ITEM NO. 39

STAFF REPORT

CITY OF OCEANSIDE

DATE: July 6, 2011

TO: Honorable Mayor and City Councilmembers

FROM: Water Utilities Department

SUBJECT: **ADOPTION OF A RESOLUTION TO ADOPT THE CITY OF OCEANSIDE 2010 URBAN WATER MANAGEMENT PLAN**

SYNOPSIS

Staff and the Utilities Commission recommend that the City Council adopt a resolution to adopt the City of Oceanside 2010 Urban Water Management Plan (Exhibit A).

BACKGROUND

On December 22, 2010, the City Council approved a professional services agreement with Infrastructure Engineering Corporation (IEC) to prepare the City's 2010 Urban Water Management Plan in order to comply with the California Urban Water Management Planning Act, Water Code Division 6, part 2.6. The UWMP must follow the guidelines set in the "Guidebook to Assist Water Suppliers in the Preparation of a 2010 Urban Water Management Plan" prepared by the California Department of Water Resources. The general provisions within the guidebook require that each urban water supplier review, make changes to and amend its Urban Water Management Plan every five years. The Urban Water Management Planning Act (Act) also requires that water suppliers file the plans with the Department of Water Resources (DWR) by July 31, 2011. The City has complied with the Act by filing a plan in 1985, 1990, 1995, 2000, and 2005.

Since the last UWMPs were submitted in 2005, there have been changes in the Act. Former Governor Schwarzenegger, in his 20x2020 Plan, determined that for California to continue to have enough water to support its growing population, it needs to reduce the amount of water each person uses per day (per capita daily consumption, which is measured in gallons per capita per day). This reduction of 20 percent per capita use by the year 2020 is supported by legislation passed in November 2009 (SB x 7-7). The revised plan will be used by the City of Oceanside to outline strategies for the conservation and efficient use of water and to ensure that the citizens of Oceanside have a safe and adequate water supply.

The UWMP is required to be adopted and submitted to the Department of Water Resources by July 31, 2011 (California Water Code §10608.20). In addition to this date,

there are several important requirements to consider regarding preparation, coordination, adoption, and submittal of UWMPs. Some of these deadlines are:

- **60 days prior to the Review/Adoption Hearing:** The UWMP regulations requires that a hearing be held prior to adoption of an UWMP (CWC §10642). Any city or county within which a water supplier delivers water is to be notified at least 60 days prior to the hearing that the UWMP is being reviewed (CWC §10621). The City mailed out notices to the San Diego County Water Authority, the County of San Diego, Rainbow Municipal Water District, Carlsbad Municipal Water District, Vista Irrigation District, and Camp Pendleton on March 7, 2011.

- **Prior to adopting a plan:** The urban water supplier shall make the plan available for public inspection (CWC §10642). The City's draft UWMP was made available on the City's website, at the Oceanside Public Library and at the Water Utilities Department in City Hall South.

- **30 days after Adoption:** Submit the UWMP to DWR, the California State Library, and any city or county within which it supplies water. Copies of any changes or amendments also have to be submitted within 30 days (CWC §10644(a)). The City will submit the UWMP to DWR, the California State Library, the San Diego County Water Authority, the County of San Diego, Rainbow Municipal Water District, Carlsbad Municipal Water District, Vista Irrigation District, and Camp Pendleton within 30 days if the UWMP is adopted on July 6, 2011. If there are any changes or amendments, those will also be submitted within 30 days.

- **30 days after Submission to DWR:** Provide a copy of the UWMP for public review during normal business hours (CWC §10645). The City will post a copy of the UWMP on its website and make it available at the City's public library and at the Water Utilities Department.

- **60 days after Submission to DWR:** Provide the applicable portions of the UWMP to any city or county within which the supplier provides water (CWC §10635(b)). The City will provide the UWMP to the agencies listed above within 60 days after submission to DWR.

Comprehensive information on both the Water Conservation Master Plan and the Urban Water Management Plan was presented to the Council at a workshop on June 7, 2011. At the workshop, the Water Conservation Master Plan was approved and the City Council approved staff's recommendation to adopt the resolution adopting the UWMP at the July 6, 2011, public hearing.

ANALYSIS

The City currently purchases approximately 85 percent of its water from the Metropolitan Water District through the San Diego County Water Authority. Careful water resource planning has been very important in the development of the City's water supply system which includes 12 reservoirs, 9 pump stations, 1 surface water treatment plant and 1 desalting facility. To prepare the 2010 Urban Water Management Plan, IEC analyzed Oceanside's current and future water sources, demands and supplies.

For future demands and water supply reliability, the UWMP includes the City's plans to add seawater desalination to the existing brackish groundwater treatment at the Mission Basin Desalting Facility. It also discusses the expansion of Oceanside's recycled water system that will begin construction on the first phase of the project in FY 2012-13 and the North County Regional Recycled Water Project (NSDCRRWP). The NSDCRRWP consists of ten agencies and cities that entered into an agreement to seek federal and state grant funding to interconnect and maximize recycled water use in North County. The UWMP includes a water shortage contingency plan as required. It also incorporates the elements of the Water Conservation Master Plan, approved by the City Council on June 7, 2011, in the demand management and water conservation activities (Best Management Practices) sections. The UWMP will serve as a road map for sound decision-making regarding water supply planning in the future.

FISCAL IMPACT

Because the UWMP incorporates the elements of the Water Conservation Master Plan, the fiscal impact is the same. The total estimated cost of the conservation program until 2020 is $11,764,326 which has an estimated annual cost of $1,176,433. The cost increase for FY12 is $370,000, the bulk of which includes increased residential public education, washer rebates, replacement of inefficient equipment at commercial/industrial facilities, and residential and commercial high-efficiency toilet rebates. During the FY12 budget process, the Department restructured several functions resulting in a reduction of 4.5 FTEs and a net reduction of $379,737 in personnel costs and benefits. These savings were applied to the increased cost of conservation programs resulting in no additional cost increase to the rate payer. The City Council approved the FY12 budget (750010711.5305) of $370,000 on June 1, 2011.

The largest cost component over the next nine years is funding a portion of the Phase I & II recycled water projects. The conservation portion of the Phases is $4.1M and is planned to commence during FY13. Funding for the conservation portion will be included in the Water Operating budget request each year; the rate increases taking effect in February 2011 and July 2011 account for the increased department costs associated with the capital part of the program. Phase I includes replacement of the pilot treatment facility at San Luis Rey as well as retrofit and use of recycled water at San Luis Rey for plant processes. Phase II includes optimizing use of recycled water from Fallbrook Public Utilities District in the Morro Hills area. It is anticipated that the remainder of the project will be paid for from developer fees and fixed asset replacement funds.

The other larger cost component is for Automated Meter Infrastructure (AMI) at an added cost of $300,000/year, starting in FY15. For future years, the costs to implement the Plan will be paid for by a combination of operating and capital funds. The implementation of the Water Conservation Master Plan is an unfunded state mandate.

CITY ATTORNEY'S ANALYSIS

The referenced documents have been reviewed by the City Attorney and approved as to form.

COMMISSION OR COMMITTEE REPORT

The Utilities Commission reviewed and approved staff's recommendation at its May 24, 2011 meeting.

RECOMMENDATIONS

Staff and the Utilities Commission recommend that the City Council adopt a resolution to adopt the City of Oceanside 2010 Urban Water Management Plan.

PREPARED BY:

Greg Blakely
Administration Manager

SUBMITTED BY:

Peter A. Weiss
City Manager

REVIEWED BY:

Michelle Skaggs Lawrence, Deputy City Manager

Cari Dale, Water Utilities Director

Teri Ferro, Financial Services Director

Exhibit A: Resolution
Exhibit B: 2010 Urban Water Management Plan

EXHIBIT A

RESOLUTION NO._____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF OCEANSIDE ADOPTING THE 2010 URBAN WATER MANAGEMENT PLAN

WHEREAS, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et seq., known as the Urban Water Management Planning Act) during the 1983-1984 Regular Session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan (Plan), the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS, the City of Oceanside is an urban supplier of water providing water to a population over 180,000;

WHEREAS, the Urban Water Management Plan shall be periodically reviewed at least once every five years and the City shall make any amendments or changes to its plans which are indicated by the review;

WHEREAS, the proper and cost effective conservation of our water resources is essential to insuring adequate water supplies now and in the future;

WHEREAS, water conservation is recognized as an integral part of all water programs;

WHEREAS, the City of Oceanside has completed a 2010 Urban Water Management Plan pursuant to the requirements of California Water Code Section 10620;

WHEREAS, the Plan is the formal document to discuss past, current, and projected water demands; current and alternate water conservation measures; water supply deficiencies; and future water management practices;

WHEREAS, the Plan must be adopted after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption;

WHEREAS, the City has prepared and circulated for public review a draft 2010 Urban Water Management Plan (2010 Plan) and a properly noticed public hearing regarding the 2010 Plan was held by the City; and

WHEREAS, the City did prepare and shall file said 2010 Plan with the California Department of Water Resources.

NOW, THEREFORE, the City Council of the City of Oceanside DOES RESOLVE as follows:

SECTION 1. The 2010 Urban Water Management Plan for the City of Oceanside, a copy of which is available in the City Clerk's office, is hereby adopted and approved.

SECTION 2. The Water Utilities Director of the City of Oceanside is hereby authorized and directed to implement the water conservation measures included in the local and regional water conservation effort made part of the Plan.

PASSED AND ADOPTED by the City Council of the City of Oceanside, California, this _____ day of _____, 2011, by the following vote

AYES:
NAYES:
ABSENT:
ABSTAIN:

_____
MAYOR, CITY OF OCEANSIDE

ATTEST:

_____
CITY CLERK

APPROVED AS TO FORM:

Barbara Hamilton, ASST.
CITY ATTORNEY

G:\Administration\Council - Commission\Staff Reports\Staff Reports - 2011\Resolutions and Ordinances\4-6-11 URBAN WATER MANAGEMENT PLAN 2010 RESOLUTION.doc

Exhibit B

City of Oceanside
2010 Urban Water Management Plan

DRAFT REPORT

Prepared for:

City of Oceanside
300 N. Coast Highway
Oceanside, CA 92054

May 2011

Prepared by:
Infrastructure Engineering Corporation
301 Mission Ave, Suite 202
Oceanside, CA 92054

TABLE OF CONTENTS

SECTION 1: PLAN PREPARATION 3

1.1 AGENCY COORDINATION 3
1.2 PUBLIC PARTICIPATION 4
1.3 PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION 5

SECTION 2: SYSTEM DESCRIPTION 6

2.1 SERVICE AREA PHYSICAL DESCRIPTION 6
2.2 SERVICE AREA POPULATION 9

SECTION 3: SYSTEM DEMANDS 10

3.1 BASELINES AND TARGETS 10
3.2 WATER DEMANDS 12
3.2.1 Low Income Water Demands *15*
3.2.2 Sale to Other Agencies *15*
3.2.3 Additional Water Uses and Losses *15*
3.2.4 Total Water Use *17*
3.3 WATER DEMAND PROJECTIONS 17
3.4 WATER USE REDUCTION PLAN 18

SECTION 4: SYSTEM SUPPLIES 20

4.1 WATER SOURCES 20
4.2 GROUNDWATER 23
4.3 TRANSFER OPPORTUNITIES 25
4.4 DESALINATED WATER OPPORTUNITIES 25
4.5 RECYCLED WATER OPPORTUNITIES 27
4.5.1 Wastewater Collection and Treatment Facilities *27*
4.5.1.1 San Luis Rey Wastewater Treatment Plant 28
4.5.1.2 La Salina Wastewater Treatment Plant 28
4.5.1.3 Fallbrook Public Utility District Treatment Plant 28
4.5.2 Recycled Water Master Plan *29*
4.5.3 Potential and Projected Recycled Water Use *29*
4.5.4 Methods to Encourage Recycled Water Use *31*
4.6 FUTURE WATER PROJECTS 32
4.6.1 Weese Water Treatment Plant Expansion *32*
4.6.2 Mission Basin Groundwater Purification Facility *32*
4.6.3 Local Seawater Desalination Facility *32*
4.6.4 Wastewater Recycling *33*

SECTION 5: WATER SUPPLY RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING 35

5.1 WATER SUPPLY RELIABILITY 36
5.2 WATER SHORTAGE CONTINGENCY PLANNING 38
5.2.1 Stages of Action *38*
5.2.2 Prohibitions *39*
5.2.3 Consumption Reduction Methods *40*
5.2.4 Penalties and Charges *41*
5.2.5 Revenue and Expenditure Impacts of Water Shortage *42*
5.2.5.1 Measures to Overcome Impacts 43
5.3 WATER QUALITY 45
5.4 DROUGHT PLANNING 45
5.4.1 Normal Supply and Demand Comparison *47*
5.4.2 Single-Dry Year Supply and Demand Comparison *47*

5.4.3 Multiple-Dry Year Supply and Demand Comparison *47*

SECTION 6: DEMAND MANAGEMENT MEASURES **49**

APPENDIX A: LIST OF GROUPS WHO PARTICIPATED IN THE DEVELOPMENT OF THIS PLAN

APPENDIX B: RESOLUTION NO. XXX, RESOLUTION TO ADOPT THE 2010 URBAN WATER MANAGEMENT PLAN, and COVER LETTERS TO OTHER AGENCIES

APPENDIX C: OCEANSIDE'S DROUGHT ORDINANCES

APPENDIX D: OCEANSIDE'S BEST MANAGEMENT PRACTICES COVERGE REPORT FOR 2009-2010

SECTION 1: PLAN PREPARATION

The City of Oceanside (City), as defined in the California Water Code section 10617, qualifies as an "Urban Water Supplier". The City is a public agency directly providing water for municipal purposes to more than 3,000 customers. As such, the City is required to complete an Urban Water Management Plan (UWMP) every five years. The last UWMP was completed in 2005.

The preparation of the City of Oceanside's 2010 Urban Water Management Plan (Plan) was contracted to Infrastructure Engineering Corporation (IEC) as provided for in the California Water Code section 10620, paragraph (e). The Plan has been prepared in conformance with the California Urban Water Management Planning Act, California Water Code Division 6, Part 2.6, Urban Water Management Planning.

The Plan is an update to the City of Oceanside's 2005 Urban Water Management Plan. The City received comments from the California Department of Water Resources specifying revisions to the 2005 Urban Water Management Plan that would be required, prior to the acceptance of the plan by the California Department of Water Resources. The City has revised the original 2005 Urban Water Management Plan to incorporate these comments, and addressed all applicable portions of California Water Code Division 6, Part 2.6 (Urban Water Management Planning).

1.1 AGENCY COORDINATION

Law

> 10620(d)(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.
>
> 10621(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.
>
> 10635(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

During the preparation of the Plan, the City coordinated information with the San Diego County Water Authority. A list of agencies is provided in Table 1, along with their involvement with the preparation of the City of Oceanside 2010 Urban Water Management Plan.

Table 1
Coordination with Appropriate Agencies

Coordinating Agencies	Participated in developing the plan	Commented on the draft	Attended public meetings	Was contacted for assistance	Was sent a copy of the draft plan	Was sent a notice of intention to adopt	Not Involved / No Information
San Diego County Water Authority				X		X	
County of San Diego						X	
Rainbow Municipal Water District						X	
Carlsbad Municipal Water District						X	
Vista Irrigation District						X	
Camp Pendleton						X	
General Public		X	X			X	

1.2 Public Participation

Law

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

The City actively encouraged community participation in its urban water management planning efforts. A workshop was held on June 7, 2011, for the purpose of obtaining City Council and public comment and input on the UWMP. A Public Hearing was held on July 6, 2011 to adopt the UWMP. The public hearing was advertised in the North County Times. Additionally, a public hearing notice was posted on the City's web site (http://www.ci.oceanside.ca.us). The 2010 UWMP was made available for public review at the Oceanside Public Libraries and the Water Utilities Department at Oceanside City Hall.

1.3 Plan Adoption, Submittal, and Implementation

Law

> 10621(c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).
>
> 10642. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.
>
> 10643. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.
>
> 10644(a) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.
>
> 10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

The City will review all of the comments received and revise the Plan accordingly. The City Council will hold a Public Hearing on July 6, 2011 to adopt the 2010 Plan by Resolution XXX, as included in Appendix B. Within 30 days of adoption, the City will submit copies to DWR, California State Library, City of Encinitas and County of San Diego, in addition to placing the adopted Plan on the City of Encinitas website for public review.

Since adopting its previous Urban Water management Plans, the City has continued to implement conservation measures as planned and shown in the CUWCC BMP Annual Reports included as Appendix D to the 2010 Plan.

SECTION 2: SYSTEM DESCRIPTION

Law

> 10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:
>
> 10631(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

The City water supply system includes five connections with the San Diego County Water Authority (SDCWA) filtered and untreated imported water aqueducts. These include connections on Pipelines No. 1 and No. 2, the CWA Tri-Agency Pipeline and the North County Distribution Pipeline (NCDP) for SDCWA imported water delivery to the City. The City also provides treatment to imported unfiltered water from the SDCWA at the 25 MGD Robert A. Weese Filtration Plant and the 6.4 MGD Mission Basin Groundwater Purification Facility that treats brackish groundwater extracted fro Mission Basin via five wells. Recycled water is another City supply source.

The City's water distribution system also includes 12 storage reservoirs located throughout the water system with at least one storage reservoir located in each of seven primary pressure zones. Some of the primary pressure zones have subzones that are supplied via pumping and via a pressure reducing station if the subzone ground elevations are lower.

There are nine pump stations in the City's water distribution system. Four of the pump stations serve as the primary source of supply for its respective service zone. The other five pump stations are for emergency service or are on standby. PRS's are located throughout the City. In some instances, the PRS is a primary source of supply for a pressure zone, while in other instances they serve as a secondary source of supply.

There are approximately 476 miles of transmission and distribution piping in the water system with sizes ranging from 6 to 42 inches in diameter. The majority of the piping in the system is 8 inches in diameter and is made of asbestos cement (AC) pipe.

2.1 SERVICE AREA PHYSICAL DESCRIPTION

The City of Oceanside was incorporated as a general law city in 1888, pursuant to the California Constitution Article XI and the California Government Code. The City is governed by an elected five-member council. The City is a full service city providing water and wastewater services through its Water Utilities department, under the purview of the City Council.

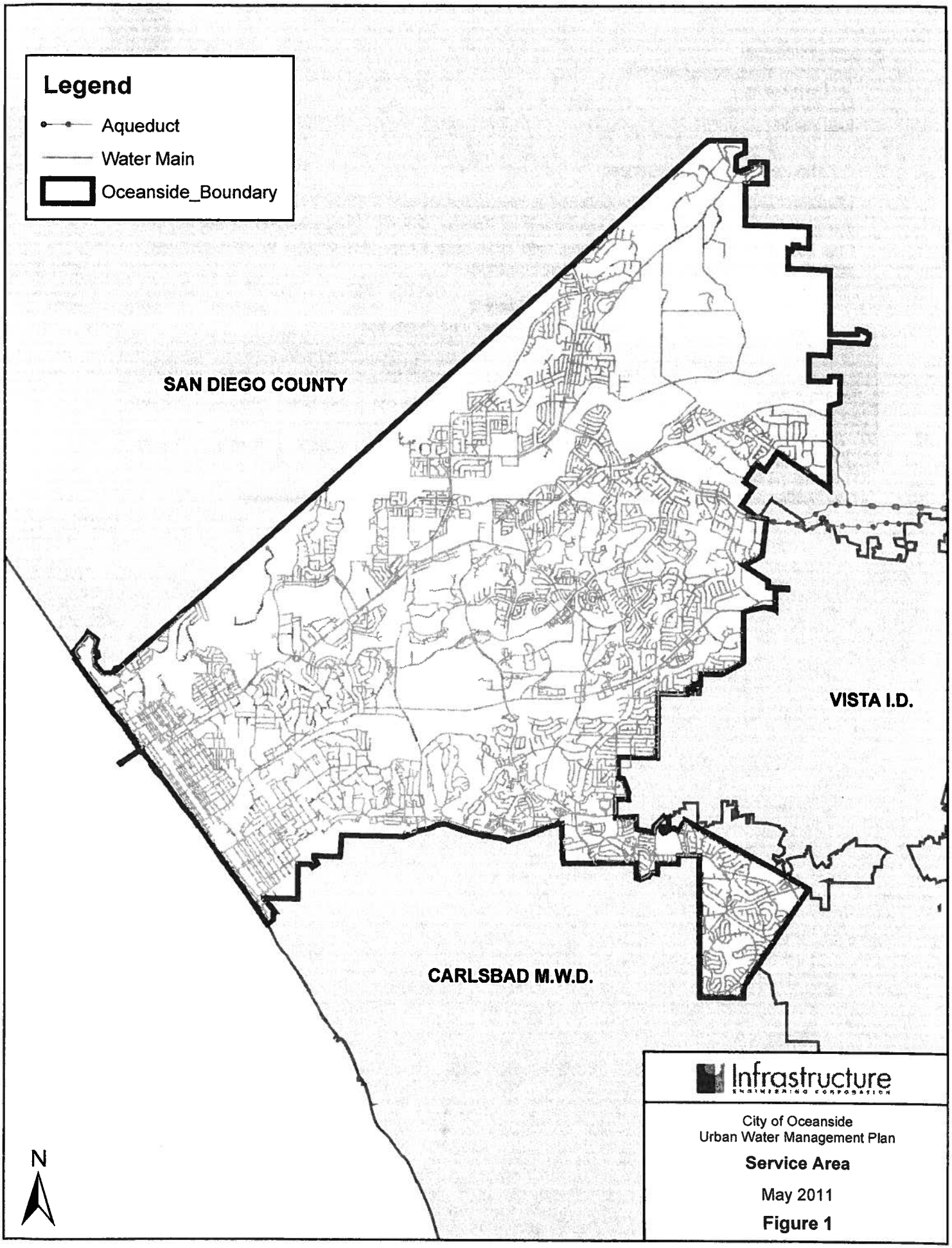
The City is located 35 miles north of the City of San Diego, encompassing about 42 square miles. The city is bordered on the west by the Pacific Ocean, the north by Camp Pendleton

Marine Base, the south by the City of Carlsbad, and on the east by the City of Vista and unincorporated County land. A map of the City and surrounding municipalities is shown in Figure 1 on the following page.

The City of Oceanside has a mild, coastal climate. As shown in Table 1A, the average annual temperature is 60.7o F. Average rainfall is 10.4 inches as measured at the National Weather Service Oceanside Marina Weather Station 046377. This rainfall total is typical for Southern California, which is low compared with the national average. Evapotranspiration (ETo) is the quantity of moisture that is both transpired by plants and evaporated by the soil plant surfaces. ETo is important to irrigation management because crop yield relates directly to ETo. Irrigators who are working to achieve maximum yields need to apply water to meet the crop's ETo demand. As shown, the largest ETo demands occur in the summer months.

Table 1A
Oceanside Climate Characteristics

	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Annual
Standard Monthly Average ETo Demand (inches)	2.08	2.4	3.7	4.79	5.35	5.72	6.06	5.98	4.6	3.61	2.44	1.99	48.7
Average Rainfall (inches)	2.14	2.16	1.73	0.97	0.21	0.08	0.03	0.08	0.26	0.38	1.08	1.27	10.4
Average Temperature (Fahrenheit)	54.2	54.7	55.6	57.7	60.7	63.4	67.2	68.8	67.3	63.7	58.6	54.7	60.7



City of Oceanside
Urban Water Management Plan

Service Area

May 2011

Figure 1

2.2 SERVICE AREA POPULATION

Historical and projected City population estimates are shown in Table 2 below. Historical data was gathered from California's Department of Finance (DOF). Projected population for the City was determined by interpolating data from San Diego Association of Governments' (SANDAG) *2050 Regional Growth Forecast*, Feb 2010.

Table 2
Population - Current and Projected

	Historical[1]			Projected[2]				
	2000	2005	2010	2015	2020	2025	2030	2035
Service Area Population	161,039	175,038	183,095	189,275	195,455	202,529	209,602	212,024
Annual Increase	-	8.69%	4.60%	3.38%	3.27%	3.62%	3.49%	1.16%

1 From California Department of Finance population estimate

2 From SANDAG 2050 Regional Growth Forecast, Feb 2010. Data for 2015, 2025, and 2035 was interpolated.

SECTION 3: SYSTEM DEMANDS

3.1 BASELINES AND TARGETS

Law

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

Senate Bill x7-7 was enacted in November 2009, requiring all water suppliers to increase water use efficiency. SBX 7-7 requires agencies to determine their baseline per capita water use and reduce it to a calculated target per the *Methodologies for Calculating Baseline and Compliance Urban per Capita Water Use*. Water use must be reduced from a baseline determined by averaging the historical per capita water use of 10 to 15 consecutive years. Per the *Methodologies*, the City is required to use a 10 year base period since their 2008 recycled water use was below 10% of its 2008 measured retail water demand. Table 3 shows the base period ranges used to determine the baseline and compliance per capita water use.

Table 3
Base Period Ranges

Base	Parameter	Value	Units
10 to 15-Year Base Period	2008 Total Water Deliveries	30,927	AFY
	2008 Total Volume of Delivered Recycled Water	66	AFY
	2008 Recycled Water as a Percent of Total Deliveries	0.2%	percent
	Number of Years in Base Period	10	years
	Year Beginning Base Period Range	1997	
	Year Ending Base Period Range	2006	
5-Year Base Period	Number of Years in Base Period	5	years
	Year Beginning Base Period Range	2003	
	Year Ending Base Period Range	2007	

The historical per capita water use and baseline is shown in Table 4. The CA Department of Finance provides population estimates for the City of Oceanside for 1997 through 2006. The City's daily system gross water use is the sum of the water purchased and produced each year with agricultural water use excluded. Annual daily per capita water use for each year, determined by dividing gross water use by population, was averaged to determine the baseline daily per capita water use of 167 gpcd.

Table 4
Base Daily Per Capita Water Use - 10 year range

Base Period Year		Distribution System Population (DOF)	Daily System Gross Water Use (mgd)	Annual Daily Per Capita Water Use (gpcd)
Sequence Year	Calendar Year			
Year 1	1997	150,090	27.45	183
Year 2	1998	154,300	24.28	157
Year 3	1999	158,451	27.61	174
Year 4	2000	161,039	27.80	173
Year 5	2001	164,398	26.58	162
Year 6	2002	167,494	28.76	172
Year 7	2003	170,769	27.11	159
Year 8	2004	173,182	29.25	169
Year 9	2005	175,038	28.02	160
Year 10	2006	175,357	28.37	162
Base Daily Per Capita Water Use				***167***

According to SBX 7-7, the water use reduction must meet a minimum of 95% of the City's baseline per capita use for a continuous 5-year period ending no earlier than December 31, 2007 and no later than December 31, 2010. As displayed in Table 5, the City's 5-year baseline for 2003 through 2007 is 164 gpcd, therefore they must reduce water consumption to at least 156 gpcd.

Table 5
Base Daily Per Capita Water Use - 5 year range

Base Period Year		Distribution System Population (DOF)	Daily System Gross Water Use (mgd)	Annual Daily Per Capita Water Use (gpcd)
Sequence Year	Calendar Year			
Year 1	2003	170,769	27.11	159
Year 2	2004	173,182	29.25	169
Year 3	2005	175,038	28.02	160
Year 4	2006	175,357	28.37	162
Year 5	2007	176,743	29.98	170
Base Daily Per Capita Water Use				***164***
Minimum Reduction				***156***

To determine the interim and 2020 water use targets, Method 3 of the four possible Methodologies was used. Oceanside is the South Coast hydraulic region. The regional 2020 target daily per capita water use is 165 gpcd. To be in compliance, the City must reduce its per capita water use to 95% of the regional target, or 142 gpcd.

Table 5A shows the 2020 target as well as the interim target for 2015. As seen, the 2020 target is well below the minimum required reduction.

Table 5A
Target Daily Per Capita Water Use (Method 3)

Calendar Year	Target Daily Per Capita Water Use (gpcd)
Base GPCD	167
2015 Target	157
2020 Target	142

3.2 WATER DEMANDS

Law

> 10631 (e) (1) Quantify, to the extent records are available, past and current water use (over the same five-year increments described in subdivision (a)) and projected water use, identifying the uses among water use sectors including, but not necessarily limited to, all of the following uses:
>
> (A) Single-family residential;
> (B) Multifamily;
> (C) Commercial;
> (D) Industrial;
> (E) Institutional and governmental;
> (F) Landscape;
> (G) Sales to other agencies;
> (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; and
> (I) Agricultural.
>
> (2) The water use projections shall be in the same five-year increments described in subdivision (a)
>
> 10631.1 (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

Historical and current water use records are maintained in the City's annual "Public Water System Statistics" reports that are submitted to the Department of Water Resources. Tables 6 and 7 show the City's historical water use and number of accounts broken down by water use sector. The City does not currently break down billing data for Institutional or Industrial use sectors.

Table 6
Water Deliveries - actual, 2005

Water use sectors	2005				
	Metered		Not metered		Total
	# of accounts	Volume (AFY)	# of accounts	Volume (AFY)	Volume (AFY)
Single family	37,242	14,531	0	0	14,531
Multifamily	1,997	4,929	0	0	4,929
Commercial	1,505	3,159	0	0	3,159
Irrigation	1,104	4,912	0	0	4,912
Government	276	1,065	0	0	1,065
Agriculture	137	2,204	0	0	2,204
Other	0	0	0	0	0
Total	***42,261***	***30,799***	***0***	***0***	***30,799***

Table 7
Water Deliveries - actual, 2010

Water use sectors	2010				
	Metered		Not metered		Total
	# of accounts	Volume (AFY)	# of accounts	Volume (AFY)	Volume (AFY)
Single family	38,014	11,648	0	0	11,648
Multifamily	2,016	4,285	0	0	4,285
Commercial	1,608	2,034	0	0	2,034
Irrigation	313	3,511	0	0	3,511
Government	1,202	838	0	0	838
Agriculture	132	1,506	0	0	1,506
Other	0	0	0	0	0
Total	***43,285***	***23,823***	***0***	***0***	***23,823***

The City provided water use projections broken down by water use sector, which are shown in Tables 8 through 10. Since water use projections are estimated based on current use, demands are not broken down for the Institutional or Industrial use sectors. It is one of the City's goals for the 2015 UWMP to break down billing data to this level.

Future residential demands are the greatest but the City sells a significant amount of irrigation and agricultural water. The irrigation and agricultural water generally is used on high-value crops such as cut flowers, nursery stock, citrus, avocado, and other specialty tree crops. Users growing crops have the option of taking water as agricultural water, which carries a discount in exchange for doubling the risk of cutbacks in the event of shortages. Growers also can choose to take water as irrigation water but do not receive a discount and thus have the same level of service reliability as other municipal users. However many of the agricultural acreages are planned for future development. This will lead to a decreased demand for agricultural water but a larger increase in demand for residential, industrial and landscape irrigation.

Table 8
Water Deliveries - projected, 2015

Water use sectors	2015				
	Metered		Not metered		Total
	# of accounts	Volume (AF/Yr)	# of accounts	Volume (AF/Yr)	Volume (AF/Yr)
Single family	39,359	15,327	0	0	15,327
Multifamily	2,189	5,078	0	0	5,078
Commercial	1,695	3,418	0	0	3,418
Irrigation	1,231	4,220	0	0	4,220
Government	300	1,049	0	0	1,049
Agriculture	150	2,701	0	0	2,701
Other	0	0	0	0	0
Total	***44,924***	***31,792***	***0***	***0***	***31,792***

Table 9
Water Deliveries - projected, 2020

Water use sectors	2020				
	Metered		Not metered		Total
	# of accounts	Volume (AF/Yr)	# of accounts	Volume (AF/Yr)	Volume (AF/Yr)
Single family	39,569	14,579	0	0	14,579
Multifamily	2,280	4,946	0	0	4,946
Commercial	1,763	3,424	0	0	3,424
Irrigation	1,263	3,547	0	0	3,547
Government	308	1,037	0	0	1,037
Agriculture	154	2,770	0	0	2,770
Other	0	0	0	0	0
Total	***45,336***	***30,303***	***0***	***0***	***30,303***

Table 10
Water Deliveries - projected 2025, 2030 and 2035

Water use sectors	2025		2030		2035	
	Metered		Metered		Metered	
	# of accounts	Volume (AF/Yr)	# of accounts	Volume (AF/Yr)	# of accounts	Volume (AF/Yr)
Single family	40,649	14,474	41,730	14,443	43,006	14,544
Multifamily	2,306	4,850	2,332	4,792	2,364	4,785
Commercial	1,873	3,582	1,982	3,741	2,088	3,904
Irrigation	1,297	3,687	1,332	3,827	1,369	3,982
Government	317	1,045	325	1,052	334	1,063
Agriculture	158	2,847	162	2,924	167	3,003
Other	0	0	0	0	0	0
Total	***46,600***	***30,484***	***47,864***	***30,778***	***49,326***	***31,282***

3.2.1 Low Income Water Demands

The DWR requires that agencies estimate the projected water use for single-family and multifamily residential housing needed for lower income households within their service area. There are 1355 low income housing units within the City. Given the SANDAG population per household estimates and the per capita water use, the City was able to calculate the water demand projections for low income housing shown in Table 11. The location of the City's low income housing is depicted in Figure 2.

Table 11
Low-Income Projected Water Demands (AFY)

2000	2005	2010	2015	2020	2025	2030	2035
748	704	589	700	638	640	642	648

3.2.2 Sale to Other Agencies

The City does not regularly sell water to other agencies.

Table 12
Sales to Other Water Agencies - AFY

Water Distributed	2010	2015	2020	2025	2030	2035
No Sales to Other Agencies	0	0	0	0	0	0
Total	***0***	***0***	***0***	***0***	***0***	***0***

3.2.3 Additional Water Uses and Losses

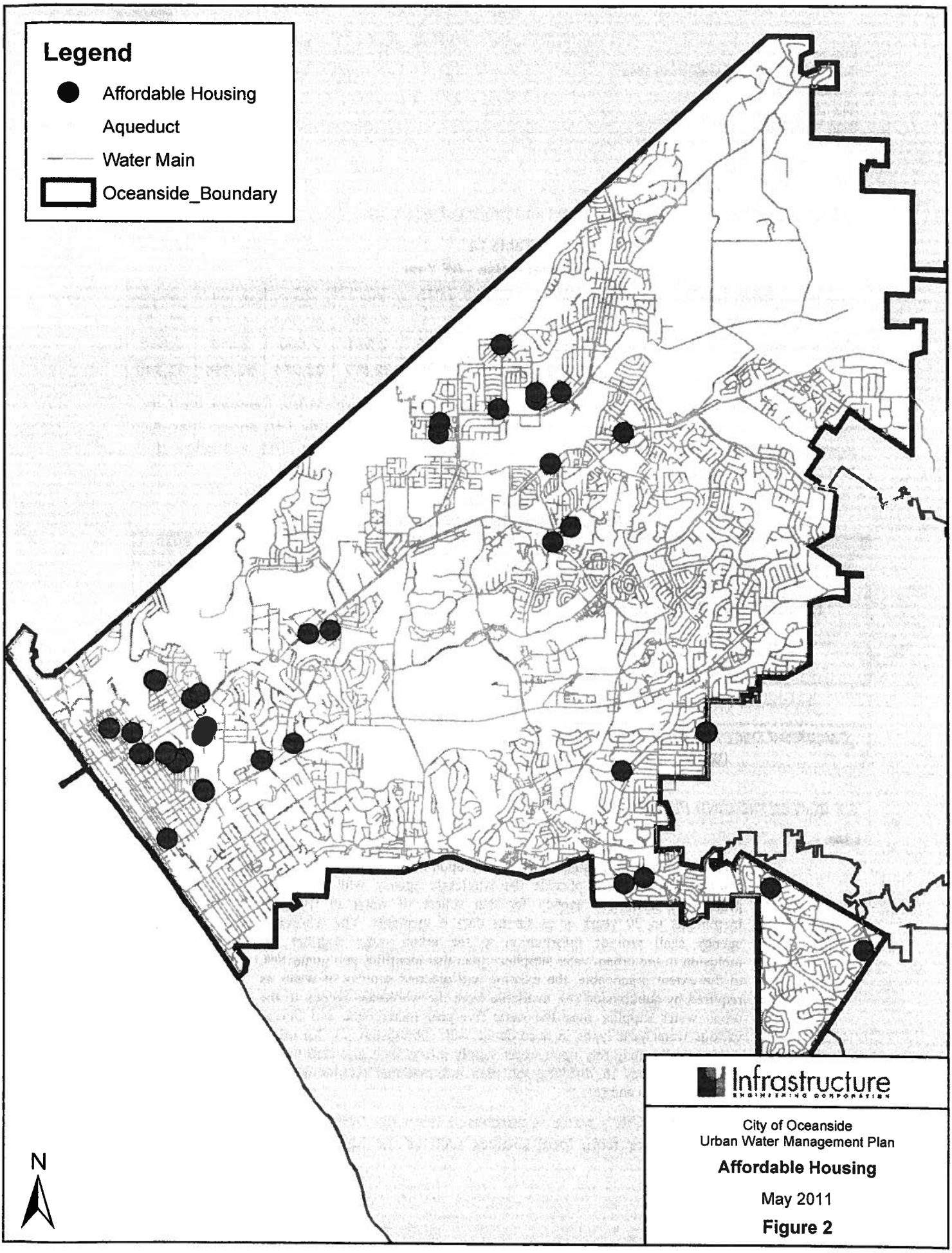
Unaccounted for water is "lost" through the potable water system due to several variables which include the age and efficiency of the pipe system, users' practices, accuracy of the meter, etc. As shown in Table 13, the City has estimated the projected system losses through the year 2035.

In addition to the potable water demands the City uses recycled water. Past and projected recycled water demands are shown in Table 13 along with past and projected water loss.

Table 13
Additional Water Uses and Losses (AFY)

Water use	2005	2010 [1]	2015	2020	2025	2030	2035
Recycled water	119	130	933	2,016	2,505	3,075	3,075
System losses	1,144	1,765	2,839	2,425	2,441	2,470	2,510
Total	***1,262***	***1,895***	***3,772***	***4,441***	***4,946***	***5,545***	***5,585***

* Water loss was estimated to be an average of from the period 2004-2007, or 7.9% of total water use.



City of Oceanside
Urban Water Management Plan

Affordable Housing

May 2011

Figure 2

3.2.4 Total Water Use

Table 14 summarizes the City's total past and projected water use.

Table 14
Total Water Use - AF Year

Water Use	2005	2010	2015	2020	2025	2030	2035
Total Water Deliveries (AFY)	30,799	23,823	31,792	30,303	30,484	30,778	31,282
Additional Water Uses and Losses	1,262	1,895	2,988	2,574	2,590	2,618	2,658
Total	**32,062**	**25,718**	**34,780**	**32,877**	**33,074**	**33,396**	**33,940**

Given the projected potable water demands and the SANDAG population forecast the City expects that they will be in compliance with their SBX 7-7 targets. Table 14A shows that per capita water use is expected to be below the interm target of 154 gpcd in 2015 and below the 2020 target of 142 gpcd.

Table 14A
Projected Per Capita Water Use

	2015	2020	2025	2030	2035
Projected Potable Water Deliveries (AFY)	31,792	30,303	30,484	30,778	31,282
Projected Water Loss (AFY)	2,839	2,425	2,441	2,470	2,510
Projected Total Water Use (AFY) (Deliveries + Loss)	34,631	32,728	32,925	33,247	33,792
Projected Total Water Use Less Agriculture (AFY)	*31,930*	*29,958*	*30,078*	*30,324*	*30,788*
SANDAG Population Projection	189,275	195,455	202,529	209,602	212,024
Calculated Daily Per Capita Water Use (gpcd)	***151***	***137***	***133***	***129***	***130***

3.3 WATER DEMAND PROJECTIONS

Law

> 10631(k) Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

Approximately 85% of the City's water is purchased from the SDCWA. In the future, the City plans to use more water from local sources such as the Mission Groundwater Basin,

desalinated water, and recycled water, thereby lessening the need for imported SDCWA water. Agency demand projections are shown in Table 15.

Table 15
Agency Demand Projections Provided to Wholesale Suppliers - AFY

Wholesaler	2010	2015	2020	2025	2030	2035
SDCWA	21,765	26,151	12,751	13,760	15,001	15,387

SDCWA presently purchases its water from the Metropolitan Water District. They also have a transfer agreement with IID that will provide 30,000 AF in 2005 and will increase up to 200,000 in 2021.

3.4 WATER USE REDUCTION PLAN

Law

> 10608.36. Urban wholesale water suppliers shall include in the urban water management plans . . . an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.
>
> 10608.36. Urban retail water suppliers are to prepare a plan for implementing the Water Conservation Bill of 2009 requirements and conduct a public meeting which includes consideration of economic impacts.

The San Diego County Water Authority Board approved a strategy to aggressively diversify its water supply portfolio by developing new local and imported water supplies. This strategy already is enhancing regional supply reliability. By fiscal year 2010, the San Diego region had reduced its reliance on MWD supplies to 50 percent. This has lessened the impact of current water cutbacks from MWD that began in July 2009.

The Water Authority is working with its 24 local member retail agencies to develop local supplies such as groundwater, recycled water, seawater desalination, and conservation. By 2020, SDCWA projects local water supplies to meet 40 percent of the region's water demand.

As part of the conservation effort, the City of Oceanside adopted Ordinance No. 091-15 on March 27, 1991, which established a water conservation program for the City. The City's "Water Conservation" code was further amended in July 2008 through the adoption of City Ordinance No. 08-IR0439-1 to revise the exiting water conservation program and add drought response conservation measures to be implemented in the event of mandatory water reductions. As they have had a history of proactive conservation, the City is on track to meet its SBX7-7 targets based on 2010 annual water use and San Diego Geographic Information Source (SANGIS) projections.

The City also completed their latest Water Conservation Master Plan (WCMP) in April 2011. This plan discusses the programs they intend to implement to support water demand reduction goals. According to the plan, the programs selected by the City include "aggressive water conservation, smart meters (AMI) and further implementation of the Recycled Water Master Plan (Phase II)." To successfully implement this new plan the following steps are recommended in the WCMP:

- Prioritize measures for implementation with those that contribute the most to meeting the per capita use targets given highest priority for implementation.
- Consider working with the largest 100 water using customers to try to reduce water use
- Develop annual work plan for each plan year as soon as budget is adopted (or in concert with budget planning process)
- Form partnerships and apply for grants where appropriate
- Outsource if needed to gain enough staff support to administer the new program.
- Set up a 20 x 2020 Working Group to guide the implementation
- Develop analytical tools to track water use by customer class and overall per capita water use, adjusted for the weather and external factors.
- Set up a database to store and manage measure participation, cost and other data to gauge successes and failures
- Use the tools annually to help decide on priorities for the next plan year
- Use the DSS Model to annually update the plan including actual measure participation, projected water savings and expected per capita water use reductions to ensure plan is on track to meet 2020 targets.
- Use the input from the 2020 Working Group and annual work planning process as the forum to amend the plan, budgets, staffing, outsourcing, schedule etc. to stay on track.

In addition to these new conservation measures, the City's current water conservation program includes water Conservation brochures and handouts; their water conservation media campaign, the "20 Gallon Challenge," which focusing on water customers saving an additional 20 gallons of water per day; promotion on the City's water conservation website (SaveWaterOceanside.com); School Education Programs; City workshops on efficient landscape and landscape irrigation and other topics; the landscape hotline to help connect residents who want their gardens to be water-wise with an expert who can help advise them; as well as their local low-water using "demonstration gardens." Further, additional water conservation programs are offered by the SDCWA and MWD.

SECTION 4: SYSTEM SUPPLIES

4.1 WATER SOURCES

Law

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

The City currently has two direct sources of potable water; the Metropolitan Water District of Southern California through the San Diego County Water Authority (SDCWA) and the Mission Groundwater Basin of the Lower San Luis Rey River Valley.

The SDCWA supplies imported water to member agencies within San Diego County. The SDCWA boundaries and its member agencies are shown in Figure 3 on the following page. Imported water is supplied to the SDCWA by the Metropolitan Water District of Southern California (MWD). Imported sources tapped by MWD included the Colorado River and the State Water Project.

SDCWA supplies both treated and raw imported water to the City through five aqueduct connections. Treated water is delivered directly into the City's distribution system. Raw water is treated at the City's Robert A. Weese Filtration Plant prior to delivery into the City's distribution system.

In their draft 2005 UWMP, SDCWA projected normal water demands for their service area for 2005 through 2030 in 5 year increments utilizing their Water Resources-Municipal and Industrial Needs (MAIN) computer model. The MAIN model uses demographic and economic data to project sector-level water demands. The SDCWA-MAIN modeling effort utilized the latest official SANDAG demographic and economic projections and the new SANDAG 2030 (December 2003) forecast through the year 2030.

SDCWA then analyzed historic dry-year events and selected the year 1989 as the representative single-dry year event. The 1989 data was then run through the model for each five-year increment. The results indicated that dry-year demands were approximately 7 percent greater than the corresponding normal-year demands for each five year increment. The single dry year of 1989 occurred during the historic drought of 1987 through 1992. To develop multiple dry-year demand projections, the 7 percent average increase was applied to the normal year demand estimates. Projected groundwater and surface water yields were based on historic 1991 supplies during the 1987 – 1992 drought.

SDCWA concluded that if projected SDCWA and member agency supplies are developed as planned, along with Metropolitan Water District of Southern California's (MWD) Integrated Resources Plan (IRP), no shortages are anticipated within SDCWA's service area under normal-year, single-dry year or multiple dry water years through 2030. However, and as a safeguard, SDCWA is pursuing development of other potential supplies including seawater desalination, construction of carry-over storage and acquiring out-of-region conjunctive-use supplies.

In addition to water purchased from the SDCWA, water is pumped from the Mission Groundwater Basin. The City operates well fields that deliver raw groundwater to the Mission

Basin Groundwater Purification Facility (MBGPF). Salts contained within the groundwater are removed at the MBGPF using a reverse osmosis treatment process.

Historical water supplies are provided in Table 15A.

Table 15A
Historical Water Supplies

Supply Source	Supply (acre feet)						Average Supply (AFY)	Percentage of Supply (%)
	2005	2006	2007	2008	2009	2010		
SDCWA Treated	13,528	10,382	11,035	9,103	7,464	4,891	9,401	29%
SDCWA Untreated - WFP[a]	20,288	21,803	22,331	22,270	20,515	16,875	20,680	63%
MBGPF[b]	2,684	2,126	2,219	1,678	2,813	4,455	2,662	8%
Recycled Water[c]	79.5	209.1	108.8	66	74.2	130	111	0.34%
Total	***36,580***	***34,520***	***35,694***	***33,117***	***30,866***	***26,350***	***32,854***	100%

(a) Untreated water purchased from SDCWA and then treated at the Weese Filtration Plant to supply City demands.
(b) Groundwater treated at the Mission Basin Groundwater Purification Facility.
(c) Recycled Water Produced at San Luis Rey Waste Water Treatment Plant.

As shown in Table 11, approximately 92 percent of the City's water supply for the period 2005 through 2010 came from imported water purchased from SDCWA. This period is indicative of historical water supply for the City. Of this SDCWA water supply, approximately 29 percent is purchased treated water and 60 percent is purchased untreated water that is then treated at the City's Weese Filtration Plant. In the future, the City plans to use more water from local sources thereby lessening the need for imported water.

Future water supplies include the aforementioned connections to the Water Authority, and expanded extraction and treatment of water from the Mission Groundwater Basin. The City has completed construction of additional facilities to produce up to 7,130 acre-ft per year of treated water at the MBGPF. Full operation of the MBGF began in 2007 as new wells were brought on-line.

Future construction of an ocean water desalination facility is anticipated by the City. Up to 10.0 MGD is estimated from the projected development of a local desalination facility that will be available sometime between 2015 and 2020 for use by the City. The City is also evaluating a raw water pipeline to the Morro Hills area to irrigate landscape and agricultural land.

The City owns and operates the Robert A. Weese Water Filtration Plant located at 3885 Silverleaf Lane, Vista, California. The plant was originally designed and constructed in 1983 with a capacity of 16.5 million gallons a day (mgd). The plant is able to operate at 25 mgd with State Health Department approval.

Due to expanding growth in the City and the County, the Weese Water Filtration Plant will be expanded an additional 12.5 mgd for a total plant capacity of 37.5 mgd. Treatment processes will be updated to meet current and future state and federal regulations.

Planned water supplies are provided in Table 16. The planned water supplies are based on meeting the target daily per capita use for potable water as shown in Table 5A.

Table 16
Water supplies — current and projected (AFY)

Water Supply Sources	2010	2015	2020	2025	2030	2035
San Diego County Water Authority	*21,765*	*26,151*	*12,751*	*13,760*	*15,001*	*15,387*
Treated	4,891	3,824	561	561	561	561
Untreated	16,875	22,327	12,190	13,199	14,440	14,826
Supplier-produced groundwater (MBGPF)	4,455	5,700	5,700	5,700	5,700	5,700
Desalinated Water	0	0	11,208	11,208	11,208	11,208
Potable Subtotal	***26,220***	***31,851***	***29,659***	***30,668***	***31,909***	***32,295***
Recycled Water	130	933	2,016	2,505	3,075	3,075
Total	***26,350***	***32,784***	***31,675***	***33,173***	***34,984***	***35,370***

The San Diego County Water Authority provided the City with its Draft Member Agency Demand Forecast for City of Oceanside. Table 17 shows the amount of water it projects to provide to the City in five-year increments until 2035. The SDCWA receives its water from the Metropolitan Water District (MWD). Under Section 135, each MWD member agency has a preferential right to a percentage of MWD's available water supplies based on a formula established in the MWD Act. Currently, the Water Authority pays about 25 percent of MWD's total revenue, but has preferential rights to only 17.22 percent of MWD's water supply (to be updated this month). This disparity is due to Section 135 limiting the calculation of preferential rights to those revenues that are unrelated to the "purchase of water."

In comparison to the City's projected supply, with the exception of 2015, SDCWA's projections are rather high. This is because the City's plans to begin using desalinated water sometime between 2015 and 2020, thereby lessening the need for imported water from SDCWA.

Table 17
Wholesale supplies — existing and planned sources of water (AFY)

Wholesale sources	Contracted Volume	2015	2020	2025	2030	2035
MWD	17.22% of MWD Supply	23,566	24,971	26,002	27,233	27,652

4.2 GROUNDWATER

Law

> 10631 (b) ...If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:
>
> (1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.
>
> (2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree.
>
> For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as over drafted or has projected that the basin will become over drafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.
>
> (3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
>
> (4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

The Mission Basin Groundwater Purification Facility (MBGPF) is a desalting treatment facility that treats brackish groundwater extracted from the Mission Basin via eight wells including four "on-site" wells located at the MBGPF site and four "off-site" wells, located in the eastern portion of the basin near North River Road west of College Blvd. Of the eight wells, six are active and two are under construction. The MBGPF was put into service in 1992 with a capacity of 2.0 mgd, and expanded to its current capacity of 6.37 MGD, or 7,130 acre-feet per year, in 2002.

The MBGPF treatment process utilizes reverse osmosis membranes to reduce salt concentrations present in the groundwater. A side-stream treatment system is employed to reduce iron and manganese. The reverse osmosis membranes are Hydranautics Model ESPA1 that operates at a feed pressure of approximately 150 psi. The facility is capable of removing many impurities form the groundwater including particles, iron, manganese, and sodium to

meet drinking water standards. Iron and manganese are present in the on-site wells, and manganese is present in the off-site wells.

After the minerals and other impurities are removed through reverse osmosis, the product is then blended with a 20 percent share of water direct from the well field and subjected to additional post-blend treatment to result in a finished, potable water supply. Table 18 shows the amount of groundwater pumped for the past 10 years.

Table 18
Amount of Groundwater pumped - AFY

Basin Name(s)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Mission	2,123	2,463	3,085	2,684	2,684	2,126	2,219	1,678	2,813	4,455
% of Total Water Supply	6.79%	6.92%	9.39%	7.63%	7.34%	6.16%	6.22%	5.07%	9.11%	16.91%

The six existing wells can be combined to produce a consistent yield of 4.2 mgd of brackish groundwater. The City is constructing two additional wells southwest of the existing MBGPF to fully utilize the full 6.4 mgd treatment capacity of the MBGPF. The amount of groundwater projected to be pump is shown in Table 19. This will reduce the need for imported SDCWA water.

Table 19
Amount of Groundwater projected to be pumped - AFY

Basin Name(s)	2010	2015	2020	2025	2030	2035
Mission	4,455	5,700	5,700	5,700	5,700	5,700
% of Total Water Supply	16.91%	17.39%	18.00%	17.18%	16.29%	16.12%

The City has conducted studies to determine the impact of groundwater pumping on local groundwater levels[1]. Those studies concluded that the planned expansion of the MBGPF will result in no significant impacts to existing groundwater-dependent vegetation during extended dry-year periods lasting up to three years. Therefore the MBGPF is considered a reliable source of up to 7,130 acre-ft per year of potable water during multiple-dry water years.

[1] *Supplemental Groundwater Pumping Analysis, Expansion of Oceanside Mission Basin Brackish Groundwater Desalting Facility to a Potable Water Production Capacity of 6.37 MGD*., February 1996, Michael R. Welch, Ph.D., P.E.

4.3 Transfer Opportunities

Law

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

The City has multiple connections to an intricate outside network of water distribution systems through the SDCWA and neighboring urban water suppliers that can be utilized in an emergency. The City does not regularly transfer water to other agencies. The Rainbow Municipal Water District (RMWD) can supply Oceanside with approximately 5-7 cfs of treated water through the Fallbrook connection in an emergency. The City also has a connection with the Carlsbad Municipal Water District near the intersection of El Camino Real and Vista Way. The city can also utilize emergency connections with the Vista Irrigation District (VID) near the Osborne Drive and East Vista Way intersection and at a second connection near the Tri City medical Center complex on Vista Way. The City may also supply water to these neighboring urban water suppliers during localized emergency situations.

As discussed in the City's 2007 Water Master Plan, the City could make two additional metered connections with VID and/or two additional metered connections with RMWD. Table 20 shows the City's transfer and exchange opportunities.

Table 20
Transfer and Exchange Opportunities - AF Year

Transfer Agency	Transfer or Exchange	Short-term or Long-term	Proposed Quantities
Rainbow Municipal Water District	E	Short-term	Emergency Only
Carlsbad Municipal Water District	E	Short-term	Emergency Only
Vista Irrigation District	E	Short-term	Emergency Only
Total			***0***

4.4 Desalinated Water Opportunities

Law

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

The City has planned for desalinated water as an expected future water supply to become less dependent upon imported water and to diversify its water resources. Overall the increase in demand over the next 25 years is significant making the opportunity to use desalinated water even more important in the City's plan to rely less on imported water and to expand its own water resources.

The City is planning to build an extraction facility in the San Luis Rey River groundwater basin that will extract available groundwater and water under the influence of the ocean. Opportunities for desalination include ocean water, brackish surface water, and brackish groundwater. The extracted water will provide additional capacity at the existing Mission Basin

Groundwater Purification Facility. The City's 2007 Water Master Plan evaluated desalination plant capacities of 5 and 10 mgd.

The City completed a Seawater Desalination Pilot Facility and Feasibility Study in October 2010. The main objective of this study was to identify a feasible, constructible and cost effective project to add a seawater component to the MBGPF. As per the study, the source of the seawater would be a series of extraction wells near the mouth of the San Luis Rey River. The design of the wells would prevent drawdown of the Mission Basin and the drawdown of potential effects on the other City wells and the habitat mitigation areas. The planning would also need to consider the operation of the seawater barriers if the recharge and extraction project were to be implemented.

The seawater would be pumped from the wells back to the MBGPF. A seawater reverse osmosis plant would be co-located at this site. There is sufficient City-owned land and the treated water would be introduced into the distribution system. The brine, and brine disposal limitations would be similar to the groundwater storage and retrieval project described previously.

By combining existing MBGPF brackish water treatment with a nearby seawater component could not only potentially reduce costs for the City, but could also attract funding sources from Federal State and Regional government agencies. This approach also maximizes the use of San Luis Rey supplies and could result in a raw water salt content that is significantly lower that direct seawater. Lower salt content can significantly reduce energy costs.

The ultimate production from this new water source will be determined through a pilot research and development project. Table 20A shows the desalinated water opportunities.

Table 20A
Desalinated Water Opportunities

Sources of Water	Yield AF/Y	Start Date	Type of Use
Desalination Plant	Up to 11,208	2020	All

4.5 Recycled Water Opportunities

Law

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

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

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

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

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

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

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

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

4.5.1 Wastewater Collection and Treatment Facilities

The City's wastewater collection and treatment system is comprised of two major systems: the San Luis Rey Water Reclamation Plant (SLRWRP) service area and the La Salina WWTP. The SLRWRP can treat up to 0.7 mgd to recycled water standards, while the La Salina WWTP has

no tertiary treatment. The City also receives some recycled water from the Fallbrook Public Utility District (FPUD).

4.5.1.1 San Luis Rey Wastewater Treatment Plant

The City of Oceanside has produced recycled water for many years, starting with the construction of the SLRWRP in 1972. Secondary effluent was supplied to Whelan Lake for storage reasons. More recently, the lake has changed its uses and is presently a bird sanctuary.

The SLRWRP provides secondary treatment for most of the City service area. The rated secondary treatment capacity is 13.5 mgd on an average annual basis. The 2004 average annual flow was 9.64 mgd. By agreement, the plant also provides treatment for up to 1.5 mgd of wastewater from the Rainbow Municipal Water District.

The processes at the SLRWRP include preliminary, primary, and activated sludge secondary treatment. The biosolids are anaerobically digested and dewatered by centrifuges prior to land application.

In 1991, a tertiary filter and chlorine contact basin was constructed. Up to 0.7 mgd of the secondary effluent can be treated further to meet Title 22 requirements for unrestricted reuse. Secondary effluent is pumped to a continuous back-washing, down-flow filter. Sodium hypochlorite is added to the filtered effluent. The effluent is disinfected in a chlorine contact channel and then stored in a 2.2 million gallon, lined storage pond located at the southerly portion of the SLRWRP. The Recycled water is then pumped to the City of Oceanside municipal golf course or Whelan Lake. The existing pump station has a rated capacity of 1.0 gpm at the 125 ft of total dynamic head.

Though the capacity at the tertiary facility is 0.7 mgd, it is difficult to treat more than 0.5 mgd. In 2004, the maximum production was limited to 0.28 mgd due to the SLRWRP Interim Expansion construction activities (the construction is now completed) and only 220 acre-feet of recycled water was produced for the entire year. Recycled water distribution piping is installed at the plant but plant demands are currently being provided by potable water or chlorinated secondary effluent. This will be converted to recycled water supply as part of a Phase 1 System.

4.5.1.2 La Salina Wastewater Treatment Plant

The La Salina WWTP has a rated secondary treatment capacity of 5.5 mgd. The 2005 flow averaged 3.34 mgd. The treatment processes include preliminary, primary, and activated sludge secondary treatment. The biosolids are anaerobically digested, dewatered by belt filter presses, and land applied off-site. There are no recycled water treatment facilities. Due to space constraints, there is no potential for construction of recycled water treatment facilities at the La Salina WWTP.

4.5.1.3 Fallbrook Public Utility District Treatment Plant

The Fallbrook Public Utility District (FPUD) currently owns and operates one treatment (Plant No. 1) with a design capacity of 2.7 mgd. Previously FPUD has an additional plant (Plant No. 2) which has since been abandoned. By agreement with the City of Oceanside, up to 2.4 mgd on an annual average basis is discharged through the Oceanside ocean outfall.

Currently recycled water from FPUD is used to irrigate the Arrowood Country Club. FPUD however may present an additional opportunity for future recycled water within the City.

Table 21 shows the quantity of wastewater collected and treated in the City's service area and the quantity that meets Title 22 recycled water standards.

Table 21
Wastewater Collection and Treatment - AF Year

Type of Wastewater	2005	2010	2015	2020	2025	2030	2035
Wastewater collected & treated in service area	15,693	19,042	19,591	20,140	20,443	20,745	20,745
Volume that meets recycled water standard	182	933	933	2,016	2,505	3,075	3,075

Methods for wastewater disposal and the quantities discharged with the typical treatment levels are shown in the Table 22.

Table 22
Disposal of wastewater (non-recycled) AF Year

Method of disposal	Treatment Level	2005	2010	2015	2020	2025	2030	2035
Ocean Outfall	Secondary	16,678	18,109	18,658	18,124	17,938	17,670	17,670

4.5.2 Recycled Water Master Plan

In 2005 the City completed its latest *Recycled Water Master Plan* (RWMP). The RWMP updates past planning with respect to demands, needed treatment and distribution facilities, and estimated cost of water.

The plan includes a summary of existing conditions as well as the potential recycled water use from the SLRWRP and the FPUD. The regulations that govern the use of recycled water are identified. The projected recycled water quality from FPUD and the SLRWRP have been compared to regulatory limits and the suitability for crop application. The plan also identifies potential users and projects demands.

In the RWMP a distribution system was developed to serve potential users. Included in this analysis was the potential use of Fallbrook's line as well as the pumping requirements and storage needs. Additionally, the plan considers alternative treatment technologies and phasing for treatment facilities.

A cost analysis was performed for the plan as well to determine the cost of treatment and distribution for recycled water.

4.5.3 Potential and Projected Recycled Water Use

Potential uses of recycled water include agricultural irrigation, landscape irrigation, wildlife habitat enhancement at Whelan Lake, and groundwater recharge.

There is potential to use recycled water for non-food agriculture irrigation along Wilshire Road and Sleeping Indian Trail. This is not expected to be economically feasible and is therefore not included in recycled water projections.

Landscaping possibilities include the Oceanside Municipal Golf Course, Arrowood Golf Course, and public landscaping as well as the addition of future development (including El Corazon) in 2015 and beyond. Industrial use possibilities include recycled water use at SLRWRP and the addition of future development (including El Corazon) in 2015 and beyond.

As recommended in the City's *2005 Recycled Water Master Plan,* a new tertiary treatment plant will be constructed at the SLRWRP as well as other system upgrades to accommodate the existing recycled water demands plus projected recycled water demands at the SLRWRP (Phase 1 System). The new tertiary plant will also be sized to supply approximately 40 percent of the recycled water demands in the northeast as described above (Phase 2 System). FPUD would supply the other 60 percent of the Phase 2 demands with Title 22 recycled water which they currently produce and convey through their land outfall that is routed through Oceanside. Distribution piping and facilities will also be constructed for the Phase 2 system. The City is continuing to evaluate the feasibility of serving recycled water to future developments beyond Phase 2.

Phase 3 would expand the system to the agricultural users along Wilshire Road. This would require construction of an expanded treatment plant as well as a new distribution pipeline to these users. There would not be enough hydraulic capacity in the Fallbrook land outfall. A new storage reservoir would also be required.

Phase 4 consists of the El Corazon development and the Rancho Del Oro business park. The new satellite recycled water treatment facility would be constructed at El Corazon.

In 1998, four agencies, Olivenhain Municipal Water District, Carlsbad Municipal Water District, San Elijo Joint Powers Authority, and the Leucadia Wastewater District applied to the US Bureau of Reclamation for Title XVI grant funds for the construction of various facilities within each of the North County agencies. That effort was the first phase of a regional North San Diego County project which resulted in the receipt of over $10 million for the agencies. The facilities which were included in that Phase I project have been constructed and are in service. Through the agencies' master planning efforts, additional recycled water projects have been identified for which the agencies desire to pursue additional funding. As a result of previous successes, a new group, consisting of the original group of four joined by six additional agencies, has been formed to evaluate whether additional Title XVI funding is available in addition to potential funding from other state or local sources.

The City is currently a member of The North San Diego County Recycled Water Group (Group), a coalition of ten (10) water and wastewater agencies, developing a Recycled Water Planning Study which will be utilized by the Group to pursue Federal Title XVI funding from the US Bureau of Reclamation and Proposition 84 Funding from the State of California, as well as other state or local grant funds.

Table 23 presents the potential recycled water use in the City through 2035.

Table 23
Recycled Water - Potential Future Use (AFY)

User type	Description	Feasibility	2015	2020	2025	2030	2035
Landscape	SLRWRP/ City of Oceanside	3,075	933	2,016	2,505	3,075	3,075

As compared to the projections for 2010 from the 2005 UWMP, actual 2010 recycled water use was low. Table 24 shows the 2005 projection along with the actual 2010 recycled water use.

Table 24
Recycled Water Uses - 2005 Projection compared with 2010 actual - AFY

User type	2005 Projection for 2010	2010 Actual Use
Landscape	1,350	130
Wildlife	140	0
Industrial	500	0
Total	***1,990***	***130***

4.5.4 *Methods to Encourage Recycled Water Use*

Though recycled water is currently only available to the Oceanside golf course, the City does offer financial incentives that will encourage recycled water use when it is made available to future customers. The City currently offers a discounted price for recycled water of 16% below the cost of potable water. In July 2011 when pricing is raised, customer cost for recycled water will be 18% below that of potable.

The Water Authority is administering a Proposition 50 recycled water retrofit incentive of $75,000 per site and/or agency. The agency must provide matching funds. This multi-year grant opportunity is to fund retrofitting potable to recycled water systems. The City can use the funds for either a customer or for its own project.

The quantified projected use as a result of these specific actions is not known at this time.

Table 25
Methods to Encourage Recycled Water Use

Actions	AF of use projected to result from this action					
	2010	2015	2020	2025	2030	2035
Financial incentives	N/A	N/A	N/A	N/A	N/A	N/A

4.6 FUTURE WATER PROJECTS

Law

> 10631 (h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

This section includes planned and alternative water projects to supply the City in the future.

4.6.1 Weese Water Treatment Plant Expansion

The City Of Oceanside owns and operates the Robert A. Weese Water Filtration Plant located at 3885 Silverleaf Lane, Vista, California. The plant was originally designed and constructed in 1983 with a capacity of 16.5 million gallons a day (mgd). The plant is able to operate at 25 mgd with State Health Department approval.

Due to expanding growth in the City and the County, the City is planning the expansion of the Weese Filtration Plant. The plant will be master-planned for a capacity of 37.5 mgd.

4.6.2 Mission Basin Groundwater Purification Facility

The MBGPF is a very cost-effective source of water. However limited well capacity and trichloropropane (TCP) contamination has limited the output to about 4.1 mgd. When capacity is reached, the average cost per acre-foot of operations and maintenance to treat the water will drop even further.

As previously discussed, the City is taking steps to increase the groundwater capacity to match the existing treatment capacity of 6.4 mgd. This capacity matches the safe yield of the Mission Basin. The 6.4 mgd matches the capacity of the Mission Basin without other sources of groundwater augmentation, which is discussed as an alternative later in this section.

To remove the TCP, the City has added a granular activated carbon treatment step.

The design of new wells and pipelines to the MBGPF is underway. The budget for this project, including design, is $2.5 million.

4.6.3 Local Seawater Desalination Facility

In October 2010, the City completed a feasibility study that examined the potential to add seawater desalination to the existing Mission Basin Groundwater Purification (MBGPF) in order to meet future water supply demands. The analysis considered the costs for available, reverse osmosis desalination technology. Additionally, as part of the City's 2007 Water Master Plan desalination plant capacities of 5 and 10 mgd were evaluated.

As previously discussed in Section 4.4, the source of the seawater would be a series of extraction wells near the mouth of the San Luis Rey River. The operation of seawater barriers will also be considered for the recharge and extraction project.

The seawater reverse osmosis plant would be constructed at the MBGPF where treated water would be introduced into the distribution system. The brine, and brine disposal limitations would be similar to the groundwater storage and retrieval project described previously.

By combining existing MBGPF brackish water treatment with a nearby seawater component could not only potentially reduce costs for the City, but could also attract funding sources from Federal State and Regional government agencies. This approach also maximizes the use of San Luis Rey supplies and could result in a salt content that is significantly lower that direct seawater. Lower salt content can significantly reduce energy costs.

4.6.4 Wastewater Recycling

The City owns and operates two wastewater treatment plants (WWTPs). The San Luis Rey Water Reclamation Plant (SLRWRP) is located in the San Luis Rey River Valley and serves about 70 percent of the eastern portions of the City's wastewater service area and has an ultimate rated capacity of 17.4 MGD. The La Salina WWTP has a current rated capacity of 5.5 MGD and is located near the coast. The La Salina WWTP is considered to be at its ultimate capacity for its service area. Both plants currently produce a minimum of secondary treatment quality effluent, suitable for ocean discharge. Ultimate wastewater flow projections show that about 25,000 acre-feet per year of effluent would be available for recycling between the two plants.

A Recycled Master Plan was prepared for the City to investigate the feasibility of developing an extensive recycled water distribution system from both WWTPs to identified markets within the City limits. Over 160 individual potential customers were identified with an average annual demand of about 14,000 acre-feet per year. Several conceptual alternatives for significant expansion of the recycled water system were developed as part of the plan. Estimated unit costs at build out for the various alternatives ranged from about $500 to about $1200 per acre-foot (af). Initial system costs ranged from $900 to about $1500 per AF. Based on these high unit costs the City determined that a large scale recycled water distribution system to serve the majority of the identified markets in the entire City was not economically feasible at the time the Master Plan was completed. Since that time, potable water costs have approached and will exceed $1000 per acre-foot (of water) in the near future, making recycled water distribution more attractive.

The City plans to pursue additional direct reuse opportunities for treated effluent in the future, as funding becomes available. The SLRWRP expansion included space for increased tertiary treatment capacity of 7.5 MGD for direct reuse. The City will require dual distribution facilities to be built in new developments where recycled water is planned for use.

Table 26 lists the future water projects that would increase the City's water supply.

Table 26
Future Water Supply Projects

Project Name	Projected Start Date	Projected Completion Date	Normal-year AF to agency	Single-dry year yield AF	Multiple-Dry-Year 1 AF	Multiple-Dry-Year 2 AF	Multiple-Dry-Year 3 AF
SLRWRP Water Reclamation Expansion	2012	2013	1,680	1,680	1,680	1,680	1,680
Mission Basin Desalter Facility	2011	2012	7,135	7,135	7,135	7,135	7,135
Desalination	2011	2020	11,201	11,201	11,201	11,201	11,201
Total			***20,017***	***20,017***	***20,017***	***20,017***	***20,017***

SECTION 5: WATER SUPPLY RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING

This section compares projected water supplies and demands and assesses the overall reliability of future supplies regardless of drought or emergency conditions

Drought planning is to consider water supplies during single-dry and multiple-dry years. Single-dry and multiple-dry year conditions are usually based on historical records of annual runoff from a particular watershed. A multiple-dry year period is generally three or more consecutive years with the lowest average annual runoff. Consistent with SDCWA's 2010 UWMP, the City's single-dry year was determined to be 1990 and multiple-dry years were 1990 through 1992. Based on the City's historical water supply data, the year 2000 was chosen as their normal year since they experienced a median supply during that year. Table 27 shows the City's basis for water year data.

Table 27
Basis of Water Year Data

Water Year Type	Base Year(s)
Average Water Year	2000
Single-Dry Water Year	1990
Multiple-Dry Water Years	1990 - 1992

Table 28 shows the actual water supply for each of the years identified in Table 27. As shown, historically, water supply drops to 80% of normal supply during a single dry year event. During multiple dry year conditions supply dropped to 80% below normal the first year, 68% the second year, and 75% the third year. This may be due to conservation efforts by the City during the drought. These percentages were used to estimate the dry year demands in Tables 35, 37 and 38 in Section 5.4.

Table 28
Supply Reliability - Historic Conditions - AF Year

Average / Normal Water Year (2000)	Single Dry Water Year (1990)	Multiple Dry Water Years		
		Year 1 (1990)	Year 2 (1991)	Year 3 (1992)
33,917	27,026	27,026	22,990	25,529
% of Normal	80%	80%	68%	75%

5.1 WATER SUPPLY RELIABILITY

Law

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

The costs of demand management or supply augmentation options to reduce the frequency and severity of shortages are now high enough that city planners must look more carefully at the costs of unreliability to make the best possible estimate of the net benefit of taking specific actions, hence the term "reliability planning." Reliability is a measure of a water service system's expected success in managing water shortages.

To plan for long-term water supply reliability, planners examine an increasingly wide array of supply augmentation and demand reduction options to determine the best courses of action for meeting water service needs. Such options are generally evaluated using the water service reliability planning approach.

In addition to climate, other factors that can cause water supply shortages are earthquakes, chemical spills, and energy outages at treatment and pumping facilities. City planners include the probability of catastrophic outages when using the reliability planning approach. Table 29 shows the different factors that may result in inconsistency of supply.

Table 29
Factors resulting in inconsistency of supply

Name of supply	Legal	Environ-mental	Water Quality	Climatic
San Diego County Water Authority		X		X
Supplier-produced groundwater (MBGPF)		X		X
Desalinated Water				
Recycled Water				

Reliability planning requires information about: (1) the expected frequency and severity of shortages; (2) how additional water management measures are likely to affect the frequency and severity of shortages; (3) how available contingency measures can reduce the impact of shortages when they occur.

The City of Oceanside is one of 24 member retail agencies of the SDCWA. Member agency status entitles the City to directly purchase water for its needs from the SDCWA on a wholesale basis. The City looks to the SDCWA to insure, to the best of its ability, that adequate amounts of imported water will be available to satisfy future water requirements.

To maximize the reliability of the region's water supply, the SDCWA is executing a long-term strategy to diversify the region's supply sources, make major investments in the region's water delivery and storage system, and improve water use efficiency.

In 1991, the San Diego region was 95 percent reliant on a single supplier of imported water – the MWD. This made the region extremely vulnerable to water supply shortages. That year, an ongoing drought forced MWD to cut deliveries to the San Diego region by 30 percent.

As a result of that crisis, the Water Authority Board approved a strategy to aggressively diversify its water supply portfolio by developing new local and imported water supplies. This strategy already is enhancing regional supply reliability. By fiscal year 2010, the San Diego region had reduced its reliance on MWD supplies to 50 percent. This has lessened the impact of current water cutbacks from MWD that began in July 2009.

SDCWA concluded that if projected SDCWA and member agency supplies are developed as planned, along with Metropolitan Water District of Southern California's (MWD) Integrated Resources Plan (IRP), no shortages are anticipated within SDCWA's service area under normal-year, single-dry year or multiple dry water years through 2035. However, and as a safeguard, SDCWA has carry-over storage.

The Water Authority is working with its 24 local member retail agencies to develop local supplies such as groundwater, recycled water, seawater desalination, and conservation. By 2020, SDCWA projects local water supplies to meet 40 percent of the region's water demand.

As part of the conservation effort, the City of Oceanside adopted Ordinance No. 091-15 on March 27, 1991, which established a water conservation program for the City. The City's "Water Conservation" code was further amended in July 2008 through the adoption of City Ordinance No. 08-IR0439-1 to revise the existing water conservation program and add drought response conservation measures to be implemented in the event of mandatory water reductions.

The City completed a comprehensive Water Conservation Master Plan in May 2011.

5.2 WATER SHORTAGE CONTINGENCY PLANNING

Law

> 10632(c) Actions to be undertaken by the urban water supplier to prepare for and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.
>
> 10632(d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.
>
> 10632(e). Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.
>
> 10632(f.) Penalties or charges for excessive use, where applicable.
>
> 10632(g). An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.
>
> 10632(h) A draft water shortage contingency resolution or ordinance.

The City of Oceanside has formally codified Ordinance No. 08-ORO439-1, attached as Appendix C, establishing a water contingency plan. The following water shortage contingency plan components are included in this ordinance.

5.2.1 Stages of Action

Water management stages shown in Table 30 are a sequential, regulatory program of increasingly stringent prohibitions on the use of water delivered within the City. The drought ordinance establishes four levels of drought response actions to be implemented in times of shortage. When the City declares that a particular stage is in effect, City customers must comply with all regulations contained in the declared stage.

Table 30
Water Supply Shortage Rationing Stages and Conditions

Drought Response Level	Water Supply Conditions	% Shortage
1	Drought Watch Condition	up to 10%
2	Drought Alert Condition	up to 20%
3	Drought Critical Condition	up to 40%
4	Drought Emergency Condition	above 40%

The City's drought ordinance establishes regulations to be implemented during the water shortage levels listed in Table 30 with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies. During a Drought Response Level 2 condition or higher, the water conservation measures and water use restrictions established are mandatory and violations are subject to criminal, civil, and administrative penalties and remedies specified in this ordinance and as provided City's Administrative or Municipal Code.

The Drought Response Conservation Program (Program) was adopted by the City in July 2008. It was based on a model program developed by the SDCWA for its member agencies. During the most recent drought, the Program was utilized to declare a Drought Response Level 2 Condition. Recently, the SDCWA and the City declared an end to the drought and the City reduced its Drought Response to a Level 1 Drought Watch condition. The SDCWA and its member agencies agree that it is a good time to analyze how effective the Program was during the drought. Anticipated changes include better defining the Drought Response Levels and establishing consumption reduction methods in order to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

5.2.2 Prohibitions

In accordance with California Urban Water Conservation Council Best Management Practice 13, the City prohibits gutter flooding, single pass cooling systems in new connections, non-recirculating systems in all new conveyer car wash and commercial laundry systems, and non-recycling decorative water fountains.

The City also support efforts to develop state law regarding exchange-type water softeners that would: (1) allow the sale of only more efficient, demand-initiated regenerating (DIR) models; (2) develop minimum appliance efficiency standards that (a) increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per pound of common salt used; and (b) implement an identified maximum number of gallons discharged per gallon of soft water produced; (3) allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the re-claimed water or groundwater supply.

Further, the City has declared that at no time shall water be wasted or used unreasonably. Unreasonable uses of water include, but are not limited to, the following:

- Failure to repair a water leak after notification from the City and opportunity to do so.
- Failure to stop water waste resulting from conditions such as inefficient landscape irrigation excessive runoff, low head drainage, overspray of water flows onto non-targeted areas, overspray of water flows onto adjacent property, overspray and water flow onto non-irrigated areas, overspray and water flow onto roadways and adjacent structures.

Table 31 presents the City's mandatory prohibitions.

Table 31
Mandatory Prohibitions

Examples of Prohibitions	Stage When Prohibition Becomes Mandatory*
Gutter flooding	1
Single pass cooling systems in new connections	1
Non-recirculating systems in all new conveyer car wash and commercial laundry systems	1
Non-recycling decorative water fountains	1
Washing down paved surfaces (sidewalks, driveways, parking lots, etc.)	2
Inefficient landscape irrigation (runoff, low head drainage, overspray, etc.)	2
Watering with a hand-held hose with a positive shut-off nozzle or a bucket	2
Watering when a drip/micro-irrigation system/equipment is used	2
Filling or refilling ornamental lakes/ponds (to the extent needed to sustain aquatic life)	3
Washing Vehicles except at commercial carwashes	3
All landscape irrigation except crops and landscape products of commercial growers and nurseries.	4

* The City encourages water use efficiency at all times

5.2.3 Consumption Reduction Methods

The City of Oceanside's Water Shortage Contingency Plan also provides consumption reduction methods to reduce water use in the most restrictive stages. These methods are listed in Table 32.

Table 32
Consumption Reduction Methods

Consumption Reduction Methods	Stage When Method Takes Effect	Projected Reduction (%)
Public Education and Outreach	1	10
Reclaimed water use only for washing down of sidewalks, driveways, parking lots, etc.	2	20
Residential and Commercial Landscape irrigation before 8am and after 6pm	2	20
Irrigate nursery and commercial growers products before 10am and after 6pm	2	20
Restaurant will serve and refill water only upon request	2	20
Hotels/motels will offer guests the option of not laundering towels and linens daily	2	20
Using recycled or non-potable water for construction purposes when available	2	20
Residential and Commercial Landscape irrigation assigned days per week	2	20
Repair all leaks within 72 hours of notification by the City	2	20
Limited Residential and Commercial Landscape irrigation assigned days per week	3	40
Repair all leaks within 48 hours of notification by the City	3	40
Stop all landscape irrigation except crops and landscape products of commercial growers and nurseries.	4	40
Repair all leaks within 24 hours of notification by the City	4	40

5.2.4 Penalties and Charges

The City of Oceanside does have provisions for penalties and charges for excessive use and mandatory prohibition violations. These are shown in Table 33.

Table 33
Penalties and Charges

Penalties or Charges	Stage When Penalty Takes Effect
Section 37.109 of the City Code provides that penalties for violation of the code sections related to water conservation are punishable as misdemeanor crimes under section 1.7 (a) (1) of the City Code with fines not to exceed $1,000 or imprisonment for a term not exceeding six months or both.	2
The City's Water Conservation Ordinance includes provisions that water service can also be discontinued or limited to any customer who uses excessive water in a drought.	2

5.2.5 Revenue and Expenditure Impacts of Water Shortage

It is difficult to precisely gauge the revenue and expenditure impacts of implementation of the water shortage contingency plan. The plan provides for prohibitions on outdoor water use and requests for indoor use reductions, enforced by misdemeanor penalties for violation. Ultimate impacts will be based upon a mix of responses to these requirements and overall public cooperation in saving water in additional ways. Revenue will be reduced through lower water sales. However, the City will see this compensated to some degree by lower water purchase, pumping and treatment charges.

During the most recent cutbacks, the City has experienced revenue impacts. The following is the City's estimate for revenue loss due to past conservation. These figures assume that percent reductions have a direct offset on all volumetric based charges (i.e., water sales, SDCWA surcharges, clean water surcharge). Estimates are based on data that was available and should be used for judging order of magnitude only. It should also be noted that these estimates do not represent direct reductions to the City's net operating revenues, because there are offsetting reductions in expenditures that also occur with reduced consumption levels.

- FY 2008/09 – 6% consumption reduction from FY 2007/08 levels
  - Approximately $1.7 million reduced revenues
- FY 2009/10 – 17.5% consumption reduction from FY 2007/08 levels
  - Approximately $6.1 million reduced revenues
- FY 2010/11 – Estimated 20.3% consumption reduction from FY 2007/08 levels
  - Approximately $9.7 million reduction in revenues estimated

For planning purposes it is assumed that City's consumption reduction targets are met for each water shortage contingency plan stage. Revenue losses are proportional to the commodity rate revenue not received, less variable cost reductions for treated water purchases from the SDCWA. No additional costs are assumed for water shortage contingency plan (code) enforcement. While most water savings are likely to accrue from less outdoor water use

there will also be revenue losses from somewhat less sewage produced and treated. For purposes here, and since the City charges a commodity charge on estimated sewage flow and can control that charge, revenue losses are assumed to be offset by collection and treatment cost reductions.

5.2.5.1 Measures to Overcome Impacts

Impacts during Drought Response Levels 1 through 4 would likely be absorbed by City reserves without requiring a rate increase provided the shortage condition did not persist for more than a year. Impacts beyond a year or impacts from a greater level of shortage would need to be individually assessed. Measures to reduce expenses would be considered during a shortage such as reduction in capital expenditures, deferring non-critical maintenance items and deferring filling of personnel vacancies. Should revenue loss impacts begin to affect essential water system operations, the City has established a drought rate structure to offset loss of revenue.

As a conservation measure, the City has established a drought rate structure, per Ordinance No. 09-OR0336-1, to be implemented to achieve the water reduction targets established in the City's Drought Response Conservation Program in the event of mandatory water reductions. The following tables show the rate increases to be implemented during each drought level.

Level 2 Drought Alert Rates: up to 20% Mandatory Reduction			
Service Fee Surcharge (per account): 10% higher than the current monthly rate (per meter equivalent)			
Commodity Charge: 1 unit = 748 gallons	Range	Reduction up to 10% - Increase Over Current Rate	Reduction up to 20% - Increase Over Current Rate
Single Family			
First Tier	0-13 units	0%	0%
Second Tier	14-20 units	25%	60%
Third Tier	21+ units	45%	100%
Multi Family			
First Tier	0-7 units	0%	0%
Second Tier	8-14 units	20%	55%
Third Tier	15+ units	40%	109%
Irrigation	per unit	20%	40%
Non-Residential/ Commercial Agricultural	per unit	15%	25%

Level 3 Drought Alert Rates: up to 20% Mandatory Reduction		
Service Fee Surcharge (per account): 25% higher than the current monthly rate (per meter equivalent)		
Commodity Charge: 1 unit = 748 gallons	Range	Increase over Current Rate
Single Family		
First Tier	0-11 units	0%
Second Tier	12-18 units	70%
Third Tier	19+ units	120%
Multi Family		
First Tier	0-7 units	0%
Second Tier	8-14 units	65%
Third Tier	15+ units	115%
Irrigation	per unit	60%
Non-Residential/ Commercial Agricultural	per unit	40%

Level 4 Drought Alert Rates: up to 20% Mandatory Reduction		
Service Fee Surcharge (per account): 30% higher than the current monthly rate (per meter equivalent)		
Commodity Charge: 1 unit = 748 gallons	Range	Increase over Current Rate
Single Family		
First Tier	0-5 units	0%
Second Tier	6-10 units	80%
Third Tier	11+ units	150%
Multi Family		
First Tier	0-4 units	0%
Second Tier	5-8 units	75%
Third Tier	9+ units	145%
Irrigation	per unit	80%
Non-Residential/ Commercial Agricultural	per unit	50%

As the City's accounts are fully metered, accounting for actual consumption can be monitored. Water production records will be examined monthly and compared against historical average monthly consumption data for that period. This data will be analyzed to assess any need for alterations to the water shortage contingency plan.

5.3 WATER QUALITY

Law

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

The City currently treats local groundwater supplies to eliminate total dissolved solids, iron, manganese, and trichloropropane that are characteristic of the groundwater in the region. Groundwater is extracted and treated at the Mission Basin Groundwater Purification Facility for delivery to the potable water system. If the groundwater was not treated, the City could potentially lose up to 6.37 million gallons per day of drinking water due to water quality issues. Given current and projected operations, no water quality issues are expected to impact the City's water supply.

5.4 DROUGHT PLANNING

Law

> 10631(c)(1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:
> (A) an average water year,
> (B) a single dry water year,
> (C) multiple dry water years.
>
> 10632(a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.
>
> 10632(b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.
>
> 10632(i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.
>
> 10635(a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

The Urban Water Management Planning Act requires every urban water supplier to assess the reliability of its water supply for normal, single-dry and multiple-dry years. Single-dry and multiple-dry year conditions were based on the City's historical water use records.

The Water Supply Assessment in Table 35 provides the City's estimated water supply projections associated with several water supply reliability scenarios.

The City has historically conserved water during single and multiple-dry years, so the forecast demands are highly conservative. The City anticipates no reduction of groundwater supplies for a single-dry year. During an extended event, an assumption was made that groundwater supplies will be reduced by 33% during the second year and another 33% (or 67% of normal year) in the third years.

In the event of a loss of local water supply during a multiple-dry year event, the City may need to purchase a higher percentage of untreated water from the SDCWA. It is assumed that SDCWA will be able to meet the City's needs during a single dry year since the SDCWA's 2010 Urban Water Management Plan states that "if the Water Authority and member agencies supplies are developed as planned, along with achievement of the SBX7-7 retail conservation target, no shortages are anticipated within the Water Authority's service area in a single dry-year through 2030." During multiple-dry years, per the Water Authority's 2010 UWMP, "some level of shortage could potentially be experienced." In the event of a shortage, the Water Authority will utilize their carryover storage supply. If shortages still occur, "additional regional shortage management measures, consistent with the Water Authority's Water Shortage and Drought Response Plan, will be taken to fill the supply shortage." It is therefore expected that the City will be able to meet customer demands during a multiple-dry year event now and in the future.

Table 35
Supply Reliability - Current Water Sources (AFY)

Water Supply Sources	Average / Normal Water Year[1]	Single Dry Water Year[2]	Multiple Dry Water Years[2]		
			Year 1	Year 2	Year 3
San Diego County Water Authority	21,765	16,412	16,412	14,746	18,233
Treated	4,891	4,891	4,891	4,891	4,891
Untreated	16,875	11,521	11,521	9,855	13,342
Supplier-produced groundwater (MBGPF)	4,455	4,455	4,455	2,985	1,470
Desalinated Water	0	0	0	0	0
Recycled Water	130	130	130	130	130
Total	***26,350***	***20,997***	***20,997***	***17,861***	***19,833***

1 From Table 12 - Current and Planned Water Supplies

2 The total water supply for single and multiple dry years was increased from the current normal year according to ther percentages in Table 25.

5.4.1 *Normal Supply and Demand Comparison*

Table 36 compares current and projected water supply and demand. It indicates that in average precipitation years, the City has sufficient water to meet its customers' needs, through 2035. This is based on continued commitment to conservation programs, maintaining current groundwater rights, additional imported water available when needed from SDCWA, and the supply of recycled water.

Table 36
Supply and Demand Comparison – Normal Year (AFY)

	2010	2015	2020	2025	2030	2035
Supply totals (Table 12)	23,823	31,792	30,303	30,484	30,778	31,282
Demand totals (Table 8)	26,350	33,938	32,589	33,598	34,839	35,225
Difference	2,528	2,146	2,286	3,114	4,061	3,943
Difference as % of Supply	11%	7%	8%	10%	13%	13%
Difference as % of Demand	10%	6%	7%	9%	12%	11%

5.4.2 *Single-Dry Year Supply and Demand Comparison*

1990 was identified as the driest year in recent record consistent with SDCWA's 2010 UWMP. The single-dry year scenario investigates the effect of an isolated single dry period similar to this year occurring in the future.

During a single-dry year demands are expected to decrease 80% as calculated in Table 37. To meet these demands, the City will continue to supply customer with groundwater supplies as well as the projected recycled water. To make up the remaining supply, the City will purchase more water from SDCWA.

In the event of a historical single-year drought, the City has sufficient water to meet its customers' needs, through 2035.

Table 37
Supply and Demand Comparison - Single Dry Year (AFY)

	2010	2015	2020	2025	2030	2035
Supply totals	20,997	27,043	25,968	26,772	27,761	28,068
Demand totals	20,997	27,043	25,968	26,772	27,761	28,068
Difference	0	0	0	0	0	0
Difference as % of Supply	0%	0%	0%	0%	0%	0%
Difference as % of Demand	0%	0%	0%	0%	0%	0%

5.4.3 *Multiple-Dry Year Supply and Demand Comparison*

The multiple-dry period supply and demand comparison examines the effect of a historical multiple-dry period occurring in the future. The historical dry year period was identified as the three year period from 1990-1992, consistent with SDCWA's 2010 UWMP. The supply production data for this period, shown in Table 28, indicates that during a multiple-dry year

event City's water demand is expected to decrease by 20% the first year, then 32% and 35% below normal demand in the second and third year respectively.

During an extended event, an assumption was made that groundwater supplies will be reduced by 33% during the second year and another 33% (or 67% of normal year) in the third years. Recycled water supply is expected to remain consistent with the normal year projections. To make up the remaining supply, the City will purchase more untreated water from SDCWA.

According to the Water Authority's 2010 UWMP, "under the specific parameters assumed in the multi dry year analysis, some level of shortage could potentially be experienced." In the event of a shortage, the Water Authority will utilize their carryover storage supply. If shortages still occur, "additional regional shortage management measures, consistent with the Water Authority's Water Shortage and Drought Response Plan, will be taken to fill the supply shortage." It is therefore expected that the City will be able to meet customer demands during a multi dry year event now and in the future.

The comparison between supply and demand for each multiple dry year period is shown in Tables 38.

Table 38

Supply and Demand Comparison - Multiple Dry-Year Events (AFY)

		2010	2015	2020	2025	2030	2035
Multiple Dry-Year First Year Supply	Supply totals	20,997	27,043	25,968	26,772	27,761	28,068
	Demand totals	20,997	27,043	25,968	26,772	27,761	28,068
	Difference	0	0	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%	0%	0%
Multiple Dry-Year Second Year Supply	Supply totals	17,861	23,004	22,090	22,773	23,615	23,876
	Demand totals	17,861	23,004	22,090	22,773	23,615	23,876
	Difference	0	0	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%	0%	0%
Multiple Dry-Year Third Year Supply	Supply totals	19,833	25,544	24,529	25,288	26,223	26,513
	Demand totals	19,833	25,544	24,529	25,288	26,223	26,513
	Difference	0	0	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%	0%	0%

SECTION 6: DEMAND MANAGEMENT MEASURES

Law

10631(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

10631(f)(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

(A) water survey programs for single-family residential and multifamily residential customers;
(B) residential plumbing retrofit;
(C) system water audits, leak detection, and repair;
(D) metering with commodity rates for all new connections and retrofit of existing connections;
(E) large landscape conservation programs and incentives;
(F) high-efficiency washing machine rebate programs;
(G) public information programs;
(H) school education programs;
(I) conservation programs for commercial, industrial, and institutional accounts;
(J) wholesale agency programs;
(K) conservation pricing;
(L) water conservation coordinator;
(M) water waste prohibition;
(N) residential ultra-lowflush toilet replacement programs.

10631(f)(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

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

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

10631(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

10631(g)(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors;

> 10631(g)(2) Include a cost-benefit analysis, identifying total benefits and total costs;
> 10631(g)(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost;
>
> 10631(g)(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

The City is a member of the California Urban Water Conservation Council (CUWCC). As such, the City has submitted biannual reports to the CUWCC in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991. The Biannual Report is a good faith effort in implementing the 14 urban water conservation Best Management Practices (BMPs) that are intended to reduce long-term urban water demands. The BMPs, attached as Appendix D, are functionally equivalent to the Demand Management Measures in Water Code Section 10631.

The City is currently on track to meet its SBX7-7 targets based on their water use projections and CA Department of Finance provides population estimates using Method 3 as discussed in Section 3.1.

APPENDIX A

LIST OF GROUPS WHO PARTICIPATED IN THE DEVELOPMENT OF THIS PLAN

List of Participants in the Development of this Plan

City of Oceanside Staff:

Cari Dale, Water Utilities Director

Greg Blakely, Water Utilities Division Manager

Teresa Gomez, Management Analyst

Judith Ludlow, Senior Management Analyst

Interagency:

San Diego County Water Authority

County of San Diego

Rainbow Municipal Water District

Vista Irrigation District

Carlsbad Municipal Water District

Camp Pendleton

Engineering Consultants:

Scott Humphrey, Infrastructure Engineering Corporation

Genevieve Chambliss, Infrastructure Engineering Corporation

APPENDIX B

RESOLUTION NO. XXX
RESOLUTION TO ADOPT THE 2010 URBAN WATER MANAGEMENT PLAN
-
2011 COVER LETTER TO THE DEPARTMENT OF WATER RESOURCES
-
2011 COVER LETTER TO THE SAN DIEGO COUNTY WATER AUTHORITY
-
2011 COVER LETTER TO COUNTY OF SAN DIEGO,
-
2011 COVER LETTER TO RAINBOW MUNICIPAL WATER DISTRICT
-
2011 COVER LETTER TO CARLSBAD MUNICIPAL WATER DISTRICT
-
2011 COVER LETTER TO VISTA IRRIGATION DISTRICT

APPENDIX C

OCEANSIDE'S DROUGHT ORDINANCE

ORDINANCE NO. 08-OR0439-1

-

OCEANSIDE'S DROUGHT RATE STRUCTURE

ORDINANCE NO. 09-OR0336-1

ORDINANCE NO. 08-OR0439-1

AN ORDINANCE OF THE CITY OF OCEANSIDE AMENDING THE OCEANSIDE CITY CODE, CHAPTER 37, ARTICLE V., BY REVISING THE EXISTING WATER CONSERVATION PROGRAM AND ADDING DROUGHT RESPONSE CONSERVATION MEASURES TO BE IMPLEMENTED IN THE EVENT OF MANDATORY WATER REDUCTIONS

WHEREAS, on March 27, 1991, the City Council adopted Ordinance No. 091-15, which established a water conservation program for the City;

WHEREAS, article 10, section 2 of the California Constitution declares that waters of the State are to be put to beneficial use, that waste, unreasonable use, or unreasonable method of use of water be prevented, and that water be conserved for the public welfare; and

WHEREAS, conservation of current water supplies and minimization of the effects of water supply shortages that are the result of drought are essential to the public health, safety and welfare; and

WHEREAS, regulation of the time of certain water use, manner of certain water use, design of rates, method of application of water for certain uses, installation and use of water-saving devices, provide an effective and immediately available means of conserving water; and

WHEREAS, adoption and enforcement of a comprehensive water conservation program will allow the City of Oceanside to delay or avoid implementing measures such as water rationing or more restrictive water use regulations pursuant to a declared water shortage emergency as authorized by California Water Code sections 350 et seq; and

WHEREAS, San Diego County is a semi-arid region and local water resources are scarce. The region is dependent upon imported water supplies provided by the San Diego County Water Authority, which obtains a substantial portion of its supplies from the Metropolitan Water District of Southern California. Because the region is dependent upon

imported water supplies, weather and other conditions in other portions of this State and of the Southwestern United States affect the availability of water for use in San Diego County; and

WHEREAS, the San Diego County Water Authority has adopted an Urban Water Management Plan that includes water conservation as a necessary and effective component of the Water Authority's programs to provide a reliable supply of water to meet the needs of the Water Authority's 24 member public agencies, including the City of Oceanside. The Water Authority's Urban Water Management Plan also includes a contingency analysis of actions to be taken in response to water supply shortages. This ordinance is consistent with the Water Authority's Urban Water Management Plan; and

WHEREAS, as anticipated by its Urban Water Management Plan, the San Diego County Water Authority, in cooperation and consultation with its member public agencies, has adopted a Drought Management Plan, which establishes a progressive program for responding to water supply limitations resulting from drought conditions. This ordinance is intended to be consistent with and to implement the Water Authority's Drought Management Plan; and

WHEREAS, the Water Authority's Drought Management Plan contains three stages containing regional actions to be taken to lessen or avoid water supply shortages. This ordinance contains drought response levels that correspond with the Drought Management Plan stages; and

WHEREAS, the City of Oceanside, due to the geographic and climatic conditions within its territory and its dependence upon water imported and provided by the San Diego County Water Authority, may experience shortages due to drought conditions, regulatory restrictions enacted upon imported supplies and other factors. The City of Oceanside has adopted an Urban Water Management Plan and a Water Conservation Program (Oceanside City Code, Chapter 37, Article V) that includes water conservation as a necessary and effective component of its programs to provide a reliable supply of water to meet the needs of the public within its service territory. The City of Oceanside's Urban Water Management Plan and Water Conservation Program also include a contingency analysis of actions to be taken in response to water supply

shortages. This ordinance is consistent with the Urban Water Management Plan and the Water Conservation Program adopted by the City of Oceanside; and

WHEREAS, the water conservation measures and progressive restrictions on water use and method of use identified by this ordinance provide certainty to water users and enable the City of Oceanside to control water use, provide water supplies, and plan and implement water management measures in a fair and orderly manner for the benefit of the public.

WHEREAS, the City Council has determined that the water conservation program shall be amended by including revised methods to reduce under certain circumstances potable water use and establishing a Drought Response Conservation Program to be implemented in the event of mandatory water reductions as determined by the Metropolitan Water District of Southern California and the San Diego County Water Authority, which are the City's external water providers.

NOW, THEREFORE, the City Council of the City of Oceanside DOES ORDAIN as follows:

SECTION 1. Sec. 37.101 of the Oceanside City Code shall be amended to read as follows:

"Sec. 37.101 Declaration of Necessity and Intent

"(a) This ordinance establishes water management requirements necessary to conserve water, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, prevent unreasonable use of water, prevent unreasonable method of use of water within the City of Oceanside in order to assure adequate supplies of water to meet the needs of the public, and further the public health, safety, and welfare, recognizing that water is a scarce natural resource that requires careful management in times of drought, but at all times.

(b) This ordinance establishes regulations to be implemented during times of declared water shortages, or declared water shortage emergencies. It establishes four levels of drought response actions to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies.

(c) Level 1 condition drought response measures are voluntary and will be reinforced through local and regional public education and awareness measures that may be funded in part by the City of Oceanside. During drought response conditions Levels 2 through 4, all conservation measures and water-use restrictions are mandatory and become increasingly restrictive in order to attain escalating conservation goals.

(d) During a Drought Response Level 2 condition or higher, the water conservation measures and water use restrictions established by this ordinance are mandatory and violations are subject to criminal, civil, and administrative penalties and remedies specified in this ordinance and as provided in the Oceanside City Code."

SECTION 2. Sec.37.101.1 shall be added and shall read as follows:

"Sec. 37.101.1 Application

(a) The provisions of this ordinance apply to any person in the use of any water provided by the City of Oceanside.

(b) This ordinance is intended solely to further the conservation of water. It is not intended to implement any provision of federal, State, or local statutes, ordinances, or regulations relating to protection of water quality or control of drainage or runoff. Refer to Chapter 40 of the Oceanside City Code or the Regional Water Quality Control Board for information on any urban runoff/stormwater ordinances or urban runoff/stormwater management plans.

(c) Nothing in this ordinance is intended to affect or limit the ability of the City of Oceanside to declare and respond to an emergency, including an emergency that affects the ability of the City of Oceanside to supply water.

(d) The provisions of this ordinance do not apply to use of water from private wells or to recycled water.

(e) Nothing in this ordinance shall apply to use of water that is subject to a special supply program, such as the Metropolitan Interim Agricultural Water Program or the Water Authority Special Agricultural Rate programs. Violations of the conditions of the special supply programs are subject to the penalties established under the applicable program. A

person using water subject to a special supply program and other water provided by the City of Oceanside is subject to this ordinance in the use of the other water."

SECTION 3. Sec. 37.103 (c) shall be amended to read as follows:

"(c) Water users shall not let water leave the property by draining onto adjacent properties or public or private roadways due to irrigation or failure to correct known leaks. Spraying hard surfaces during irrigation activities is prohibited."

SECTION 4. **Sec. 37.105. Definitions** shall be amended by adding the following:

" (j) *DMP* means the Water Authority's Drought Management Plan in existence on the effective date of this ordinance and as readopted or amended from time to time, or an equivalent plan of the Water Authority to manage or allocate supplies during shortages.

(k) *Grower* refers to those engaged in the growing or raising, in conformity with recognized practices of husbandry, for the purpose of commerce, trade, or industry, or for use by public educational or correctional institutions, of agricultural, horticultural or floricultural products, and produced: (1) for human consumption or for the market, or (2) for the feeding of fowl or livestock produced for human consumption or for the market, or (3) for the feeding of fowl or livestock for the purpose of obtaining their products for human consumption or for the market. "Grower" does not refer to customers who purchase water subject to the Metropolitan Interim Agricultural Water Program or the Water Authority Special Agricultural Rate programs.

(l) *Metropolitan* means the Metropolitan Water District of Southern California.

(m) *Person* means any natural person, corporation, public or private entity, public or private association, public or private agency, government agency or institution, school district, college, university, or any other user of water provided by the City of Oceanside.

(n) *Water Authority* means the San Diego County Water Authority."

SECTION 5. Sec. 37.106 shall be amended to read as follows:

"Sec. 37.106. Conservation levels

(a) General conditions. Customers are always asked to use water wisely and to practice water conservation measures so that water is not wasted. Under these conditions, the City of

Oceanside has sufficient water supplies to meet normal and local emergency water supply needs. To protect and to enhance the city's overall use of local water supply, water treatment devices that waste potable water or that degrade wastewater so that it cannot be utilized for reclaimed water or local basin recharge will not be sold to or utilized by any users unless necessary for authorized medical reasons. The City encourages customers to follow the water conservation practices listed in Drought Response Level 1 at all times.

(b) Drought Response Level 1 – Drought Watch Condition

1. A Drought Response Level 1 condition is also referred to as a "Drought Watch" condition. A Level 1 condition applies when the Water Authority notifies its member agencies that due to drought or other supply reductions, there is a reasonable probability there will be supply shortages and that a consumer demand reduction of up to 10 percent is required in order to ensure that sufficient supplies will be available to meet anticipated demands. The Water Utilities Director shall declare the existence of a Drought Response Level 1 and take action to implement the Level 1 conservation practices indentified in this ordinance.

2. During a Level 1 Drought Watch condition, the City of Oceanside will increase its public education and outreach efforts to emphasize increased public awareness of the need to implement the following water conservation practices:

a. Stop washing down paved surfaces, including but not limited to sidewalks, driveways, parking lots, tennis courts, or patios, except when it is necessary to alleviate safety or sanitation hazards.

b. Stop water waste resulting from inefficient landscape irrigation, such as runoff, low head drainage, or overspray, etc. Similarly, stop water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.

c. Irrigate residential and commercial landscape before 10:00 a.m. and after 6:00 p.m. only.

d. Use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped areas, including trees and shrubs located on residential and commercial properties that are not irrigated by a landscape irrigation system.

e. Irrigate nursery and commercial grower's products before 10:00 a.m. and after 6:00 p.m. only. Watering is permitted at any time with a hand-held hose equipped with a positive shut-off nozzle, a bucket, or when a drip/micro-irrigation system/equipment is used. Irrigation of nursery propagation beds is permitted at any time. Watering of livestock is permitted at any time.

f. Use re-circulated water to operate ornamental fountains.

g. Wash vehicles using a bucket and a hand-held hose with positive shut-off nozzle, mobile high pressure/low volume wash system, or at a commercial site that re-circulates (reclaims) water on-site. Avoid washing during hot conditions when additional water is required due to evaporation.

h. Serve and refill water in restaurants and other food service establishments only upon request.

i. Offer guests in hotels, motels, and other commercial lodging establishments the option of not laundering towels and linens daily.

j. Repair all water leaks within five (5) days of notification by the City of Oceanside unless other arrangements are made with the Water Utilities Director.

k. Use recycled or non-potable water for construction purposes when available.

3. During a Drought Response Level 2 condition or higher, all persons shall be required to implement the conservation practices established in a Drought Response Level 1 condition.

(c) Drought Response Level 2 – Drought Alert Condition

1. A Drought Response Level 2 condition is also referred to as a "Drought Alert" condition. A Level 2 condition applies when the Water Authority notifies its member agencies that due to cutbacks caused by drought or other reduction in supplies, a consumer demand reduction of up to 20 percent is required in order to have sufficient supplies available to meet anticipated demands. The Oceanside City Council shall adopt a resolution declaring the existence of a Drought Response Level 2 condition and implementing the mandatory Level 2 conservation measures indentified in this ordinance.

2. All persons using City of Oceanside water shall comply with Level 1 Drought Watch water conservation practices during a Level 2 Drought Alert, and shall also comply with the following additional conservation measures:

a. Limit residential and commercial landscape irrigation to no more than three (3) assigned days per week on a schedule established by the Water Utilities Director and posted by the City of Oceanside. During the months of November through May, landscape irrigation is limited to no more than once per week on a schedule established by the Water Utilities Director and posted by the City of Oceanside. This section shall not apply to commercial growers or nurseries.

b. Limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per water station per assigned day. This provision does not apply to landscape irrigation systems using water efficient devices, including but not limited to: weather-based controllers, drip/micro/irrigation systems or stream rotor sprinklers.

c. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by subsection 37.106(c)2.a., on the same schedule set forth in subsection 37.106(c)2.a. by using a bucket, hand-held hose with positive shut-off nozzle, or low-volume non-spray irrigation.

d. Repair all leaks within seventy-two (72) hours of notification by the City of Oceanside unless other arrangements are made with the Water Utilities Director.

e. Stop operating ornamental fountains or similar decorative water features unless recycled water is used.

(d) Drought Response Level 3 – Drought Critical Condition

1. A Drought Response Level 3 condition is also referred to as a "Drought Critical" condition. A Level 3 condition applies when the Water Authority notifies its member agencies that due to increasing cutbacks caused by drought or other reduction of supplies, a consumer demand reduction of up to 40 percent is required in order to have sufficient supplies available to meet anticipated demands. The Oceanside City Council shall adopt a resolution declaring

the existence of a Drought Response Level 3 condition and implementing the Level 3 conservation measures identified in this ordinance.

2. All persons using City of Oceanside water shall comply with Level 1 Drought Watch and Level 2 Drought Alert water conservation practices during a Drought Response Level 3 condition, and shall also comply with the following additional mandatory conservation measures:

a. Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the Water Utilities Director and posted by the City of Oceanside. During the months of November through May, landscape irrigation is limited to no more than once per week on a schedule established by the Water Utilities Director and posted by the City of Oceanside. This section shall not apply to commercial growers or nurseries.

b. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by subsection 37.106(d)2.a., on the same schedule set forth in subsection 37.106(d)2.a. by using a bucket, hand-held hose with positive shut-off nozzle, or low-volume non-spray irrigation.

c. Stop filling or re-filling ornamental lakes or ponds, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a drought response level under this ordinance.

d. Stop washing vehicles except at commercial carwashes that re-circulate water, or by high pressure/low volume wash systems.

e. Repair all leaks within forty-eight (48) hours of notification by the City of Oceanside unless other arrangements are made with the Water Utilities Director.

3. Upon the declaration of a Drought Response Level 3 condition, no new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as, will-serve

letters, certificates, or letters of availability) shall be issued, except under the following circumstances:

a. A valid, unexpired building permit has been issued for the project; or

b. The project is necessary to protect the public's health, safety, and welfare; or

c. The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the City of Oceanside.

This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted for a period of one year or less.

d. Upon declaration of a Drought Response Level 3 condition, the City of Oceanside will suspend consideration of annexations to its service area.

e. The City of Oceanside may establish a water allocation for property served by the City of Oceanside using a method that does not penalize persons for the implementation of conservation methods or the installation of water saving devices. If the City of Oceanside establishes a water allocation it shall provide notice of the allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the City of Oceanside customarily mails the billing statement for the fees or charges for on-going water service. The notice of allocation may also include notice that water usage in excess of the allocation will be subject to a penalty in a specified amount for each billing unit of water used in excess of the allocation. The penalty for excess water use shall be cumulative to any other remedy or penalty that may be imposed for violation of this ordinance.

(e) Drought Response Level 4 – Drought Emergency Condition

1. A Drought Response Level 4 condition is also referred to as a "Drought Emergency" condition. A Level 4 condition applies when the Water Authority Board of Directors declares a water shortage emergency pursuant to California Water Code section 350 and notifies its member agencies that a Level 4 requires a demand reduction of more than 40 percent in order for the City of Oceanside to have maximum water supplies available to meet anticipated

demands. The City of Oceanside shall declare a Drought Emergency in the manner and on the grounds provided in California Water Code section 350.

2. Upon declaration of a Drought Emergency, all persons using City of Oceanside water shall comply with conservation measures required during Level 1 Drought Watch, Level 2 Drought Alert, and Level 3 Drought Critical conditions and shall also comply with the following additional mandatory conservation measures:

a. Stop all landscape irrigation, except crops and landscape products of commercial growers and nurseries. This restriction shall not apply to the following categories of use unless the City of Oceanside has determined that recycled water is available and may be lawfully applied to the use.

(1) Maintenance of trees and shrubs that are watered on the same schedule set forth in subsection 37.106(d)2.a. by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation;

(2) Maintenance of existing landscaping necessary for fire protection as specified by the Fire Marshall of the local fire protection agency having jurisdiction over the property to be irrigated;

(3) Maintenance of existing landscaping for erosion control;

(4) Maintenance of plant materials identified to be rare or essential to the well-being of rare animals;

(5) Maintenance of landscaping within active public parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week according the schedule established under subsection 37.106(d)2.a.;

(6) Watering of livestock; and

(7) Public works projects and actively irrigated environmental mitigation projects.

b. Repair all leaks within twenty-four (24) hours of notification by the City of Oceanside unless other arrangements are made with the Water Utilities Director.

3. The City of Oceanside may establish a water allocation for property served by the City of Oceanside. If the City of Oceanside establishes a water allocation it shall provide notice of the allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the City of Oceanside customarily mails the billing statement for the fees or charges for on-going water service. The notice of allocation may also include notice that water usage in excess of the allocation will be subject to a penalty in a specified amount for each billing unit of water used in excess of the allocation. The penalty for excess water use shall be cumulative to any other remedy or penalty that may be imposed for violation of this ordinance.

SECTION 6. Sec. 37.107 shall be amended to read as follows:

"Sec. 37.107. Correlation between Drought Management Plan and Drought Response Levels

(a) The correlation between the Water Authority's DMP stages and the City of Oceanside's drought response levels identified in this ordinance is described herein. Under DMP Stage 1, the City of Oceanside would implement Drought Response Level 1 actions. Under DMP Stage 2, the City of Oceanside would implement Drought Response Level 1 or Level 2 actions. Under DMP Stage 3, the City of Oceanside would implement Drought Response Level 2, Level 3, or Level 4 actions.

(b) The drought response levels identified in this ordinance correspond with the Water Authority DMP as identified in the following table:

Drought Response Levels	Use Restrictions	Conservation Target	DMP Stage
1 – Drought Watch	Voluntary	Up to 10%	Stage 1 or 2
2 – Drought Alert	Mandatory	Up to 20%	Stage 2 or 3
3 – Drought Critical	Mandatory	Up to 40%	Stage 3
4 – Drought Emergency	Mandatory	Above 40%	Stage 3

///

///

SECTION 7. Sec. 37.108 shall be amended to read as follows:

"Sec. 37.108. Procedures for Determination and Notification of Drought Response Level.

(a) The existence of a Drought Response Level 1 condition may be declared by the Water Utilities Director upon a written determination of the facts and circumstances supporting the determination. A copy of the written determination shall be filed with the Oceanside City Clerk and provided to the Oceanside City Council. The Water Utilities Director may publish a notice of the determination of existence of Drought Response Level 1 condition in one or more newspapers, including a newspaper of general circulation within the City of Oceanside. The City of Oceanside may also post notice of the condition on its website.

(b) The existence of Drought Response Level 2 or Level 3 conditions may be declared by resolution of the Oceanside City Council adopted at a regular or special public meeting held in accordance with State law. The mandatory conservation measures applicable to Drought Response Level 2 or Level 3 conditions shall take effect on the tenth (10) day after the Oceanside City Council adopts a resolution declaring the response level. Within five (5) days following the declaration of the response level, the City of Oceanside shall publish a copy of the resolution in a newspaper used for publication of official notices.

(c) The existence of a Drought Response Level 4 condition may be declared in accordance with the procedures specified in California Water Code Sections 351 and 352. The mandatory conservation measures applicable to Drought Response Level 4 conditions shall take effect on the tenth (10) day after the date the response level is declared. Within five (5) days following the declaration of the response level, the City of Oceanside shall publish a copy of the resolution in a newspaper used for publication of official notices. If the City of Oceanside establishes a water allocation, it shall provide notice of the allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the City of Oceanside customarily mails the billing statement for the fees or charges for on-going water service. Water allocation shall be effective on the fifth (5) day following the date of the mailing or at such later date as specified in the notice.

(d) The Oceanside City Council may declare an end to the Drought Response Level by the adoption of a resolution at any regular or special meeting held in accordance with State law."

SECTION 8. Subsection (a) of 37.109 shall be amended to read as follows:

"Sec. 37.109. **Violation, remedies.**

(a) The penalties for violations of this article are set forth in Section 1.7 and Section 1.14 et seq. of the City Code."

SECTION 9. **Severability.**

If any section, sentence, clause or phrase of this ordinance is for any reason held to be invalid or unconstitutional by a decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and adopted this ordinance and each section, sentence, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid or unconstitutional."

SECTION 10. The City Clerk of the City of Oceanside is hereby directed to publish this ordinance, or the title hereof as a summary, pursuant to state statute, once within ten (10) days after its passage in the North County Times, a newspaper of general circulation published in the City of Oceanside.

///

///

///

SECTION 11. This ordinance shall take effect and be in force upon adoption.

INTRODUCED at a regular meeting of the City Council of the City of Oceanside held on the 18th day of June, 2008, and, thereafter,

PASSED, AND ADOPTED by the City Council of the City of Oceanside, California this 9th day of July, 2008, by the following vote:

AYES: WOOD, CHAVEZ, FELLER, KERN, SANCHEZ
NAYS: NONE
ABSENT: NONE
ABSTAIN: NONE

MAYOR, CITY OF OCEANSIDE

ATTEST:

CITY CLERK

APPROVED AS TO FORM:

CITY ATTORNEY

AN ORDINANCE OF THE CITY OF OCEANSIDE AMENDING THE OCEANSIDE CITY CODE, CHAPTER 37, ARTICLE V., BY REVISING THE EXISTING WATER CONSERVATION PROGRAM AND ADDING DROUGHT RESPONSE CONSERVATION MEASURES TO BE IMPLEMENTED IN THE EVENT OF MANDATORY WATER REDUCTIONS

///
///
///

G:\Administration\Council - Commission\Staff Reports\Staff Reports - 2008\Resolutions and Ordinances\6-18-2008 Water Conservation Drought Management Ordinance.doc

ORDINANCE NO. 09-OR0336-1

AN ORDINANCE OF THE CITY OF OCEANSIDE AMENDING OCEANSIDE CITY CODE, CHAPTER 37 BY ESTABLISHING A DROUGHT RESPONSE RATE STRUCTURE AND DROUGHT RATES IN THE EVENT OF MANDATORY WATER REDUCTIONS

WHEREAS, on July 9, 2008, the City Council adopted Ordinance No. 08-OR0439-1 related to establishing drought response conservation measures to be implemented in the event of mandatory potable water reductions; and

WHEREAS, the City Council has determined that a drought rate structure with associated drought rates must be implemented to achieve the water reduction targets established in the City of Oceanside's Drought Response Conservation Program in the event of mandatory water reductions as determined by the Metropolitan Water District of Southern California and the San Diego County Water Authority, which are the City's external water providers.

NOW, THEREFORE, the City Council of the City of Oceanside DOES ORDAIN as follows:

SECTION 1. The second sentence of Section 37.108(b) is amended to read as follows:

Section 37.108(b) Procedures for determination and notification of drought response level.

"The mandatory conservation measures applicable to Drought Response Level 2 or Level 3 conditions shall take effect on the tenth (10th) day after the Oceanside City Council adopts a resolution declaring the response level, or on such later date as may be set forth in the resolution."

SECTION 2. The second sentence of Section 37.108(c) is amended to read as follows:

Section 37.108(c) Procedures for determination and notification of drought response level.

"The mandatory conservation measures applicable to Drought Response Level 4 conditions shall take effect on the tenth (10th) day after the Oceanside City Council adopts a

resolution declaring the response level, or on such later date as may be set forth in the resolution."

SECTION 3. Section 37.109.1 is hereby added to read as follows:

Section 37.109.1 Drought Rates

Effective upon declaration by the San Diego County Water Authority that Drought Response Levels Two through Four water reductions are required in order to have sufficient supplies to meet anticipated demands and upon the adoption of a resolution at each level by the Oceanside City Council, the following Drought Level Two through Four rates may be implemented:

Level 2 Drought Alert Rates: up to 20% Mandatory Reduction			
Service Fee Surcharge (per account): 10% higher than the current monthly rate (per meter equivalent)			
Commodity Charge: 1 unit = 748 gallons	Range	Reduction up to 10% - Increase over Current Rate	Reduction up to 20% - Increase over Current Rate
Single Family			
First Tier	0-13 units	0%	0%
Second Tier	14-20 units	25%	60%
Third Tier	21+ units	45%	100%
Multi Family			
First Tier	0-7 units	0%	0%
Second Tier	8-14 units	20%	55%
Third Tier	15+ units	40%	109%
Irrigation	Per unit	20%	40%
Non-Residential/ Commercial Agricultural	Per unit	15%	25%

///

///

Level 3 Drought Critical: up to 40% Mandatory Reduction		
Service Fee Surcharge (per account): 25% higher than the current monthly rate (per meter equivalent)		
Commodity Charge: 1 unit = 748 gallons	Range	Increase over Current Rate
Single Family		
First Tier	0-11 units	0%
Second Tier	12-18 units	70%
Third Tier	19+ units	120%
Multi Family		
First Tier	0-7 units	0%
Second Tier	8-12 units	65%
Third Tier	13+ units	115%
Irrigation	Per unit	60%
Non-Residential/ Commercial Agricultural	Per unit	40%

Level 4 Drought Emergency: Above 40% Mandatory Reduction		
Service Fee Surcharge (per account): 30% higher than the current monthly rate (per meter equivalent)		
Commodity Charge: 1 unit = 748 gallons	Range	Increase over Current Rate
Single Family		
First Tier	0-5 units	0%
Second Tier	6-10 units	80%
Third Tier	11+ units	150%
Multi Family		
First Tier	0-4 units	0%
Second Tier	5-8 units	75%
Third Tier	9+ units	145%
Irrigation	Per unit	80%
Non-Residential/ Commercial Agricultural	Per unit	50%

SECTION 4. The City Clerk of the City of Oceanside is hereby directed to publish this ordinance, or the title hereof as a summary, pursuant to state statute, once within fifteen (15)

days after its passage in the North County Times, a newspaper of general circulation published in the City of Oceanside.

SECTION 5. Severability.

If any section, sentence, clause or phrase of the Ordinance is for any reason held to be invalid or unconstitutional by a decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance and each section, sentence, clause or phrase thereof, irrespective of the fact that any one or more section, subsections, sentences, clauses or phrases be declared invalid or unconstitutional.

INTRODUCED at a regular meeting of the City Council of the City of Oceanside held on the 20th day of May, 2009, and, thereafter,

PASSED, AND ADOPTED by the City Council of the City of Oceanside, California this 3rd day of June, 2009, by the following vote:

AYES: WOOD, FELLER, KERN
NAYS: CHAVEZ, SANCHEZ
ABSENT: NONE
ABSTAIN: NONE

MAYOR, CITY OF OCEANSIDE

ATTEST:

CITY CLERK

APPROVED AS TO FORM:

ASST.

CITY ATTORNEY

AN ORDINANCE OF THE CITY OF OCEANSIDE AMENDING OCEANSIDE CITY CODE, CHAPTER 37, AMENDING THE DROUGHT RESPONSE CONSERVATION MEASURES AND ESTABLISHING A DROUGHT RESPONSE RATE STRUCTURE AND DROUGHT RATES IN THE EVENT OF MANDATORY WATER REDUCTIONS

APPENDIX D

OCEANSIDE BEST MANAGEMENT PRACTICES COVERAGE REPORT FOR 2009-2010

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Agency: CO OCEANSIDE
Retail

District Name: CO OCEANSIDE

CUWCC Unit #: 70

Primary Contact TERESA GOMEZ

Telephone 760-435-5815

Email: TKGOMEZ@CI.OCEANSIDE.CA.US

Compliance Option Chosen By Reporting Agency:
(Traditional, Flex Track or GPCD)
GPCD if used:

GPCD in 2010	136
GPCD Target for 2018	137

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	161	100%	167
2012	2	92.8%	155	96%	161
2014	3	89.2%	149	93%	155
2016	4	85.6%	143	89%	149
2018	5	82.0%	137	82%	137

Not on Track if 2010 GPCD is ≥ than target

GPCD in 2010	136
Highest Acceptable GPCD for 2010	167

On Track

Agency: CO OCEANSIDE
Retail

District Name: CO OCEANSIDE

CUWCC Unit #: 70

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Foundational BMPs

BMP 1.1 Operational Practices

Conservation Coordinator provided with necessary resources to implement BMPs?

		2009	2010
1.Conservation Coordinator provided with necessary resources to implement BMPs?	Name	TERESA GOMEZ	TERESA GOMEZ
	Title	MANAGEMENT ANALYST	MANAGEMENT ANALYST
	Email		TKGOMEZ@CI.C
		On Track	On Track

2. Water waste prevention documentation

On Track if any one of the 6 ordinance actions done, plus documentation or links provided

	2009	2010
Descriptive File	0	0
Descriptive File 2010		
URL	http://www.savewateroceanside.com/pdf/droughtlevel2.pdf	
URL 2010		http://www.savewateroceanside.com/, http://www.ci.oceanside.ca.us/Datarelation.aspx?Content=10
Describe Ordinance Terms	http://www.savewateroceanside.com/pdf/droughtlevel2.pdf	
Describe Ordinance Terms 2010		http://www.savewateroceanside.com/pdf/droughtlevel2.pdf http://www.savewateroceanside.com/pdf/droughtordinance.pdf
	On Track	On Track

Agency: CO OCEANSIDE
Retail

District Name: CO OCEANSIDE

CUWCC Unit #: 70

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

BMP 1.2 Water Loss Control

	2009		
Complete a prescreening Audit	yes	On Track	On Track if Yes
Metered Sales	30,118		
Verifiable Other Uses	20		
Total Supply	32,051		
(Metered Sales + System uses)/ Total Supply >0.89	0.94	On Track	On Track if =>.89, Not on Track if No
If ratio is less than 0.9, complete a full scale Audit in 2009?	Yes	On Track	On Track if Yes
Verify Data with Records on File?	yes	On Track	On Track if Yes
Operate a system Leak Detection Program?	Yes	On Track	On Track if Yes

		2010		
Compile Standard Water Audit using AWWA Software?		Yes	On Track	On Track if Yes, Not on Track if No
AWWA file provided to CUWCC?	FY 2010 AWWA Water Loss C		On Track	On Track if Yes, Not on Track if No
AWWA Water Audit Validity Score?		67		Info only until 2012
Completed Training in AWWA Audit Method?		no		
Completed Training in Component Analysis Process?		No		Info only until 2012
Complete Component Analysis?		No		Info only until 2012
Repaired all leaks and breaks to the extent cost effective?		Yes	On Track	On Track if Yes, Not on Track if No
Locate and repair unreported leaks to the extent cost effective.		Yes	On Track	On Track if Yes, Not on Track if No
Maintain a record-keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair.				Info only until 2012

Provided 7 types of Water Loss Control Info — info only until 2012

Leaks Repaired	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost of Interventions	Water Saved
0	$ -	$ -	0	Off	$ -	0

Agency: CO OCEANSIDE
Retail

District Name: CO OCEANSIDE

CUWCC Unit #: 70

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

1.3 METERING WITH COMMODITY RATES FOR ALL NEW CONNECTIONS AND RETROFIT OF EXISTING CONNECTIONS

		2009		2010		
Exemption or 'At least as Effective As' accepted by CUWCC						If signed MOU prior to 31 Dec 1997, On Track if all connections metered; if signed after 31 Dec 1997, complete meter installations by 1 July 2012 or within 6 yrs of signing and 20% biannual reduction of unmetered connections.
Numbered Unmetered Accounts	2008	0	On Track	0	On Track	On Track if no unmetered accounts
Metered Accounts billed by volume of use		Yes	On Track	Yes	On Track	Volumetric billing required for all connections on same schedule as metering
Number of CII accounts with Mixed Use meters		8		11		Info only
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?		no	On Track	No	On Track	On Track if Yes, On Track until 2012 if No
Feasibility Study provided to CUWCC?		no	On Track	No	On Track	On Track if Yes, On Track until 2012 if No
Completed a written plan, policy or program to test, repair and replace meters		Yes	On Track	Yes	On Track	On Track if Yes, Not on Track if No

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Agency: CO OCEANSIDE
Retail

District Name: CO OCEANSIDE

CUWCC Unit #: 70

Coverage Report Date: May 19, 2011

Primary Contact TERESA GOMEZ

Email: TKGOMEZ@CI.OCEANSIDE.CA.US

1.4 Retail Conservation Pricing

Date 2009 data received June 7, 2011
Date 2010 data received May 26, 2011

On Track if: Increasing Block, Uniform, Allocation, Standby Service; Not on Track if otherwise

Metered Water Rate Structure

Customer Class	2009 Rate Type	Conserving Rate?	Customer Class	2010 Rate Type	Conserving Rate?
Single-Family	Increasing Block	Yes	Single-Family	Increasing Block	Yes
Multi-Family	Increasing Block	Yes	Multi-Family	Increasing Block	Yes
Commercial	Uniform	Yes	Commercial	Uniform	Yes
Industrial	Uniform	Yes	Industrial	Uniform	Yes
Institutional	Uniform	Yes	Dedicated Irrigation	Uniform	Yes
	On Track			On Track	

Year Volumetric Rates began for Agencies with some Unmetered Accounts

Info only

Agencies with Partially Metered Service Areas: If signed MOU prior to 31 Dec. 1997, implementation starts no later than 1July 2010. If signed MOU after 31 Dec. 1997, implementation starts no later than 1July 2013, or within seven years of signing the MOU,

Agency: CO OCEANSIDE
Retail

District Name: CO OCEANSIDE

CUWCC Unit #: 70
Coverage Report Date: May 19, 2011

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Adequacy of Volumetric Rates) for Agencies with No Unmetered Accounts

Customer Class	2009 Rate Type	2009 Volumetric Revenues $1000s	2010 Rate Type	2010 Volumetric Revenues $1000s
Single-Family	Increasing Block	Data Missing	Single-Family	Data Missing
Multi-Family	Increasing Block		Multi-Family	
Commercial	Uniform		Commercial	
Industrial	Uniform		Industrial	
Institutional	Uniform		Dedicated Irrigation	
Dedicated Irrigation				
Agricultural				
Total Revenue Commodity Charges (V):				
Total Revenue Fixed Charges (M):				
Calculate: V / (V + M):		Data Missing		Data Missing

Agency Choices for rates:

A) Agencies signing MOU prior to 13 June2007, implementation starts 1 July2007: On Track if (V / (V + M) ≥ 70% x .8 = **56% for 2009** and 70%x0.90 = **63% for 2010**; Not on track if (V / (V + M)) < 70%;

B) Use Canadian model. Agencies signing MOU after 13June2007, implementation starts July 1 of year following signing.

	2009	2010
Canadian Water & Wastewater Rate Design Model Used and Provided to CUWCC	No	No
If Canadian Model is used, was 1 year or 3 year period applied?	On Track	On Track

Wastewater Rates

Does Agency Provide Sewer Service? 2009: Yes; 2010: Yes

if 'No', then wastewater rate info not required.

Customer Class	2009 Rate Type	Conserving Rate?	Customer Class	2010 Rate Type	Conserving Rate?
Single-Family	Increasing Block	Yes	Single-Family	Increasing Block	Yes
Multi-Family	Uniform	Yes	Multi-Family	Uniform	Yes
Commercial	Uniform	Yes	Commercial	Uniform	Yes
Industrial	Uniform	Yes	Industrial	Uniform	Yes
	Select a Rate Structure			Select a Rate Structure	
		No		Select a Rate Structure	
		No		Select a Rate Structure	
	On Track			On Track	

On Track if: 'Increasing Block', 'Uniform', 'based on long term marginal cost' or 'next unit of capacity'

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

BMP 2. EDUCATION PROGRAMS

BMP 2.1 Public Outreach Actions Implemented and Reported to CUWCC

	2009	2010
1) Contacts with the public (minimum = 4 times per year)	41,999	38,260
2) Water supplier contacts with media (minimum = 4 times per year, i.e., at least quarterly).	4	4
3) An actively maintained website that is updated regularly (minimum = 4 times per year, i.e., at least quarterly).	Yes	yes
4) Description of materials used to meet minimum requirement.	Website Newsletter articles on conservation Email Messages Newsletter articles on conservation News releases Television contacts Articles or stories resulting from outreach Select a type of media contact	Website Newsletter articles on conservation Newsletter articles on conservation Website Television contacts News releases Articles or stories resulting from outreach Select a type of media contact
5) Annual budget for public outreach program.	$ 45,911	$ 59,620
6) Description of all other outreach programs	Description is too large for text area. Data will be stored in the BMP Reporting database when online.	Description is too large for text area. Data will be stored in the BMP Reporting database when online.
	OnTrackfor 6 Actions	OnTrackfor 6 Actions

All 6 action types implemented and reported to CUWCC to be 'On Track')

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

2.2 School Education Programs Implemented and Reported to CUWCC

	2009	2010	
Does a wholesale agency implement School Education Programs for this unility's benefit?	Yes	Yes	
Name of Wholesale Supplier?	San Diego County Water Authority	San Diego County Water Authority	
1) Curriculum materials developed and/or provided by agency	3rd Grade Traveling Library Presentation, 5th Grade Weather and Water Presentation, H20 Where Do you Go? (Assembly), Traveling Library Display, and Splash Lab.	Project WET	Yes/ No
2) Materials meet state education framework requirements and are grade-level appropriate?	Yes	Yes	All 5 actions types implemented and reported to CUWCC to be 'On Track'
3) Materials Distributed to K-6?	yes	Yes	
Describe K-6 Materials	Library Presentaltons,Classroom Presentaltons, Assembly, Traveling Library Display	3rd Grade Traveling Library Presentation, 5th Grade Weather and Water Presentation, H20 Where Do you Go? (Assembly), Traveling Library Display, Green Machine, and Mobile Science Lab.	Describe materials to meet minimum requirements
Materials distributed to 7-12 students?	No	No	Info Only
4) Annual budget for school education program.	$450,500	$ 451,500	
5) Description of all other water supplier education programs	3rd Grade History Video DVD, Be Water Smart Conservation DVD, and Give Water a Second Chance..Re-Cycle it!, 20 Gallon challenge Pledge, and Youth & Scout Merit Patch Program	20 Gallon challenge Pledge and Youth/Scout Merit Patch Program	
	See Wholesale Report 0 On Track	See Wholesale Report 1 On Track	