no earlier than December 31, 2007, and no later than December 31, 2010.

2.4.5. SBx7-7 Water Use Targets

Under Compliance Option 1, the simple 20% reduction from the baseline, the City’s 2015 interim water use target is 198.9 GPCD and the 2020 final water use target is **176.8 GPCD** as summarized in Table 2-8.

Table 2-8: Preferred Compliance Option and Water Use Targets

	Baseline	2015 Target	2020 Target
Option 1 - Simple 20% Reduction	221.0	198.9	176.8

2.4.6. Water Use Reduction Plan

The City is a member agency of MWDOC and a member of the Orange County 20x2020 Regional Alliance to meet the SBx7-7 targets as a region comprising of 29 retail urban water suppliers. MWDOC as the regional wholesale provider implements many of the urban water conservation Best Management Practices (BMPs) on behalf of its retail agencies. The Orange County 20x2020 Regional Alliance’s water use reduction plan to achieve SBx7-7 targets will build on existing collaboration between MWDOC and its retail agencies. The Orange County 20x2020 Regional Alliance’s water use reduction plan will align with the MWDOC’s conservation measures detailed in MWDOC’s RUWMP Section 4 as well as Metropolitan’s conservation measures detailed in Metropolitan’s 2010 RUWMP Section 3.4.

Additionally, Metropolitan in collaboration with MWDOC and other member agencies is in the process of developing a draft Long Term Conservation Plan¹ with the overarching goals to:

- Achieve the 2010 IRP conservation target – The target for new water savings through conservation is a regional per capita use of 159 gallons per day in 2015 and 141 gallons per day in 2020.
- Pursue innovation that will advance water conservation
- Transform the public’s value of water within this region – A higher value on water within this region can lead to a conservation ethic that results in permanent change in water use behavior, earlier adoption of new water saving technologies, and transition towards climate-appropriate landscapes.

Achieving these goals requires the use of integrated strategies that leverage the opportunities within this region. It requires regional collaboration and sustained support for a comprehensive, multi-year program. It requires a commitment to pursue behavioral changes and innovation in technologies that evolve the market for water efficient devices and services. It requires strategic, focused implementation approaches that build from broad-based traditional programs. It requires that research be conducted to provide the basis for decisions. Lastly, it requires the support of local leaders to communicate a new value standard for water within this region. Metropolitan will implement the five strategies through both a traditional program and a market acceleration program. The five strategies include:

- **Use catalysts for market transformation.** Metropolitan will pursue market transformation to affect the market and consumer choices for water efficient devices and services.
- **Encourage action through outreach and education.** Metropolitan will provide outreach, educational workshops, and training classes through a range of media and formats which are essential to changing public perceptions of the value of water.
- **Develop regional technical capability.** Metropolitan will conduct research, facilitate information sharing, and/or provide technical assistance to member agencies and retail agencies to develop technical capabilities within the region for water budgeting, advanced metering infrastructure, ordinances, retail rate structures, and other conservation measures.
- **Build strategic alliances.** Metropolitan will form strategic alliances with partners to leverage resources, opportunities and existing momentum that support market transformation.

¹ Metropolitan Water District of Southern California Long Term Conservation Plan Working Draft Version 6 (November 30, 2010)

- **Advance water efficiency standards.** Metropolitan will work to advance water efficiency codes and standards to increase efficiency and reduce water waste.

Successful market transformation requires the integrated use of all five strategies. It is implemented through two complementary programs: traditional and market acceleration programs. When used together, these approaches can be catalytic and transform markets.

Traditional Program: A traditional program of incentives, outreach, education, and training will be used to provide a foundation of water savings, establish baseline conditions, provide market data, and help determine devices and services that are primed for market acceleration. Implementation may include regional incentive programs, pilot programs, regional outreach, and research for a variety of devices and services.

Market Acceleration Program: A portion of Metropolitan’s resources will be used for market acceleration of devices and services that have potential for market change. Metropolitan will use a strategic focus for a specified time period to affect the market for a particular device or service. Tactics may include strategic outreach to manufacturers, retailers, contractors, and consumers; enhanced incentives; and collaboration on implementation.

2.5. Demand Projections

2.5.1. 25 Year Projections

One of the main objectives of this UWMP is to provide an insight into the City’s future water demand outlook. As discussed above, for the most of the recent fiscal year, 2009-10, the City’s total water demand is 8,789 acre-feet comprised of 23% local groundwater, 73% imported water, and 5% recycled water. As illustrated in Table 2-9, the City’s water demand is expected to increase by 18% in the next 25 years to 10,400 acre-feet by 2035.

Table 2-9: Current and Projected Water Demands (AFY)

Water Supply Sources	Fiscal Year Ending					
	2010	2015	2020	2025	2030	2035-opt
MWDOC(Imported Treated Full Service (non-int.))	6,379	2,000	2,250	2,500	2,750	5,493
San Juan Basin (GWRP)	1,980	5,450	5,450	5,450	5,450	2,957
Recycled Water	430	1,950	1,950	1,950	1,950	1,950
Total	8,789	9,400	9,650	9,900	10,150	10,400

The City’s 25-year demand projections for imported water shown in Table 2-10 are based on the projections provided by the City to MWDOC. As the regional wholesale supplier

of Orange County, MWDOC works in collaboration with each of its member agencies as well as with Metropolitan, its wholesaler, to develop demand projections for imported water.

Table 2-10: San Juan Capistrano’s Demand Projections Provided to Wholesale Suppliers (AFY)

Wholesales	Fiscal Year Ending				
	2015	2020	2025	2030	2035-opt
MWDOC	2,000	2,250	2,500	2,750	5,493

2.5.2. Low Income Household Projections

One significant change to the UWMP Act since 2005 is the requirement for retail water suppliers to include water use projections for single-family and multifamily residential housing needed for lower income and affordable households. This requirement is to assist the retail suppliers in complying with the requirement under Section 65589.7 of the Government Code that suppliers grant a priority for the provision of service to housing units affordable to lower income households. A lower income household is defined as a household earning 80% of the County of Orange’s median income or less.

In order to identify the planned lower income housing projects within its service area, DWR² recommends that retail suppliers may rely on Regional Housing Needs Assessment (RHNA) or Regional Housing Needs Plan information developed by the local council of governments, the California Department of Housing and Community Development.

The RHNA is an assessment process performed periodically as part of Housing Element and General Plan updates at the local level. Regional Council of Governments in California are required by the State Housing Element Law enacted in 1980 to determine the existing and projected regional housing needs for persons at all income levels. The RHNA quantifies the need for housing by income group within each jurisdiction during specific planning periods. The RHNA is used in land use planning, to prioritize local resource allocation and to help decide how to address existing and future housing needs. The RHNA consists of two measurements: 1) existing need for housing, and 2) future need for housing.

The current RHNA planning period is January 1, 2006 to June 30, 2014 completed by the Southern California Association of Governments (SCAG) in 2007. The next RHNA which will cover the planning period of January 1, 2011 to September 30, 2021 is not

² California Department of Water Resources, Guidebook to Assist Urban Water Suppliers to Prepare a 2010 UWMP, Final (March 2011)

expected to be completed until fall of 2012; therefore, the 2007 RHNA will be used for the purpose of this 2010 UWMP.

Based on the 2007 Final Regional Housing Need Allocation Plan³, the projected housing need for low and very low income households (hereafter referred to as low-income) in the City of San Juan Capistrano are 17.7% and 21.6%, respectively or 39.3% combined.

Therefore, from inference, it is estimated that approximately 39.3% of the projected water demands within the City’s service area will be for housing needed for low income households. Table 2-11 provides a breakdown of the projected water needs for low income single family and multifamily units. The projected water demands shown here represent 39.3% of the projected water demand by customer type for single-family and multifamily categories provided in Table 2-4 above. For example, the total single family residential demand is projected to be 4,580 AFY in 2015 and 5,067 AFY in 2035. The projected water demands for housing needed for single family low income households are 1,800 and 1,991 AFY for 2015 and 2035, respectively.

Table 2-11: Projected Water Demands for Housing Needed for Low Income Households (AFY)

Water Use Sector	Fiscal Year Ending				
	2015	2020	2025	2030	2035-opt
Total Retail Demand	9,400	9,650	9,900	10,150	10,400
Total Residential Demand	6,029	6,189	6,350	6,510	6,670
<i>Total Low Income Households Demand</i>	<i>2,369</i>	<i>2,432</i>	<i>2,495</i>	<i>2,558</i>	<i>2,621</i>
SF Residential Demand - Total	4,580	4,701	4,823	4,945	5,067
<i>SF Residential Demand - Low Income Households</i>	<i>1,800</i>	<i>1,848</i>	<i>1,896</i>	<i>1,943</i>	<i>1,991</i>
MF Residential Demand - Total	1,449	1,488	1,526	1,565	1,603
<i>MF Residential Demand - Low Income Households</i>	<i>570</i>	<i>585</i>	<i>600</i>	<i>615</i>	<i>630</i>

³ Southern California Association Governments, Final Regional Housing Need Allocation Plan for Jurisdictions within the Six County SCAG Region (July 2007)

3. Water Sources and Supply Reliability

3.1. Overview

The City relies on a combination of imported water, local groundwater, and recycled water to meet its water needs. The City works together with two primary agencies, Metropolitan and MWDOC, to ensure a safe and high quality water supply, which will continue to serve the community in periods of drought and shortage. The sources of imported water supplies include the Colorado River and the State Water Project (SWP). Metropolitan's 2010 Integrated Water Resources Plan (IRP) update describes the core water resource strategy that will be used to meet full-service demands (non-interruptible agricultural and replenishment supplies) at the retail level under all foreseeable hydrologic conditions from 2015 through 2035. The imported water supply numbers shown here represent only the amount of supplies projected to meet demands and not the full supply capacity.

The City has invested in the Groundwater Recovery Plant (GWRP) to produce up to 4,800 acre-feet per year of potable water from the groundwater basin, roughly half of the annual demand. The construction of the GWRP was completed in December 2004. Because of the MTBE and other issues, actual production for FY 2009-10 represents approximately 23% of the City's current annual potable water demands. The remainder of the City's local supply was from local groundwater previously pumped from two wells- Rosenbaum Well No. 1, and the North Open Space Well. Both wells were removed from service because of primary standards violations but are now operating.

Figure 3-1 depicts the City's current and projected water supplies by source through 2035.

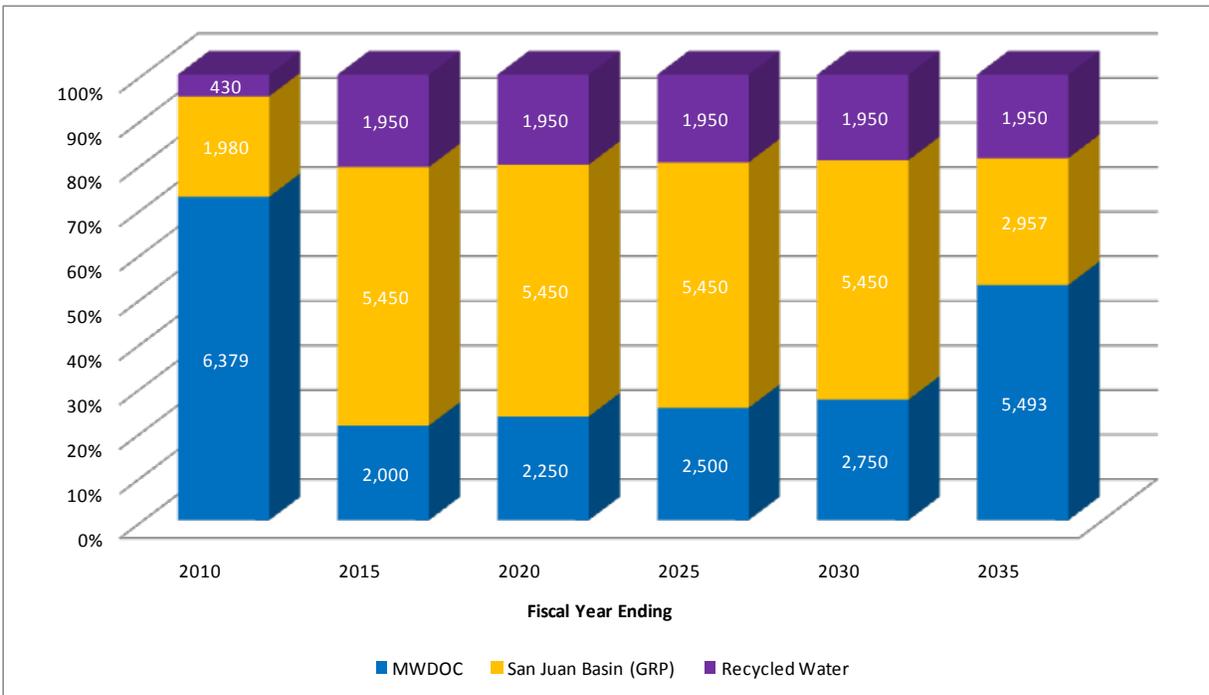


Figure 3-1: Current and Projected Water Supplies (AFY)

In 2035, the City’s control of the GWRP will end, requiring it to share production capacity with surrounding agencies. GWRP production capacity, for the City, will drop from 5,450 AFY to 2,957 AFY.

The following sections provide a detailed discussion of the City’s water sources as well as projections to the City’s future water supply portfolio for the next 25 years. Additionally, the City’s projected supply and demand under various hydrological conditions are compared to determine the City’s supply reliability for the 25 year planning horizon. This section satisfies the requirements of § 10631 (b) and (c), and 10635 of the Water Code.

3.2. Imported Water

The City currently relies on 6,379 AFY of imported water wholesaled by Metropolitan through MWDOC to supplement local groundwater. Imported water represents approximately 73% of the City’s total water supply. Metropolitan’s principal sources of water originate from two sources - the Colorado River via the Colorado Aqueduct and the Lake Oroville watershed in Northern California through the State Water Project (SWP). This water is treated at the Robert B. Diemer Filtration Plant located north of Yorba Linda. Typically, the Diemer Filtration Plant receives a blend of Colorado River water from Lake Mathews through the Metropolitan Lower Feeder and SWP water through the

Yorba Linda Feeder. Imported water is conveyed to the City through the East Orange County Feeder #2 (EOCF #2), Joint Regional Water Supply System Transmission Main (JRTM), and the Eastern Transmission Main (ETM). The City's Master Meter (CM-10) is located at the terminus of the ETM and has 15 cubic-feet per second (cfs) capacity which is equivalent to 10,860 acre-feet/year.

The South County Pipeline (SCP) was constructed by the Santa Margarita Water District (SMWD) in 1990, with participation by Metropolitan. The pipeline originates at the terminus of the Allen-McCulloch Pipeline (AMP) ST-21 turnout near the Baker Filtration Plant in Lake Forest. AMP originates at the Metropolitan Diemer Water Treatment Plant and is owned and operated by Metropolitan. The City receives water from SCP through the SC-04 Turnout. The City has a capacity right of 4.9 cfs (3,550 acre-feet/year) at this turnout and has an option to purchase up to an additional 5.1 cfs capacity in the future for a total of 10 cfs.

3.2.1. Metropolitan's 2010 Regional Urban Water Management Plan

Metropolitan's 2010 Regional Urban Water Management Plan (RUWMP) reports on its water reliability and identifies projected supplies to meet the long-term demand within its service area. It presents Metropolitan's supply capacities from 2015 through 2035 under the three hydrologic conditions specified in the Act: single dry-year, multiple dry-years, and average year.

Colorado River Supplies

Colorado River Aqueduct (CRA) supplies include supplies that would result from existing and committed programs and from implementation of the Quantification Settlement Agreement and related agreements to transfer water from agricultural agencies to urban uses. Colorado River transactions are potentially available to supply additional water up to the CRA capacity of 1.25 million acre-feet (MAF) on an as-needed basis.

State Water Project Supplies

Metropolitan's State Water Project (SWP) supplies have been impacted in recent years by restrictions on SWP operations in accordance with the biological opinions of the U.S. Fish and Wildlife Service and National Marine Fishery Service issued on December 15, 2008 and June 4, 2009, respectively. In dry, below-normal conditions, Metropolitan has increased the supplies received from the California Aqueduct by developing flexible Central Valley/SWP storage and transfer programs. The goal of the storage/transfer programs is to develop additional dry-year supplies that can be conveyed through the available Banks pumping capacity to maximize deliveries through the California Aqueduct during dry hydrologic conditions and regulatory restrictions.

In June 2007, Metropolitan's Board approved a Delta Action Plan that provides a framework for staff to pursue actions with other agencies and stakeholders to build a sustainable Delta and reduce conflicts between water supply conveyance and the environment. The Delta action plan aims to prioritize immediate short-term actions to stabilize the Delta while an ultimate solution is selected, and mid-term steps to maintain the Bay-Delta while the long-term solution is implemented.

State and federal resource agencies and various environmental and water user entities are currently engaged in the development of the Bay Delta Conservation Plan (BDCP), which is aimed at addressing the basic elements that include the Delta ecosystem restoration, water supply conveyance, and flood control protection and storage development. In evaluating the supply capabilities for the 2010 RUWMP, Metropolitan assumed a new Delta conveyance is fully operational by 2022 that would return supply reliability similar to 2005 condition, prior to supply restrictions imposed due to the Biological Opinions.

Storage

Storage is a major component of Metropolitan's dry year resource management strategy. Metropolitan's likelihood of having adequate supply capability to meet projected demands, without implementing its Water Supply Allocation Plan, is dependent on its storage resources. In developing the supply capabilities for the 2010 RUWMP, Metropolitan assumed a simulated median storage level going into each of five-year increments based on the balances of supplies and demands.

Supply Reliability

Metropolitan evaluated supply reliability by projecting supply and demand conditions for the single- and multi-year drought cases based on conditions affecting the SWP (Metropolitan's largest and most variable supply). For this supply source, the single driest-year was 1977 and the three-year dry period was 1990-1992. Metropolitan's analyses are illustrated in Tables 3-1, 3-2, and 3-3 which correspond to Metropolitan's 2010 RUWMP's Tables 2-11, 2-9 and 2-10, respectively. These tables show that the region can provide reliable water supplies not only under normal conditions but also under both the single driest year and the multiple dry year hydrologies.

Table 3-1: Metropolitan Average Year Projected Supply Capability and Demands for 2015 to 2035

Forecast Year	2015	2020	2025	2030	2035
Average Year Supply Capability¹ and Projected Demands Average of 1922-2004 Hydrologies (acre-feet per year)					
Current Programs					
In-Region Storage and Programs	685,000	931,000	1,076,000	964,000	830,000
California Aqueduct ²	1,550,000	1,629,000	1,763,000	1,733,000	1,734,000
Colorado River Aqueduct					
Colorado River Aqueduct Supply ³	1,507,000	1,529,000	1,472,000	1,432,000	1,429,000
Aqueduct Capacity Limit ⁴	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Colorado River Aqueduct Capability	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Capability of Current Programs	3,485,000	3,810,000	4,089,000	3,947,000	3,814,000
Demands					
Firm Demands of Metropolitan	1,826,000	1,660,000	1,705,000	1,769,000	1,826,000
IID-SDCWA Transfers and Canal Linings	180,000	273,000	280,000	280,000	280,000
Total Demands on Metropolitan⁵	2,006,000	1,933,000	1,985,000	2,049,000	2,106,000
Surplus	1,479,000	1,877,000	2,104,000	1,898,000	1,708,000
Programs Under Development					
In-Region Storage and Programs	206,000	306,000	336,000	336,000	336,000
California Aqueduct	382,000	383,000	715,000	715,000	715,000
Colorado River Aqueduct					
Colorado River Aqueduct Supply ³	187,000	187,000	187,000	182,000	182,000
Aqueduct Capacity Limit ⁴	0	0	0	0	0
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	588,000	689,000	1,051,000	1,051,000	1,051,000
Potential Surplus	2,067,000	2,566,000	3,155,000	2,949,000	2,759,000

¹ Represents Supply Capability for resource programs under listed year type.

² California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

³ Colorado River Aqueduct includes water management programs, IID-SDCWA transfers and canal linings conveyed by the aqueduct.

⁴ Maximum CRA deliveries limited to 1.25 MAF including IID-SDCWA transfers and canal linings.

⁵ Firm demands are adjusted to include IID-SDCWA transfers and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

Table 3-2: Metropolitan Single-Dry Year Projected Supply Capability and Demands for 2015 to 2035

**Single Dry-Year
Supply Capability¹ and Projected Demands
Repeat of 1977 Hydrology
(acre-feet per year)**

Forecast Year	2015	2020	2025	2030	2035
Current Programs					
In-Region Storage and Programs	685,000	931,000	1,076,000	964,000	830,000
California Aqueduct ²	522,000	601,000	651,000	609,000	610,000
Colorado River Aqueduct					
Colorado River Aqueduct Supply ³	1,416,000	1,824,000	1,669,000	1,419,000	1,419,000
Aqueduct Capacity Limit ⁴	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Colorado River Aqueduct Capability	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Capability of Current Programs	2,457,000	2,782,000	2,977,000	2,823,000	2,690,000
Demands					
Firm Demands of Metropolitan	1,991,000	1,889,000	1,921,000	1,974,000	2,039,000
IID-SDCWA Transfers and Canal Linings	180,000	273,000	280,000	280,000	280,000
Total Demands on Metropolitan⁵	2,171,000	2,162,000	2,201,000	2,254,000	2,319,000
Surplus	286,000	620,000	776,000	569,000	371,000
Programs Under Development					
In-Region Storage and Programs	206,000	306,000	336,000	336,000	336,000
California Aqueduct	556,000	556,000	700,000	700,000	700,000
Colorado River Aqueduct					
Colorado River Aqueduct Supply ³	187,000	187,000	187,000	182,000	182,000
Aqueduct Capacity Limit ⁴	0	0	0	0	0
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	762,000	862,000	1,036,000	1,036,000	1,036,000
Potential Surplus	1,048,000	1,482,000	1,812,000	1,605,000	1,407,000

¹ Represents Supply Capability for resource programs under listed year type.

² California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

³ Colorado River Aqueduct includes water management programs, IID-SDCWA transfers and canal linings conveyed by the aqueduct.

⁴ Maximum CRA deliveries limited to 1.25 MAF including IID-SDCWA transfers and canal linings.

⁵ Firm demands are adjusted to include IID-SDCWA transfers and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

Table 3-3: Metropolitan Multiple-Dry Year Projected Supply Capability and Demands for 2015 to 2035

Forecast Year	2015	2020	2025	2030	2035
Multiple Dry-Year Supply Capability¹ and Projected Demands Repeat of 1990-1992 Hydrology (acre-feet per year)					
Current Programs					
In-Region Storage and Programs	246,000	373,000	435,000	398,000	353,000
California Aqueduct ²	752,000	794,000	835,000	811,000	812,000
Colorado River Aqueduct					
Colorado River Aqueduct Supply ³	1,318,000	1,600,000	1,417,000	1,416,000	1,416,000
Aqueduct Capacity Limit ⁴	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Colorado River Aqueduct Capability	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Capability of Current Programs	2,248,000	2,417,000	2,520,000	2,459,000	2,415,000
Demands					
Firm Demands of Metropolitan	2,056,000	1,947,000	2,003,000	2,059,000	2,119,000
IID-SDCWA Transfers and Canal Linings	180,000	241,000	280,000	280,000	280,000
Total Demands on Metropolitan⁵	2,236,000	2,188,000	2,283,000	2,339,000	2,399,000
Surplus	12,000	229,000	237,000	120,000	16,000
Programs Under Development					
In-Region Storage and Programs	162,000	280,000	314,000	336,000	336,000
California Aqueduct	242,000	273,000	419,000	419,000	419,000
Colorado River Aqueduct					
Colorado River Aqueduct Supply ³	187,000	187,000	187,000	182,000	182,000
Aqueduct Capacity Limit ⁴	0	0	0	0	0
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	404,000	553,000	733,000	755,000	755,000
Potential Surplus	416,000	782,000	970,000	875,000	771,000

¹ Represents Supply Capability for resource programs under listed year type.

² California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

³ Colorado River Aqueduct includes water management programs, IID-SDCWA transfers and canal linings conveyed by the aqueduct.

⁴ Maximum CRA deliveries limited to 1.25 MAF including IID-SDCWA transfers and canal linings.

⁵ Firm demands are adjusted to include IID-SDCWA transfers and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

3.2.2. San Juan Capistrano’s Imported Water Supply Projections

Based on Metropolitan’s supply projections that it will be able to meet full service demands under all three hydrologic scenarios, MWDOC, Orange county’s wholesale supplier projects that it would also be able to meet the demands of its retail agencies under these conditions.

California Water Code section §10631 (k) requires the wholesale agency to provide information to the urban retail water supplier for inclusion in its UWMP that identifies and quantifies the existing and planned sources of water available from the wholesale agency. Table 3-4 indicates the wholesaler’s water availability projections by source for the next 25 years as provided to the City by MWDOC. The water supply projections shown in Table 3-4 represent the amount of supplies projected to meet demands. They do not represent the full supply capacity.

Table 3-4: Wholesaler Identified & Quantified Existing and Planned Sources of Water (AFY)

Wholesaler Sources	Fiscal Year Ending				
	2015	2020	2025	2030	2035-opt
MWDOC	2,000	2,250	2,500	2,750	5,493

3.3. Groundwater

3.3.1. San Juan Basin Desalter

The City completed a 5 MGD Groundwater Recovery Plant (GWRP) in December 2004 located in the City Hall complex. The Plant takes groundwater that is high in iron, manganese, and total dissolved solids and treats the water using reverse osmosis to make it suitable for potable water uses. The facility consists of 6 wells that are located along the Lower San Juan sub basin. As part of a planned expansion of treatment capacity, 2 new wells have been constructed, bringing the total complement of wells to 8. In the past three years, the City has discovered that some of the wells which supply raw water to the GWRP have been compromised due to MTBE contamination of the water source. The finding required the City to shutdown 2 of these wells which had a significant impact on the plant’s production. The City has recently reached agreement with Chevron, whose 2 gas stations were found to be the source of the contamination, as to a mitigation program for the contamination. The State Water Resources Control Board (SWRCB) will oversee the proper implementation of the program. As part of the solution to the MTBE granulated activated carbon (GAC) filters are to be added to the GWRP treatment process. The GAC filters will remove from the product water any MTBE not removed by the GWRP membranes.

The plant adds chlorine and ammonia to the finished water and delivers potable water to the City's distribution system. In 2035, the GWRP lease expires at which point the City will revert to having control over only 20% of the basin rights reducing the production to just less than 3,000 AFY. In 2035, the City's control of the GWRP will end, requiring it to share production capacity with surrounding agencies. GWRP production capacity, for the City, will drop from 5,450 AFY to 2,957 AFY.

3.3.2. San Juan Groundwater Basin Characteristics

Prior to the availability of imported water, the City's sole source of supply was local groundwater wells within the San Juan Groundwater Basin (the Basin). San Juan Basin Authority (SJBA) is a joint powers agency, formed to manage the Basin. Member agencies of the SJBA are: City of San Juan Capistrano, Santa Margarita Water District, Moulton Niguel Water District, and South Coast Water District. The Basin underlies the Capistrano Valley and several tributary valleys in southern Orange County. The Basin is bounded on the west by the Pacific Ocean and otherwise by Tertiary semi-permeable marine deposits. San Juan Creek drains the Capistrano Valley and several other creeks drain valleys tributary to San Juan Creek. In 1995 the SJBA adopted the San Juan Basin Groundwater Management and Facilities Plan (GWMP). A copy of the GWMP is attached as Appendix B. The basin is not adjudicated. The basin is not currently in overdraft and provided that the recommendations of the GWMP are followed, is not projected to be in overdraft.

Water Bearing Formations

The primary water-bearing unit within the Basin is Quaternary alluvium. This alluvium ranges from a heterogeneous mixture of sand, silt, and gravel in the eastern portion of the basin, to coarse sand near the center, to fine-grained lagoonal sediments in the western portion of the basin. Thickness of the alluvium averages about 65 feet and may reach more than 125 feet. Specific yield of the alluvium is estimated to average about 13% and range from 3 to 22%. Wells typically yield from 450 to 1,000 gallons per minute (gpm). Sand layers of the Tertiary Santiago Formation may be water bearing within the region and beneath the basin, and minor amounts of water are extracted from fractured basement rock beneath the basin.

Restrictive Structures

At the confluence of San Juan Creek and Canada Chiquita, near the middle portion of the basin, the Cristianitos fault forms a barrier to subsurface outflow. Forster, Mission Viejo and Aliso faults are not known to form barriers to groundwater flow, but they are mapped as crossing the basin.

Recharge Areas

Recharge of the Basin is from flow in San Juan Creek, Oso Creek, and Arroyo Trabuco and precipitation to the valley floor. Water from springs flows directly from Hot Spring Canyon into San Juan Creek, adding to recharge.

Groundwater Level Trends

Groundwater levels in 1987 were similar to water levels in 1952. Hydrographs show seasonal cycles with average declines related to drought cycles that recover during more plentiful seasons. Groundwater flows southwest toward the Pacific Ocean.

Groundwater Storage Capacity

Combined basin capacity in upper, middle, and lower San Juan plus Trabuco basins is approximately 63,000 acre-feet.

Groundwater Budget

A study entitled San Juan Basin Groundwater Management and Facility Plan (the Plan) by NBS Lowry (1994) investigated and modeled the groundwater basin for 1979 through 1990. The study determined that the mean pump extraction capacity was 5,621 AFY and a mean subsurface inflow was 2,246 AFY. Average subsurface outflow to the ocean was estimated to be about 450 AFY. SJBA has 8,026 AFY of rights, expandable to 10,702 AFY if approved by DWR.

SJBA approved the Plan in 1995. The Plan represented the first step in the implementation of the SJBA mission to develop and maintain a reliable, good quality and economical local water supply for the residents in the Basin by maximizing use of local ground and surface water, the San Juan Creek and its tributaries, with due consideration for the preservation and enhancement of the environment, including, but not limited to, natural resources, fish and wildlife, infrastructure improvements and the cultural heritage of the area. A later study entitled the Preliminary Well Design and Site Selection Report, prepared in June 2001 by Geotechnical Consultants, Inc., confirmed the findings in the Plan.

The City's groundwater rights in the Basin are shown in Table 3-5.

Table 3-5: Groundwater Rights (AFY)

Basin Name	Water Rights (AFY)
San Juan Groundwater Basin	6,750
Total	6,750

The water right available to San Juan until 2034 is 8,437 AFY. At 80% recovery, it will produce 6,750 AFY. Starting 2035, the control of the GWRP will transfer, leaving the City with 5,026 AFY of raw groundwater, 3,696 AFY of which at 80% recovery will produce 2,957 AFY from the GWRP, the balance of 1,330 AFY is considered to be directly usable; or processed through GWRP capacity (80% recovery) for an increase of 1,064 AFY of local production. This would allow the City a local production of 4,021 AFY.

3.3.3. Groundwater Historical and Projected Extraction

Until 2004, there was a limited amount of water production from the Basin. In 2000, the California State Water Resources Control Board granted a water rights permit of 8,026 AFY to SJBA for diversion and use from the Basin. The permit also allows an additional 2,676 AFY in the future depending on certain conditions specified in the permit. A copy of the Permit is available for review in Appendix C. SJBA completed construction of Phase I of the GWRP, in December 2004. The SJBA lease agreement will expire December 1, 2035. According to the agreement between the SJBA and the City, the City can produce up to 4,800 acre-feet of desalinated groundwater annually from the Basin. Again, the presence of MTBE in some of the source water wells has significantly reduced the production from the plant over the past three years.

Phase I of the GWRP requires a diversion of 5,760 AFY to produce, at 80% recovery, the 4,800 AFY of potable water. Depending on the conditions in the Basin after the implementation of the San Juan Basin Groundwater Management and Facility Plan, expansion of the production may be possible.

Table 3-6 shows projected groundwater production in the Basin.

Table 3-6: Amount of Groundwater Pumped in the Past 5 Years (AFY)

Basin Name(s)	Fiscal Year Ending				
	2005	2006	2007	2008	2009
San Juan Basin (GWRP)	1,619	4,799	3,094	1,265	2,159
San Juan Basin Domestic Wells	1,035	810	694	724	489
% of Total Water Supply	29%	63%	38%	20%	27%

The amount of groundwater projected to be pumped through 2035 is shown in Table 3-7. All groundwater is to be produced through the GWRP.

Table 3-7: Amount of Groundwater Projected to be Pumped (AFY)

Basin Name(s)	Fiscal Year Ending					
	2010	2015	2020	2025	2030	2035-opt
San Juan Basin (GWRP)	1,980	5,450	5,450	5,450	5,450	2,957
% of Total Water Supply	23%	58%	56%	55%	54%	28%

3.4. Recycled Water

One of the major components of the City’s water conservation program is its non-domestic water program. The City provides the water to be used for landscape irrigation services and demands are continuing to increase as new services are available. The City’s non-domestic water program is more fully described in Section 6.

3.5. Supply Reliability

3.5.1. Overview

It is required that every urban water supplier assess the reliability of water service to provide water service to its customers under normal, dry, and multiple dry water years. The City depends on a combination of imported and local supplies to meet its water demands and has taken numerous steps to ensure it has adequate supplies. Development of groundwater, groundwater recovery, non-domestic water system, and desalination opportunities augment the reliability of the imported water system. There are various factors that may impact reliability of supplies such as legal, environmental, water quality and climatic which are discussed below. The water supplies are projected to meet full-service demands; Metropolitan’s 2010 RUWMP finds that Metropolitan is able to meet with existing supplies, full-service demands of its member agencies starting 2015 through 2035 during normal years, single dry year, and multiple dry years.

Metropolitan’s 2010 Integrated Water Resources Plan (IRP) update describes the core water resource strategy that will be used to meet full-service demands at the retail level under all foreseeable hydrologic conditions from 2015 through 2035. The foundation of Metropolitan’s resource strategy for achieving regional water supply reliability has been to develop and implement water resources programs and activities through its IRP preferred resource mix. This preferred resource mix includes conservation, local resources such as water recycling and groundwater recovery, Colorado River supplies and transfers, SWP supplies and transfers, in-region surface reservoir storage, in-region groundwater storage, out-of-region banking, treatment, conveyance and infrastructure improvements. MWDOC is reliant on Metropolitan for all of its imported water. With the addition of planned supplies under development, Metropolitan’s 2010 RUWMP finds that Metropolitan will be able to meet full-service demands from 2015 through 2035, even

under a repeat of the worst drought. Table 3-8 shows the reliability of the wholesaler’s supply for single dry year and multiple dry year scenarios.

Table 3-8: Wholesaler Supply Reliability - % of Normal AFY

Wholesaler Sources	Single Dry	Multiple Dry Water Years		
		Year 1	Year 2	Year 3
MWDOC	100%	100%	100%	100%

In addition to meeting full-service demands from 2015 through 2035, Metropolitan projects reserve and replenishment supplies to refill system storage. MWDOC’s 2010 RUWMP states that it will meet full-service demands to its customers from 2015 through 2035. Table 3-9 shows the basis of water year data used to predict drought supply availability.

Table 3-9: Basis of Water Year Data

Water Year Type	Base Year	Base Year	Base Year
Normal Water Year	Average 1922-2004		
Single-Dry Water Year	1977		
Multiple-Dry Water Years	1990	1991	1992

3.5.2. Factors Contributing to Reliability

The Act requires a description of the reliability of the water supply and vulnerability to seasonal or climatic shortage. The City relies on import supplies provided by Metropolitan through MWDOC. The following are some of the factors identified by Metropolitan that may have an impact on the reliability of Metropolitan supplies.

Environment – Endangered species protection needs in the Sacramento-San Joaquin River Delta have resulted in operational constraints to the SWP system. The Bay-Delta’s declining ecosystem caused by agricultural runoff, operation of water pumps and other factors has led to historical restrictions in SWP supply deliveries. SWP delivery restrictions due to the biological opinions resulted in the loss of about one-third of the available SWP supplies in 2008.

Legal – Listings of additional species under the Endangered Species Act and new regulatory requirements could impact SWP operations by requiring additional export reductions, releases of additional water from storage or other operational changes impacting water supply operations. Additionally, the Quantification Settlement Agreement has been challenged in courts and may have impacts on the Imperial

Irrigation District and San Diego County Water Authority transfer. If there are negative impacts, San Diego could become more dependent on the Metropolitan supplies.

Water Quality – Water imported from the Colorado River Aqueduct (CRA) contains high level of salts. The operational constraint is that this water needs to be blended with SWP supplies to meet the target salinity of 500 mg/L of total dissolved solids (TDS). Another water quality concern is related to the quagga mussel. Controlling the spread and impacts of quagga mussels within the Colorado River Aqueduct requires extensive maintenance and results in reduced operational flexibility.

Climate Change – Changing climate patterns are expected to shift precipitation patterns and affect water supply. Unpredictable weather patterns will make water supply planning even more challenging. The areas of concern for California include the reduction in Sierra Nevada snowpack, increased intensity and frequency of extreme weather events, and rising sea levels causing increased risk of levee failure.

Legal, environmental, and water quality issues may have impacts on Metropolitan supplies. It is felt, however, that climatic factors would have more of an impact than the others. Climatic conditions have been projected based on historical patterns; however severe pattern changes may occur in the future. Table 3-10 shows the factors resulting in inconsistency of supply.

Table 3-10: Factors Resulting in Inconsistency of Supply

Name of Supply	Legal	Environmental	Water Quality	Climatic
State Water Project	X	X		
Colorado River			X	X

These and other factors are addressed in greater detail in Metropolitan’s 2010 RUWMP.

3.5.2.1. Water Quality

Imported Water - Metropolitan is responsible for providing water of a high quality throughout its service area. The water that Metropolitan delivers is tested both for currently regulated contaminants and for additional contaminants of concern as over 300,000 water quality tests are conducted each year to regulate the safety of its waters. Metropolitan’s supplies originate primarily from the Colorado River Aqueduct (CRA) and from the State Water Project (SWP). A blend of these two sources, proportional to each year’s availability of the source, is then delivered throughout Metropolitan’s service area.

Metropolitan’s primary sources face individual water quality issues of concern. The CRA water source contains a higher level of total dissolved solids (TDS) and a lower level of organic material while the SWP contains a lower TDS level while its level of organic materials is much higher, lending to the formation of disinfection byproducts. To remediate the CRA’s high level of salinity and the SWP’s high level of organic materials, Metropolitan has been blending CRA water with SWP supplies as well as implementing updated treatment processes to decrease the disinfection byproducts. In addition, Metropolitan has been engaged in efforts to protect its Colorado River supplies from threats of uranium, perchlorate, and chromium VI while also investigating the potential water quality impact of emerging contaminants, N-nitrosodimethylamine (NDMA) and pharmaceuticals and personal care products (PPCPs). Metropolitan has assured its ability to overcome the above mentioned water quality concerns through its protection of source waters, implementation of innovative treatment processes, and blending of its two sources. While unforeseeable water quality issues could alter reliability, Metropolitan’s current strategies ensure the deliverability of high quality water.

Groundwater - Groundwater pumping from the San Juan Basin has declined from the 1960s until the end of 2004 due to the poor water quality. The mineral content of groundwater in the basin is variable, however, the basin typically has calcium bicarbonate or bicarbonate-sulfate character below the upper reaches of the valleys, and calcium-sodium sulfate or sulfate-chloride near the coast. In general, TDS content in groundwater increases from below 500 mg/L in the upper reaches of the valley to near 2,000 mg/L near the coast. TDS content of water from 3 public supply wells averages 760 mg/L and ranges from 430 mg/L to 1,250 mg/L. The GWRP is designed in accordance with the existing water quality in the basin.

Table 3-11 shows the impact in acre-feet per year that water quality would have on supply.

Table 3-11: Water Quality – Current and Projected Water Supply Impacts (AFY)

Water Source	Fiscal Year Ending					
	2010	2015	2020	2025	2030	2035-opt
Imported	0	0	0	0	0	0
Local	0	0	0	0	0	0

3.5.3. Normal-Year Reliability Comparison

The City has entitlements and/or written contracts to receive imported water from Metropolitan via the regional distribution system. Although pipeline capacity rights do not guarantee the availability of water, per se, they do guarantee the ability to convey water when it is available to the Metropolitan distribution system. All imported water supplies assumed in this section are available to the City from existing water transmission

facilities. Table 3-12 shows supply and demand under normal year conditions. Water supplies are projected to be available from Metropolitan; however, these additional supplies are not included in the table since projected supplies meet projected demands.

Table 3-12: Projected Normal Water Supply and Demand (AFY)

	Fiscal Year Ending				
	2015	2020	2025	2030	2035
Total Demand	9,400	9,650	9,900	10,150	10,400
San Juan Basin (GWRP)	5,450	5,450	5,450	5,450	2,957
Recycled Water	1,950	1,950	1,950	1,950	1,950
Imported	2,000	2,250	2,500	2,750	5,493
Total Supply	9,400	9,650	9,900	10,150	10,400

3.5.4. Single Dry-Year Reliability Comparison

The City has documented that it is 100% reliable for single dry year demands from 2015 through 2035 with a demand increase of 7.1% using FY 2003-04 as the single dry-year. Table 3-13 compiles supply and demand projections for a single dry water year. The available imported supply is greater than shown; however, it is not included because all demands are met.

Table 3-13: Projected Single-Dry Year Water Supply and Demand (AFY)

	Fiscal Year Ending				
	2015	2020	2025	2030	2035
Total Demand	9,936	10,200	10,464	10,729	10,993
San Juan Basin (GWRP)	5,450	5,450	5,450	5,450	2,957
Recycled Water	1,950	1,950	1,950	1,950	1,950
Imported	2,536	2,800	3,064	3,329	6,086
Total Supply	9,936	10,200	10,464	10,729	10,993

3.5.5. Multiple Dry-Year Reliability Comparison

The City is capable of meeting all customers' demands with significant reserves held by Metropolitan in multiple dry years from 2015 through 2035 with a demand increase of 7.1% using FY 2003-04 as the multiple dry-years. This is true even if the demand projections were to be increased by a large margin, as long as local supply remains unaffected. Table 3-14 shows supply and demand projections under multiple dry year conditions.

Table 3-14: Projected Multiple Dry Year Period Supply and Demand (AFY)

		Fiscal Year Ending				
		2015	2020	2025	2030	2035
First Year Supply	Total Demand	9,936	10,200	10,464	10,729	10,993
	San Juan Basin (GWRP)	5,450	5,450	5,450	5,450	2,957
	Recycled Water	1,950	1,950	1,950	1,950	1,950
	Imported	2,536	2,800	3,064	3,329	6,086
	Total Supply	9,936	10,200	10,464	10,729	10,993
Second Year Supply	Total Demand	9,936	10,200	10,464	10,729	10,993
	San Juan Basin (GWRP)	5,450	5,450	5,450	5,450	2,957
	Recycled Water	1,950	1,950	1,950	1,950	1,950
	Imported	2,536	2,800	3,064	3,329	6,086
	Total Supply	9,936	10,200	10,464	10,729	10,993
Third Year Supply	Total Demand	9,936	10,200	10,464	10,729	10,993
	San Juan Basin (GWRP)	5,450	5,450	5,450	5,450	2,957
	Recycled Water	1,950	1,950	1,950	1,950	1,950
	Imported	2,536	2,800	3,064	3,329	6,086
	Total Supply	9,936	10,200	10,464	10,729	10,993

4. Demand Management Measures

4.1. Overview

Water conservation, often called demand-side management, can be defined as practices, techniques, and technologies that improve the efficiency of water use. Such practices are referred to as demand management measures (DMM). Increased efficiency expands the use of the water resource, freeing up water supplies for other uses, such as population growth, new industry, and environmental conservation.

Statewide, the increasing efforts in water conservation are spurred by a number of factors: growing competition for limited supplies, increasing costs and difficulties in developing new supplies, optimization of existing facilities, delay of capital investments in capacity expansion, and growing public support for the conservation of limited natural resources and adequate water supplies to preserve environmental integrity.

The City recognizes the importance of water conservation and has made water use efficiency an integral part of water use planning. The City has been a signatory to the California Urban Water Conservation Council's (CUWCC) Memorandum of Understanding (MOU) of Best Management Practices (BMPs) since August 1994. Demand Management Measures as defined by the Act corresponds to the CUWCC's BMPs. The City is currently implementing all of 13 retail agency DMMs described in the Act. Also included, in Appendix E, is the August 2009 letter from DWR certifying compliance with the requirements of AB 1420.

This section of the UWMP satisfies the requirements of § 10631 (f) & (j). It describes how each DMM is being implemented by the City and how the City evaluates the effectiveness of the DMMs implemented. This section also provides an estimate of existing conservation savings where information is available.

4.2. Water Use Efficiency Programs

As Signatory to the CUWCC MOU, the City has committed to use good-faith efforts to implement the 13 cost-effective retail agency BMPs. The City has implemented and is actively participating in many water conservation activities. A Water Conservation Ordinance was amended and updated by the City Council in 2008 as Chapter 12 of Title 6 of the City Municipal Code pertaining to water conservation. The purpose of this chapter of the code is to establish standards and procedures for water conservation, to reduce or eliminate the waste of water in the City, to complement the City's Storm water Runoff Control Ordinance and enable implementation of the City's water shortage

contingency measures. More details on this water conservation ordinance are provided in Section 5 of this document.

Moreover, as a member agency of MWDOC, the City actively participates in various Metropolitan residential and CII rebate programs, as well as school and public education and outreach programs, and other programs administered by MWDOC. MWDOC implements many of the urban water conservation BMPs on behalf of its member agencies. MWDOC's 2010 RUWMP should be referred to for a detailed discussion of each regional BMP program. The City works cooperatively with MWDOC for technical and financial support needed to facilitate meeting the terms of the MOU. MWDOC's current Water Use Efficiency Program implemented on behalf of its member agencies and detailed in their 2010 RUWMP focuses on three basic areas:

1. Regional Program Development – MWDOC develops, obtains funding for, and implements regional BMP programs on behalf of all retail water agencies in Orange County.
2. Local Program Assistance - MWDOC assists retail agencies to develop and implement local programs within their individual service areas.
3. Research and Evaluation – MWDOC conducts research programs which allow an agency to measure the water savings benefits of a specific program and then compare those benefits to the costs of implementing the program in order to evaluate the economic feasibility of the program.

At the local level, the City develops and manages water use efficiency, drought response, and demand management (DMM) programs for the City community. Table 4-1 provides an overview of City's DMM program status.

Table 4-1: San Juan Capistrano's Demand Management Measures Overview

Demand Management Measure (DMM)	DMM Status		
	Past	Current	Future
Residential Water Surveys		X	
Residential Plumbing Retrofits		X	
System Water Audits, Leak Detection and Repair		X	
Metering with Commodity Rates		X	
Large Landscape Conservation Programs		X	
High-Efficiency Washing Machine Rebates		X	
Public Information Programs		X	
School Education Programs		X	
Commercial, Industrial and Institutional Programs		X	
Wholesale Agency Assistance		N/A	
Conservation Pricing		X	
Conservation Coordinator		X	
Water Waste Prohibition		X	
Residential ULFT Replacement Programs		X	

4.2.1. DMM 1: Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers

Local Residential Program – The City’s budget-based rate structure acts as an efficient notification to residents that water use has risen above a prudent level; when usage on an account increases above the monthly budget, the price per unit of water increase. This can be the signal a customer needs to identify a leak or malfunction they were otherwise unaware of. Leaks such as slab leaks can have severe or even catastrophic consequences, so there are multiple benefits to this pricing signal. Rates are described in greater detail in Section 4.2.11 Conservation pricing, below.

As part of the monthly meter reading process, rereads are proactively undertaken when water use exceeds a threshold percentage of increase, set seasonally by the customer service department. If field staff subsequently determines that a high read is correct, they also check the meter for movement and leave a tag on the door indicating that the customer’s use is unusually high, and suggesting they check for leaks. Often, dye tablets are distributed at this time, as toilet leaks are the most common cause of high use. Door tags are also provided to all water field staff, for use year-round to notify customers about runoff, broken sprinklers, and leaks observed. Examples of the three most frequently used tags are included in Appendix E.

The City actively engages in residential site visits, including complete indoor and outdoor water use surveys for single family and multi-family customers. These surveys are offered proactively to customers with water consumption in the higher tiers of usage, as defined by the budget-based rate structure (described in Section 4.2.11 Conservation Pricing, below). Surveys also take place at the request of the customer, in conjunction with a high use investigation following a high water bill. In the process of assessing flow rates of all fixtures, other water uses at the home, and the condition of any irrigation system on site, the City makes recommendations and identifies appropriate retrofits and rebates that are available. The City also provides free aerators, showerheads, and hose nozzles to customers, along with relevant brochures and information on California Friendly landscape and irrigation practices.

Water savings attributed to residential surveys have not been quantified. Each site has varying conditions. This activity is seen as an essential customer service, and does result in water use reductions with plumbing retrofits, adjustments to irrigation schedules, and leak repair.

Regional Programs - The City participates in regional landscape programs through MWDOC, aimed at helping residential and small commercial customers to be more water efficient. Programs include Smart-Timer Rebate Program, Rotating Nozzle Rebate Program, Synthetic Turf Rebate Program, and the California Friendly Landscape Program as described below.

Smart Timer Rebate Program - The Smart Timer Rebate Program started in FY 2004/05. Under this regional program, residential and small commercial properties are eligible for a rebate when they purchase and install a weather-based irrigation controller which has the potential to save 41 gallons per day per residence and reduce runoff and pollution by 49%. To date, 46 rebates have been given out to residential customers (controlling 428 irrigation valves) and 58 rebates to small commercial customers (controlling 1,315 valves) within the City's service area which translates to a water savings of 93 acre-feet, collectively. The City will continue to provide on-site meetings, literature and incentives related to this program. As part of the MWDOC grant for the Smart Timers a site audit and inspection is required and provided by contract through MWDOC, which provides an opportunity to disseminate more landscape information one-on-one to customers.

Rotating Nozzle Rebate Program - This rebate program started in 2007 and is offered to both residential and commercial customers. Through this program, site owners purchase and install rotary nozzles in existing irrigation systems. The current rebate amount in the City's service area is \$8.00 per nozzle. Following the submittal of a rebate application, water bill, and original purchase receipt, MWDOC directs a third party installation verification contractor to perform installation verifications at all of the sites that installed devices. To date, within the City's service area, 1,756 rotating nozzles have been

installed at residential properties and another 7,369 at small commercial sites, representing a combined water savings of 80 acre-feet since the beginning of the program.

Synthetic Turf Rebate Program – Started in FY 2007-08 and recently suspended in 2011, this program was a partnership between MWDOC, Metropolitan, and the local retail water agency. Through this program, residential and small commercial customers of participating retail water agencies were eligible to receive a minimum of \$1 per square foot of turf removed for qualifying projects. Through this program, 14,634 sq. ft. of turf grass was replaced by synthetic turf on residential properties and another 639 sq. ft. at commercial properties translating to a cumulative water savings to date of 4.74 acre-feet for the City’s service area.

California Friendly Landscape Training (Residential) - The California Friendly Landscape Training Program provides education to residential homeowners and professional landscape contractors on a variety of landscape water efficiency practices they can employ. These classes are funded by Metropolitan and promoted by MWDOC and hosted by the City. The residential training program consists of either a half-day Mini Class or individual, topic-specific, four-hour classes. The City typically hosts one class or series each year, in addition to in-depth landscape design seminars taught periodically by City staff.

4.2.2. DMM 2: Residential Plumbing Retrofit

Through Metropolitan’s mass showerhead distribution which began in 1991, and supplemented by the City’s active local giveaway programs, over 95% of single-family and multi-family residential accounts in Orange County have been retrofitted with low flow showerheads. To determine whether the 75% saturation requirement defined by the CUWCC BMPs was achieved within Orange County, a saturation study was conducted by MWDOC and Metropolitan and completed in 2001. Data was obtained through telephone surveys and on-site inspections. Using the saturation findings of the study, MWDOC estimates that today low flow showerhead saturation is at nearly 100% for single-family homes and at 94% for multi-family homes. The City continues to keep showerheads and low-volume faucet aerators in stock, for special events and to give away on request. Clothes washers are described below in Section 4.2.6, and toilet retrofits are discussed under 4.2.14, below.

4.2.3. DMM 3: System Water Audits, Leak Detection and Repair

Leak Detection and Repair Program –The City maintains an emergency response capability 24 hours a day, and can quickly deploy staff to isolate and repair leaks as soon as they are identified. The City also employs a contractor to check and repair trouble spots in mainlines and service lines. In 2008, the City purchased and began to employ a leak correlator, a leak detection device which is deployed throughout the distribution

system as needed to proactively assess leak potential as part of the leak detection process. Water loss has historically fluctuated between 2% and 5% annually for the past 20 years, so a full scale audit has not been required. All leaks are mapped with the City's GIS system, which helps identify areas for more frequent proactive surveys in the future.

4.2.4. DMM 4: Metering with Commodity Rates

All of the City's existing connections are metered. The City requires individual metering for all new connections and bills monthly by volume of use. New commercial accounts are required to have dedicated irrigation meters. The City employs a four-tier water-budget based increasing block rate structure for all residential and landscape customers as described in Section 4.2.11 below.

4.2.5. DMM 5: Large Landscape Conservation Programs and Incentives

Budget-Based Rates - The City has maintained a water budget-based rate structure since 1991, which communicates a monthly water budget for all landscape accounts. Every landscape account is allocated water based on the square footage of the area served by the meter, real-time evapotranspiration rates, a crop coefficient, and the number of days in the billing period. Usage over the budget is charged at the higher tiered pricing. Every water bill acts as a report card for efficient water use. In February 2010, the allocations were adjusted to reflect a new lower crop coefficient, now 70% of the former cool season turf grass Kc factor.

Large Landscape Surveys - The City continues to offer landscape water use surveys to customers with dedicated landscape meters and to CII customers with mixed-used meters. The large landscape survey components include irrigation system check, distribution uniformity analysis, irrigation schedules review, and landscape area measurement verification. Follow-up tracking is accomplished via phone calls to customers. Between 2005 and 2008, 415 landscape surveys were offered and 265 surveys were completed within the City's service area.

Demonstration Gardens - During the past three years, the City has installed California Friendly landscapes at four public venues throughout the City, including the landscape around City Hall, and a new 5- acre all-native park in the Historic District. These parks and gardens act as examples for residents, homeowner associations and landscape architects to emulate. All new large landscapes are required to conform to the local version of AB 1881, which limits the amount of turf and requires weather based irrigation controllers and low-volume emitters, among many other stringent guidelines. The demonstration gardens and development requirements strongly reinforce the linkage between efficient irrigation and reduction in urban runoff.

Regional Programs - The City also participates in large landscape conservation through MWDOC's regional programs. MWDOC offers several landscape water use efficiency

programs aimed at both residential and commercial customers as described under DMM 1. MWDOC also offers programs in Orange County to specifically assist retail agencies and their large landscape customers to use water efficiently. Landscape training classes are the primary regional program for professional landscape contractors in the City.

California Friendly Landscape Training (Professional) - The California Friendly Landscape Training provides education to professional landscape contractors on a variety of landscape water efficiency practices they can employ. The Professional Training Program course consists of four consecutive classes in landscape water management, each building upon principles presented in the preceding class, including hardware, controller programming, water budgeting, and plant identification. Each participant receives a bound handbook containing educational materials for each class. These classes are taught in both English and Spanish languages, and the City typically hosts one series each year.

Rebates – Through the regional Metropolitan rebate program “Save A Buck”, commercial and large landscape customers can apply to receive rebates on irrigation hardware and weather based irrigation controllers. Controllers are currently eligible for \$25 per active station, and rotating nozzles receive \$8.00 per nozzle, at the time of this writing.

Tri-Cities H2O for HOAs Water Forum – This innovative program is a collaborative effort between the Cities of San Clemente, San Juan Capistrano, and Dana Point in addition to the South Coast Water District to educate homeowners association (HOA) board members, property managers, and landscape contractors about proper irrigation and landscape management. This is an annual event that began in 2007 and attracts over 100 participants who directly manage the large landscapes in our communities. Participants receive the latest information on water efficient technologies and rebates, local water conservation and storm water prevention ordinances, and efficient landscape and irrigation design. Surveys indicate that the participants, specifically the HOA board members, come away from this event more educated about how to sustainably manage their landscapes and empowered to invest more resources, such as installing weather-based irrigation controllers, into conserving water.

In addition, the City takes advantage of regional and local efforts which target and market to large landscape properties including bill inserts, direct marketing efforts, ads in various publications, educational seminars/symposiums for property owners, and presentations at Homeowners Associations (HOAs) board meetings. The outreach and educational efforts described above have multiple benefits; the reported water savings for homeowner associations participating in rebate programs ranges from about 10% to 50% depending on what changes were made and the level of water management effort; however the overall savings has not been analyzed or quantified by City staff. A study commissioned

by Metropolitan and published in 1999 (Chesnutt & Pekelney 1999) attributes a 22% reduction in water use by landscape accounts to the City's budget-based rates.

4.2.6. DMM 6: High-Efficiency Washing Machine Rebate Programs

The City participates in the SoCal Water Smart residential rebate program offered by Metropolitan. This program offers financial incentives to single-family and multifamily residential customers through the form of a rebate.

Orange County residents are eligible to receive an \$85 rebate when they purchase a new High Efficiency Clothes Washer (HECW). This program began in 2001 and is sponsored by MWDOC, Metropolitan, and local retail water agencies. Rebates are available on a first-come, first-served basis, while funds last. Metropolitan recently ended this program in 2011. Applications must have been postmarked by December 6, 2010 to qualify for a rebate. Participants must be willing to allow an inspection of the installed machine for verification of program compliance. To qualify for a rebate, the HECW must have a water factor of 4.0 or less. An HECW with a water factor of 4 will use approximately 15 gallons of water per load compared to a conventional top-loading clothes washer which can use 40 gallons or more per load. Depending on use, these machines can save 10,000 gallons of water per year. Participants are encouraged to contact their local gas and/or electric utility as additional rebates may be available.

As of FY 2010-11, 932 HECWs have been installed in single and multi-family homes within the City's service area through this program. These retrofits have saved over 105 acre feet of potable water over the program's lifetime to date.

4.2.7. DMM 7: Public Information Programs

The City has an energetic public information program, including the H2O for HOAs water forum (described above in Section 4.2.5) for homeowner associations, along with public information meetings held at City Hall on various topics, and staff engagements speaking to groups and clubs. Written information provided to the public includes brochures available at public counters, a quarterly newsletter included with bills, newspaper articles, and electronic eNews releases. In recent years the conservation program has purchased advertising space in a local paper, to keep the public informed of drought-related efforts and current events. Other opportunities to engage the public include staffing a booth at Earth Day, and booths at Summer Nites concerts and other City events. Public Information programs have long been a staple of basic customer service outreach, and no quantification is made of water savings attributable to this DMM.

The City participates in MWDOC's regional Water Use Efficiency and Public Affairs Workgroups, along with the Metropolitan Conservation Coordinators' meeting. These meetings facilitate increased communication and shared resources with other Orange

County and southern California water agencies. As discussed in section 4.2.5, the Tri-Cities group collaborates on many public outreach and education projects which target select groups. For example, the H2O for HOAs Water Forum targets HOA board members, property managers, and local landscape contractors while the H2O for Hospitality Water Forum targets owners and managers of hotels and restaurants to go over conservation-related BMPs for their related industry, trade, or responsibility.

MWDOC currently offer a wide range of public information programs in Orange County in collaboration with its member agencies including the City of San Juan Capistrano. Current regional public information programs within the MWDOC's service area are summarized below.

Water Facility Inspection Trip Program - The inspection trip program is sponsored by MWDOC and Metropolitan. Each year, Orange County elected officials, residents, business owners, and community leaders are invited to attend educational inspection trips to tour key water facilities throughout the state of California. The goal is to educate members of our community about planning, procurement and management of southern California's water supply and the issues surrounding delivery and management of this vital resource.

O.C. Water Hero Program - The goal of this program is to engage children in water use efficiency activities while facilitating discussion with friends and family members about how to save water. Any Orange County child can become a Water Hero by pledging to save 20 gallons of water per day. In exchange for their pledge, they receive a free Water Hero kit, which includes a variety of fun, water-saving items like a 5-minute shower timer and "fix-it" ticket pad for busting water wasters. To become a Superhero, a student must get their parents to also pledge to save 20 gallons of water per day. To date, more than 13,000 children in Orange County have become Water Heroes and more than 4,000 have become Superheroes.

eCurrents - This monthly electronic newsletter is designed to keep MWDOC's 28 member agencies, residents and businesses, stakeholder groups, opinion leaders, and others apprised of MWDOC news, programs, events, and activities. The publication also serves to keep readers informed about regional, state, and federal issues affecting water supply, water management, water quality, and water policy and regulation.

Water Advisory Committee of Orange County (WACO) - WACO was formed in 1983 to facilitate the introduction, discussion, and debate of current and emerging water issues among Orange County policymakers and water professionals. The committee's membership has evolved to include elected officials and management staff from Orange County cities and water districts, engineers, attorneys, consultants, and other industry

professionals. Monthly meetings are open to the public and are typically held on the first Friday of each month at 7:30 a.m.

4.2.8. DMM 8: School Education Programs

City staff speaks directly to school groups which visit City Hall, or request classroom visits, but the majority of school education takes place via MWDOC's county-wide school program. MWDOC's regional water education program began in 1973 and provides water education to Orange County students in grades kindergarten through high school. The program teaches students about the water cycle, the importance and value of water and water conservation. Over 1,500 students from the service area participate annually. While it is not feasible for the City to evaluate the water savings of this DMM, the City will continue to consider this DMM as vital and necessary.

MWDOC's Regional School Education Programs

Water Education School Program - One of the most successful and well-recognized water education curriculums in Southern California is MWDOC's Water Education School Program. For more than 30 years, School Program mascot "Ricki the Rambunctious Raindrop" has been educating students in grades K-5 about the water cycle, the importance and value of water, and the personal responsibility we all have as environmental stewards.

The School Program features assembly-style presentations that are grade-specific and performed on-site at the schools. The program curriculum is aligned with the science content standards established by the State of California. Since its inception in 1973, nearly three million Orange County students have been educated through the School Program.

In 2004, MWDOC formed an exciting partnership with Discovery Science Center that has allowed both organizations to reach more Orange County students each year and provide them with even greater educational experiences in the areas of water and science. Discovery Science Center currently serves as the School Program administrator, handling all of the program marketing, bookings, and program implementation. During the 2010-11 school year, more than 70,000 Orange County students will be educated through the program. For the City, specifically, approximately 1,500 students participate in this program annually.

Water Education Poster & Slogan Contest - Each year, MWDOC holds a Water Education Poster and Slogan Contest to increase water awareness. To participate, children in grades K-6 develop posters and slogans that reflect a water awareness message. The goal is to get children thinking about how they can use water wisely and to

facilitate discussion about water between children and their friend, parents, and teachers. Each year, more than 1,500 poster and slogan entries are received through the contest.

During a special judging event, approximately 16 posters and 10 slogans are selected as the winners. All of the winners – and their parents, teachers, and principals – are invited to attend a special awards ceremony with Ricki Raindrop at Discovery Science Center. At the awards ceremony, the winners are presented with their framed artwork as well as a custom t-shirt featuring their poster or slogan, a trophy, a certificate, and other fun water-saving prizes.

Orange County Children’s Water Education Festival - The largest water education festival of its kind is the annual Children’s Water Education Festival (Festival). The Festival is presented by Orange County Water District (OCWD), the National Water Research Institute, Disneyland Resort, and MWDOC. Each year, more than 5,000 students participate in the Festival over the course of this two-day event. The Festival is currently held at the Richard Nixon Library and Birthplace in Yorba Linda, California.

The Festival presents a unique opportunity to educate students in grades four through six about local water issues and help them understand how they can protect our water resources and the environment. Students attend the Festival with their teacher and classmates, visiting a variety of booths focused on different water-related topics throughout the day. Participating organizations (presenters) engage the students through interactive educational presentations that are aligned with the science content standards established by the State of California.

4.2.9. DMM 9: Conservation Programs for Commercial, Industrial and Institutional Accounts

The City has met the CUWCC BMP requirement for ranking consumption by CII accounts and continues to conduct on-site CII surveys on request. The City offers financial incentives under the Metropolitan regional Save Water Save A Buck Rebate Program which offers rebates for various water efficient devices to CII customers.

Save Water Save a Buck – This program began in 2002 and offers rebates to assist commercial, industrial, and institutional customers in replacing high-flow plumbing fixtures with low-flow fixtures. Rebates are available only on those devices listed in Table 4-2 below and must replace higher water use devices. Installation of devices is the responsibility of each participant. Participants may purchase and install as many of the water saving devices as is applicable to their site.

Table 4-2: Retrofit Devices and Rebate Amounts Available Under Save Water Save a Buck Program (Amounts current as of March 2011)

Retrofit Device	Rebate Amount
High Efficiency Toilet	\$50
Ultra-Low-Water or Zero Water Urinal	\$200
Connectionless Food Steamers	\$485 per compartment
Air-Cooled Ice Machines (Tier III)	\$300
Cooling Tower Conductivity Controller	\$625
pH / Conductivity Controller	\$1,750
Dry Vacuum Pumps	\$125 per HP
Water Pressurized Broom	\$110

As of FY 2010/11, the City’s CII customers have installed a total 246 water-saving fixtures via regional programs, representing a water savings of 217 acre-feet. The City will continue to educate CII customers to meet the DMM requirements.

4.2.10. DMM 10: Wholesale Agency Programs

This BMP pertains to wholesale agency programs which are not applicable to the City, a retail agency. The City is a member agency of MWDOC, the region’s wholesaler that is responsible for the implementation and reporting requirements of this DMM.

4.2.11. DMM 11: Conservation Pricing

The City has had a water-budget-based rate structure since 1991. Revised in 2010, the structure now has four tiers of pricing, and more than a dozen rate classifications. Rates and budgets are tailored for each classification, based on cost of service and individualized water budget allocations for each account. The factors which are included to calculate the monthly allocations are: lot size, house size (if residential; also indoor allocations), real-time weather (ETo), monthly crop coefficient (Kc) of cool season turfgrass, and number of days in the billing period.

The table below is a simple example of the single family regular lot size rate code, which typically has an allocation of about 12 in the winter and 25 in the summer, based on the variables listed above. The total allocation is billed as a block of 6 at the lowest base rate, and the balance of the allocation at the Tier 2 rate. Use above the allocation and up to double the total allocation is billed at Tier 3 rate, and usage over 200% of the allocation is billed at Tier 4.

Table 4-3: San Juan Capistrano Water Rate Structure (Example: Single Family Home on 7,000 sq. ft. Lot)

Tiers	Rates	Winter Allocation	Summer Allocation
Tier 1 “Base Rate”	\$2.91 / ccf	6* ccf	6 ccf
Tier 2	\$3.88 / ccf	6* ccf	19 ccf
Tier 3	\$5.83 / ccf	13 to 24* ccf	20 to 50*ccf
4	\$10.68 / ccf	>24* ccf	>50*ccf

*Actual water allocations and tiers vary each month by real-time ET and also by lot size and number of days in the billing period.

Budget based rates have been shown to be responsible for a 22% reduction in water use (Chesnutt & Pikelney 1999), and are a very efficient mechanism to alert customers about leaks and problems they were not aware of. The complete rate schedule as of July 1, 2010, is included as Appendix E.

4.2.12. DMM 12: Water Conservation Coordinator

The City has employed a full-time water conservation coordinator since 1992. The City’s water conservation coordinator is responsible for enhanced customer service response, designing and implementing all conservation programs, including baseline water use efficiency and drought management; communicating and promoting water conservation issues to the City’s management and the public, cooperating with MWDOC and Metropolitan on regional conservation programs, coordinating with City staff on local conservation programs, coordinating with CUWCC staff, and preparing CUWCC BMP Reports.

4.2.13. DMM 13: Water Waste Prohibition

The City Council adopted Ordinance No. 941 as part of Chapter 12 of Title 6 of the City’s Municipal Code pertaining to water conservation in 2008. The ordinance establishes standards and procedures for year-round water conservation to promote efficient use of water and prohibit waste of water in the City. The ordinance institutes the mandatory restrictions on water waste at all times as well as defining four stages of water shortages and their corresponding contingency measures. Penalties and fines for noncompliance are included. Ordinance No. 941 is described in more detail in Section 5, and meets the CUWCC standards for water waste prohibition.

4.2.14. DMM 14: Residential Ultra-Low-Flush Toilet Replacement Programs

Over the past 19 years, MWDOC has continuously implemented regional ULFT rebate and distribution programs targeting single- and multi-family homes in Orange County. Since the end of the direct distribution program in 2004, MWDOC’s program has focused solely on providing rebate incentives for retrofitting non-efficient devices with either

ULFTs or High Efficiency Toilets (HETs) – toilets using 1.28 gallons per flush or less. The regional ULFT portion of this program concluded in June 2009

The City has participated in this regional program from the beginning. When the regional program ended in 2009, the City determined that over 4,000 pre-1993 toilets still remained in the City's service area, and the City adopted a local incentive program targeting those old fixtures. The program requires City staff to inspect the old toilet to verify its age before replacement, and the incentive is \$200 per toilet, up to two per home. To date 4,663 ULFTs and 143 HETs have been installed via the regional program, with an additional 650 replaced to date via the local incentive program. These three regional and local programs together represent a cumulative combined water savings of 2,092 acre-feet.

5. Water Supplies Contingency Plan

5.1. Overview

Recent water supply challenges throughout the American Southwest and the State of California have resulted in the development of a number of policy actions that water agencies would implement in the event of a water shortage. In southern California, the development of such policies has occurred at both the wholesale and retail level. This section describes how new and existing policies that Metropolitan, MWDOC and the City have in place to respond to water supply shortages, including a catastrophic interruption and up to a 50% reduction in water supply.

5.2 Shortage Actions

Metropolitan

As an importer of water from multiple sources, including both the Colorado River and Sierra Nevada, a number of water supply challenges have impacted the reliability of Metropolitan's imported supplies. In response to these challenges, Metropolitan has implemented existing policies as well as developed new ones.

The first action that Metropolitan implements in the event of a water shortage is the suspension and/or reduction of its interruptible supplies, which are supplies sold at a discount in return for the buyers agreeing to be the first to be cutback in the event of a shortage. Metropolitan currently has two interruptible programs for agricultural users and groundwater replenishment, under which supplies were either suspended or reduced in 2007.

In addition, in preparation for the possibility of being unable to meet "firm demands" (non-interruptible supplies) of its member agencies, in February 2008, the Metropolitan's Board of Directors (Board) adopted the Water Supply Allocation Plan (WSAP), which was subsequently updated in June 2009.

Metropolitan's plan includes the specific formula for calculating member agency supply allocations and the key implementation elements needed for administering an allocation. Metropolitan's WSAP is the foundation for the urban water shortage contingency analysis required under Water Code Section 10632 and is part of Metropolitan's 2010 RUWMP.

Metropolitan's WSAP was developed in consideration of the principles and guidelines described in Metropolitan's 1999 Water Surplus and Drought Management Plan (WSDM), with the objective of creating an equitable needs-based allocation. The plan's formula seeks to balance the impacts of a shortage at the retail level while maintaining equity on the wholesale level for shortages of Metropolitan supplies of up to 50%. The formula takes into account: impact on retail customers and the economy; growth and population; changes in supply conditions; investments in local resources; demand hardening aspects of non-potable recycled water use; implementation of conservation savings program; participation in Metropolitan's interruptible programs; and investments in facilities.

The formula is calculated in three steps: based period calculations, allocation year calculations, and supply allocation calculations. The first two steps involve standard computations, while the third section contains specific methodology developed for the WSAP.

Step 1: Base Period Calculations – The first step in calculating a water supply allocation is to estimate water supply and demand using a historical based period with established water supply and delivery data. The base period for each of the different categories of demand and supply is calculated using data from the three most recent non-shortage years, 2004-2006.

Step 2: Allocation Year Calculations – The next step in calculating the water supply allocation is estimating water needs in the allocation year. This is done by adjusting the base period estimates of retail demand for population or economic growth and changes in local supplies.

Step 3: Supply Allocation Calculations – The final step is calculating the water supply allocation for each member agency based on the allocation year water needs identified in Step 2. Each element and its application in the allocation formula are discussed in detail in Metropolitan's WSAP.

In order to implement the WSAP, the Metropolitan Board makes a determination on the level of the regional shortage, based on specific criteria, in April each year. If it is determined allocations are necessary, they go into effect in July for that year and remain for a 12-month period, although the schedule is at the discretion of Metropolitan's Board.

Metropolitan's 2010 RUWMP forecasts that Metropolitan will be able to meet projected firm demands throughout the forecast period from 2015 to 2035. However, these projections do not mean that Metropolitan would not implement its WSAP during this period.

MWDOC

To prepare for the potential allocation of imported water supplies from Metropolitan, MWDOC worked collaboratively with its 28 member agencies to develop its own Water Supply Allocation Plan (MWDOC WSAP), adopted January 2009, to allocate imported water supplies at the retail level. The MWDOC WSAP lays out the essential components of how MWDOC will determine and implement each member agency's allocation during a time of shortage.

The MWDOC WSAP uses a similar method and approach, when reasonable, as that of the Metropolitan's WSAP. However, MWDOC's plan remains flexible to use an alternative approach when Metropolitan's method produces a significant unintended result for the member agencies. The MWDOC WSAP model follows five (5) basic steps to determine a retail agency's imported supply allocation.

Step 1: Determine Baseline Information – The first step in calculating a water supply allocation is to estimate water supply and demand using a historical based period with established water supply and delivery data. The base period for each of the different categories of demand and supply is calculated using data from the last three non-shortage years – calendar years, 2004, 2005, and 2006.

Step 2: Establish Allocation Year Information – In this step, the model adjusts for each member agency's water need in the allocation year. This is done by adjusting the base period estimates for increased retail water demand based on growth and changes in local supplies.

Step 3: Calculate Initial Minimum Allocation Based on Metropolitan's Declared Shortage Level – This step sets the initial water supply allocation for each member agency. After a regional shortage level is established, MWDOC will calculate the initial allocation as a percentage of adjusted Base Period Imported water needs within the model for each member agency.

Step 4: Apply Allocation Adjustments and Credits in the Areas of Retail Impacts, Conservation, and the Interim Agriculture Water Program – In this step, the model assigns additional water to address disparate impacts at the retail level caused by an across-the-board cut of imported supplies. It also applies a conservation credit given to those agencies that have achieved additional water savings at the retail level as a result of successful implementation of water conservation devices, programs and rate structures.

Step 5: Sum Total Allocations and Determine Retail Reliability – This is the final step in calculating a retail agency's total allocation for imported supplies. The model sums an agency's total imported allocation with all of the adjustments and credits and then calculates each agency's retail reliability compared to its Allocation Year Retail Demand.

The MWDOC WSAP includes additional measures for plan implementation, including the following:

- **Appeal Process** – An appeals process to provide member agencies the opportunity to request a change to their allocation based on new or corrected information. MWDOC anticipates that under most circumstances, a member agency’s appeal will be the basis for an appeal to Metropolitan by MWDOC.
- **Melded Penalty Rate Structure** – At the end of the allocation year, MWDOC would only charge a penalty to each member agency that exceeded their allocation if MWDOC exceeds its total allocation and is required to pay a penalty to Metropolitan. Metropolitan enforces allocations to member agencies through a tiered penalty rate structure: penalty rates to a member agency that exceeds its total annual allocation at the end of the twelve-month allocation period, according to a specified rate structure. MWDOC’s penalty would be assessed according to the member agency’s prorated share (acre-feet over usage) of MWDOC penalty amount with Metropolitan. Penalty funds collected by Metropolitan will be invested in water conservation and local resource development.
- **Tracking and Reporting Water Usage** – MWDOC will provide each member agency with water use monthly reports that will compare each member agency’s current cumulative retail usage to their allocation baseline. MWDOC will also provide quarterly reports on its cumulative retail usage versus its allocation baseline.
- **Timeline and Option to Revisit the Plan** – The allocation period will cover 12 consecutive months and the Regional Shortage Level will be set for the entire allocation period. MWDOC only anticipates calling for allocation when Metropolitan declares a shortage; and no later than 30 days from Metropolitan’s declaration will MWDOC announce allocation to its member agencies.

Due to the complexity of calculating allocations and the potential for unforeseen circumstances that may occur during an allocation year, after one year of implementation, MWDOC staff and member agencies have the opportunity to make recommendations to the MWDOC Board that will improve the method, calculation, and approach of the MWDOC WSAP.

San Juan Capistrano

Per Water Conservation Ordinance No. 941, water shortages created by regional restrictions, local or regional water shortage conditions, and emergencies will require the City Council to impose reductions in the use of water. The City Council may declare one of four stages of water conservation depending on the expected duration and severity of the water shortage detailed in Table 5-1. In an emergency, the City Manager may make the declaration which will be ratified by the City Council at a subsequent meeting.

Table 5-1: Water Supply Shortage Stages and Conditions – Rationing Stages

Stage No.	Water Supply Conditions
Stage 1: Voluntary Compliance – Water Watch	Possibility exists that the City will not be able to meet all of the demands of its customers or when the state or a regional supplier has recommended a reduction in water use, or when normal production and supply are curtailed.
Stage 2: Mandatory Compliance – Water Alert	Probability exists that the City will not be able to meet all of the water demands of its customers, periods when either the regional supplier or local production and distribution staff demonstrate that daily water demand is greater than what can be replenished from available production or supply.
Stage 3: Mandatory Compliance - Water Warning	Periods when the City will not be able to meet all of the water demands of its customers due to required reduction in water use, curtailed normal production or supply, or critical difference between supply and demand.
Stage 4: Mandatory Compliance – Water Emergency	A failure of any supply or distribution facility occurs in the water distribution system of the State Water Project, Metropolitan Water District of Southern California, Municipal Water District of Orange County, or the City’s facilities, and the supply of water necessary to meet the City’s demands is likely to be reduced or interrupted.

5.2. Three-Year Minimum Water Supply

As a matter of practice, Metropolitan does not provide annual estimates of the minimum supplies available to its member agencies. As such, Metropolitan member agencies must develop their own estimates for the purposes of meeting the requirements of the Act.

Section 135 of the Metropolitan Water District Act declares that a member agency has the right to invoke its “preferential right” to water, which grants each member agency a preferential right to purchase a percentage of Metropolitan’s available supplies based on specified, cumulative financial contributions to Metropolitan. Each year, Metropolitan calculates and distributes each member agency’s percentage of preferential rights.

However, since Metropolitan's creation in 1927, no member agency has ever invoked these rights as a means of acquiring limited supplies from Metropolitan.

As an alternative to preferential rights, Metropolitan adopted the Water Shortage Allocation Plan (WSAP) in February 2008. Under the WSAP, member agencies are allowed to purchase a specified level of supplies without the imposition of penalty rates. The WSAP uses a combination of estimated total retail demands and historical local supply production within the member agency service area to estimate the firm demands on Metropolitan from each member agency in a given year. Based on a number of factors, including storage and supply conditions, Metropolitan then determines whether it has the ability to meet these firm demands or will need to allocate its limited supplies among its member agencies. Thus, implicit in Metropolitan's decision not to implement an allocation of its supplies is that at a minimum Metropolitan will be able to meet the firm demands identified for each of the member agencies.

In order to estimate the minimum available supplies from Metropolitan for the period 2011-2013, an analysis was performed to assess the likelihood that Metropolitan would re-implement mandatory water use restrictions in the event of a 1990-92 hydrologic conditions over this period. Specific water management actions during times of water shortage are governed by Metropolitan's Water Shortage and Drought Management Plan (WSDM Plan). Adopted by the Metropolitan Board in 1999, the WSDM Plan provides a general framework for potential storage actions during shortages, but recognizes that storage withdrawals are not isolated actions but part of a set of resource management actions along with water transfers and conservation. As such, there is no specific criterion for which water management actions are to be taken at specific levels of storage. The implementation of mandatory restrictions is solely at the discretion of the Metropolitan Board and there are no set criteria that require the Board to implement restrictions. Given these conditions, the analysis relies upon a review of recent water operations and transactions that Metropolitan has implemented during recent drought.

The first step in the analysis was a review of projected SWP allocations to Metropolitan, based on historical hydrologies. As with the recent drought, potential impacts to SWP supplies from further drought and the recently implemented biological opinions are anticipated to be the biggest challenges facing Metropolitan in the coming three years.

A review of projected SWP allocations from the DWR's State Water Project Delivery Reliability Report 2009 (2009 SWP Reliability Report) was made to estimate a range of conservative supply assumptions regarding the availability of SWP supplies. The 2009 SWP Reliability Report provides estimates of the current (2009) and future (2029) SWP delivery reliability and incorporates regulatory requirements for SWP and CVP operations in accordance with USFWS and NMFS biological opinions. Estimates of future reliability also reflect potential impacts of climate change and sea level rise.

The analysis assumes a maximum SWP allocation available to Metropolitan of 2,011,500 AF and a Metropolitan storage level of 1,700,000 AF at 2010 year-end. The analysis also assumes a stable water supply from the Colorado River in the amount of 1,150,000 AF through 2015. Although the Colorado River watershed has also experienced drought in recent years, Metropolitan has implemented a number of supply programs that should ensure that supplies from this source are relatively steady for the next three years. Based on estimated “firm” demands on Metropolitan of 2.12 MAF, the annual surplus or deficit was calculated for each year of the three-year period.

A review of recent Metropolitan water management actions under shortage conditions was then undertaken to estimate the level of storage withdrawals and water transfers that Metropolitan may exercise under the 1990-92 hydrologic conditions were identified. For this analysis, it was assumed that, if Metropolitan storage levels were greater than 2 MAF at the beginning of any year, Metropolitan would be willing to take up to 600 TAF out of storage in that year. Where Metropolitan storage supplies were between 1.2 MAF and 2 MAF at the beginning of the year, it was assumed that Metropolitan would be willing to take up to 400 TAF in that year. At storage levels below 1.2 MAF, it was assumed that Metropolitan would take up to 200 TAF in a given year.

It was also assumed that Metropolitan would be willing to purchase up to 300 TAF of water transfer in any given year. For years where demands still exceeded supplies after accounting for storage withdrawals, transfer purchases were estimated and compared against the 300 TAF limit.

Table 5-2: Metropolitan Shortage Conditions

Study Year	Actual Year	SWP Allocation (%)	SWP (AF)	CRA (AF)	Total (AF)	Demand (AF)	Surplus/Shortage (AF)	Storage at YE (AF)	Transfers (AF)
2011	1990	30%	603,450	1,108,000	1,711,450	2,124,000	(400,000)	1,300,000	(12,550)
2012	1991	27%	542,820	1,108,000	1,650,820	2,123,000	(200,000)	1,100,000	(272,180)
2013	1992	26%	522,990	1,108,000	1,630,990	2,123,000	(200,000)	900,000	(292,010)

Based on the analysis above, Metropolitan would be able to meet firm demands under the driest three-year hydrologic scenario using the recent water management actions described above without re-implementing mandatory water use restrictions on its member agencies. Given the assumed absence of mandatory restrictions, the estimated minimum imported water supplies available to MWDOC from Metropolitan is assumed to be equal to Metropolitan’s estimate of demand for firm supplies for MWDOC, which Metropolitan uses when considering whether to impose mandatory restrictions. Thus, the estimate of the minimum imported supplies available to MWDOC is 261,577 AF⁴.

⁴ Metropolitan 2010/11 Water Shortage Allocation Plan model (March 2011)

MWDOC has also adopted a shortage allocation plan and accompanying allocation model that estimates firm demands on MWDOC. Assuming MWDOC would not be imposing mandatory restrictions if Metropolitan is not, the estimate of firms demands in MWDOC’s latest allocation model has been used to estimate the minimum imported supplies available to each of MWDOC’s customer agencies for 2011-13. Thus, the estimate of the minimum imported supplies available to the City is 4,085 AF⁵.

As captured in its 2010 RUWMP, Metropolitan believes that the water supply and demand management actions it is undertaking will increase its reliability throughout the 25-year period addressed in its plan. Thus for purposes of this estimate, it is assumed that Metropolitan and MWDOC will be able to maintain the identified supply amounts throughout the three-year period.

Metropolitan projects reliability for full service demands through the year 2035. Additionally, local supplies are projected to be maintained at demand levels. Based on the MWDOC Water Supply Allocation Plan, the City is expected to fully meet demands for the next three years assuming Metropolitan and MWDOC are not in shortage, a Basin Production Percentage of 62% for Local Supplies and zero allocations are imposed for Imported Supplies. Normal year supplies are based on the Base Period supply in the MWDOC Water Supply Allocation Plan, which is the average of the last three non-shortage calendar years 2004, 2005, and 2006. The Three Year Estimated Minimum Water Supply is listed in Table 5-3.

Table 5-3: Three-Year Estimated Minimum Water Supply (AFY)

Source	2010/11	2011/12	2012/13
Local	5,420	5,420	5,420
Imported	4,085	4,085	4,085
<i>Total</i>	<i>9,505</i>	<i>9,505</i>	<i>9,505</i>

5.3. Catastrophic Supply Interruption

Given the great distances that imported supplies travel to reach Orange County, the region is vulnerable to interruptions along hundreds of miles aqueducts, pipelines and other facilities associated with delivering the supplies to the region. Additionally, this water is distributed to customers through an intricate network of pipes and water mains that are susceptible to damage from earthquakes and other disasters.

⁵ MWDOC Water Shortage Allocation model (August 2010)

Metropolitan

Metropolitan has comprehensive plans for stages of actions it would undertake to address a catastrophic interruption in water supplies through its WSDM and WSAP Plans. Metropolitan also developed an Emergency Storage Requirement to mitigate against potential interruption in water supplies resulting from catastrophic occurrences within the southern California region, including seismic events along the San Andreas Fault. In addition, Metropolitan is working with the State to implement a comprehensive improvement plan to address catastrophic occurrences that could occur outside of the Southern California region, such as a maximum probable seismic event in the Delta that would cause levee failure and disruption of SWP deliveries. For greater detail on Metropolitan's planned responses to catastrophic interruption, please refer to Metropolitan's RUWMP.

Water Emergency Response Organization of Orange County

In 1983, the Orange County water community identified a need to develop a plan on how agencies would respond effectively to disasters impacting the regional water distribution system. The collective efforts of these agencies resulted in the formation of the Water Emergency Response Organization of Orange County (WEROC) to coordinate emergency response on behalf of all Orange County water and wastewater agencies, develop an emergency plan to respond to disasters, and conduct disaster training exercises for the Orange County water community. WEROC was established with the creation of an indemnification agreement between its member agencies to protect each other against civil liabilities and to facilitate the exchange of resources. WEROC is unique in its ability to provide a single point of contact for representation of all water and wastewater utilities in Orange County during a disaster. This representation is to the county, state, and federal disaster coordination agencies. Within the Orange County Operational Area, WEROC is the recognized contact for emergency response for the water community.

San Juan Capistrano

The City is prepared for a catastrophic event that threatens to interrupt water supplies. The Public Works Department staff meets monthly to reinforce its emergency plan procedures. The City has 10 reservoirs, 11 pump stations; three imported water connections, 5 emergency interconnections, a groundwater recovery plant and 2 domestic wells. The diversity of its water system provides the City numerous built-in facility backups. The City has three portable emergency generators to run wells and pump stations in the event of a power outage. The City has prepared an Emergency Pump Station Failure Procedures Manual to deal with such occurrences.

The 5.1 MGD provided by the GWRP in combination with the local reservoir storage provides the City with the equivalent of seven average days of storage in the event of either a planned shutdown of the imported supply system, or an emergency that disrupted the imported supply system. In the event that the interruption persists past the seven days the City will continue to supply water from the GWRP. In addition the City is working with the Santa Margarita Water District on the development of the Chiquita Emergency Storage Reservoir; which expected to be complete in August 2011 and will provide the City with 25,000,000 gallons of storage, which in conjunction with the GWRP would provide the City with an additional 8 average days of storage. With the storage depleted the City can continue to supply water at 60% of the average demand for an extended period using the GWRP.

The City has recently approved a Vulnerability Assessment of its water facilities and an Emergency Response Plan as required by the Public Health, Security and Bioterrorism Preparedness Act. The plan provides a plan of action for the City in terms of making its facilities more secure and less prone to outside disturbance. The City has included the recommended projects as a part of its regular Capital Improvement Program. Table 5-4 summarizes the City’s preparatory actions for possible catastrophes.

Table 5-4: Preparation Actions for Catastrophe

Possible Catastrophe	Preparation Actions
Earthquake	Participation in Water Emergency Response Organization of Orange County (WEROC); South Orange County Water Reliability Study (SOCWRS); redundant sources of water supply - reservoirs, pump stations, imported water connections, emergency water connections, groundwater recovery plant, domestic wells, portable generators, Emergency Pump Station Failure Procedures Manual, Vulnerability Assessment of Water Facilities, Emergency Response Plan as required by the Public Health, Security, and Bioterrorism Preparedness Act
Terrorist Act which Interrupts Service	
Pipeline Breaks	

5.4. Prohibitions, Penalties and Consumption Reduction Methods

Prohibitions

The Water Conservation Ordinance No. 941 adopted on September 2, 2008, lists water conservation requirements which shall take effect upon implementation by the City Council. These prohibitions shall promote the efficient use of water, reduce or eliminate water waste, complement the City’s Water Quality regulations and urban runoff reduction

efforts, and enable implementation of the City’s Water Shortage Contingency Measures. Prohibitions include but are not limited to the following restricted activities: outdoor watering, washing of vehicles, washing of hard or paved surfaces, filling or refilling swimming pools and decorative water features, using potable water in construction activities, and serving water at food service facilities. Additionally, the City requires leaks to be repaired in a time frame relative to each water supply shortage level. The prohibitions and the stages at which they take effect can be found in Table 5-5.

Table 5-5: Mandatory Prohibitions

Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
Leaks, breaks, or malfunctions in the user’s plumbing, distribution, or irrigation system must be corrected in no more than two (2) days of City notification.	Year Round
Watering or irrigating any vegetated area is prohibited any day of the week between 9:00 am and 6:00 pm except by use of a hand held container, hose equipped with an automatic shutoff device, hose end sprinkler with limited spray radius, drip/bubbler/soaker emitters, or for the expressed purpose of installing, adjusting or repairing an irrigation system for very short periods of time.	Year Round
Watering of any landscape or open ground is prohibited while it is raining. All irrigation controllers associated with dedicated landscape meters shall have a rainfall shutoff device.	Year Round
Operation of landscape irrigation systems shall minimize overspray and/or excessive runoff onto impervious surfaces.	Year Round
Water hoses used to wash any vehicle shall be equipped with an automatic shutoff device.	Year Round
Commercial car wash facilities shall not permit the washing of any boat or vehicle other than by use of mechanical automatic car wash facilities utilizing water recycling equipment, use of a hose on a timer, use of a hose equipped with an automatic shutoff device, and/or use of bucket and hand washing.	Year Round
All wash/rinse water must be captured and recycled or discharged into the sanitary sewer system through an appropriate treatment system after obtaining a special discharge permit from the South Orange County Wastewater Authority.	Year Round
All commercial conveyor car wash facilities shall be equipped with a water recycling system.	Year Round

Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
No person shall use a water hose to wash any type of equipment or machinery unless the hose is equipped with an automatic shutoff device. All wash water from such activity must be discharged into the sanitary sewer system through an appropriate treatment system.	Year Round
No person shall use water through a hose to clean the exterior of any structure unless the hose is equipped with an automatic shutoff device and all wash water must be prevented from discharging to the storm water drainage system.	Year Round
Using water through a hose for cleaning of hard or paved surfaces is prohibited unless all wash water is prevented from discharging to the storm water drainage system.	Year Round
Emptying and refilling a swimming pool is prohibited except to prevent structural damage or comply with public health regulations or upon written recommendation of a pool maintenance professional. Discharge of pool or spa filter backwash water to storm drain is prohibited. All pools and spas shall be equipped with a water recirculation device.	Year Round
The use of water to operate or maintain levels in decorative fountains, basins, ponds, lakes, and waterways is prohibited unless a recirculation device is in use.	Year Round
No single pass cooling systems shall be permitted in new connections to the potable water system.	Year Round
New commercial laundry facilities shall be equipped with a water reclamation system for reuse of rinse water. Laundromats and common area laundry rooms shall install high efficiency clothes washing machines, as older machines are replaced.	Year Round
Food service facilities shall serve drinking water only upon request.	Year Round
Garbage disposals are prohibited in all new food facilities. All existing pre-rinse spray nozzles shall be retrofitted to models using 1.6 gallons per minute or less.	Year Round
Food service facilities shall avoid defrosting food with running water, use a hose with an automatic shutoff device for wash downs, and set scoop sinks at minimum flow at all times.	Year Round
New or remodeled kitchens shall use the best	Year Round

Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
available water conserving technology.	
No potable water may be used for compacting or dust control purposes in construction activities where there is a reasonably available source of recycled or other non-potable water approved by the California Department of Public Health and appropriate for such use.	Year Round
All water hoses used in connection with any construction activities shall be equipped with an automatic shutoff device when such a device exists for size or type of hose in use.	Year Round
No person may use water from any fire hydrant for any purpose other than fire suppression or emergency aid, without first obtaining City permission.	Year Round
Gutter flooding is prohibited.	Year Round
Indiscriminate running of water which is wasteful and without reasonable purpose is prohibited.	Year Round
All major water uses are required to reduce their usage by the percentage determined by staff to be necessary to sustain adequate water supply for the City.	Level 2
Landscape irrigation water use shall be reduced or prohibited by the City.	Level 2
Agricultural users and commercial nurseries shall be subject to certain restrictions.	Level 2
Washing of any boat or vehicle is prohibited except at a commercial car wash.	Level 2
Hydrant water use is prohibited except for firefighting or activities necessary to maintain the health, safety, and welfare of the public.	Level 2
Sales and deliveries of City water for construction or grading purposes shall be suspended.	Level 2
Cleaning of structures using water from a hose shall be prohibited.	Level 2
Pavement and surface washing shall be prohibited.	Level 2
Spillage shall be prohibited.	Level 2
Filling or emptying and refilling swimming pools and spas excluding normal maintenance of water levels due to evaporation shall be prohibited. New construction permits for pools or spas shall not be issued.	Level 2
The operation of lakes, ponds, fountains, and other	Level 2

Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
water features shall be prohibited.	
Lawn watering and landscape irrigation shall be further reduced or prohibited.	Level 3
No water shall be used for air conditioning purposes.	Level 3
All outdoor irrigation is prohibited.	Level 4
Use of water for agricultural or commercial nursery purposes, except for livestock water, is prohibited.	Level 4
Use of water by all types of commercial car washes shall be prohibited except when the health, safety, and welfare of the public is contingent upon frequent vehicle cleaning.	Level 4
Filling or refilling or adding water to swimming pools, spas, or water features shall be prohibited.	Level 4
Use of water for commercial, manufacturing, or processing purposes shall be reduced in volume by fifty percent (50%).	Level 4

Consumption Reduction Methods

Methods to reduce the use of potable water exist in all stages of water conservation. These methods, which can be found in Table 5-6, are expected to reduce consumption up to 50% or more.

Table 5-6: Consumption Reduction Methods

Consumption Reduction Methods	Stage When Method Takes Effect
Stage 1 Conservation Measures	1
Stage 2 Conservation Measures	2
Stage 3 Conservation Measures	3
Stage 4 Conservation Measures	4

Penalties

Any customer who violates provisions of the Water Conservation Ordinance by either excess use of water or by specific violation of one or more of the applicable water use restrictions for a particular mandatory conservation stage may be cited by the City and may be subject to written notices, surcharges, fines, and flow restrictions. Any penalties, surcharges, or increased charges incurred by the City for excessive use by customers shall

be passed on to the customers causing excessive usage of water. A summary of the penalties and charges enforced for violating the City’s Water Conservation Ordinance is described in Table 5-7.

Table 5-7: Penalties and Charges

Penalties or Charges	Stage When Penalty Takes Effect
Administrative Citation not to exceed one hundred dollars (\$100)	First Violation
Administrative Citation not to exceed two hundred dollars (\$200).	Second Violation
Administrative Citation not to exceed five hundred dollars (\$500).	Third and Subsequent Violations
Fine not to exceed two hundred dollars (\$200)	First Violation for commercial, industrial, construction, and irrigation accounts.
Fine not to exceed four hundred dollars (\$400).	Second Violation for commercial, industrial, construction, and irrigation accounts.
Fine not to exceed one thousand dollars (\$1000) and a water use fee of four (4) times the Tier 3 water rate	Third and Subsequent Violations for commercial, industrial, construction, and irrigation accounts.
Termination of service or flow restricting device	Any Violation
Abatement of the violation as a nuisance	Any Violation

5.5. Impacts to Revenue

Because the City relies on commodity charges to support the operation, maintenance and administration of the water system drought conditions can have a meaningful effect on the revenues and therefore the City’s ability to provide water service. A reduction in revenues can be expected due to a reduction in the amount of water that can be delivered. As listed in Table 5-7, the City will closely monitor its revenue requirements, with the potential for special charges or rate adjustments to ensure that revenue needs during the drought period are met. The City will endeavor to affect a revenue neutral attitude during the shortage to keep impacts to residents and businesses to a minimum. The City keeps very accurate track of water usage as meters are currently read monthly. Should conditions become extreme, the City may respond by reading meters on a weekly or

biweekly basis. If revenues are anticipated to be in shortfall, the City will call an emergency meeting of the City Council to determine how to proceed. If the emergency period is not expected to last too long the City’s Water Fund Reserve would be available to meet the revenue shortfall. If the emergency period is longer, then an emergency water rate increase would be instituted until the time the emergency period is past.

Table 5-8: Proposed Measures to Overcome Revenue Impacts

Name of Measures
Special Charges or Rate Adjustments
Water Fund Reserve

5.6. Reduction Measuring Mechanism

MWDOC will provide each member agency with water use monthly reports that will compare each member agency’s current cumulative retail usage to their allocation baseline. MWDOC will also provide quarterly reports on it cumulative retail usage versus its allocation baseline.

Table 5-9: Water Use Monitoring Mechanisms

Mechanisms for Determining Actual Reductions	Type of Data Expected
MWDOC Water Use Monthly Reports	Comparison of cumulative retail usage to allocation baseline.

6. Recycled Water

6.1. Agency Coordination

There are a number of water agencies in south Orange County that provide potable water services as well as wastewater collection and treatment. These agencies depend on imported water supplies for the majority of their potable water supplies in that very little in the way of groundwater supplies are available. These agencies have been in the forefront of recycled water development to diversify water supplies. Over the years most agencies have given up individual wastewater treatment facilities and joined SOCWA.

Table 6-1: Participating Agencies

Participating Agencies	Participated
Water Agencies	San Juan Capistrano
Wastewater Agencies	SOCWA,
Groundwater Agencies	SJBA

6.2. Wastewater Description and Disposal

The City collects wastewater and sends it to the South Orange County Wastewater Authority (SOCWA) plant. SOCWA is a Joint Powers Authority (JPA) that collects, treats, and disposes of wastewater and sludge from a service area covering South Orange County. The City is a member agency of SOCWA. Other SOCWA member agencies include South Coast Water District, the City of San Clemente, Moulton Niguel Water District and Santa Margarita Water District. Costs for the operation and maintenance of the treatment facility are proportioned to each member agency primarily based on ownership capacity in the plant. The current total average daily flow tributary to the SOCWA J.B. Latham plant is 8.5 MGD. The plant has a design capacity of 13 MGD. The City owns 4.0 MGD of capacity in the SOCWA treatment plant.

The SOCWA plant uses a conventional activated sludge process that treats wastewater to secondary treatment standards. The SOCWA plant effluent is disposed of by means of an ocean outfall that discharges off the coast of Dana Point.

Table 6-2 summarizes the past, current, and projected wastewater volumes collected and treated at the SOCWA J.B. Latham plant, and the quantity of wastewater treated to recycled water standards for treatment plants within the City's service area. No recycled

water has been developed at the J.B. Latham Plant. Table 6-3 summarizes the disposal method, and treatment level of discharge volumes.

Table 6-2: Wastewater Collection and Treatment (AFY)

Type of Wastewater	Fiscal Year Ending						
	2005	2010	2015	2020	2025	2030	2035
Wastewater Collected & Treated in Service Area	10,077	10,977	11,200	11,200	11,200	11,200	11,200
Volume that Meets Recycled Water Standards	-	-	-	-	-	-	-

Table 6-3: Disposal of Wastewater (Non-Recycled) (AFY)

Method of Disposal	Treatment Level	Fiscal Year Ending					
		2010	2015	2020	2025	2030	2035
Ocean Outfall	Secondary	10,977	11,200	11,200	11,200	11,200	11,200

6.3. Current Recycled Water Uses

In 1989, the City installed a separate non-potable water system to utilize lower quality groundwater supply for landscape irrigation of golf courses, parks, recreation areas, greenbelts, schoolyards, highway medians, and industrial uses. The non-potable water system supplies approximately 400 AFY and currently has only one producing non-domestic well, called Hollywood 2A. Three previously producing non-potable wells, Mission Street, Rosenbaum #2 and Well Site #5, have all been shut down for over two or more years. The Old SJBA #2 well was shut down and a replacement was installed which now supplies the Groundwater Recovery Plant.

The non-domestic water system includes three wells (only one is active), one storage reservoir, and approximately 54,000 linear feet of pipe. Currently, marginal quality groundwater from local wells and potable water supply the non-domestic water system. The City claims a historic right to use a maximum of 3,325 AFY of groundwater in the San Juan Basin. Of this amount, 1,825 AFY has been historically claimed for non-domestic use.

Table 6-4 below illustrates the current uses for recycled water in the City. The usage is limited to landscape irrigation with a tertiary treatment level.

Table 6-4: Current Recycled Water Uses (AFY)

User Type	Treatment Level	Fiscal Year Ending
		2010
Agriculture		
Landscape	NA/Tertiary	430
Wildlife Habitat		
Wetlands		
Industrial		
Groundwater Recharge		
Total		430

6.4. Potential Recycled Water Uses

The City is currently working with its neighboring agencies Santa Margarita Water District and Moulton Niguel Water District to make arrangements to use recycled water, when available, from these agencies. Plans for a local recycled water treatment plant at SOCWA’s J.B. Latham Plant have been indefinitely delayed.

Tables 6-5 and 6-6 represent projected recycled water use within the City’s service area through 2035. Recycled water use will increase by more than double through the 25-year period, with landscape irrigation as its sole use.

Table 6-5: Projected Future Use of Recycled Water in Service Area (AFY)

User Type	Fiscal Year Ending					
	2010	2015	2020	2025	2030	2035-opt
Projected Use of Recycled Water	430	1,950	1,950	1,950	1,950	1,950

Table 6-6: Projected Recycled Water Uses (AFY)

User Type	Treatment Level	Fiscal Year Ending				
		2015	2020	2025	2030	2035-opt
Agriculture						
Landscape	NA/Tertiary	1,950	1,950	1,950	1,950	1,950
Wildlife Habitat						
Wetlands						
Industrial						
Groundwater Recharge						
Total		1,950	1,950	1,950	1,950	1,950

Table 6-7 compares the recycled water use projections from the City’s 2005 UWMP with actual 2010 recycled water use.

Table 6-7: Recycled Water Uses – 2005 Projections compared with 2010 Actual (AFY)

User Type	2005 Projection for 2010	2010 Actual Use
Agriculture		
Landscape	1,250	430
Wildlife Habitat		
Wetlands		
Industrial		
Groundwater Recharge		
Total	1,250	430

6.4.1. Direct Non-Potable Reuse

The City currently uses water from their non-domestic water system for direct non-potable reuse such as landscape irrigation.

6.4.2. Indirect Potable Reuse

The City does not have the potential for indirect potable reuse within their service area.

6.5. Optimization Plan

In Orange County, the majority of recycled water is used for irrigating golf courses, parks, schools, business and communal landscaping. However, future recycled water use

can increase by requiring dual piping in new developments, retrofitting existing landscaped areas and constructing recycled water pumping stations and transmission mains to reach areas far from the treatment plants. Gains in implementing some of these projects have been made throughout the county; however, the additional costs, large energy requirements, and facilities make such projects very expensive to pursue.

To optimize the use of recycled water, cost/benefit analyses must be conducted for each potential project. Once again, this brings about the discussion on technical and economic feasibility of a recycled water project requiring a relative comparison to alternative water supply options.

The City will conduct future cost/benefit analyses for recycled water projects, and seek creative solutions and a balance to recycled water use, in coordination with MWDOC, Metropolitan and other cooperative agencies. These include solutions for funding, regulatory requirements, institutional arrangements and public acceptance.

7. Future Water Supply Projects and Programs

7.1. Water Management Tools

Resource optimization such as desalination to minimize the needs for imported water is led by the regional agencies in collaboration with local agencies.

With the advancement in the Groundwater Recovery Plant, along with efforts in reducing water waste, the City can meet projected demands with existing facilities and distribution system.

7.2. Transfer or Exchange Opportunities

Metropolitan currently has a tiered unbundled rate structure. Tier 2 of this rate structure increases the cost of supply to a member agency in order to provide a price signal that encourages development of alternative supply sources. One alternative source of supply may be a transfer or exchange of water with a different agency.

The CALFED Bay-Delta Program (CALFED) has helped to develop an effective market for water transactions in the Bay-Delta region. This market is demonstrated by the water purchases made by the Environmental Water Account and Metropolitan in recent years. MWDOC and its member agencies plan to take advantage of selected transfer or exchange opportunities in the future. These opportunities can help ensure supply reliability in dry years and avoid the higher Tier 2 cost of supply from Metropolitan. The continued development of a market for water transactions under CALFED will only increase the likelihood of MWDOC participation in this market when appropriate opportunities arise.

MWDOC will continue to help its member agencies in developing these opportunities and ensure their successes. In fulfilling this role, MWDOC will look to help its member agencies navigate the operational and administrative issues of wheeling water through the Metropolitan water distribution system.

The City relies on the efforts of Metropolitan as well as MWDOC to pursue transfer or exchange opportunities. At this time, the City is not currently involved in any transfer or exchange opportunities.

7.3. Planned Water Supply Projects and Programs

The Groundwater Recovery Plant (GWRP) has been impacted by Methyl Tert-Butyl Ether (MTBE), cutting production in half to about 2 MGD or less since the spring of

2008. The installation of a Granular Activated Carbon Filter (GAC) is expected to allow the full 5.1 MGD by winter of 2011. The construction of 2 additional wells that were completed in the spring of 2011 are expected to increase the treatment capacity expansion to 7 MGD by winter of 2011 when the GWRP expansion, and GAC systems are complete.

Table 7-1: Specific Planned Water Supply Projects and Programs

Project Name	Projected Start Date	Projected Completion Date	Normal-Year Supply to Agency (AF)	Single-Dry Year Yield (AF)	Multiple-Dry-Year 1 Yield (AF)	Multiple-Dry-Year 2 Yield (AF)	Multiple-Dry-Year 3 Yield (AF)
San Juan Desalter GWRP expansion		Winter 2011	7,840	7,840	7,840	7,840	7,840

This production capacity is only possible with 7 MGD and 365 days per year. Without sales to outside agencies, this is not possible. Also, note the GWRP needs to be off-line for a cumulative of two weeks per year to allow maintenance of the membranes and other critical components.

7.4. Desalination Opportunities

Until recently, seawater desalination has been considered uneconomical to be included in the water supply mix. However, recent breakthroughs in membrane technology and plant siting strategies have helped reduce desalination costs, warranting consideration among alternative resource options. However, the implementation of large-scale seawater desalination plants faces considerable challenges. These challenges include high capital and operation costs for power and membrane replacement, availability of funding measures and grants, addressing environmental issues and addressing the requirements of permitting organizations, such as the Coastal Commission. These issues require additional research and investigation.

MWDOC has been in the process of studying the feasibility of ocean desalination on behalf of its member agencies. MWDOC is reviewing and assessing treatment technologies, pretreatment alternatives, and brine disposal issues, and identifying and evaluating resource issues such as permitting, and the regulatory approvals (including CEQA) associated with the delivery of desalinated seawater to regional and local distribution system.

MWDOC is also assisting its member agencies in joint development of legislative strategies to seek funding in the form of grant and/or loans, and to inform decision-

makers of the role of seawater desalination in the region’s future water supplies. Observing the strategies and outcomes of other agency programs (such as that in Tampa Bay, Florida) to gain insights into seawater desalination implementation and cost issues is also being undertaken.

In Orange County, there are three proposed ocean desalination projects that could serve MWDOC, including one that specifically that may benefit the City. These are the Huntington Beach Seawater Desalination Project, the South Orange Coastal Desalination Project, and the Camp Pendleton Seawater Desalination Project. The South Orange Coastal Desalination Project, in which the City is participating, may supply desalinated water to the City.

Table 7-2: Opportunities for Desalinated Water

Sources of Water	Check if Yes
Ocean Water	X
Brackish Ocean Water	X
Brackish Groundwater	X

7.4.1. Groundwater

The City currently owns and operates a Groundwater Recovery Plant (GWRP) with a capacity of 5 MGD that takes groundwater high in iron, manganese, and total dissolved solids using Reverse Osmosis and makes it suitable for potable water uses.

7.4.2. Ocean Water

Huntington Beach Seawater Desalination Project – Poseidon Resources LLC (Poseidon), a private company, has proposed development of the Huntington Beach Seawater Desalination Project to be located adjacent to the AES Generation Power Plant in the City of Huntington Beach along Pacific Coast Highway and Newland Street. The proposed project would produce up to 50 MGD (56,000 AFY) of drinking water and will distribute water to coastal and south Orange County to provide approximately 8% of Orange County’s water supply needs. The project supplies would be distributed to participating agencies through a combination of (1) direct deliveries through facilities including the East Orange County Feeder #2 (EOCF #2), the City of Huntington Beach’s distribution system, and the West Orange County Water Board Feeder #2 (WOCWBF #2), and (2) water supply exchanges with agencies with no direct connection to facilities associated with the Project.

Poseidon had received non-binding Letters of Intent (LOI) from the Municipal Water District of Orange County and 17 retail water agencies to purchase a total of approximately 72 MGD (88,000 AFY) of Project supplies.

The Project has received specific approvals from the Huntington Beach City Council, including the Coastal Development Permit, Tentative Parcel Map, Subsequent Environmental Impact Report (EIR) and Conditional Use Permit, which collectively provided for the long-term operation of the desalination facility.

In addition to final agreements with the participating agencies, the Project still needs approvals from the State Lands Commission and the California Coastal Commission before Poseidon can commence construction of the desalination facility in Huntington Beach. A public hearing on the Project before the State Lands Commission is expected as early as this October. If project receives all required permits by 2011, it could be producing drinking water for Orange County by as soon as 2013. The City of San Juan Capistrano is not a direct participant in the Huntington Beach Seawater Desalination Project.

South Orange Coastal Desalination Project – MWDOC is proposing a desalination project jointly with Laguna Beach County Water District, Moulton Niguel Water District, City of San Clemente, City of San Juan Capistrano, South Coast Water District, and Metropolitan. The project is to be located adjacent to the San Juan Creek in Dana Point just east of the transition road from PCH to the I-5. The project will provide 15 MGD (16,000 AFY) of drinking water and will provide up to 30% of their potable water supply to the participating agencies.

Phase 1 consists of drilling, constructing and pumping a test slant well. Phase 2 consists of drilling 4 test borings and installing monitoring wells. Phase 3 consists of constructing a Pilot Test Facility to collect and assess water quality. Phases 1 and 2 have been completed and Phase 3 commenced in June 2010 and will last 18 months.

If pumping results are favorable after testing, a full-scale project description and EIR will be developed. If EIR is adopted and necessary permits are approved, project could be operational by 2016.

Camp Pendleton Seawater Desalination Project– San Diego County Water Authority (SDCWA) is proposing a desalination project in joint with Metropolitan to be located at Camp Pendleton Marine Corps Base adjacent to the Santa Margarita River. The initial project would be a 50 or 100 MGD plant with expansions in 50 MGD increments up to a max of 150 MGD making this the largest proposed desalination plant in the US.

The project is currently in the study feasibility stage and is conducting geological surveys to study the effect on ocean life and examining routes to bring desalination to SDCWA's

delivery system. MWDOC and south Orange County agencies are maintaining a potential interest in the project, but at this time is only doing some limited fact finding and monitoring of the project. The City of San Juan Capistrano is not a direct participant in the Camp Pendleton Seawater Desalination Project.

8. UWMP Adoption Process

8.1. Overview

Recognizing that close coordination among other relevant public agencies is the key to the success of its UWMP, the City worked closely with other entities such as MWDOC to develop and update this planning document. The City also encouraged public involvement through a holding of a public hearing to learn and ask questions about their water supply.

This section provides the information required in Article 3 of the Water Code related to adoption and implementation of the UWMP. Table 8-1 summarizes external coordination and outreach activities carried out by the City and their corresponding dates. The UWMP checklist to confirm compliance with the Water Code is provided in Appendix A.

Table 8-1: External Coordination and Outreach

External Coordination and Outreach	Date	Reference
Encouraged public involvement (Public Hearing)	June 7, 2011 & June 14, 2011	Appendix G
Notified city or county within supplier’s service area that water supplier is preparing an updated UWMP (at least 60 days prior to public hearing)		Appendix F
Held public hearing	June 21, 2011	Appendix G
Adopted UWMP		Appendix H
Submitted UWMP to DWR (no later than 30 days after adoption)		
Submitted UWMP to the California State Library and city or county within the supplier’s service area (no later than 30 days after adoption)		
Made UWMP available for public review (no later than 30 days after filing with DWR)		

This UWMP was adopted by the City Council on **MONTH DAY, YEAR**. A copy of the adopted resolution is provided in Appendix H.

A change from the 2004 legislative session to the 2009 legislative session required the City to notify any city or county within its service area at least 60 days prior to the public hearing. The City sent a Letter of Notification to the County of Orange and the City of

Dana Point on **DATE** that it is in the process of preparing an updated UWMP (Appendix F).

8.2. Public Participation

The City encouraged community and public interest involvement in the plan update through public hearings and inspection of the draft document. Public hearing notifications were distributed through utility bills and published in local newspapers. A copy of the published Notice of Public Hearing is included in Appendix G. The hearing provided an opportunity for all residents and employees in the service area to learn and ask questions about their water supply in addition to the City's plans for providing a reliable, safe, high-quality water supply. Copies of the draft plan were made available for public inspection at the City Clerk's and Utilities Department offices.

8.3. Agency Coordination

All of the City's water supply planning relates to the policies, rules, and regulations of its regional and local water providers. The City is dependent on imported water from Metropolitan through MWDOC, its regional wholesaler. The City is also dependent on groundwater from the San Juan Groundwater Basin. In addition to imported water and groundwater supplies, The City incorporates into its water supply recycled water treated by SOCWA. The City involved these aforementioned water providers in the development of its 2010 UWMP at various levels of contribution as summarized in Table 8-2.

Table 8-2: Coordination with Appropriate Agencies

	Participated in Plan Development	Commented on Draft	Attended Public Meetings	Contacted for Assistance	Sent Copy of Draft Plan	Sent Notice of Intention to Adopt	Not Involved/No Information
South Coast Water District	X		X	X	X	X	
Moulton Niguel Water District	X			X	X	X	
SOCWA	X			X	X	X	
MWDOC	X			X	X	X	
County of Orange				X	X	X	
City of Dana Point				X	X	X	
San Juan Capistrano Planning Department	X	X	X	X	X	X	

As a member agency of MWDOC, MWDOC provided assistance to the City’s 2010 UWMP development by providing much of the data and analysis such as, population projections, demand projections, and SBx7-7 modeling. The City’s UWMP was developed in collaboration with MWDOC’s 2010 RUWMP to ensure consistency between the two documents as well as Metropolitan’s 2010 RUWMP and 2010 Integrated Water Resources Plan.

As a groundwater producer who relies on supplies from the San Juan Basin, the City also coordinated the preparation of this 2010 UWMP with SJBA.

8.4. UWMP Submittal

8.4.1. Review of Implementation of 2005 UWMP

As required by California Water Code, the City summarizes the implementation of the Water Conservation and Water Recycling Programs to date, and compares the implementation to those as planned in its 2005 UWMP.

Comparison of 2005 Planned Water Conservation Programs with 2010 Actual Programs

As a signatory to the MOU regarding urban water use efficiency, the City's commitment to implement BMP-based water use efficiency program continues today. For the City's specific achievements in the area of conservation, please see Section 4 of this Plan.

Comparison of 2005 Projected Recycled Water Use with 2010 Actual Use

Current recycled water projections for the City in 2010 are about 66% less than previously forecasted for 2010 in the 2005 UWMP, as illustrated in Table 6-7.

8.4.2. Filing of 2010 UWMP

The City Council reviewed the Final Draft Plan on **DATE**. The five-member City Council approved the 2010 UWMP on **DATE**. See Appendix H for the resolution approving the Plan.

By August 1, 2011, the City's Adopted 2010 UWMP was filed with DWR, California State Library, County of Orange, and cities within the City's service area.

Appendices

- A. Urban Water Management Plan Checklist
- B. 1994 San Juan Basin Groundwater Management and Facility Plan
- C. Calculation of Dry Year Demands
- D. SJBA Water Rights Permit
- E. Ordinance No. 941, Stage 1 Tag, AB 1420 Compliance Letter, Customer Service Tag, Educational Tag, Water and Sewer Rate Codes
- F. 60 Day Notification Letters
- G. Public Hearing Notice
- H. Copy of Plan Adoption

Appendix A

Urban Water Management Plan Checklist

Urban Water Management Plan checklist, organized by subject

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
PLAN PREPARATION				
4	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.	10620(d)(2)		Section 8.3
6	Notify, at least 60 days prior to the public hearing on the plan required by Section 10642, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Any city or county receiving the notice may be consulted and provide comments.	10621(b)		Appendix F
7	Provide supporting documentation that the UWMP or any amendments to, or changes in, have been adopted as described in Section 10640 et seq.	10621(c)		Section 8.4
54	Provide supporting documentation that the urban water management plan has been or will be provided to any city or county within which it provides water, no later than 60 days after the submission of this urban water management plan.	10635(b)		Section 8.4
55	Provide supporting documentation that the water supplier has encouraged 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.	10642		Section 8.2
56	Provide supporting documentation that the urban water supplier made the plan available for public inspection and held a public hearing about the plan. For public agencies, the hearing notice is to be provided pursuant to Section 6066 of the Government Code. The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water. Privately-owned water suppliers shall provide an equivalent notice within its service area.	10642		Appendix G
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642		Appendix H
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		Section 8.4

No.	UWMP requirement a	Calif. Water Code reference	Additional clarification	UWMP location
59	Provide supporting documentation that, in addition to submittal to DWR, the urban water supplier has submitted this UWMP to 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. This also includes amendments or changes.	10644(a)		Section 8.4
60	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the urban water supplier has or will make the plan available for public review during normal business hours	10645		Section 8.4
SYSTEM DESCRIPTION				
8	Describe the water supplier service area.	10631(a)		Section 1.3.1
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		Section 2.2.1
10	Indicate the current population of the service area	10631(a)	Provide the most recent population data possible. Use the method described in "Baseline Daily Per Capita Water Use." See Section M	Section 2.2.2
11	Provide population projections for 2015, 2020, 2025, and 2030, based on data from State, regional, or local service area population projections.	10631(a)	2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Section 2.2.2
12	Describe other demographic factors affecting the supplier's water management planning.	10631(a)		Section 2.2.3
SYSTEM DEMANDS				
1	Provide 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.	10608.20(e)		Section 2.4.4 Section 2.4.5
2	Wholesalers: Include an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions. Retailers: Conduct at least one public hearing that includes general discussion of the urban retail water supplier's implementation plan for complying with the Water Conservation Bill of 2009.	10608.36 10608.26(a)	Retailers and wholesalers have slightly different requirements	Appendix G Section 2.4.6

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
3	Report progress in meeting urban water use targets using the standardized form.	10608.40		Not applicable
25	Quantify past, current, and projected water use, identifying the uses among water use sectors, for the following: (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, conjunctive use, and (I) agriculture.	10631(e)(1)	Consider 'past' to be 2005, present to be 2010, and projected to be 2015, 2020, 2025, and 2030. Provide numbers for each category for each of these years.	Section 2.3
33	Provide documentation that either the retail agency provided the wholesale agency with water use projections for at least 20 years, if the UWMP agency is a retail agency, OR, if a wholesale agency, it provided its urban retail customers with future planned and existing water source available to it from the wholesale agency during the required water-year types	10631(k)	Average year, single dry year, multiple dry years for 2015, 2020, 2025, and 2030.	Section 2.5
34	Include projected water use for single-family and multifamily residential housing needed for lower income households, as identified in the housing element of any city, county, or city and county in the service area of the supplier.	10631.1(a)		Section 2.5.2
SYSTEM SUPPLIES				
13	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	10631(b)	The 'existing' water sources should be for the same year as the "current population" in line 10. 2035 and 2040 can also be provided.	Section 3.1
14	Indicate whether groundwater is an existing or planned source of water available to the supplier. If yes, then complete 15 through 21 of the UWMP Checklist. If no, then indicate "not applicable" in lines 15 through 21 under the UWMP location column.	10631(b)	Source classifications are: surface water, groundwater, recycled water, storm water, desalinated sea water, desalinated brackish groundwater, and other.	Section 3.3
15	Indicate whether a groundwater management plan been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	10631(b)(1)		Appendix B
16	Describe the groundwater basin.	10631(b)(2)		Section 3.3
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		Appendix C

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
18	Describe the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. If the basin is not adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Not applicable
19	For groundwater basins that are not adjudicated, provide information as to whether DWR 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. If the basin is adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Section 3.3
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	10631(b)(3)		Section 3.3.3
21	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	10631(b)(4)	Provide projections for 2015, 2020, 2025, and 2030.	Section 3.3.3
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		Section 7.2
30	Include a detailed description of all water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years, excluding demand management programs addressed in (f)(1). Include specific projects, describe water supply impacts, and provide a timeline for each project.	10631(h)		Section 7.3
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		Section 7.4
44	Provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier. Coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	10633		Section 6.1
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(a)		Section 6.2

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
46	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	10633(b)		Section 6.2
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(c)		Section 6.3
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, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.	10633(d)		Section 6.4
49	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.	10633(e)		Section 6.4
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(f)		Section 6.5
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)		Section 6.5
WATER SHORTAGE RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING ^b				
5	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	10620(f)		Section 3
22	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage and provide data for (A) an average water year, (B) a single dry water year, and (C) multiple dry water years.	10631(c)(1)		Section 3.5.1
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.	10631(c)(2)		Section 3.5.2
35	Provide an urban water shortage contingency analysis that specifies stages of action, including up to a 50-percent water supply reduction, and an outline of specific water supply conditions at each stage	10632(a)		Section 5.2

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
36	Provide 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(b)		Section 5.3
37	Identify 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(c)		Section 5.4
38	Identify 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(d)		Section 5.5
39	Specify consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.	10632(e)		Section 5.5
40	Indicated penalties or charges for excessive use, where applicable.	10632(f)		Section 5.5
41	Provide 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.	10632(g)		Section 5.6
42	Provide a draft water shortage contingency resolution or ordinance.	10632(h)		Appendix E
43	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)		Section 5.7
52	Provide information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments, and the manner in which water quality affects water management strategies and supply reliability	10634	Four years 2010, 2015, 2020, 2025, and 2030	Section 3.5.2.1

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
53	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing 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. Base the assessment on the information compiled under Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.	10635(a)		Section 3.5.3 Section 3.5.4 Section 3.5.5
DEMAND MANAGEMENT MEASURES				
26	Describe how each water demand management measure is being implemented or scheduled for implementation. Use the list provided.	10631(f)(1)	Discuss each DMM, even if it is not currently or planned for implementation. Provide any appropriate schedules.	Section 4
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f)(3)		Section 4
28	Provide 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 ability to further reduce demand.	10631(f)(4)		Section 4
29	Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water suppliers' legal authority to implement the work.	10631(g)	See 10631(g) for additional wording.	Not applicable
32	Include the annual reports submitted to meet the Section 6.2 requirements, if a member of the CUWCC and signer of the December 10, 2008 MOU.	10631(j)	Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29.	Not applicable

a The UWMP Requirement descriptions are general summaries of what is provided in the legislation. Urban water suppliers should review the exact legislative wording prior to submitting its UWMP.

b The Subject classification is provided for clarification only. It is aligned with the organization presented in Part I of this guidebook. A water supplier is free to address the UWMP Requirement anywhere with its UWMP, but is urged to provide clarification to DWR to facilitate review

Appendix B

1994 San Juan Basin Groundwater Management and Facility Plan

Appendix C

Calculation of Dry Year Demands

Demand “Bump” Factors for 2010 UWMP

Description of Methodology

Water agencies must develop estimates of the impacts of single dry years (Single-Dry) and multiple consecutive dry years (Multiple-Dry) on both supplies and demands in future years. In these cases, demands increase somewhat above the normal or average level. The increase can be expressed as a percent “bump” up from the normal level. For example, if dry year demand was 105 percent of normal, this would be a 5% “bump”. As the methodology to estimate the Single-Dry and Multiple-Dry “bumps” was developed, several issues needed to be decided, as follows:

1. The methodology used existing data from MWDOC records for each agency, to allow the estimates to reflect the characteristics and differences of demands relative to the makeup of each retail entity. The overall MWDOC estimate was developed from a weighted sum of all of OC’s agencies.
2. Total potable demands, including agricultural demands, were used to derive the “bumps” because Orange County agencies have opted to have water that is used for agricultural uses be considered as full service demands. Non-potable demands are included; these demands will be met with non-potable supplies.
3. The methodology focused on per-capita usage (in units of AF/capita) because this removes the influence of growth from the analysis. Overall population growth in Orange County has been about 1% per year over the past two decades, creating about a 20% increase in demand over two decades. Some of the agencies have had even higher growth.
4. The period that was used for the analysis was limited to FY 1992-93 thru FY 2008-09 because fiscal years 1991-92 and 2009-10 were years of extraordinary conservation-- pricing disincentives for using over the allocated amounts were implemented in order to curtail demands-- and so these years were not considered. The Orange County total per-capita water usage in the period FY 1992-93 thru FY 2008-09 is plotted in Figure 1. Per-capita water use in Orange County has been on a decreasing trend in recent years as shown by the trend line in Figure 1. The downward trend is likely due to water use efficiency efforts, principally the plumbing codes since 1992 that have required low-flush toilets in all new construction and prohibited the sale of high-flush toilets for replacement purposes. Because of this drop in per-capita usage over time, the more recent data is a better predictor of future usage than the earlier data. Therefore, we narrowed the focus to the period FY 2001-02 thru FY 2008-09.
5. **Single-Dry “Bump” Methodology:** Per-capita usage for each participant agency from FY 2001-02 thru FY 2008-09 is shown in Table 1. The Single-Dry Bump for each agency was derived using the highest per-capita usage in the period, divided by average per-capita usage for that period. Because of suspect data for Fountain Valley and Santa Ana, the highest year data was eliminated and the second-highest usage in the period was used (when data was suspect, it was also removed from the average for the agency). The resulting Single-Dry “bumps” are shown in Table 2. The OC-average Single-Dry “bump” came to 6.6%
6. **Multiple-Dry “Bump” Methodology:** DWR guidelines recommend that “multiple” years is three years. There are various methods that can be used to derive demand “bumps” for those three years. The same “bump” can be used for all three years, or different “bumps” can be assumed for each of the three years. A pattern can be selected based on historical demand data or on historical water supply data or on another basis. MWDOC selected a Multiple-Dry Bump as the same as the Single-Dry Bump for each agency. This means having three highest-demand years in a row. This is conservative because it would be extremely unlikely for three driest years to occur in a row. However, it should be noted that future demand in any particular year depends on other factors in addition to rainfall, such as the economic situation, and cloudiness, windiness, etc. The OC-average Multiple-Dry “bump” came to 6.6%.

Figure 1
Per-Capita Water Use in Orange County (AF/person)

FY Ending	OC Actual AF/person	Least Sq AF/person	approx high	approx "bump"
1993	0.223327	0.233	0.250	7%
1994	0.223528	0.232		
1995	0.221986	0.230		
1996	0.235919	0.229		
1997	0.244071	0.228		
1998	0.217014	0.226		
1999	0.228797	0.225		
2000	0.242408	0.224		
2001	0.223537	0.222		
2002	0.228534	0.221		
2003	0.214602	0.219		
2004	0.222155	0.218		
2005	0.204941	0.217		
2006	0.207720	0.215		
2007	0.223599	0.214		
2008	0.211873	0.212		
2009	0.202396	0.211	0.225	7%

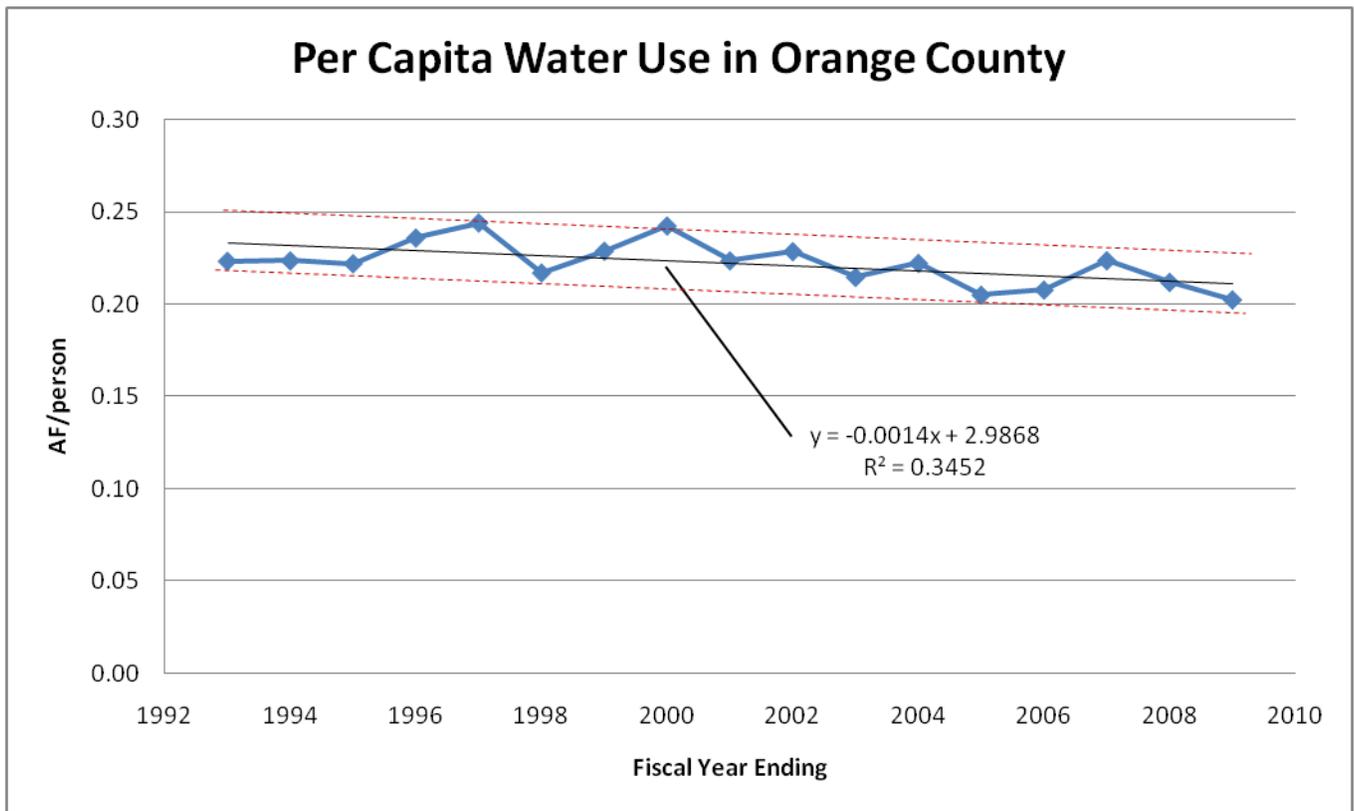


Table 1. Per-Capita Retail Water Usage by Retail Water Agency [1] [2]

Fiscal Year ->	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
	Per Capita Retail Water Usage (AF/person)							
San Juan Capistrano	0.25737	0.24507	0.26582	0.23717	0.22761	0.25485	0.24981	0.24732

[1] Retail water usage (includes recycled water and Agricultural usage) divided by population.

[2] Population is for Jan. 1 of each fiscal year ending. Source: Center for Demographic Research, CSU Fullerton.

Table 2
Demand Increase "Bump" Factors for Single Dry Years and Multiple Dry Years
 for OC Water Agencies participating in MWDOC's 2010 UWMP group effort

	Single	Multiple	
San Juan Capistrano	7.1%	7.1%	
OC Average	6.6%	6.6%	weighted average of all OC water agencies

Appendix D

SJBA Water Rights Permit

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

PERMIT FOR DIVERSION AND USE OF WATER

PERMIT 21074

Application 30123 of San Juan Basin Authority
27500 La Paz Road
Laguna Niguel, CA 92656-3489

filed on May 4, 1992, has been approved by the State Water Resources Control Board (SWRCB)
SUBJECT TO PRIOR RIGHTS and to the limitations and conditions of this permit.

Permittee is hereby authorized to divert and use water as follows:

1. Source of water

Source	Tributary to
(A) San Juan Creek	San Juan Creek thence Pacific Ocean
(B) Arroyo Trabuco	Arroyo Trabuco thence San Juan Creek thence Pacific Ocean

within the County of Orange

2. Location of point of diversion

By California Coordinate System in Zone # 6	40-acre subdivision of public land survey or projection thereof	Section	Township	Range	Base and Meridian
(A) Direct Diversion: (1) Well No. 41 North 492951 East 1583352	SE $\frac{1}{4}$ of SE $\frac{1}{4}$	32	7S	7W	SB
(2) Well No. 42 North 491396 East 1578329	NE $\frac{1}{4}$ of NW $\frac{1}{4}$	5	8S	7W	SB
(3) Well No. 43 North 490395 East 1576689	SW $\frac{1}{4}$ of NW $\frac{1}{4}$	5	8S	7W	SB
(4) Well No. 44 - North 489649 East 1575517	NE $\frac{1}{4}$ of SE $\frac{1}{4}$	6	8S	7W	SB
(5) Well No. 45 North 486327 East 1571321	NW $\frac{1}{4}$ of NW $\frac{1}{4}$	7	8S	7W	SB

Application 30123

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(6) Well No. 46 North 485234 East 1570059	SE 1/4 of NE 1/4	12	8S	8W	SB
(7) Well No. 47 North 478815 East 1563940	NE 1/4 of SE 1/4	14	8S	8W	SB
(8) Well No. 48 North 480696 East 1564240	NE 1/4 of NE 1/4	14	8S	8W	SB
(9) Well No. 49 North 482297 East 1564900	SE 1/4 of SE 1/4	11	8S	8W	SB
(10) Well No. 50 North 484312 East 1564800	NE 1/4 of SE 1/4 <i>SE 1/4 of NE 1/4</i>	11	8S	8W	SB
(11) Well No. 57 North 476524 East 1563325	NW 1/4 of NE 1/4	23	8S	8W	SB
(B) Direct Diversion: (12) Well No. 51 North 485952 East 1565995	NW 1/4 of NW 1/4 <i>NW 1/4 of SE 1/4</i>	12	8S	8W	SB
(13) Well No. 52 North 487028 East 1567831	NE 1/4 of NW 1/4 <i>SE 1/4 of NE 1/4</i>	12	8S	8W	SB
(14) Well No. 53 North 487288 East 1569927	NE 1/4 of NE 1/4	12	8S	8W	SB
(15) Well No. 54 North 491880 East 1566980	NE 1/4 of NW 1/4	1	8S	8W	SB
(16) Well No. 55 North 494150 East 1566514	NW 1/4 of SW 1/4	36	7S	8W	SB
(17) Well No. 56 North 496439 East 1567936	SE 1/4 of NW 1/4	36	7S	8W	SB

3. Purpose of use	4. Place of use	Section	Township	Range	Base and Meridian	Acres
Municipal	Within the boundaries of Santa Margarita, Moulton Niguel, Capistrano Valley and Trabuco Canyon Water Districts					

The place of use is shown on map on file with the SWRCB.

5. The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 17.3 cubic feet per second to be diverted from January 1 to December 31 of each year. Until further order of the Chief, Division of Water Rights, the maximum amount diverted under this permit shall not exceed 8,026 acre-feet per annum (afa). This amount can be increased by a

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maximum of 2,676 afa, for a total diversion of 10,702 afa, upon showing by the permittee of the availability of unappropriated water and approval of the Chief, Division of Water Rights.

(0000005A)

6. Complete application of the water to the authorized use shall be made by December 31, 2010.

(0000009)

7. Allocation of the available water resources under this permit and any permits issued pursuant to Application 30337 of South Coast Water District and 30696 of Capistrano Valley Water District, et al. are governed by private agreements among the respective parties dated November 21, 1995 and March 1, 1998, and by their joint letter dated March 13, 1998.

If the agreements are modified in a manner which requires revisions to the allocation of water, the permittee shall provide to the Chief of the Division of Water Rights a revised allocation schedule and the permittee shall operate to the revised schedule. If the agreements terminate, the Chief of the Division of Water Rights shall determine the water allocation schedule needed to protect prior rights and public trust resources, and the permittee shall operate to this schedule.

(0000024)

8. To the extent that water available for use under this permit is return flow, imported water, or wastewater, this permit shall not be construed as giving any assurance that such supply will continue.

(0000025)

9. Permittee shall consult with the Division of Water Rights and, within one year from the date of this permit, shall submit to the State Water Resources Control Board its Urban Water Management Plan as prepared and adopted in conformance with Section 10610, et seq. of the California Water Code, supplemented by any additional information that may be required by the Board.

Features of the water conservation plan may include but not necessarily be limited to (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project.

All cost-effective measures identified in the water conservation program shall be implemented in accordance with the schedule for implementation found therein

plant location
well locations

(0000026A)

10. If it is determined after permit issuance that the as-built conditions of the project are not correctly represented by the map(s) prepared to accompany the application, permittee shall, at his expense have the subject map(s) updated or replaced with equivalent as-built map(s). Said revision(s) or new map(s) shall be prepared by a civil engineer or land surveyor registered or licensed in the State of California and shall meet the requirements prescribed in section 715 and

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sections 717 through 723 of the California Code of Regulations, Title 23. Said revision(s) or map(s) shall be furnished upon request of the Chief, Division of Water Rights.

(0000030)

11. The permittee shall not operate the project in a manner so as to cause injury to the reasonable and beneficial uses of water recognized for San Juan Creek watershed in the Water Quality Control Plan for the San Diego Basin, including significant injury to the quality of water necessary for senior reasonable and beneficial uses at the San Juan Golf Property.

(0000999)

12. This permit is specifically subject to the prior riparian right of San Juan Golf, Inc. and Charles I. Vermeulen, or their successors, to the extent that any such right is determined to be valid.

(000T001)

13. In order to prevent degradation of the quality of water during and after construction of the project, prior to commencement of construction, permittee shall file a report pursuant to Water Code Section 13260 and shall comply with all waste discharge requirements imposed by the California Regional Water Quality Control Board, San Diego Region, or by the State Water Resources Control Board.

↑
RWQCB Permit

(0000100)

14. Cumulative extractions by the permittee, senior right holders, and rights governed by private agreements with the permittee (see condition 7) shall not exceed recharge from return flows and precipitation. This condition is satisfied when groundwater storage is not less than one-half of the storage capacity in the alluvial groundwater basin.

(0360900)

15. Prior to diversion of water under this permit, permittee shall (1) install devices to collect information needed to calculate the quantities of water in underground storage and (2) install devices to measure the quantities of water taken from underground storage and placed to beneficial use. All measuring devices shall be approved by the Chief, Division of Water Rights prior to diversion of water under this permit. All measuring devices shall be properly maintained.

(0000900)

(0490900)

16. Prior to diversion of water under this permit, permittee shall prepare and submit to the Chief, Division of Water Rights for approval and modification, if necessary, an annual compliance monitoring plan. Any amendments to the plan shall also be submitted to the Division Chief for approval and modification, if necessary, prior to implementation.

The monitoring plan shall identify (a) the measures the permittee will take to collect data regarding water levels in the San Juan Basin (b) document how the permittee will comply with the requirement that cumulative extractions do not exceed recharge from return flows and precipitation, and (c) provide adequate information to document that the permittee will not operate the project in a manner that causes adverse impacts to senior water rights (including the riparian rights listed in condition 12) and water rights governed by private agreement (identified in condition 7), and their successors in interest.

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The permittee shall identify the steps that will be taken to limit diversions at each of the authorized points of diversion to ensure that (a) diversions do not interfere with prior rights, (b) cumulative diversions do not exceed basin recharge rates, and (c) diversions comply with all permit terms and conditions. Upon approval of the plan by the Chief, Division of Water Rights, the permittee shall implement the plan.

An annual compliance report shall be submitted with the Progress Report by Permittee.

(0490700)

17. Prior to initiating any diversion of water under this permit, the permittee shall install monitoring well(s) located downstream of the points of diversion for the purpose of monitoring both total dissolved solids (TDS) and chloride levels. The monitoring well(s) shall be located on San Juan Creek downstream of the confluence of San Juan Creek and Arroyo Trabuco. The permittee shall obtain measurements of the TDS and chloride levels at the monitoring well(s) and shall develop a monitoring program that identifies the sampling frequency, monitoring protocol, and statistical analysis needed to document TDS and chloride levels relative to the water quality objectives in the Water Quality Control Plan for the San Diego Basin (Basin Plan). The water quality monitoring program shall be submitted to the Chief, Division of Water Rights for approval and modification, if necessary, within six months of issuance of this permit. No water may be diverted until the monitoring program is approved.

Extractions shall not cause groundwater to exceed the Basin Plan objectives. In the event the Basin Plan objectives are already exceeded, the extraction shall not cause further degradation. Because the levels of TDS and chloride may vary with time, the constituent levels in the monitoring wells shall be statistically compared with historic levels or monitoring wells unaffected by the extractions to determine if degradation has occurred.

A record of the TDS and chloride level measurements taken in accordance with the water quality monitoring program requirements shall be submitted annually with the Progress Report by Permittee, together with documentation that the permittee discontinued use of any wells not meeting the requirements of this permit condition. The permittee shall provide the well names, well locations and dates of non-use for any wells not in use due to this permit condition.

(0110900)
(0360900)
(0490700)

18. Prior to the commencement of any grading for the project, the permittee shall complete the following:

DUP
359
#1

A survey for the Least Bell's Vireo and Southwestern Willow Flycatcher shall be conducted in suitable habitat between April 15 and July 31 by a qualified biologist using protocols acceptable to the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (DFG). Surveys for other sensitive species (such as Willow Flycatcher, Yellow-breasted Chat, Yellow Warbler and Blue Grosbeak) shall be conducted concurrently using the same criteria. Project grading and construction activities, if proposed in the vicinity of areas known to be occupied by Least Bell's Vireo, Southwestern Willow Flycatcher and California Gnatcatcher, shall not occur during the breeding season for said sensitive species (February through July).

new

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Focused surveys for native fish (Arroyo Chub, Partially Armored Threespine Stickleback, California Killifish and Steelhead) shall be conducted by a qualified biologist at each infrastructure location that could potentially affect pools or runs of the San Juan and Trabuco Creeks. Such surveys shall be conducted using protocols acceptable to the USFWS and DFG.

Focused surveys for the Arroyo Toad, Western Spadefoot, and Southwestern Pond Turtle shall be conducted in suitable habitat by a qualified biologist using protocols acceptable to the USFWS and DFG.

A survey for sensitive plant species (Southwestern Spiny Rush and Coulter's Matilija Poppy) shall be conducted by a qualified biologist using protocols acceptable to the USFWS and DFG.

A wetland delineation shall be conducted at each infrastructure location chosen for the project, as well as any areas which may be affected by project construction. Such wetland delineation(s) shall be conducted by a qualified biologist pursuant to the criteria established by the Army Corps of Engineers and DFG.

The permittee shall prepare, or cause to be prepared, a report that describes the findings of all botanical, avian, fishery, amphibian, reptile, and wetland delineation surveys that are required prior to the commencement of any grading for the project or construction related activities related to project infrastructure. The report should include methods employed to avoid, minimize, restore, or compensate for species or wetlands determined to be effected by project related impacts. A copy of the report shall be filed with the Chief, Division of Water Rights.

(0390500)
(0600500)

19. Prior to grading and construction related to project infrastructure, the permittee shall ensure that downstream sedimentation in the area of San Juan Creek shall not occur during the late winter and spring breeding seasons which may affect native fish populations, and native amphibian egg masses and larva. The permittee shall implement standard construction procedures in compliance with local jurisdictions for control of sedimentation during grading and construction. Such procedures shall be determined prior to grading and construction for each infrastructure site.

(0400500)

20. Prior to the final selection of project infrastructure sites in sensitive locations by the permittee, the permittee shall consult with a qualified consulting biologist and biologist from the DFG to determine acceptable sitings for well, pipeline and access road facilities. Such siting shall be determined by the permittee, the qualified biologist, and the biologist from DFG by field inspections of the proposed sites which are located in sensitive areas.

(0400500)

21. Prior to construction of project infrastructure, the permittee, in coordination with the consulting biologist and DFG, shall remove species of non-native vegetation from the banks of streams where project facilities are to be located.

(0400500)

22. Prior to the commencement of any phase of the project, a total of 3-5 piezometers shall be installed by the permittee in those areas directed by DFG in order to monitor soil moisture within

Application 30123

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the riparian zone for Phase I and II of the project. If moisture falls below natural levels for sustaining vegetation, pumping in that area will cease until moisture levels are adequately restored.

~ R9581 #20 #1

(0400500)

23. Prior to the commencement of any pumping in an area where important native vegetation and/or surface water resources could be affected, the permittee shall ensure that a mitigation monitoring program is established to observe, track and control the effects of pumping on important native vegetation. The frequency of monitoring shall be determined by recommendations of the consulting biologist. The mitigation monitoring program shall become a part of the 1601 agreement between the permittee and DFG, and periodic monitoring reports (as set forth below) shall be forwarded to DFG.

~ Dup R9581 #20 #2
This mitigation monitoring program shall be reviewed by the consulting biologist every three (3) months from the date of commencement of the project for one year, and annually thereafter. Such review will determine if continued vegetation and/or surface water resource monitoring is necessary, or whether the frequency of review requires adjustment. Any revisions to the mitigation monitoring program by the permittee or consulting biologist shall be coordinated with DFG.

Dup R9581 #20 #3
Prior to commencement of pumping for Phase II of the project, a mitigation monitoring program shall be developed to observe, track and control the effects of Phase II of the project by utilizing the same terms, parties and review as provided in the mitigation monitoring program for Phase I of the project.

~ Dup R9581 #20 #4
If at any time during the monitoring of Phase I or Phase II of the project it is determined by the consulting biologist that areas of important native vegetation are under stress as a result of pumping, the consulting biologist shall inform the permittee and shall cause the cessation of pumping in the affected areas until the stress has been eliminated or reduced to a level acceptable to the consulting biologist. Pumping may be reinstated in the affected area(s) upon consultation with the biologist. Provisions for surface water release, if necessary, to sustain or restore vegetation affected by pumping shall be incorporated into the final design.

(0400500)

~ Dup R9581 #2
24. Prior to any grading associated with the project, a Society of Professional Archaeologists (SOPA) certified archaeologist shall be retained by the permittee to survey those areas not previously surveyed for archaeological remains. Following the survey, a report shall be prepared and submitted to the Information Center at UCLA for their records. If important prehistoric or historic resources are encountered, then evaluative testing and/or other appropriate archaeological investigations shall be conducted before grading begins.

(0380500)

Dup R9581 #22
25. A SOPA certified archaeologist shall be retained by the permittee to attend the pre-grade meeting or meetings, prepare a monitoring program and to be present during all grading activities for the proposed project. During the grading activities, the archaeologist shall conduct monitoring to observe and retrieve any buried artifacts that may be uncovered. The archaeological monitor shall have the authority to temporarily divert or suspend grading and/or construction activities in the vicinity of the find until the significance of any previously unknown cultural resources has been evaluated. If the resources are determined to be significant any mitigation measures deemed

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Permit

appropriate by a qualified archaeologist, in consultation with the State Office of Historic Preservation, must be completed prior to resuming the grading and/or construction activities in the vicinity of the find. This includes disposition of any recovered resources and/or artifacts. Such resources and/or artifacts, after analysis and lab testing, shall be offered to the County of Orange, or designee (such as a public museum or public university), on a first refusal basis.

(0380500)

26. ALL PERMITS ISSUED BY THE STATE WATER RESOURCES CONTROL BOARD ARE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

- (A) Permittee shall maintain records of the amount of water diverted and used to enable SWRCB to determine the amount of water that has been applied to beneficial use pursuant to Water Code section 1605.
- (B) The amount authorized for appropriation may be reduced in the license if investigation warrants.
- (C) Progress reports shall be submitted promptly by permittee when requested by the SWRCB until a license is issued.
- (D) Permittee shall allow representatives of the SWRCB and other parties, as may be authorized from time to time by said SWRCB, reasonable access to project works to determine compliance with the terms of this permit.
- (E) Pursuant to California Water Code sections 100 and 275, and the common law public trust doctrine, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of SWRCB in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the SWRCB may be exercised by imposing specific requirements over and above those contained in this permit with a view to eliminating waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. No action will be taken pursuant to this paragraph unless the SWRCB determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the SWRCB also may be exercised by imposing further limitations on the diversion and use of water by the permittees in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the SWRCB determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution Article X, Section 2; is consistent with the public interest; and is necessary to preserve or restore the uses protected by the public trust.

- (F) The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the SWRCB if, after notice to the permittee and an opportunity for hearing, the SWRCB finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to

Application 30123

Permit 21074

Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the SWRCB finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

(G) This permit does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this water right, the permittee shall obtain authorization for an incidental take prior to construction or operation of the project. Permittee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this permit.

This permit is issued and permittee takes it subject to the following provisions of the Water Code:

Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer.

Section 1391. Every permit shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a permit is issued takes it subject to the conditions therein expressed.

Section 1392. Every permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Dated: October 30, 2000

STATE WATER RESOURCES CONTROL BOARD

ORIGINAL SIGNED
BY HARRY M. SCHUELLER

Chief, Division of Water Rights

Appendix E

Ordinance No. 941, Stage 1 Tag, AB 1420 Compliance Letter, Customer Service Tag, Educational Tag, Water and Sewer Rate Codes 60 Day Notification Letters

Ordinance No. 941

ORDINANCE NO. 941

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SAN JUAN CAPISTRANO, CALIFORNIA, ESTABLISHING CHAPTER 12 OF TITLE 6 OF THE SAN JUAN CAPISTRANO MUNICIPAL CODE PERTAINING TO WATER CONSERVATION.

The City Council of the City of San Juan Capistrano does ordain as follows:

SECTION 1: Authority. This ordinance is enacted pursuant to Section 375 of the California Water Code, and Sections 37100 and 38742 of the California Government Code.

SECTION 2: Findings.

- A. The protection, conservation, and management of local and imported water supplies are one of the main functions of the City as a domestic water purveyor. The City has the power to perform all acts necessary to carry out fully the provision of California Water Code Section 375, to establish rules and regulations for the distribution and use of water, and undertake a water conservation program to promote efficient water use and reduce water waste.
- B. Wasteful water use practices constitute a potential threat to, and an unacceptable diminution of, the City's water supplies. The prevention of water waste is an economically and environmentally feasible way to protect, conserve, and prevent unacceptable diminution of the City's water supplies.
- C. Outdoor water use is a primary source of urban runoff, which flows onto the streets, through storm drains, to the creeks and beaches. It is therefore in the public interest to promote practices that increase water use efficiency, reduce or eliminate runoff, and further support the regulations of Title 8, Chapter 14, of the Municipal Code, Water Quality Regulations, and related Best Management Practices. If there are conflicts between this ordinance and said Water Quality Regulations, the more restrictive shall apply.
- D. Contamination, drought, or failure of the water system infrastructure may lead to a potable water shortage emergency in the City's water supplies.
- E. In 1994, The City Council acting as the Board of Directors of the Capistrano Valley Water District voluntarily signed a Memorandum of Understanding with the California Urban Water Conservation Council, agreeing to undertake cost-effective Water Use Efficiency Best Management Practices (BMPs). One such Water Use Efficiency BMP is the adoption of a year-round water waste prohibition in the form of an ordinance, in addition to existing water shortage contingency planning. This ordinance is consistent with the Water Use Efficiency BMP.

SECTION 3: Purpose of Ordinance. The purpose of this ordinance is to establish the water conservation regulations for the City of San Juan Capistrano; and, as the successor agency to the Capistrano Valley Water District (CVWD), to revise, update, and replace the water conservation and water shortage contingency measures contained in CVWD Ordinances 8, 9, and 10.

SECTION 4: General Provisions. Chapter 12 of Title 6 of the San Juan Capistrano Municipal Code is hereby established to read as follows:

**Chapter 12
WATER CONSERVATION**

Sections:

6-12.01	Short Title
6-12.02	Purpose.
6-12.03	Definitions.
6-12.04	Application.
6-12.05	Mandatory restrictions on water waste.
6-12.06	Water shortage contingency measures.
6-12.07	Enforcement and administration.
6-12.08	Violations and notices.
6-12.09	Nuisances, abatement, injunctive relief.
6-12.10	Relief from compliance.
6-12.11	Voluntary water conservation plan.

6-12.01 Short Title.

This chapter may be cited as the Water Conservation Ordinance of the City of San Juan Capistrano.

6-12.02 Purpose.

The purpose of this chapter is to establish standards and procedures for year-round water conservation, to promote the efficient use of water, to reduce or eliminate the waste of water in the City, to complement the City's Water Quality Regulations and urban runoff reduction efforts, and enable implementation of the City's water shortage contingency measures.

6-12.03 Definitions.

For the purposes of this chapter, unless otherwise apparent from the context, certain words and phrases used in this chapter are defined as follows:

"City" shall mean the City of San Juan Capistrano, Orange County, California.

"City Water Service Area" shall mean the City of San Juan Capistrano, Orange County, California, and adjoining sections of other cities and unincorporated areas with water service provided by the City of San Juan Capistrano.

"Effective Date" shall mean the date the ordinance adopting this chapter becomes effective.

"Enforcing attorney" shall mean the City Attorney, acting as counsel to the City of Juan Capistrano and his/her designee, or the District Attorney or City Prosecutor, which counsel is authorized to take enforcement action as described herein.

"Impervious surface" shall mean a constructed or modified surface that cannot effectively infiltrate rainfall. The term includes, but is not limited to, sidewalks, driveways, v-ditches, gutters and roadways.

"Major Water Users" shall mean those customers within any specific customer classification which were using or consuming more than the mathematical average use for that classification during the previous billing period. At the discretion of the City Manager, and based on the severity of shortage, this definition may be expanded to include all customers using more than 9 CCF of water per month.

"Non-essential water use" shall mean the application or usage of water for functions or additional activities which do not have any health or safety impacts, are not required by regulation, and are not part of the core function or business process at a site. This would include but not be limited to uses such as the watering of planters and landscape at a car wash, the washing of cars on display at a car dealer, and other activities that a reasonable person would concur will reduce extra use of water, while not affecting a given enterprise in a fundamental way.

"Person" shall mean any natural person, property owner, renter, or lessee, as well as any corporation, partnership, government entity or subdivision, trust, estate, cooperative association, homeowners' association, joint venture, business entity, or other similar entity, or the property management company, property manager, agent, employee or representative of any of the above.

"Properly programmed" shall refer to a weather-based or sensor-based irrigation controller that has been programmed according to the manufacturer's instructions and site-specific conditions.

"Quasi-Public Entity" shall mean an entity, other than a governmental agency, whether characterized by statute as a public corporation, public instrumentality, or otherwise, that is expressly created by statute for the purpose of administration of a state or local function.

“Sensor-based irrigation controller” shall mean an irrigation controller that operates based on input received from any combination of sensors, such as rain, solar radiation, and soil moisture sensor, installed within and/or around the irrigated landscape area.

“Stormwater drainage system” shall mean street, street gutter, sidewalk, alleyway, channel, storm drain, constructed drain, lined diversion structure, wash area, inlet, outlet or other facility, which is a part of or tributary to the county-wide stormwater runoff system and owned, operated, maintained or controlled by County of Orange, the Orange County Flood Control District or any NPDES permit co-permittee city, and used for the purpose of collecting, storing, transporting, or disposing of stormwater.

“Urban runoff” shall mean all flows in the stormwater drainage system and consist of stormwater and non-stormwater flows.

“Water Waste” shall mean uses of water which are prohibited or limited, going beyond the purpose of necessary or intended use, including area runoff, and which could reasonably be prevented.

“Water Conservation Coordinator” is the City Manager or his/her designee.

“Water Quality Regulations” are the storm water regulations in Chapter 14 of Title 8 of the San Juan Capistrano Municipal Code.

“Weather-based irrigation controller” shall mean an irrigation controller that operates based on evapotranspiration rates and historic or real-time weather data.

6-12.04 Application.

This chapter shall apply within the City’s Water Service Area, which includes the corporate boundaries of the City and those areas and properties outside the City’s boundaries connected to the City’s water distribution system, and that receive water service from the City. Compliance with the provisions of this chapter shall be a condition of water service within this Water Service Area.

6-12.05 Mandatory restrictions on water waste at all times.

The following activities or measures are in effect year-round, regardless of whether or not a water shortage stage has been declared. During water shortage stages, additional and more restrictive measures may be put in place. These are described in section 6-12.06.

- (a) Repair of Plumbing, Sprinkler and Irrigation System. Any owner, manager, or person responsible for the day-to-day operation of any

premises shall within twenty four (24) hours after such person has been notified of leaks, breaks, or defects, initiate steps to repair any leaking, broken or defective water pipes, faucets, plumbing fixtures, other water service appliances, sprinklers, watering or irrigation systems, or distribution systems which cause or may cause water waste or runoff from such, and shall thereafter diligently and promptly pursue such repair work to completion within a reasonable time, as determined by the City Manager or his/her designee, unless a variance is obtained from the City.

(b) Watering/Irrigation.

(1) No person shall water their lawn or landscaping or permit their lawn or landscaping to be watered between the hours of nine (9:00) AM and six (6:00) PM, except as provided below:

- i. Persons may operate the irrigation system between the hours of 9:00 AM and 6:00 PM for the purpose of installing, repairing or routine maintenance of the same.
- ii. Persons may water their lawn or landscaping between the hours of 9:00 AM and 6:00 PM using any of the following methods:
 1. Drip, bubbler, or soaker irrigation hardware or emitters;
 2. By hand, using a bucket; and/or
 3. By hand, using a hose with an automatic shutoff nozzle or a hose-end sprinkler with a radius of not more than 10 (ten) feet, if such sprinkler causes no overspray or runoff.

(2) No person shall allow lawns, groundcover, shrubbery, other landscape material, or open ground to be watered at any time while it is raining. Automatic irrigation controllers may be turned off manually, or connected to a rain shutoff device. Effective July 1, 2010, all irrigation controllers associated with dedicated landscape meters shall have a rain shutoff device which overrides the program in the event of rainfall.

(3) Every person shall operate their landscape irrigation system(s) to minimize overspray and/or excess runoff onto impervious surfaces (such as sidewalks, driveways, v-ditches, gutters and roadways).

(c) Washing of Vehicles. No person shall use a water hose to wash any car, truck, boat, trailer, bus, recreational vehicle, camper, tractor, or any other vehicle, or any portion thereof, unless the hose is equipped with an automatic shutoff nozzle. To the maximum extent possible, all wash water from vehicle washing/cleaning activity must be prevented from discharging to the stormwater drainage system.

(d) Commercial Car Washes.

- (1) Commercial car wash facilities shall not permit the washing of any boat or vehicle in such facility or on its premises, other than by the following methods:
 - i. Use of mechanical automatic car wash facilities utilizing water recycling equipment;
 - ii. Use of a hose that operates on a timer for limited time periods and shuts off automatically at the expiration of the time period;
 - iii. Use of a hose equipped with an automatic shutoff nozzle; and/or
 - iv. Use of bucket and hand washing.
 - (2) All wash/rinse water must be captured and recycled or discharged into the sanitary sewer system through an appropriate treatment system, after obtaining a special discharge permit from the South Orange County Wastewater Authority.
 - (3) All new commercial conveyor car wash facilities shall be equipped with a water recycling system.
 - (4) Mobile car detailing enterprises using water shall have a City business license and carry a statement of approval by the City Manager or his/her designee as to knowledge of and compliance with the City's Water Quality Regulations, and the required Best Management Practices and techniques to prevent runoff to storm drains.
- (e) Washing of Equipment and Machinery. No person shall use a water hose to wash any type of equipment or machinery, or any portion thereof, unless the hose is equipped with an automatic shutoff nozzle. All wash water from such washing/cleaning activity must be prevented from discharging to the stormwater drainage system. All wash water from such washing/cleaning containing chemicals shall be discharged into the sanitary sewer system through an appropriate treatment system. Any person discharging water containing chemicals is required to first obtain a special discharge permit from the South Orange County Wastewater Authority before such water can be discharged to the sanitary sewer.
- (f) Cleaning of Structures. No person shall use water through a hose, including pressure-washing, to clean the exterior of any building or structure unless such hose is equipped with a shutoff nozzle. All wash water from such activity must be prevented from discharging to the stormwater drainage system, and shall comply with the City's Water Quality Regulations and Best Management Practices.
- (g) Cleaning of Surfaces. No person shall use water through a hose, including pressure-washing, to clean any sidewalk, driveway, roadway, parking lot, sports court, or any other outdoor paved or hard surfaced area, unless all wash water

from such activity is prevented from discharging to the stormwater drainage system. Such water-using cleaning may only occur for health and safety reasons and comply with the City's Water Quality Regulations and Best Management Practices. General maintenance cleaning shall be performed by other means such as by using a broom.

- (h) Swimming Pools and Spas. No person shall empty and refill a swimming pool except to prevent or repair structural damage or to comply with public health regulations, or upon written recommendation of a pool maintenance professional. Discharge of pool or spa water, other than directly to the sanitary sewer system, shall be consistent with the City's Water Quality Regulations and Best Management Practices. Discharge of pool or spa filter backwash water to the stormwater drainage system is prohibited. All pools and spas shall be equipped with a water recirculation device. The use of a pool/spa cover is strongly encouraged to prevent evaporative water loss, and for the additional energy and chemical saving benefits.
- (i) Fountains, Decorative Basins, Ponds, Lakes, Waterways. No person shall use water to operate or maintain levels in decorative fountains, basins, ponds, lakes, and waterways unless a recirculation device is in use. Discharge of water, other than directly to the sanitary sewer system, shall be consistent with City's Water Quality Regulations and related Best Management Practices. Discharge of filter backwash water to the stormwater drainage system is prohibited.
- (j) Cooling Systems. No single pass cooling systems shall be permitted in new connections to the potable water system.
- (k) Commercial Laundry Facilities, Laundromats and Common Area Laundry Rooms. New commercial laundry facilities shall be equipped with a water reclamation system for reuse of rinse water. Laundromats and common area laundry rooms shall install high efficiency clothes washing machines, as older machines are replaced.
- (l) Visitor-Serving Facilities. The owner and manager of each hotel, motel, restaurant, and other visitor-serving facility shall ensure that such facility displays, in places visible to all customers, placards or decals approved by the City, promoting public awareness of the need for water conservation and/or advising the public that waste of water is prohibited. Hotels and motels shall give guests the option to reuse towels and linens.
- (m) Public and Quasi-Public Entities. All public and quasi-public entities shall display, in visible locations in all restrooms, kitchens, and dining areas, placards or decals approved by the City, and available through the City's Web site, promoting public awareness of the need for water conservation and/or advising the public that waste of water is prohibited.

(n) Food Service Facilities.

1. **Drinking Water.** Food service facilities in the City shall not serve water to customers or patrons, except upon request of the customer or patron.
2. **Dishwashing and Garbage Disposals.** All commercial kitchens with dishwashing facilities shall encourage the activity of scraping food waste into a garbage can rather than using a garbage disposal. Garbage disposals are prohibited in all new food facilities. All existing pre-rinse spray nozzles shall be retrofitted to models using 1.6 gallons per minute or less, by July 1, 2010.
3. **Other Water Using Activities.** Defrosting food with running water shall be avoided and discouraged. If using a hose for washdown of kitchens, garbage areas, or any other area required by the health department or for sanitation reasons, it shall have a positive shut off nozzle. Scoop sinks shall be set at minimum flow at all times, and during hours of operation carefully monitored to avoid using water unnecessarily when the scoop sink is not in active use.
4. **New or Remodeled kitchens.** All other water using equipment in new or remodeled kitchens shall use the best available water conserving technology.

(o) Construction.

1. No potable water may be used for compacting or dust control purposes in construction activities where there is a reasonably available source of recycled or other non-potable water approved by the California Department of Public Health and appropriate for such use. This condition must be identified and specified on construction drawings submitted to the City for review.
2. All water hoses used in connection with any construction activities shall be equipped with an automatic shutoff nozzle when an automatic shutoff nozzle can be purchased or otherwise obtained for the size or type of hose in use.
3. All water used on a construction site shall be prevented from entering any part of the stormwater drainage system.

(p) Use of Hydrants. No person may use water from any fire hydrant for any purpose other than fire suppression or emergency aid, without first obtaining a City hydrant meter account or written approval from the City Manager or his/her designee. Absent a meter or written permission, current water theft and meter tampering fees will be applied as appropriate.

(q) Water Spillage and Runoff. Every person shall minimize runoff beyond the immediate area of use. Every person is deemed to have under his/her control at all times his/her water distribution lines and facilities, and to know the manner

and extent of his/her water use and excess runoff. Gutter flooding is specifically prohibited.

- (r) Indiscriminate Use. No person shall cause or permit the indiscriminate running of water not otherwise prohibited above which is wasteful and without reasonable purpose.
- (s) Public Health and Safety. These regulations shall not be construed to limit water use which is immediately necessary to protect public health and/or safety.

6-12.06 Water shortage contingency measures.

The City Council by resolution shall require or impose reductions in the use of water if such reductions are necessary in order for the City to comply with water use restrictions imposed by federal, state or regional water agencies, or to respond to local or regional water shortage conditions and emergencies. Depending on the expected duration and severity of the shortage, these measures may include, but are not limited to, some or all of the actions listed in the following four (4) stages of water conservation, which shall take effect upon declaration by the City Council. In an emergency, the City Manager or his/her designee may make the declaration, which will be ratified by the City Council at a subsequent meeting. Each elevated stage will include the elements of the previous stage(s), and are intended to be more restrictive than the previous stage(s).

(a) Stage 1 - Voluntary Compliance - Water Watch

Stage 1 applies during periods when the possibility exists that the City will not be able to meet all of the demands of its customers. Stage 1 may also be declared when the state or a regional supplier has recommended a reduction in water use, or when normal production and supply are curtailed. This circumstance can occur when either the regional supplier or the local production and distribution staff demonstrate that daily water demand is greater than what can be replenished from available production or supply. This may occur during peak-use periods, or be due to other circumstances. During Stage 1, the following water conservation measures are requested to be undertaken on a voluntary basis:

1. Staff. All City staff to be alerted to the Stage 1 conditions, supplied with educational material, and directed to actively intervene and educate the public, when excessive use is observed.
2. Lawn watering and landscape irrigation. Encourage reduction in consumption or use of City water by residential, recreational, commercial, industrial and institutional water users for landscape irrigation purposes.
3. Agriculture / Nurseries. All non-essential water use shall cease.
4. Residential car washing. All non-essential water use for vehicle washing shall cease.

5. Car Washes. Washing on the immediate premises of a commercial car wash shall not be subject to these measures. However, all non-essential water use shall cease.
6. Pavement/surface washing. Water shall not be used to wash down sidewalks, driveways, parking areas, tennis courts, patios or other paved areas except to alleviate immediate fire or sanitation hazards.
7. Leaks. All water leaks shall be repaired immediately.
8. Restaurants and Hotel/motel. All non-essential water use shall cease.
9. Public Entities. All non-essential water use shall cease.
10. Pools, spas. Discourage the filling or emptying and refilling of swimming pools, excluding normal maintenance of water levels due to evaporation.
11. Lakes, ponds, fountains, and other water features. Discourage the filling or emptying and refilling of water features, excluding normal maintenance of water levels due to evaporation.
12. Commercial / Industrial use. All non-essential water use shall cease.
13. Other Actions Possible. Initiate or implement additional or innovative actions to increase the supply of water available to the City and to conserve the City's existing water supply.
14. Media. The declaration of this and subsequent stages shall be communicated to the media.

(b) Stage 2 - Mandatory Compliance - Water Alert

Stage 2 applies during periods when the probability exists that the City will not be able to meet all of the water demands of its customers. Stage 2 can occur, but is not limited to, periods when either the regional supplier or the local production and distribution staff demonstrate that daily water demand is greater than what can be replenished from available production or supply. Stage 2 may also be declared when the state or a regional supplier has required a reduction in water use, or when normal production and supply are curtailed. Noncompliance with mandatory restrictions on water waste shall be subject to an administrative citation. During Stage 2, the Stage 1 conservation measures shall become mandatory and the following additional conservation measures shall apply:

1. All major users. Require all major water users to reduce their usage by the percentage determined by staff to be necessary to sustain adequate water supply for the City. Such percentage shall be based both on the rate of supply to the City and the rate of current water demand.
2. Rates & charges. Lower allocations for all water connections and accounts by a percentage relative to the shortage. Establish allocations for commercial accounts, set at the lowest consumption for a billing period in the last five years. Impose an additional water surcharge or penalty above and beyond the existing City water rates on all City residents, water users and water consumers who fail or refuse to abide by the requirements, restrictions and priorities adopted by the City in response to the emergency water shortage condition. For example, if Metropolitan Water District calls for a mandatory reduction of 30%, allocations

may be reduced by 30%, with a surcharge added which reflects the penalty the City will be charged by Metropolitan Water District or other agencies for exceeding the mandated reduction.

3. Staff. At the discretion of the City Manager, hire, divert, or employ additional City staff and volunteers to monitor water usage, provide assistance to water users to reduce their water consumption, and to monitor the enforcement of the requirements, restrictions and priorities adopted by the City in response to the emergency water shortage condition.
4. Lawn watering and landscape irrigation. Reduce or prohibit consumption or use of City water by residential, recreational, commercial, industrial and institutional water users for landscape irrigation purposes.
5. Agriculture / Nurseries. Agricultural users and commercial nurseries as defined in the Metropolitan Water District of Southern California Code are subject to an interruptible supply, and curtailments and restrictions are put in place when necessary by Metropolitan Water District. The City shall enforce these restrictions as appropriate.
6. Runoff to street. Administrative citation fines may be increased for water permitted to escape from any hose, pipe, valve, faucet, sprinkler, or irrigation device into any stormwater drainage system, drain, gutter or street.
7. Residential car washing. Washing of autos, trucks, trailers, boats, airplanes and other types of mobile equipment is prohibited, other than at a car wash.
8. Hydrant water use. Prohibit the use of a temporary fire hydrant meter from the City, or otherwise using water through a temporary City water service including jumpers. The use of water from fire hydrants shall be limited to fire fighting and related activities, or other activities necessary to maintain the health, safety and welfare of the public.
9. Construction water. Suspend all sales and deliveries of City water, and use of City water, for construction or grading purposes. New construction meters or services will not be issued. Construction water shall not be used for earth work or road construction purposes.
10. Cleaning of structures. Cleaning of structures, using water from a hose, shall be prohibited.
11. Pavement/surface washing. Pavement and other surface washing shall be prohibited.
12. Spillage. Spillage shall be prohibited.
13. Pools, spas. Prohibit the filling or emptying and refilling of swimming pools, excluding normal maintenance of water levels due to evaporation. New construction permits for pools and spas will not be issued.
14. Lakes, ponds, fountains, and other water features. The operation of any ornamental fountain or similar structure is prohibited.
15. Exceptions. The prohibited uses of water are not applicable to that use of water necessary for public health and safety or for essential governmental services such as police, fire and, other similar emergency services.

(c) Stage 3 - Mandatory Compliance - Water Warning

Stage 3 applies during periods when the City will not be able to meet all of the water demands of its customers. Stage 3 may be declared when the state or a regional supplier has required a reduction in water use, or when normal production and supply are curtailed. Stage 3 may be declared when there is a critical differential between supply and demand, and it is determined that demand cannot be reduced sufficiently through Stage 1 and 2 measures to remain within the available supply. During Stage 3, administrative fines will double, and the following additional water conservation measures shall apply:

1. Lawn watering and landscape irrigation. Further reduce or prohibit consumption or use of City water by residential, recreational, commercial, industrial and institutional water users for landscape irrigation purposes.
2. Rates and charges. Further reduce allocations, raise rates and increase penalty charges, for water use over a baseline defined by the severity of the shortage and anticipated demand at the time of the emergency.
3. Agriculture / Nurseries. Agricultural users and commercial nurseries may be subject to additional restrictions if the regional or local agency or jurisdiction deems necessary. Monetary penalties will be passed through to agricultural customers, if assessed by Metropolitan Water District or other agency.
4. Hydrant water use. Unauthorized use will be subject to additional fines for water theft and meter tampering, pursuant to City of San Juan Capistrano Resolution 06-02-07-05.
5. Construction water. Unauthorized use will be subject to additional fines for water theft and meter tampering, pursuant to City of San Juan Capistrano Resolution 06-02-07-05. No new building permits or will-serve letters will be issued.
6. Air Conditioning. No water shall be used for air conditioning purposes.

(d) Stage 4 - Mandatory Compliance - Water Emergency

Stage 4 applies when a failure of any supply or distribution facility, whether temporary or permanent, occurs in the water distribution system of the State Water Project, Metropolitan Water District of Southern California, Municipal Water District of Orange County, or the City's facilities, and the supply of water necessary to meet the City's demands is likely to be reduced or interrupted. Any and all measures necessary to meet basic health and safety needs shall be undertaken, while all other water uses shall be reduced or prohibited. During Stage 4, administrative fines will triple, offenses may be subject to prosecution and publication, and the following water conservation measures shall apply:

1. Allocations. Water use allocations at the Tier 1 rate will be reduced to a level deemed appropriate for the level of emergency.
2. Lawn watering and landscape irrigation. All outdoor irrigation is prohibited.
3. Agriculture / Nurseries. Use of water for agricultural or commercial nursery purposes, except for livestock water, is prohibited.

4. Car Washes. The use of water by all types of commercial car washes shall be prohibited. Further, such washings are exempted from these regulations where the health, safety and welfare of the public is contingent upon frequent vehicle cleaning such as garbage trucks and vehicles used to transport food and perishables.
5. Pools, spas, water features. Filling, refilling or adding of water to swimming pools, spas, ponds, lakes, and other water features is prohibited.
6. Commercial / Industrial use. The use of water for commercial, manufacturing or processing purposes shall be reduced in volume by 50%.

6-12.07 Enforcement and administration.

The City Manager and all officers and employees of the City, including all *ex officio* officers and employees, shall enforce all the provisions of this chapter. The City Manager or his/her designee shall implement and administer this chapter.

6-12.08 Violations, notices and remedies.

(a) Notice of Noncompliance. If any person fails or refuses to comply with this Chapter, the City Manager or his/her designee shall provide that person with written notice of the violation and an opportunity to correct the noncompliance. The written notice shall:

1. Be posted or presented at the site of the noncompliance;
2. State the time, date, and place of violation;
3. State a general description of the violation;
4. State the means to correct the violation;
5. State a date by which correction is required [period for compliance will be shortened depending on any applicable water conservation contingency stage];
6. State the possible consequences of failing to correct the violation; and,
7. Include appeal and hearing rights and procedures.
8. A copy of the written notice shall be mailed to the address of the violation, to the party who is billed for the water, or to the Owner of the property, as appropriate.
9. Each and every day that the violation occurs or continues shall be considered a new and separate offense.

(b) Compliance Remedies. If a person fails to correct the violation within the time specified in the written notice, the City Manager or his/her designee shall take one or more of the following actions:

1. Any penalties, surcharges or increased charges incurred by the City for excessive use by customers shall be passed on to the customers causing the excessive use of water.

2. For residential accounts, impose an administrative citation of not more than one hundred dollars (\$100) for a first violation, two hundred dollars (\$200) for a second violation, and five hundred dollars (\$500) for each additional violation occurring within the calendar year.
 3. For commercial, industrial, construction, and irrigation accounts, impose a fine of not more than two hundred dollars (\$200) for a first violation, four hundred dollars (\$400) for a second violation, and one thousand dollars (\$1,000) for each additional violation occurring within the calendar year, and a water waste use fee of four (4) times the Tier 3 water rate in effect at the time for each billing unit (CCF) of water that the City estimates is wasted. The estimated water waste determination will be based on the previous five years of water use for similar accounts during the same billing cycle.
 4. Terminate water service to the site of the violation, or place a flow restricting device on the meter;
 5. Abate the violation as a nuisance in accordance with Section 6-12.09 of this Chapter.
- (c) **Regulatory Fine Recovery.** In the event that a person causes a regulatory agency to levy a fine against the City of San Juan Capistrano resulting from the person's violations of the provisions of this Chapter, such person shall be required to reimburse the City for the fine and associated administrative costs.
- (d) **Administrative Hearing for Notices of Noncompliance, Invoices for Costs and Adverse Determinations.** Any person receiving a notice of noncompliance, an invoice for costs, or any person who is subject to any adverse determination made pursuant to this chapter, may appeal the matter by requesting an administrative hearing.
- (e) **Request for Administrative Hearing.** Any person appealing a notice of noncompliance, an invoice for costs or an adverse determination shall, within fifteen (15) days of receipt thereof; file a written request for an administrative hearing, accompanied by an administrative hearing fee as established by separate resolution, with the Office of the City Clerk. Thereafter, a hearing on the matter shall be held before a hearing officer appointed by the City Manager within forty-five (45) business days of the date of filing of the written request unless, in the reasonable discretion of the hearing officer and pursuant to a written request by the appealing party, a continuance of the hearing is granted.
- (f) **Hearing Proceedings.** The City officer and/or employee issuing the notice of noncompliance, invoice for costs or adverse determination shall appear in support of the notice, invoice for costs, or determination, and the appealing party shall appear in support of dismissal of the notice, determination, and invoice for costs. Each party shall have the right to present testimony, present their own witnesses and other documentary evidence as necessary for explanation of their case. The hearing need not be conducted according to technical rules relating to evidence and

witnesses. Any relevant evidence shall be admitted if it is the sort of evidence on which responsible persons are accustomed to rely in the conduct of serious affairs, regardless of the existence of any common law or statutory rule which might make improper admission of such evidence over an objection in civil actions. Hearsay evidence may be used for the purpose of supplementing or explaining any direct evidence but shall not be sufficient in itself to support a finding by the hearing officer, unless it would be admissible over an objection in civil actions. The rules of privilege shall be effective to the same extent they are now or hereafter may be recognized in civil actions, and irrelevant and unduly repetitious evidence shall be excluded. The appealing party shall notify the City 48 hours in advance of the hearing, if legal counsel will be present on their behalf. The provisions of Chapter 6 of Title 1 of this Code shall not apply.

- (g) Final Decision and Appeal. The final decision of the hearing officer shall be issued within thirty (30) days of the conclusion of the hearing and shall be delivered by first-class mail, postage prepaid, to the parties. The decision shall include notice that it is final and any legal challenge to the final decision shall be made pursuant to the provisions of Code of Civil Procedure §§ 1094.5 and 1094.6 and shall be commenced within ninety (90) days following its issuance. The administrative hearing fee paid by a prevailing party in an appeal shall be refunded.

6-12.09 Nuisances, abatement, injunctive relief.

- (a) Any condition in violation of the prohibitions of this chapter shall constitute a threat to the public health, safety and welfare, and is declared and deemed a nuisance pursuant to Government Code § 38771.
1. Court Order to Enjoin or Abatement. At the request of the City Manager, or the person designated by the City Manager, the enforcing attorney may seek a court order to enjoin and/or abate the nuisance.
 2. Notice to Owner and Occupant. Prior to seeking any court order to enjoin or abate a nuisance or threatened nuisance, the City Manager, or the person designated by the City Manager, shall provide notice of the proposed injunction or abatement to the owner and occupant, if any, of the property where the nuisance or threatened nuisance is occurring.
 3. Reimbursement of Costs. All costs incurred by the City in responding to any nuisance, all administrative expenses and all other expenses recoverable under state law, including reasonable consulting fees and attorneys fees, shall be recoverable from the person(s) creating, causing, committing, permitting or maintaining the nuisance.
 4. Nuisance Lien. All costs shall become a lien against the property from which the nuisance emanated and a personal obligation against the owner thereof in accordance with Government Code § 38773.1 and § 38773.5. The owner of

record of the property subject to any lien shall be given notice of the lien prior to recording as required by Government Code § 38773.1.

5. At the direction of the City Manager, or the person designated by the City Manager, the enforcing attorney is authorized to collect nuisance abatement costs or enforce a nuisance lien in an action brought for a money judgment or by delivery to the County Assessor of a special assessment against the property in accord with the conditions and requirements of Government Code § 38773.5.

6-12.10 Relief from compliance.

The City Manager or his/her designee may, in writing, grant variances to persons who apply on forms supplied by the City for:

- (a) Usages of water prohibited by Section 6-12.05 if it is found that a variance is necessary to prevent an emergency condition relating to health and safety, and if the person seeking a variance has demonstrated that he or she has implemented water conservation measures in some other manner that achieves the objectives of this Chapter. No variance may be granted for the filling of any decorative fountain, basin, pond, hot tub, spa or permanent swimming or wading pool, unless the filling occurs as the result of performing necessary leak repairs and unless the other provisions of this Section are met.
- (b) No variance shall be granted to any customer unless the customer has demonstrated that he or she has already achieved the maximum practical reduction in water consumption as can be achieved by the affected property or business. Any variance granted shall be based upon the water consumption rates of similar water users, properties or businesses.

6-12.11 Additional water conservation measures.

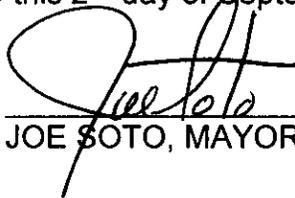
- (a) In addition to the water conservation requirements established by this Chapter, the City Manager or his or her designee is authorized to develop and promulgate additional water conservation plans and measures which shall be directed to achieve target goals for reductions in water consumption as determined by the City Council by resolution from time to time.
- (b) The City may, to the extent authorized by law, elect to contract for the services of any public agency or private enterprise to carry out the building services approvals, inspections, and enforcement authorized by this chapter.

SECTION 5. SEVERABILITY. If any section, subsection, clause or phrase of this Ordinance or any part thereof is for any reason held to be invalid, unconstitutional or enforceable by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portion of the Ordinance. The City Council declares that it would have passed each section, subsection, paragraph, sentence,

clause or phrase thereof, irrespective of the fact that any one or more section, subsection, sentence, clause or phrase would be declared invalid, unconstitutional or unenforceable.

SECTION 6. CERTIFICATION. The City Clerk shall certify to the adoption of this Ordinance and cause the same to be posted at the duly designated posting places within the City and published once within fifteen (15) days after passage and adoption as required by law; or, in the alternative, the City Clerk may cause to be published a summary of this Ordinance and a certified copy of the text of this Ordinance shall be posted in the Office of the City Clerk five (5) days prior to the date of adoption of this Ordinance; and, within fifteen (15) days after adoption, the City Clerk shall cause to be published the aforementioned summary and shall post a certified copy of this Ordinance, together with the vote for and against the same, in the Office of the City Clerk.

PASSED, APPROVED, AND ADOPTED this 2nd day of September 2008.



JOE SOTO, MAYOR

ATTEST:


MARGARET R. MONAHAN, CITY CLERK
STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss.
CITY OF SAN JUAN CAPISTRANO)

I, MARGARET R. MONAHAN, appointed City Clerk of the City of San Juan Capistrano, do hereby certify that the foregoing is a true and correct copy of **Ordinance No. 941** which was regularly introduced and placed upon its first reading at the Regular Meeting of the City Council on the 19TH day of August 2008 and that thereafter, said Ordinance was duly adopted and passed at the Regular Meeting of the City Council on the 2nd day of September 2008 by the following vote, to wit:

AYES: COUNCIL MEMBERS: Allevato, Hribar, Uso, Nielsen, and Mayor Soto
NOES COUNCIL MEMBERS: None
ABSENT: COUNCIL MEMBERS: None



MARGARET R. MONAHAN, City Clerk

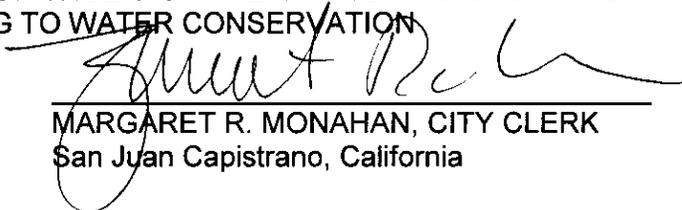
STATE OF CALIFORNIA
COUNTY OF ORANGE
CITY OF SAN JUAN CAPISTRANO)

)
) ss

AFFIDAVIT OF POSTING

I, **MARGARET R. MONAHAN**, declare as follows: That I am the duly appointed and qualified City Clerk of the City of San Juan Capistrano; That in compliance with State laws, Government Code section 36933(1) of the State of California, on the 19TH day of August 2008, at least 5 days prior to September 2, 2008, the date of adoption of the ordinance, I caused to be posted, in the City Clerk's Office a certified copy of the proposed Ordinance entitled:

AN ORDINANCE OF THE CITY OF SAN JUAN CAPISTRANO, CALIFORNIA,
ESTABLISHING CHAPTER 12 OF TITLE 6 OF THE SAN JUAN CAPISTRANO
MUNICIPAL CODE PERTAINING TO WATER CONSERVATION



MARGARET R. MONAHAN, CITY CLERK
San Juan Capistrano, California

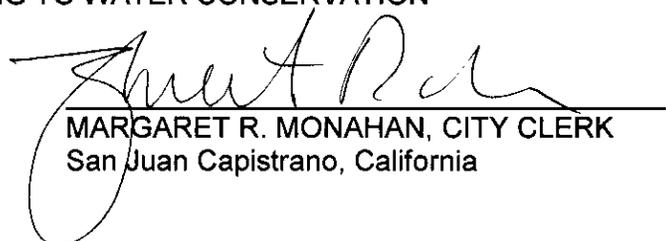
STATE OF CALIFORNIA
COUNTY OF ORANGE
CITY OF SAN JUAN CAPISTRANO)

)
) ss

AFFIDAVIT OF POSTING

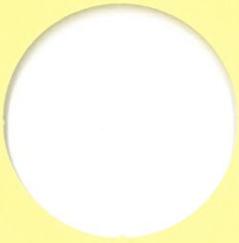
I, **MARGARET R. MONAHAN**, declare as follows: That I am the duly appointed and qualified City Clerk of the City of San Juan Capistrano; That in compliance with State laws, Government Code section 36933(1) of the State of California. On the 3rd day of September 2008 I caused to be posted, in the City Clerk's office, a certified copy of **Ordinance No. 941**, adopted by the City Council on September 2, 2008 entitled:

AN ORDINANCE OF THE CITY OF SAN JUAN CAPISTRANO, CALIFORNIA,
ESTABLISHING CHAPTER 12 OF TITLE 6 OF THE SAN JUAN CAPISTRANO
MUNICIPAL CODE PERTAINING TO WATER CONSERVATION



MARGARET R. MONAHAN, CITY CLERK
San Juan Capistrano, California

Stage 1 Tag



Did You Know?

San Juan Capistrano is experiencing a water shortage along with all of Southern California.

Stage 1
Water restrictions are in effect

This is an educational notice.

Date: _____

Today we observed:

1. Sprinklers were running during the day (do not water between 9 a.m. and 6 p.m.).
2. Water runoff from this property.
3. Car washing: excessive use.
4. Pavement and/or structure washing.
5. Water is leaking on this property.

Comments: _____

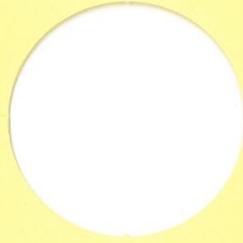
Date _____ Time _____ By _____

Address _____

Circle Item: 1 2 3 4 5

Comment: _____

Over



Did You Know?

Violations of the Water Conservation Ordinance may be subject to fines.

The complete text of the ordinance is available at the City's Web site:
www.sanjuancapistrano.org

Violations of the ordinance may be subject to administrative citations and fines.

Stay informed! Sign up for e-News notification about water issues on the City's Web site.

Call if you have questions!
Customer Service: (949) 493-1515

Thank you for being Water Wise!

Comments: _____

Additional Comments:

AB 1420 Compliance Letter

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



August 25, 2009

UTILITY DEPARTMENT

AUG 28 2009

CITY OF
SAN JUAN CAPISTRANO

Ms. Francie Kennedy
Water Conservation Coordinator
City of San Juan Capistrano
32400 Paseo Adelanto
San Juan Capistrano, California 92675

Dear Ms. ^{Francie}Kennedy:

The Department of Water Resources (DWR) has reviewed the City of San Juan Capistrano's (CSJC) Self-Certification Statement – Table 1 CSJC submitted on August 20, 2009, regarding implementation of the Urban Best Management Practices (BMPs).

The purpose of DWR's review is to determine eligibility of CSJC to receive water management grant or loan funds. DWR has followed the *Compliance with AB 1420 Requirements* dated June 1, 2009. For detailed information, please visit www.owue.water.ca.gov/finance/index.cfm.

Based on DWR's review of the information in Table 1, CSJC has and is currently implementing the BMPs consistent with AB 1420 and, therefore, is eligible to receive water management grant or loan funds.

DWR reserves the right to request additional information and documentation to substantiate the accuracy of the information provided in Table 1. Additionally, DWR may reverse or modify its eligibility determination and notify you if it finds inaccuracies in the supporting documentation or in Table 1.

If you have any questions, please contact me at (916) 651-9666 or Chriss Fakunding at (916) 651-9673.

Sincerely,

Handwritten signature of Baryohay Davidoff in black ink.

Baryohay Davidoff, Chief
Agricultural Water Management Planning
And Financial Assistance

Customer Service Tag

Efficient Water Use

Saves water and dollars....

Outdoors:

- Only water lawns and plants when they need it.
- Check the sprinklers monthly to make sure they are not broken.
- Use a broom instead of a hose to clean walks, patios and driveways. This prevents runoff, also.

Indoors:

- Toilets are the most common cause of water waste indoors – if they are making funny noises they are wasting water. Please turn off or repair immediately.
- Turn off faucets when not in use.
- Fix all leaks as soon as you notice them.
- Only run the dishwasher and washing machine when you have a full load.
- A one or two minute reduction in shower time can save hundreds of gallons of water each month!

Comments: _____

If you have any questions about this notice, please call Customer Service at (949) 493-1515.

Office hours:

7:30 a.m. to 5:30 p.m. Monday – Thursday

7:30 a.m. to 4:30 p.m. Friday



City of San Juan Capistrano
32400 Paseo Adelanto
San Juan Capistrano, CA 92675

Important Notice

Date: _____

- Your water service is off; please call the Water Customer Service Dept. at (949) 493-1515.
- Your water service is scheduled to be locked off, please call Customer Service Dept. to set up your account.
- Your water service is off for repairs until ____.
- We are unable to turn your water service on.
 - The meter is moving indicating water may be on in the house or yard.
 - Water is on at meter, please check house valve or ball valve.
- High bill investigation results:
 - The meter read is correct.
 - The meter was incorrectly read; Customer Service will call with corrected amount due.
 - Movement at meter indicates possible leak or water in use at time of test.
 - Leak observed on owner's side – your plumber can make repairs.
 - Leak on City side of meter – repairs will be scheduled by our crew.
- Possible over watering – please check sprinklers and watering schedule.
- Runoff observed.
- Water pressure _____.
- Access to water meter box needed:
 - Please trim bushes / plants.
 - Please remove dirt on meter box.
 - Meter is behind locked gate, please call to schedule access and provide gate code.
 - Crew needs access for reading or maintenance, please call to schedule access.
 - Car parked over meter.
- We came as requested – sorry we missed you!

Comments:

Educational Tag

City of San Juan Capistrano

Water Conservation Ordinance Educational Notice

Date: _____

San Juan Capistrano's Water Conservation Ordinance took effect October 2, 2008. We have observed a possible violation on your property, and wish to inform you so that you may correct the situation.

Year-round water waste prevention measures:

1. **Leak observed:** Please begin repair of leaks within 24 hours of notification.
2. **Automatic irrigation** watering is prohibited between 9AM- 6PM. Please reset the timer.
3. **Automatic irrigation** watering is prohibited when raining. Please turn off irrigation when rain is predicted.
4. **Overspray or excess runoff** was observed. Please adjust sprinklers and timer to avoid runoff.
5. **Washing vehicles, equipment, and machinery:** using a hose requires a shutoff nozzle; minimize water runoff to gutter.
6. **Cleaning structures and surfaces** using a hose is discouraged except for health and safety. Requires a shutoff nozzle; minimize water runoff to gutter.
7. **Pools and spas** - empty only for repairs, drain only into sanitary sewer.
8. **Gutter flooding** is prohibited.

Date _____ Time _____ By _____

Address _____

Circle Item: 1 2 3 4 5 6 7 8

Comment: _____

California's water supply is increasingly constrained by drought and by regulatory agencies. Locally, wasteful water use practices constitute a potential threat to the City's water supplies. The prevention of water waste is an economically and environmentally feasible way to protect and conserve the City's water supplies.

The purpose of this ordinance is to establish standards for year-round water conservation, to promote the efficient use of water, and to reduce or eliminate the waste of water in the City.

You are in control of your water use! Please use water wisely – be aware of water-using activities in your home and garden, and don't let water leave your property.

For further information:

City Water Customer Service 493-1515

The complete ordinance, as well as summary brochures can be found at:
www.sanjuancapistrano.org

Comments:

Additional Comments:

Water and Sewer Rate Codes

City of San Juan Capistrano - Water and Sewer Rate Codes

Rates & Allocations Effective as of 07/01/10

USAGE						
CODE	CUSTOMER TYPE	Base Rate	TIER I	TIER II	TIER III	ALLOCATION TYPE (Alloc. in ccf)
WCA	REGULAR LOT	\$2.91	\$3.88	\$5.83	\$10.68	Indoor @ 6 + Standard Outdoor (3,636 Sq Ft)
WCB	LARGE LOT	\$2.91	\$3.88	\$5.83	\$10.68	Indoor @ 6 (x # Units) + Outdoor by SQ FT
WCC	MASTER METERED RESIDENTIAL	\$3.62	\$4.83	\$7.25	\$13.28	Indoor @ 4 (x # units) + Outdoor by SQ FT
WCD	MULTI WITH Own Irrigation	\$3.22	\$4.30	\$6.44	\$11.81	Indoor @ 6 (x # Units)+ Standard Outdoor
WCE	MULTI W/O Irr -Regular	\$3.22	\$4.30	\$6.44	\$11.81	Indoor only @ 6 (x # Units)
WCN	MULTI W/O Irr- High Density	\$3.22	\$4.30	\$6.44	\$11.81	Indoor only @ 8 (x # Units)
WCF	LANDSCAPE	N/A	\$3.34	\$5.02	\$9.18	Outdoor only by SQ FT
WCG	AG	\$2.57	\$3.42	\$5.13	\$9.42	Indoor @ 6 (# Units) + Outdoor by SQ FT
WCH	COMMERCIAL	\$2.81	\$3.74	\$5.62	\$10.29	Indoor only @ 6 (x # Units)
WCI	CONSTRUCTION	N/A	N/A	\$5.83	N/A	No Allocations - All at Tier II
WCJ	NON-POTABLE	N/A	\$3.27	\$4.91	\$8.99	Outdoor only; by SQ FT
WCK	NO CHARGE - USE	\$0.00	N/A	N/A	N/A	
WCL	FIRELINES	\$5.83	N/A	N/A	N/A	No Allocations - All at Tier I
WCM	CITY FARM (AG rate, one tier)	\$2.83	N/A	N/A	N/A	No Allocations - All at Tier I
WCO	RECYCLED	N/A	\$3.27	\$4.91	\$8.99	Outdoor only; by SQ FT

SERVICE CHARGE RATE CODES per month

CODE	SERVICE SIZE	CHARGE	
WSA	5/8"	\$18.00	
WSB	1"	\$27.00	
WSC	1.5"	\$40.49	
WSD	2"	\$56.62	
WSE	3"	\$95.38	
WSF	4"	\$150.26	
WSG	6"	\$287.92	
WSH	8"	\$454.37	
WSI	MISC. FLAT RATE USE	\$45.17	
WSJ	MOBILE HOMES	\$1.81	Per Space (See Formula Control File)
WSK	TEMP SERVICE - JUMPER	\$18.00	
WSL	FIRELINE	\$80.98	
WSS	CONSTRUCTION	\$95.38	(i.e. \$2.6943/ [\$2.69] day)
WST	NO CHARGE- SERV.	\$0.00	No charge i.e. Compound meter or City Account

DISCOUNT (CREDIT) RATE CODES per month

CODE	DISCOUNT TYPE	CHG/CREDIT	
DSC	DISCOUNT - CITY TREES	(\$19.40)	= 5 ccf
DSD	DISCOUNT - SHARED SERVICE	N/A	= Flat Rate Charge

SEWER RATE CODES per month &/or per ccf

CODE	CUSTOMER TYPE	CHARGE	
SCA	NO SJC SEWER	\$0.00	
SCB	Not used		
SCC	RESIDENTIAL	\$22.33	PER UNIT (if multi units)
SCD	MULTI-RESIDENTIAL	\$17.84	PER UNIT (if multi units)
SCE	COMMERCIAL	BY USE*	* Monthly water use plus \$22.33
SCF	POOL-SMALL	\$14.50	0-30 ccf \$1.16
SCG	POOL-LARGE	\$29.00	31-100 ccf \$1.38
SCH	FLAT-AMBUEHL	\$327.70	101 & > ccf \$1.60
SCI	FLAT-CAPO SCH	\$327.34	
SCJ	FLAT- MARCO	\$434.28	
SCK	FLAT-SJ ELEM	\$208.51	
SCL	FLAT-CV CHURCH	\$403.83	
SCM	FLAT-ST MARG	\$238.02	
SCN	FLAT-NAZARENE	\$167.48	
SCQ	MOBILE HOMES	\$14.50	PER UNIT

Appendix F
60 Day Notification Letters

To Be Provided At A Later Date

Appendix G
Public Hearing Notice

To Be Provided At A Later Date

Appendix H
Copy of Plan Adoption

To Be Provided At A Later Date



8001 Irvine Center Drive, Suite 1100
Irvine, CA 92618
949.450.9901 Fax 949.450..9902

**MALCOLM
PIRNIE**

 **ARCADIS**

The Water Division of ARCADIS