

**CITY OF GROVER BEACH  
County of San Luis Obispo  
State of California**

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**2010 URBAN WATER MANAGEMENT PLAN**

City of Grover Beach  
2010 Urban Water Management Plan  
Contact Sheet

Date plan submitted to the Department of Water Resources:

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The Water supplier is a: **Municipality**

The Water supplier is a: **Retailer**

Utility services provided by the water supplier include: **Water, Sewer**

Is This Agency a Bureau of Reclamation Contractor? **No**

Is This Agency a State Water Project Contractor? **No**

## Acronyms and Abbreviations

AFY – Acre feet per year  
CRM – Consumption Reduction Methods  
CSD – Community Services District  
CUWCC – California Urban Water Conservation Council  
DMM – Demand Management Measures  
DWR – Department of Water Resources  
GB – Grover Beach  
Gpcd – gallons per capita per day  
IRWMPC – Integrated Regional Water Management Planning Committee  
LUE – Land Use Element  
MGD – Million Gallons per Day  
MOU – Memorandum of Understanding  
NCMA – Northern Cities Management Area  
SB-7 - Senate Bill No. 7  
SLO – San Luis Obispo  
TDS – Total Dissolved Solids  
SSLOCSD – South San Luis Obispo County Sanitation District  
UWMP – Urban Water Management Plan  
WSCP – Water Shortage Contingency Plan  
WSSA – Water Shortage Stages of Action  
WWTP – Wastewater Treatment Plant

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## **Areawide Participation**

### **Law**

*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 (10620(d)(2)).*

## **Area Water Agencies and Organizations**

The Northern Cities, which include the City of Arroyo Grande, City of Grover Beach, City of Pismo Beach and the Oceano Community Services District, County of San Luis Obispo, San Luis Obispo County Flood Control & Water Conservation District (Zone 3) and local landowners have actively and cooperatively managed surface water and groundwater resources for more than 30 years, with the goal of preserving the long-term integrity of water supplies in the Northern Cities Management Area (NCMA).

The Northern Cities Monitoring Program collects and analyzes data pertinent to water supply and demand, including:

- Land and water uses in the basin
- Sources of supply to meet those uses
- Groundwater conditions (including water levels and water quality).<sup>1</sup>

The City of Grover Beach is a member of the San Luis Obispo County Integrated Regional Water Management Planning Committee which contributes to the countywide water master plan.

## **Public Participation**

The City of Grover Beach has encouraged community participation in its urban water management planning efforts since the first Urban Water Management Plan was developed in 1990. Public meetings were held prior to the adoption of the 1990, 1995, 2000, 2005 and 2010 Urban Water Management Plans.

For this update to the Urban Water Management Plan, a public meeting was held for review and comment on the draft plan before the City Council's approval. Notices of this public meeting were posted on the City's Website on the Internet. Legal public notices for the meeting were published in the local newspaper, posted at City facilities and the local library. Copies of the draft 2010 update were sent to all local water management agencies.

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<sup>1</sup> 2009 Annual Monitoring Report (NCMA) by Todd Engineers, April, 2010

## **Plan Adoption**

The City of Grover Beach prepared this update of its Urban Water Management Plan during the winter of 2010/2011. The updated plan was adopted by the City Council in June of 2011 and was submitted to the California Department of Water Resources within 30 days of Council approval. Attached to the cover letter addressed to the Department of Water Resources and as Appendix A are copies of the signed Resolution of Plan Adoption. This plan includes all information necessary to meet the requirements of California Water Code Division 6, Part 2.6 (Urban Water Management Planning).

## **Coordination within the City**

Robert James Garing, City Engineer, Water and Sewer and Garing, Taylor & Associates, Inc., consultant for the preparation of this plan, coordinated with the City Manager, City Community Development Director, City Engineer/Director of Public Works and the City Finance Department staff to aid in the development of this plan.

## **Interagency Coordination**

The City is a member of the South County Sanitation District for the purpose of collection and treatment of wastewaters. The City coordinated the development of this plan with the following agencies:

- South San Luis Obispo County Sanitation District
- Arroyo Grande High School, serving the City of Grover Beach
- Grover Beach Elementary, Grover Heights Elementary and North Oceano Elementary Schools
- All members of the NCMA area water agencies and organizations

## Supplier Service Area



### 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.

### Climate

The City of Grover Beach has a Mediterranean coastal climate with mild and dry summers, cool winters and an annual average of 16 inches of precipitation. During the summer months, fog helps reduce irrigation requirements by decreasing evapotranspiration.

<b>Table 1. City of Grover Beach Rainfall Statistics</b>	
<b>YEAR*</b>	<b>RAINFALL (Inches)</b>
2010	17.35
2009	7.35
2008	12.02
2007	7.79
2006	20.30
2005	23.20
2004	10.80
2003	13.55
2002	7.10
2001	16.79
2000	18.70
1999	15.20
1998	32.60
1997	17.65
1996	15.80
1995	24.15

\*The years represent "rainfall" years, which begin on July 1<sup>st</sup> and end on June 30<sup>th</sup>.

## **Other Demographic Factors**

The City of Grover Beach covers 2.25 square miles and is located along the central coast of California, 92 miles north of Santa Barbara and 150 miles south of Monterey.

The land was first claimed in 1867 as part of 8,838 acres secured under a U.S. land grant by Isaac J. Sparks. He sold half of the property after 20 years and it was D.W. Grover who filed

plans at the San Luis Obispo County Court House to found what would become the City of Grover City. D.W. Grover laid out streets in a grid pattern, naming them for popular beaches of the time and set aside land for a train depot, a hotel and a city park. The seeds of development didn't flourish as planned until many years later. In the mid-1940's, the first store opened followed by the first post office. 1949 saw the Fairgrove Fire District and the Grover City Water District formed and the early 1950's brought a building boom. The growing desire among residents to give their community a more beach-oriented name culminated in a citywide vote reaffirming the City Council's vote to change the name by Ordinance to The City of Grover Beach.

As part of the Five Cities area of southern San Luis Obispo County, Grover Beach and its neighbors of Arroyo Grande and Pismo Beach offer an ideal living environment that has made the south county one of the most desirable places to live in California. The residents of Grover Beach enjoy a community that is primarily residential in nature, with about 375 businesses providing retail, light industrial and service oriented employment opportunities.

Table 2. shows the population total for the City from 2010, with projections to 2030.

<b>Table 2. Population Projections</b>					
	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
Service Area Population	13,156	13,950	14,400	14,700	15,000

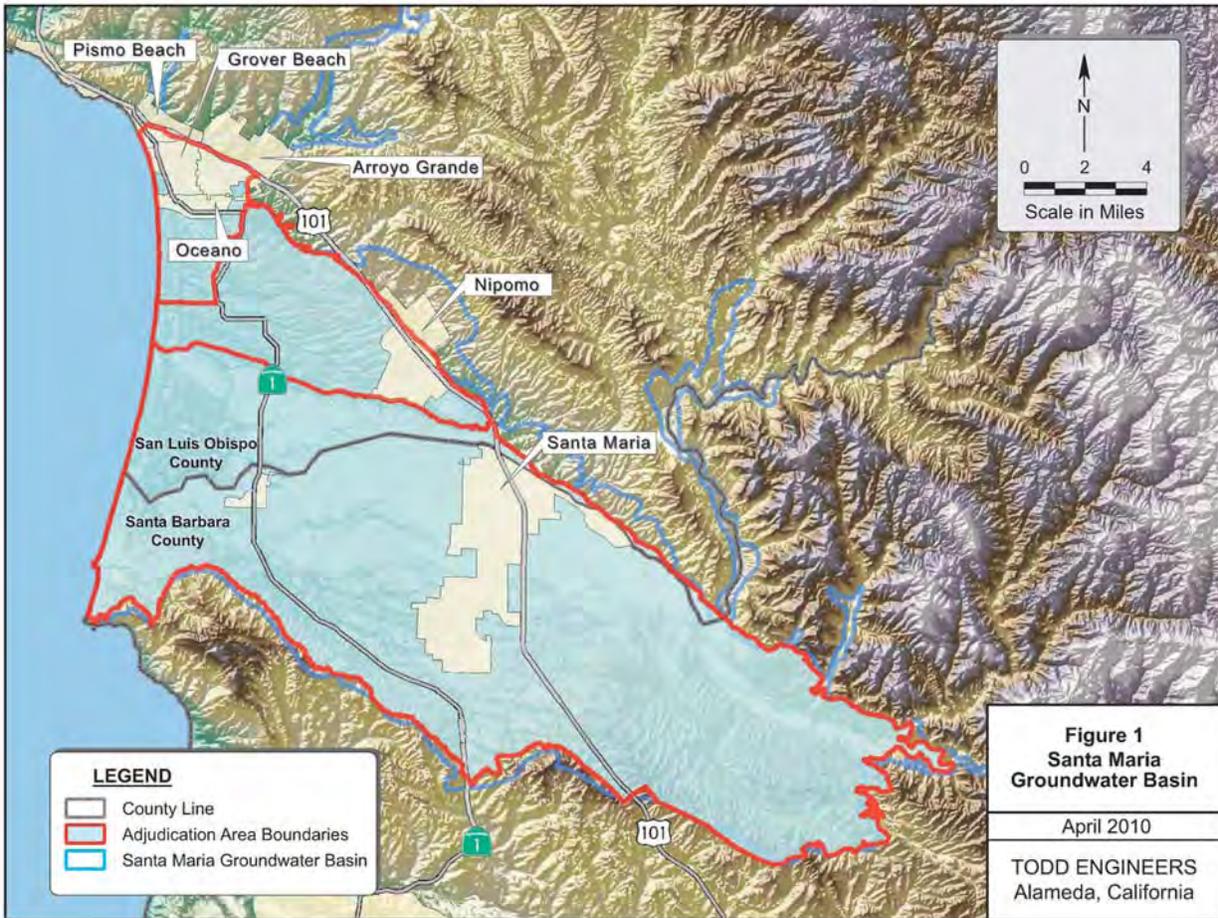
Based on year 2010 Census and LUE projection (City of Grover Beach) population to year 2030.

## **Past Drought, Water Demand and Conservation Information**

Grover Beach overlies a portion of groundwater basin 3-12 as defined by the State of California Department of Water Resources. Named Santa Maria River Valley Groundwater Basin and consisting of a surface area of 184,000 acres (288 square miles), this groundwater basin underlies the Santa Maria Valley in the coastal portion of northern Santa Barbara and southern San Luis Obispo Counties. The basin also underlies Nipomo and Tri-Cities Mesas, Arroyo Grande Plain, as well as the Nipomo, Arroyo Grande and Pismo Creek Valleys (DWR 2002).

The basin is bounded on the north by the San Luis and Santa Lucia Ranges, on the east by the San Rafael Mountains, on the south by the Solomon Hills and the San Antonio Creek Valley Groundwater Basin, on the southwest by the Casmalia Hills, and on the west by the Pacific Ocean. Several rivers and creeks drain westward to the Pacific Ocean. The Sisquoc, Cuyama, and Santa Maria Rivers and Orcutt Creek drain the Santa Maria Valley. Arroyo Grande and Pismo Creeks drain Tri-Cities Mesa and Arroyo Grande Plain. Nipomo Valley is drained by

Nipomo Creek into the Santa Maria River. Annual precipitation ranges from 13 to 17 inches, with an average of 16 inches. See Figure 1.



Although the south county area of San Luis Obispo County has experienced drought conditions in recent years, these droughts have not caused a shortage of water to the community of Grover Beach. In the years leading up to the Resolution by the South San Luis Obispo County Water Association approving urban use of a portion of the safe yield of the Arroyo Grande Plain-Tri-Cities-Mesa Groundwater Basin, the City relied exclusively upon ground water.

Hydrographs show that water levels near Tri-Cities Mesa generally remained stable in the Paso Robles Formation and the alluvium from about 1965 through 2000 (DWR 2002). Groundwater levels in the deeper Squire Member of the Pismo Formation near Tri-Cities Mesa declined

during the 1980's and partially recovered by 2000 to between 4 and 11 feet below late 1970's to early 1980's levels (DWR 2002).

Groundwater levels beneath Nipomo Mesa declined from 1 to 10 feet in the northern part during 1975 through 2000 and as much as 58.6 feet in the central part during 1968 through 2000; whereas water levels were stable in the western and southeastern parts, generally following rainfall cycles (DWR 2002). Groundwater levels beneath Santa Maria Valley generally declined during 1945 through 1977, recovered by about 1986, declined again until about 1992, then recovered to near historic high levels by 1998 (DWR 2002).

Natural recharge to the basin comes from seepage losses from the major streams, percolation of rainfall, and subsurface flow (DWR 2002). Percolation of flow in Pismo Creek provides recharge for the northern portion of the basin (DWR 2002). Percolation of flow in Arroyo Grande Creek, controlled by releases from Lopez Dam, provides recharge for the Tri-Cities Mesa, Arroyo Grande Plain, and Arroyo Grande Valley portions of the basin (DWR 2002).

## Water Sources (Supply)

### Law

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

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

### Water Supply Sources

The City now has two main water sources: ground water and local surface water. The City may have the opportunity to access additional supplies from up to three new sources. A 1999 study indicated the possibility of using recycled water from the South County Sanitation District in Oceano to recharge Arroyo Grande Creek, thereby freeing additional potable water from Lopez Lake. The Recycled Water Study was updated for June 2010. Results are summarized on page 11 of this report (Recycled Water).<sup>2</sup>

In 2005, another study compared the possibility of extending water resources from Lake Nacimiento via pipeline extension to constructing a new seawater desalinization plant at the South County Sanitation District Wastewater Treatment Plant site. Of these two potential sources, the lower cost option would be to construct the desalinization plant at that same site.<sup>3</sup>

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<sup>2</sup> Wallace Group, Consultant for SSLOCSD, 1999, 2010.

<sup>3</sup> Wallace Group, Consultant for SSLOCSD, 2005.

The proposed desalination plant would provide supplemental water to the City of Arroyo Grande, the City of Grover Beach, and the Oceano Community Services District.

In 2008, a Funding Study was prepared by Wallace Group to examine feasibility and funding for a desalination plant. The purpose of the study was to determine feasibility, identify constraints, develop a timeline, and examine the effect on water rates to customers. In general, the project was found feasible, would take eight years or more to complete, and would raise a typical water bill for Grover Beach residential customers between \$21 and \$39.<sup>4</sup>

Currently, a study is in progress to determine the feasibility of raising the Lopez Reservoir Spillway. If feasible, a spillway raise could be a less costly alternative for supplemental water.

<b>Water Supply Sources</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
Gentleman's Agreement (Groundwater)	1,198	1,198	1,198	1,198	1,198
Agricultural land conversion credit (Groundwater)	209	209	209	209	209
Other Supplemental Water (Future)#			400	400	400
South SLO County–Zone 3 (Lopez)	800	800	800	800	800
Transfers (Oceano Community Services District)					
Exchanges					
Recycled Water					
<b>Total</b>	<b>2,207</b>	<b>2,207</b>	<b>2,607</b>	<b>2,607</b>	<b>2,607</b>
Units of Measure: Acre-feet per year					

# The City Council is currently considering several potential sources of supplemental water including Desalination, Raise Lopez Spillway, obtain State Water and Recycled Wastewater. The 400 acre foot amount is shown for discussion purposes only and is not an adopted target amount.

## Groundwater

The City typically pumps approximately 1,100 -1,300 acre-feet per year from four wells. The City manages its water supply so that additional ground water pumping is reserved for years when the other water supplies may be in shortfall, keeping ground water as a local reserve. Wells No. 1, No. 2 and No. 3 are shallow wells drawing water from the Paso Robles formation while well No. 4 is a deep well drawing water from the Careaga formation.

<sup>4</sup> Wallace Group, SSLOC Desal Funding Study (Draft), August, 2008.

The ground water from the Paso Robles formation meets all state and federal standards except for nitrate concentration. The City of Grover Beach completed construction of an ion exchange water treatment plant designed to remove nitrates from the shallow well water in 1989. This allows the City to use its shallow well water to produce water straight into the water mains after it passes through the treatment plant and a chlorination station.

Water from the Careaga and Paso Robles formations is shared with other South County Communities under the terms of a Gentlemen's Agreement. (See Appendix G) This agreement provides for each signatory to pump only its "groundwater entitlement". According to the agreement, the City's extraction is limited to no more than 1,407 acre-feet per year including the Agricultural Land Use Conversion Credit.

Additional groundwater is pumped by two irrigation wells that provide non-potable water for use on a State Parks Department golf course and a large park within the City. It is estimated that the availability of non-potable water from these wells reduces the volume of treated water required by approximately 225 acre-feet per year.

The City has available an agricultural land conversion water credit that has been in place since 1991. The water usage of irrigated agricultural land that is converted to urban use is credited to the amount of water the City has available for non-agricultural use based on the 1979 Department of Water Resources report.<sup>5</sup>

## **Litigation and Settlement**

The Cities of Grover Beach, Arroyo Grande, Pismo Beach, and Oceano Community Services District engaged the firm of Todd Engineers to perform an analysis of the Safe Yield of the Arroyo Grande Plain Tri-Cities Mesa groundwater basin and provide the first annual monitoring report for the NCMA per Santa Maria Groundwater Litigation Lead Case # CV 770214.

This (safe yield) is recognized in the 2002 Settlement Agreement among the Northern Cities, Northern Landowners, and Other Parties, and in the 2005 Settlement Stipulation for the Santa Maria groundwater basin adjudication, which were adopted by the Superior Court of California, County of Santa Clara, in its Judgment After Trial, entered January 25, 2008 (herein "Judgment"). See Figure 1, page 6.

Each of the Northern Cities has developed groundwater supply by means of respective well fields in the NCMA; NCMA groundwater also supplies agricultural and rural uses. Groundwater use in the NCMA is governed by the Judgment and the 2002 Settlement Agreement, which states that groundwater will continue to be allocated and independently managed by the Northern Parties (Northern Cities, NCMA overlying owners, San Luis Obispo County and Flood Control & Water Conservation District). The Settlement Agreement initially allocates 57 percent

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<sup>5</sup> Gentlemen's Agreement, Appendix G

of groundwater safe yield to agriculture and 43 percent to the cities and confirms that any increase or decrease in groundwater yield will be shared by the cities and landowners on a pro rata basis.

A groundwater safe yield value of 9,500 AFY was cited in the 2002 Groundwater Management Agreement among the Northern Cities. The entitlement reserved for agricultural irrigation is (5,300 AFY), for subsurface outflow to the ocean (200 AFY), and urban use (4,000 AFY). The Management Agreement's safe yield allotment for urban use was subdivided as follows:

City of Arroyo Grande 1,202 AFY  
City of Grover Beach 1,198 AFY  
City of Pismo Beach 700 AFY  
Oceano Community Services District 900 AFY

The Management Agreement's subdivision for agriculture is higher than the actual agricultural groundwater use and the amount designated for subsurface outflow is believed to be low. Maintenance of subsurface outflow is essential to preventing seawater intrusion. While the minimum subsurface outflow needed to prevent seawater intrusion is unknown, a regional outflow on the order of 3,000 AFY was presented in the 2002 DWR report, Water Resources of the Arroyo Grande-Nipomo Mesa Area.

The 2002 Settlement Agreement provides that the various urban parties' allocations can be increased when land is converted from agricultural uses to urban uses, referred to as an agricultural conversion credit. Agricultural credits for the cities of Arroyo Grande and Grover Beach are 112 AFY and 209 AFY, respectively, for a total of 321 AFY.<sup>6</sup>

## Surface Water

Zone 3 of the San Luis Obispo County Flood Control and Water Conservation District was established to construct and operate the Lopez water supply system, and is a wholesale supplier. Water from Lopez Reservoir is the sole source of water provided by Zone 3. The contractors in Zone 3 include the communities of Oceano, Grover Beach, Pismo Beach, Arroyo Grande, and CSA 12 (including the Avila Beach area).

The safe yield of Lopez Reservoir is 8,730 acre-feet per year, which reflects the amount of sustainable water supply during a drought. 4,530 acre-feet have been apportioned by agreements to contract agencies that are primarily municipal water purveyors. Of these 4,530 acre-feet, the City of Grover Beach has an entitlement of 800 acre-feet per year. The remaining 4,200 acre-feet per year is reserved for downstream releases to maintain stream flows and groundwater recharge downstream. Management of the releases to avoid surface flow to the ocean has in the past resulted in an unreleased portion of the 4,200 AFY, which was periodically

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<sup>6</sup> 2009 Annual Monitoring Report (NCMA) by Todd Engineers, April, 2010

offered to the contractors as surplus water. Surplus water had been unavailable for a number of years because of the dam remediation release water for habitat and drought. Starting with deliveries in 2010, surplus water has again been identified. 805 acre-feet was identified in 2009-2010 and including current estimates a total of 2,205 acre-feet is projected to be available through March 31, 2012.<sup>7</sup>

## **Recycled Water**

The City of Grover Beach does not currently use recycled water as a primary water source. The completed feasibility study mentioned under Water Sources (Supply) in this report indicates the possible use of this option to help recharge Arroyo Grande Creek. The Water Recycling Conceptual Plan was updated in June 2010 by Wallace Group for the SSLOCSD and is summarized in the next paragraphs as applicable to the City of Grover Beach.

SSLOCSD Collection System and WWTP. The SSLOCSD trunk sewer system collects wastewater from individual sewer collection systems in the Cities of Arroyo Grande and Grover Beach, and Oceano CSD. The SSLOCSD trunk sewers vary between 18" and 30" in diameter. The SSLOCSD Plant is rated at 5 million gallons per day (mgd). The plant provides secondary treatment using a fixed film reactor. The plant is also designed for a 9 mgd peak wet weather flow. Effluent is chlorinated and dechlorinated prior to discharge. Plant effluent is discharged through the existing joint outfall line to the Pacific Ocean. This plant currently serves a permanent population of approximately 38,000 persons.<sup>8</sup>

SSLOCSD WWTP. In 2008, a comprehensive study (update to 2001 recycled water feasibility study) was prepared to evaluate the feasibility of various recycled water applications including turf irrigation, stream augmentation/environmental demand, indirect potable reuse/groundwater recharge, and agricultural irrigation. The market assessment covered turf irrigation predominantly in the City of Arroyo Grande and Grover Beach areas and focused on agricultural irrigation potential in Oceano. In 2009, a supplemental study was conducted to evaluate the feasibility of a focused secondary effluent reuse project to irrigate a local City of Arroyo Grande cemetery and freeway median landscaping. The study reviewed options to serve these secondary reuse sites from the SSLOCSD WWTP and/or the City of Pismo Beach WWTP.<sup>9</sup>

SSLOCSD WWTP. It was estimated that a turf irrigation program alone would cost on the order of \$8,000 per AF (on a life cycle basis), and up. Stream augmentation in Arroyo Grande Creek was expensive, and infeasible due to environmental/permitting constraints, and water quality issues that would require the addition of a reverse osmosis treatment system to comply with in-stream chlorides and TDS quality. Indirect potable reuse/groundwater recharge was estimated to be expensive, and may have considerable hurdles with public perception, and complex

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<sup>7</sup> Information provided by San Luis Obispo Department of Public Works, January, 2011.

<sup>8</sup> Appendix D (South San Luis Obispo County Wastewater Treatment Plant)

<sup>9</sup> Water Recycling Conceptual Plan, June 2010, Wallace Group (Draft)

permitting to meet California Department of Public Health requirements. Of the various alternatives considered, one alternative appears to be viable for future implementation if done on a large scale. This would be the implementation of a large-scale tertiary recycled water program for crop irrigation in the nearby Oceano area. This program would be modeled after the successful program in Monterey County. This program cost was still estimated to be quite expensive at \$4,900 per AF; however, if implemented in phases over time, the project could prove to be viable.<sup>10</sup>

## Transfer or Exchange Opportunities

### Law

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

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

Potential exists for transfers and exchanges with other groundwater users, Lopez contractors and the State Water Project contractors. The NCMA is currently investigating the possibility of obtaining additional State water using existing pipelines more fully either on a temporary or permanent basis.

## Water Use

### Law

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

*10631 (e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors including, but not necessarily limited to, all of the following uses:*

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

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

## Projected Demand

Demand is projected through 2030 using population projections from the Grover Beach 2010 Land Use Element and previous calculations used to derive projected demand for the Grover Beach 2005 Urban Water Management Plan. Prior to 2007, the City of Grover Beach benefitted

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<sup>10</sup> Water Recycling Conceptual Plan, June 2010, Wallace Group (Draft)

from the computed agricultural conversion credit of 230 AF. This number was based on agricultural water use of 3 acre-feet/acre and because the demand for water in urban areas is less, agricultural land that is converted would receive a credit. In 2007, Todd Engineers reviewed the agricultural credit calculation procedure and negotiations occurred between the cities of Arroyo Grande, Pismo Beach, Grover Beach, and Oceano Community Services District.

In 2007, the City of Grover Beach credit of 230 AFY was reduced to 207 AFY, lowering the City's total water entitlement to 2,207 AFY. In 2010, the temporary offer of 100 acre-feet of groundwater from the Oceano Community Services District expired. For projected demand in 2010 and subsequent years, the Average Daily and Yearly Productions were derived from the projected population within the GB LUE and the baseline per capita use (SB 7) as an average of gpcd values between the years 2003-2007 (see next section).

### **State of California Senate Bill No. 7, Chapter 4 (2009)**

In February 2008, Governor Schwarzenegger of the State of California directed state agencies to initiate a comprehensive plan for the improvement of the Sacramento-San Joaquin Delta and to reduce statewide per capita urban water use. On November 10, 2009, the Governor signed Senate Bill No. 7; Chapter 4 (SB 7), requiring the State to achieve a 20% reduction in urban per capita water use in California by December 31, 2020. The State would be required to make incremental progress towards this goal by reducing per capita water use by at least 10% on or before December 31, 2015. This undertaking perpetuated the inception of California's 20x2020 Water Conservation Plan (20x2020 Plan).

In 2005, the State of California established statewide baseline urban water use value of 192 gallons per capita day (gpcd). The Interim 2015 Statewide Target would be a 10% use reduction or 173 gpcd and the final 2020 Statewide Target would be a 20% use reduction or 154 gpcd, representing a statewide savings of 1.59 million acre-feet based on a population of 37 million. Regional Water Use Patterns established by the 20x2020 Water Conservation Plan are divided into 10 DWR Hydrologic Regions for planning purposes. Regional baseline and target values were derived for daily per capita water use. The 20x2020 Plan designates the Central Coastal Region as DWR Region 3. Region 3 has the following information:

The Department of Water resources, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part.

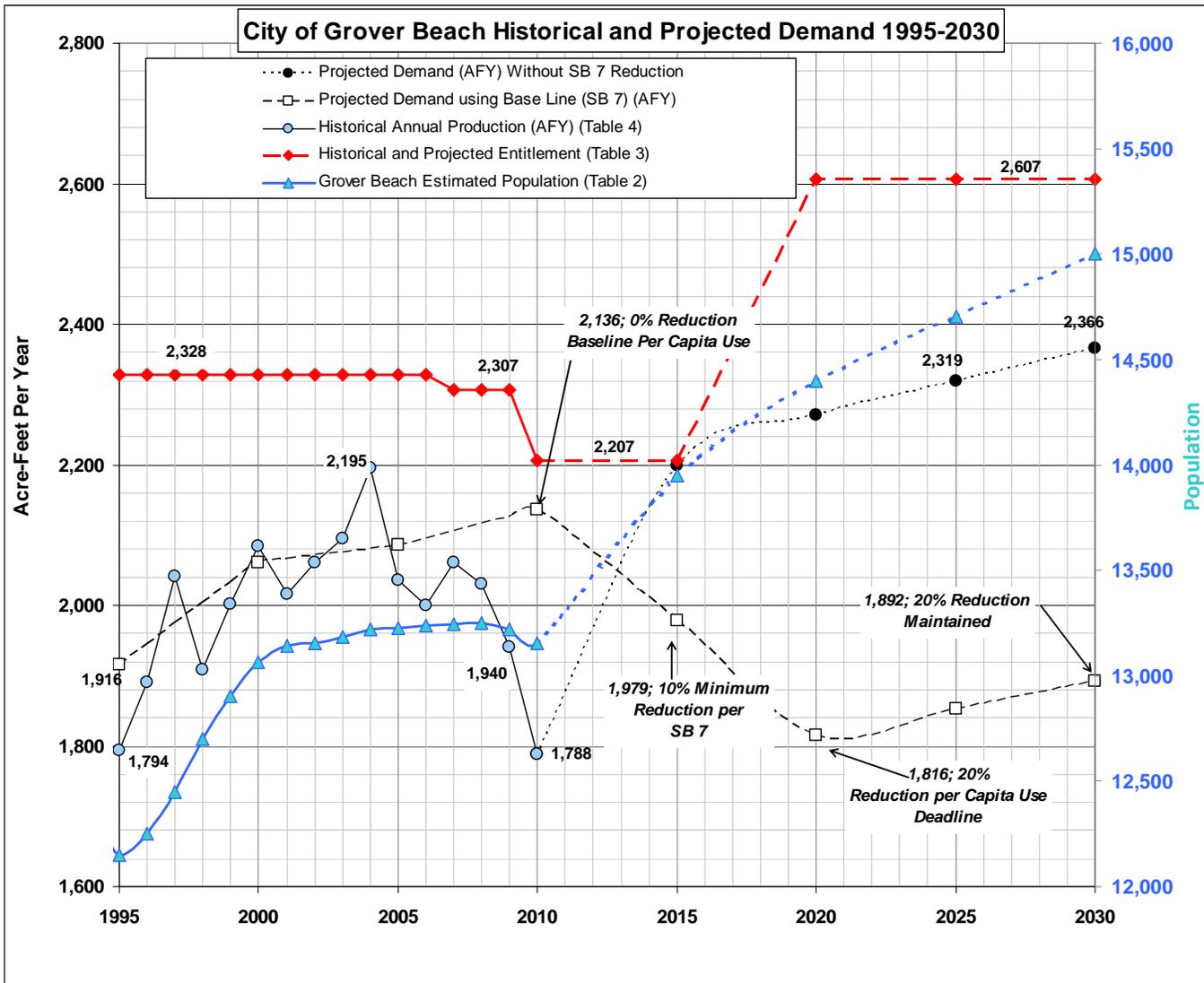
As stated in Senate Bill #7, the baseline daily per capita water use was determined by calculation over a continuous 5 year period ending no earlier than December 31, 2007 and no later than December 31, 2010: between 1/1/2003 and 12/31/2007.

Beginning in 2010, the City of Grover Beach's estimated population increase (see Table 4 and Chart A) was used to calculate an average per capita usage of 140.7 gpcd or 2,136 AFY. By

GROVER BEACH 2010 URBAN WATER MANAGEMENT PLAN

2015, a 10% reduction in use would yield an estimated 127 gpcd or 1,979 AFY and by 2020, the 20% reduction would be approximately 113 gpcd or 1,816 AFY.

Chart A



As illustrated in Chart A and Table 4, non-compliance with SB No.7 could result in demand that would exceed entitlement by year 2015. By trending toward the SB No.7 requirement of a 10% reduction in water use by 2015, demand would not exceed entitlement. Further reduction to 20% by year 2020 would result in additional water savings.

Table 4. Past, Current, and Projected Water Use 5 Year Periods (acre-feet)						
Water Use Sectors	2005	2010	2015	2020	2025	2030
Single family residential Low Income Units (n)* water use included in total	1,229 (2)	1,019 (8)	1,109 (75)	1,009 (75)	1,062 (75)	1,067 (75)
Multi-family residential Low Income Units (n) water use included in total	302 (0)	296 (0)	350 (0)	315 (0)	300 (0)	320 (0)
Commercial/Institutional	207	160	180	165	162	165
Industrial	16	17	20	20	18	19
Commercial/Residential						
Mixed Use Low Income Units (n) water use included in total	58 (0)	51 (0)	60 (0)	65 (0)	65 (0)	70 (0)
Landscape	73	62	62	60	62	62
Sales to other agencies						
Saline barriers						
Groundwater recharge						
Conjunctive use						
Agriculture						
<b>Projection based on Land Use Element</b>						
Metered Consumption (Low Income Consumption (n) included in total)	1,885 (2)	1,605 (8)	1,781 (75)	1,634 (75)	1,669 (75)	1,703 (75)
Total Production	2,036	1,788	1,980	1,816	1,854	1,892
Unaccounted for Loss	7.4%	10.2%	10.0%	10%	10%	10%
Population	13,248	13,550	13,950	14,400	14,700	15,000
Acre-feet/capita/year **	0.1537	0.1185	0.1419	0.1261	0.1261	0.1261
Water Available	2,328	2,207	2,207	2,607	2,607	2,607

\* (n) Number of dwelling units.

\*\* Acre-feet/capita/year includes all water use. Year 2010 decrease represents results from good water management practices and from the Declaration of a Water Shortage and implementation of Stages of Action during water years 2007, 2008, 2009 and 2010.

Also reflects mandated 10% reduction of average (base line) consumption by 2015 followed by an additional 20% reduction by 2020 per California State Senate Bill No. 7 (SB 7).

## **Residential Sector**

Currently (2010-2011) total system per capita water use is lower than the City's historical average. This is attributed to the ongoing Stage 1 and Stage 2 Water Shortage declarations made by the City Council during 2008 through 2010. Stage 1 Water Shortage continues and voluntary consumption reduction methods have been in effect since 2008.

The City of Grover Beach Land Use Element projections anticipate a buildout population of approximately 15,000 persons in 2030. The average household size (number of persons per house) is approximately 2.58. The Regional Housing Needs Allocation of 75 affordable dwelling units will represent a population of approximately 194 persons. At .1261 acre-feet per capita per year, low-income consumption would be approximately 24.5 AFY or .94% of the total.

A new program was established by City ordinance in 1990, where new development pays additional fees to help offset their water demand by increasing the water use efficiencies of existing customers. The in-lieu fee generated by each new dwelling unit is sufficient to retrofit five existing dwelling units. See DMM 2 later in this report.

## **Commercial Sector**

Commercial customers in the City range in type from multi-story office buildings, beauty shops, gas stations, insurance offices, and banks to high volume restaurants, antiques stores, gift shops and miscellaneous businesses serving the visitor population. Water use in the commercial sector is currently stable; redevelopment of existing commercial properties into mixed-use projects has resulted in additional demand in the mixed use residential category. This trend is expected to continue through the year 2030.

## **Industrial Sector**

The City has a small industrial sector, primarily centered on commercial service oriented businesses and light manufacturing. The growth trend in the industrial sector has been minimal over the last decade, but is still expected to increase over the next eight to ten years because of existing vacant and under-utilized industrial properties.

## **Institutional/Governmental Sector**

The City has a stable institutional/governmental sector, primarily local government, schools, and visitor serving public facilities. This sector is not expected to expand significantly over the next decade.

## Landscape/Recreational Sector

Two large landscape areas within the City (Mentone Basin and 16<sup>th</sup> Street Park) are irrigated with non-potable water pumped from irrigation wells. smaller locations are irrigated with potable water from the City water system. The non-potable segment is estimated at 65% and the potable segment is estimated at 35% of the total City landscape irrigation requirement.

## Agricultural Sector

There is no City water designated for agricultural use. The agricultural water users within the City limits use private wells for irrigation. When Agricultural land is converted to other use, a reduction in water use per acre generally occurs. The City credits this reduction in use in accordance with the 2002 Settlement Agreement. The credit to date is 209 AFY.

<b>Table 5. Number of Water Service Connections by Customer Type (Sector)</b>						
Customer Type (Sector)	2005	2010	2015	2020	2025	2030
Single family residential	4,276	4,307	4,456	4,605	4,754	4,903
Low Income Included (n)*	(0)	(8)	(75)	(75)	(75)	(75)
Multi-family residential	444	422	436	451	466	480
Low Income Included (n)*	(0)	(0)	(0)	(0)	(0)	(0)
Commercial/Institutional	288	281	291	300	310	320
Industrial	36	37	38	39	41	42
Commercial/Residential Mixed Use	86	84	87	90	93	96
Low Income included (n)*	(0)	(0)	(0)	(0)	(0)	(0)
Landscape/recreation	73	71	72	73	74	75
Agriculture						
Other						
<b>Total</b>	<b>5,203</b>	<b>5,202</b>	<b>5,380</b>	<b>5,559</b>	<b>5,378</b>	<b>5,916</b>

\* (n) Number of dwelling units and estimated number of units per City of Grover Beach General Plan Housing Element table 4-1.

Table 5 represents the number of metered water connections by sector, both existing and projected, to year 2030. Starting in 2010 the number of connections in Table 5 includes those identified in Table 4 as low-income. Accurate reading and management of these connections is critical to ongoing water management.

In 2006 the City replaced all water meters with-state-of-the-art meters and a radio-read meter reading system. The City now is able to read meters and bill customers without the help of third parties. This has resulted in an adjusted number of water connections as water records were updated.

## Reliability Comparison

### Law

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

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

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

The City maintains daily rainfall records and the City Engineer reports yearly to the City Council. The county maintains rainfall monitoring stations at the Lopez Reservoir area and results are available in real-time. This information is used in the determination of whether the season is normal or dry.

An average water year beginning July 1 and ending June 30 would consist of 24" of rainfall at the Lopez Recreation Area and 16" of rainfall at the City Corporation Yard. A single dry year would consist of less than 65% of a blended average of these amounts. Multiple dry years would consist of less than 65% of a blended average of these amounts persisting for two or more successive years.

The City's right to produce groundwater has been adjudicated and set at 1,198 acre-feet per year plus Agricultural Conversion Credit<sup>11</sup>. In 2005 the City adopted a Water Shortage Contingency Plan that describes in detail the definition of a water shortage and which provides for the implementation of certain voluntary or mandatory prohibitions of water use during a water shortage. Voluntary prohibitions were implemented in 2007 and have continued through 2010.

The result of this action during these dry years has resulted in lower water consumption (See Chart A on page 12). No adverse effects are known to have resulted from water production by the City of Grover Beach. An ongoing monitoring program and annual reports by the NCMA are designed to detect any change in groundwater quality<sup>3</sup>.

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<sup>11</sup> 2009 Annual Monitoring Report (NCMA) by Todd Engineers, April, 2010

## Inconsistent Water Sources

### Law

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

*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 California Sport Fishing Alliance filed a complaint regarding the operation of the County of San Luis Obispo Flood Control Zone 3 Wholesale Agency, Lopez Lake Water Treatment Plant and Distribution System. This action could ultimately reduce the safe yield of the Lopez supply. A potential replacement source would be an allocation of State water or reclaimed water from the South San Luis Obispo County Sanitation District Wastewater Treatment Plant effluent.

### Three-Year Minimum Water Supply

**Law**

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

10632 (2) 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.

<b>Table 6.</b>			
<b>THREE YEAR MINIMUM WATER SUPPLY PROJECTIONS</b>			
<b>(acre-feet per year)</b>			
<b>Sources of Supply</b>	<b>ENTITLEMENT</b>	<b>DIMINISHED WATER SUPPLY</b>	
	<b>Year "A"</b>	<b>Year "B"</b>	<b>Year "C"</b>
Ground Water	1,407 **	1,407 **	1,407 **
Lopez Lake	800	600#	400#
Water Storage	0	0	0
Actual Water Required	1788*	1788 *	1788
Total Water Available	2207	2007	1807
Percent Shortage	None	None	None

\*Actual production during drought years of 2009-2010.

\*\*Includes agricultural land conversion water credit of 209 AFY

# Hypothetical reduction in Lopez Reservoir capacity due to continued drought.

Note that in Years “B” & “C” in Table 6, City residents used less than the total water available, even with a hypothetical 50% reduction in Lopez Supply “Diminished Water Supply”. This level of usage was actually achieved during a Stage II Water Shortage alert using recommended voluntary consumption reduction methods.

## Water Supply Reliability

### Law

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

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

Extraction of potable water from the ground water basin pre-dates the incorporation of the City in 1959. It is used only on a “safe-yield” basis (usage each year does not exceed long term average inflow). This source has been 100% reliable and has shown only minimal vulnerability to the effects of prolonged drought conditions.

Lopez Reservoir is the sole source of water provided by Zone 3 of the San Luis Obispo County Flood Control and Water Conservation District, a wholesaler to the City. This water source has been 98% reliable. Zone 3 experienced prolonged drought conditions in the late 1980’s and early 1990’s and again during 2007-2009. Lopez contractors have never been shorted on their entitlement from Zone 3, even during these drought periods and have been able to purchase surplus water in many past years.

<b>Table 7.</b>					
<b>Water Supply Projection 2010 – 2030</b>					
<b>(acre-feet per year)</b>					
<b>Sources of Supply</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
Ground Water*	1,407	1,407	1,407	1,407	1,407
Lopez Lake**	800	800	800	800	800
Other Supplemental Water (Future)	0	0	0	400#	400#
Transfer					
<b>Totals</b>	<b>2,207</b>	<b>2,207</b>	<b>2,207</b>	<b>2,607</b>	<b>2,607</b>

\*1,198 AF per year per “Gentlemen’s Agreement” plus agricultural land conversion credit of 209 AF

\*\* 800 AF per year entitlement

# Desalinization Plant, Raise Lopez Spillway, Obtain State Water, Recycled Wastewater, or other Supplemental Source

The Lopez Reservoir Spillway Project which would raise the level of the Lopez Spillway by three to five feet is envisioned as a possible and economic way to ensure additional water retention during wet years. The NCMA, with the City of Pismo Beach as lead agency requested and

received proposals for a feasibility study to accomplish this feat. Stetson Engineers Inc., in association with others has been awarded a contract to complete this study by the end of 2011.

## Catastrophic Water Supply Interruption

### Law

*10632 The plan shall provide an urban water shortage contingency analysis that includes...*

*10632 (1) Stages of Action...including up to a 50% reduction in water supply...*

In preparation for a water supply interruption, the City is required to prepare a Water Shortage Contingency Plan. This Plan recognizes that the City, although having two very dependable sources of water, have in place an operations contingency plan in the event of a water shortage emergency. This Plan focuses on long-term drought as the most likely reason for a water supply emergency. The Plan will also include planning measures to be taken by the City in case of other catastrophic water supply interruptions such as severe earthquake or terrorist attack.

### Stages of Action:

Four stages of action are defined by annual rainfall amounts and reservoir storage levels. Each stage (minor, moderate, severe, critical) involves an increasingly prolonged or severe water shortage condition and requires an escalating level of City action and public water use restrictions. A fifth stage terminates the emergency response.

### Recommended Preparation Actions:

**Step 1** calls for the formation of a water shortage response team with a leader to spearhead the effort and involve the various units in the organization.

**Step 2** calls for water suppliers to collect supply and demand data. These data are needed as a basis for planning and estimating how much water of acceptable quality will be available under various shortage conditions, including multiyear shortages. Pumping and pipeline capacity also are considered. Calculating projected demand, including increases because of growth and less precipitation, will be balanced against projected supply. The best time to initiate this process is before a shortage occurs.

**Step 3** examines not only the quantity of water available from various supply augmentation and demand reduction options, but any problems or constraints resulting from the use of such sources.

**Step 4** identifies trigger mechanisms to react to shortage severity.

**Step 5** represents the synthesis of information from previous steps. Groups of water saving measures are associated with progressive levels of supply shortage. The key element of this step is involvement of customers in order to create a program that the community understands, contributes to, and supports.

**Step 6** develops a budget and presents the draft plan to the public for review and revision. Formally establishing the ordinances and interagency agreements that underlay the plan happens before the plan is adopted.

**Step 7** considers the nuts and bolts of how to implement the plan. Procedural issues, staffing needs, and budget and funding considerations must be resolved. The preparation and implementation of a plan requires many complicated actions and we recommend that the supplier begin planning at least six months before rationing might start.<sup>12</sup>

### **Water Shortage Contingency Plan:**

The Water Shortage Contingency Plan for the City of Grover Beach includes many of the elements required by the water code. Specifically, it defines stages of action, provides methods to reduce water consumption, lists mandatory prohibitions against specific water use practices, and presents penalties for excessive water use. Elements required in a Water Shortage Contingency Plan include: analysis of impacts of water conservation on City revenues and expenditures, presentation of measures to overcome those financial impacts, and a description of mechanisms to document actual reductions in water use resulting from implementation of the Water Shortage Contingency Plan.

The City of Grover Beach Land Use Element projections anticipate a buildout population of approximately 15,000 persons in 2030. The average household size (number of persons per house) is approximately 2.58. The Regional Housing Needs Allocation of 75 affordable dwelling units will represent a population of approximately 194 persons. At .1261 acre-feet per capita per year, low-income consumption would be approximately 24.5 AFY or 0.94% of the total.

Table 8 (page 24) represents the average water consumption of the City of Grover Beach water users by customer type. Over eighty-five percent (85%) of Grover Beach water is consumed by residential or mixed-use customers. Results shown in Table 4 and Table 8 reveal consumption reduction in all sectors between 2005 and 2010. The existing Water Shortage Contingency Plan and Consumption Reduction Methods adopted by the City Council of Grover Beach appear to be effective.

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<sup>12</sup> 7 Steps from Urban Drought Guidebook 2008 Updated Edition

**Table 8.  
Historical Consumption by Customer Type  
(acre-feet per year)**

Customer Type (Sector)	2000	% Total	2005	% Total	2010	% Total	Average
Single family residential	1,137	63.3%	1209.06	65.9%	1,090	64.26%	64.30%
Low Income Included	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Multi-family residential	334	18.6%	295.69	16.1%	305.01	17.72%	17.72%
Low Income Included	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Commercial/Institutional	164	9.1%	190.92	10.4%	167.17	9.8%	9.84%
Industrial	15	0.8%	15.72	0.9%	20.34	1.2%	0.91%
Commercial/Residential Mixed Use	52	2.9%	60.52	3.3%	59.11	3.5%	3.13%
Low Income included	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Landscape/recreation	93	5.2%	62.43	3.4%	70.54	4.1%	4.14%
Agriculture							
Other							
<b>Total</b>	<b>1,795</b>	<b>100.0%</b>	<b>1834.34</b>	<b>100.0%</b>	<b>1,712</b>	<b>100.0%</b>	<b>100.00%</b>

The Urban Water Management Planning Act requires an adopted or draft water shortage contingency resolution or ordinance.

The City of Grover Beach adopted Resolution 06-15 on March 06, 2006, establishing a Water Shortage Contingency Plan.

This resolution fulfilled the requirements of the Planning Act by including the following:

- Definition of stages of action
- Provision of consumption reduction methods
- Development of prohibitions and penalties
- Analysis of impacts of water conservation on revenues and expenditures, and presentation of measures to overcome those financial impacts
- Description of mechanisms to document actual reductions in water use resulting from implementation of the water shortage contingency plan

The Water Shortage Contingency Plan adopted by the City Council of the City of Grover Beach defines what constitutes a recommendation for a water shortage proclamation, providing specific triggers for action stages and charging the Public Works Director/City Engineer with responsibility for advising the City Council on enactment of the Water Shortage Contingency Plan and designation of an initial action stage. The Plan also anticipates obtaining additional water supplies through water transfers; and developing alternative water supplies through

conversion of inactive or agricultural wells into municipal production wells. The Plan includes communication and coordination with other local water agencies and utilities, and identifies the Public Works Director/City Engineer as the primary coordinator. Actions to be taken by the City in response to the various emergency stages focus primarily on communication with the public.

Overall, the Plan provides a detailed response to water shortage emergencies. However, it is recommended that the Plan be periodically reviewed in detail for updating and revision. Suggestions are provided in this Urban Water Management Plan. It is recommended that the City respond to a gradually developing water supply shortage in a measured, step by step process as indicated.

It is important to recognize that the following are guidelines. The City's actual response to a water shortage requires specific action by the City Council. Nothing in this Plan is intended to limit the City Council's available options in defining a specific response to a future water shortage.

#### **Water Shortage Stages of Action:**

Stages of action for many water agencies are defined by available storage in a surface water reservoir or by the annual allotment provided by a water wholesaler. In contrast, the City of Grover Beach overlies vast groundwater storage that has enabled the City to experience drought with no significant shortfall in supply.

The amount of rainfall in a given year or series of years is recommended as the basis for definition for stages of action. Rainfall, the ultimate source of recharge to the groundwater basin and surface water supplies, is readily monitored, and is recognized as the basis for defining drought. Rainfall is cumulated daily and summarized on an annual basis. City of Grover Beach rainfall averages approximately 16 inches per year. Rainfall at Lopez Recreation Area averages approximately 24 inches per year. A blended average of 20 inches during a rainfall season (July 1 through June 30) is the recommended benchmark amount used to consider what stage of action is justified.

The City response to drought depends on the magnitude of a perceived shortfall.

The first stage is defined by a reduction of rainfall to 65% (or less) of the benchmark amount in a rainfall season.

The second stage is defined by a reduction of rainfall to an average of 65% (or less) of the benchmark amount that persists over two rainfall seasons. The average computation would begin from the first year that recorded rainfall was 65% (or less) of the benchmark amount.

Stage three would invoke mandatory conservation measures and is characterized by a reduction of rainfall to an average of 65% (or less) of the benchmark that persists over three

rainfall seasons and if sufficient surplus water is not available from Lopez Reservoir. The average computation would begin from the first year that recorded rainfall was 65% (or less) of the benchmark amount.

The fourth stage continues mandatory conservation measures and is characterized by a reduction of rainfall to an average of 65% (or less) of the benchmark that persists over four rainfall seasons and if sufficient surplus water is not available from Lopez Reservoir. The average computation would begin from the first year that recorded rainfall was 65% (or less) of the benchmark amount.

**Stage four (mandatory) conservation measures could be considered immediately** upon receiving information that the water supply of the City of Grover Beach could be reduced to 50% or less. If a fourth stage water shortage were declared by the City Council, a public hearing would be required to be held at least 30 days before any water rationing plan or other plan that would incur financial penalties to the public is adopted by the City Council.

The fifth stage would remove all mandatory conservation measures and could be declared by the City Council when rainfall had returned to normal, Lopez Reservoir had returned to normal levels, groundwater monitoring showed improvement of water quality or when the City Council concludes it is safe to do so.

### **Consumption Reduction Measures:**

Once a water shortage stage has been declared, measures will be implemented to meet water conservation goals. This section describes consumption reduction methods that may be implemented by the City Council in response to water shortage. These measures range from public education to mandatory rationing. Given the City's reliable water supply, only selected reduction measures are recommended.

Specific recommended measures to reduce water use in both Stage 1 and 2 are as follows:

- Notify all customers of the water shortage
- Mail information to all customers explaining the importance of water conservation
- Provide technical information to customers on means to promote water use efficiency
- Develop a media campaign to promote water conservation
- Develop or expand conservation programs such as low-flow toilet rebates

### **Prohibitions:**

The Urban Water Management Planning Act requires provision of mandatory prohibitions against specific water use practices during water shortages. The prohibitions include:

- Use of potable water for street cleaning
- Unauthorized use of water from any fire hydrant
- Use of potable water to wash sidewalks or roadways where air-blowers or sweeping provides a reasonable alternative
- Use of potable water for construction purposes, such as consolidation of backfill unless no other source of water or method can be used
- Restaurant water service to patrons unless upon request
- Hydrant flushing except where required for public health and safety
- Refilling existing private pools except to maintain water levels
- Use of potable water for planting of turf and other new landscaping unless it consists of low water using, drought tolerant plants
- Use of water for washing cars, boats, sidewalks, driveways or other exterior surfaces without a quick-acting shut-off nozzle on the hose
- Operation of any ornamental fountain or car wash unless the water is re-circulated

Depending on the nature of the water shortage and at the discretion of the City Council, the above measures can be modified. Often-used variations include banning water use for planting any new landscaping, limiting landscape watering to specific days of the week, and discontinuing operation of all fountains.

### **Penalties:**

The Water Shortage Contingency Plan proposes penalties at various shortage stages including house call warnings, installation of flow restrictors, penalties, fines, and disconnection. For the Water Shortage Contingency Plan, violators should be warned in writing, including time, date, and place of violation; general description of violation, means to correct violation, and date by which the correction is required. The first and subsequent warnings should specify a potential penalty, namely fine and disconnection, with fines increasing with each new violation. A fee also should be charged for restoring service.

### **Revenue and Expenditure Impacts:**

Successful implementation of water conservation measures results in a decrease in water demand, with the unintended effect of reducing a water purveyor's revenues. Accordingly, the water code requires analysis of fiscal impacts of the water shortage contingency plan on revenues and expenditures and discussion of measures to reduce impacts. For the City of Grover Beach, effective implementation of the Water Shortage Contingency Plan would result in a decline in potable water sales. Revenues derived from penalties for excessive water use or

water wasting during the water shortage would not effectively offset lost revenues. These presumably limited revenues should be applied toward administration of the Water Shortage Contingency Plan. Declining water demands would be offset to a small degree by a decline in operating expenses related to the amount of water provided, such as pumping (energy) and water treatment costs.

**Reduction Measuring Mechanisms:**

The Urban Water Management Planning Act requires a mechanism for determining if reductions in water use are actually being achieved in response to conservation measures. It is proposed that the Public Works Director/City Engineer be responsible for implementation of the ordinance and administration of any procedures, rules and regulations. Regular monitoring during a Stage 1 or Stage 2 shortage would include reporting of production figures by the Water Department to the Public Works Director/City Engineer. The Water Department compares the weekly production to the target weekly production to verify that the reduction goal is being met. Weekly reports are forwarded to the Public Works Director/City Engineer. In addition, water usage by customers from monthly billings would be reported to the Public Works Director/City Engineer. The Public Works Director/City Engineer provides a monthly report to the City Manager and City Council. If reduction goals are not met, the City Manager notifies the City Council and provides them with a Staff Report containing recommended corrective action alternatives for their consideration.

**Extreme Catastrophic Water Interruption:**

If City water supplies were suddenly and catastrophically interrupted such as in the case of a major earthquake or terrorist attack, the City has an obligation to do everything in its power to mitigate the effects on its citizens.

Water reservoir number 3 (Appendix C) has a valve capable of direct distribution. This will allow as much as 1.5 million gallons to be directly dispensed to authorized personnel as required. This will allow some relief to citizens until the magnitude and duration of the problem is determined.

Channel 20, Public Information Channel, will be used to urge citizens to store emergency supplies of water in their homes for preparedness as well as suggest places to recover some existing water such as draining hot water heaters and bathroom toilet tank reservoirs.

## **Water Recycling: Wastewater System Description**

### **Law**

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

Another agency, South San Luis Obispo County Sanitation District, is responsible for the treatment and disposal of wastewater for the City of Grover Beach. A complete description of their operation is included in this report (see Appendix D).

## **Water Demand Management Measures**

### **Law**

*1000631 (f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:*

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

The City of Grover Beach is committed to implementing water conservation programs. These programs are discussed in this section.

The City of Grover Beach is not a signatory to the Memorandum of Understanding regarding Urban Water Conservation in California (MOU) and is therefore not a member of the California Urban Water Conservation Council (CUWCC). For the purpose of responding to the Urban Water Management Planning Act, the City addresses the 14 Demand Management Measures. Descriptions of the City's water conservation programs are included below. The City has, in good faith, tried to address and comply with all of the Best Management Practice targets listed in the CUWCC MOU where applicable.

### **DMM 1 – Water Survey Programs**

The City does not currently implement all components of this DMM. The City does effectively follow all high usage residential meters through its billing program (refer to DMM 3) and advises customers of any problems on their side of the meter. The City also has a very effective on-going retrofit program (see DMM 2 and DMM 14).

To implement the Water Survey Programs DMM: The top 20% (1,040 services) in usage of single family and multi-family residences would be surveyed over a 10-year period. At the current labor rates, the estimated cost in man hours required for completion of the following components of the DMM would be \$54.34 per survey:

- Check meter, toilets and faucets for leaks.
- Check toilet flow rates and offer to install or recommend installation of displacement device.
- Replace leaking toilet flapper or direct customer to ULFT replacement program, as necessary.
- Check aerator flow rates, and showerhead flow rates and offer to replace or recommend replacement, as necessary.
- Check irrigation system and timers, and review or develop customer irrigation schedule.

Estimated “administrative costs” of \$46.00 for each survey include:

- Customer notice/response for participation
- Written evaluation and recommendations for customer consideration
- Printing and distribution
- Scheduling of surveys
- Monitoring impact to determine any reduction in consumption

This would result in total costs of \$100.34 to the City for each service surveyed and could total \$104,394 or more over the ten year period.

<b>Table 9. Residential &amp; Multi-family Residential including Mixed Use Projected Population/Meter Count</b>		
Year	Population	Meter Count
2010	13,156	5,202
2015	13,950	5,380
2020	14,400	5,559
2025	14,700	5,738
2030	15,000	5,916

Population from US Census 2010 and projections are based on Land Use Element projection, (City of Grover Beach) 2010.

**LEGAL AUTHORITY:**

Implementation of this Demand Management Measure would require the adoption of a Resolution by the City Council of the City of Grover Beach.

**IMPLEMENTATION SCHEDULE:**

The City has not implemented this DMM. Demand Management Measures 2, 3 & 4 are effectively monitoring and reducing consumption. The new water meters and automated meter reading system deployed in 2006 are useful in datalogging any adverse customer usage. This information will be used to establish additional water usage monitoring.

**DMM 2 – Plumbing Retrofit**

**IMPLEMENTATION DESCRIPTION:** In 1990 the City passed an ordinance that required all existing toilets within the city limits to be replaced at no cost to the residents (see DMM 14). At the same time, a program was instituted to provide all existing residences with low flow showerheads and faucet aerators, again at no cost to residents.

**IMPLEMENTATION SCHEDULE:** At present, the City has retrofitted about 95% of the 5,252 qualifying residential units, with approximately 263 residences remaining to be retrofitted.

**CONSERVATION SAVINGS:** Implementation of this program has resulted in estimated water savings of 70+ AF per year through 2010, rising to approximately 80 AF per year at build-out.

**DMM 3 – System Water Audits, Leak Detection and Repair**

The City of Grover Beach replaced all the City’s water meters with “state of the art” water meters with radio reading devices that have the capability of datalogging 21 months of water usage. The datalogging feature allows the City to monitor for leak detection, high usage, and other information desired.

**BUDGET:** The City entered into a lease/purchase agreement in April 2006 for the purchase of the water meters with radio reading devices totaling \$1,584,317. The lease payment of \$358,800 is made annually and will terminate in April 2011.

**DMM 4 – Metering With Commodity Rates**

**IMPLEMENTATION DESCRIPTION:** The City is fully metered for all customer sectors, including separate meters for single-family residential, commercial and all institutional

GROVER BEACH 2010 URBAN WATER MANAGEMENT PLAN

and governmental facilities. Multi-family residential is set up with a single meter for multiple units. By ordinance, the City adopted a policy in 1996 that water funds shall be enterprise funds and shall pay their full costs of operation. As of August 1, 2010 water utility rates were set as follows as a first rate phase, with a second phase occurring on March 1, 2011:

<b>Service Charges</b>						
<b>Meter Size</b>	<b>Existing Rates<sup>1</sup></b>	<b>Proposed Rates</b>				
		<b>August 1, 2010</b>	<b>March 1, 2010</b>	<b>Sept. 1, 2011</b>	<b>July 1, 2012</b>	<b>July 1, 2013</b>
Inches		\$/month	\$/month	\$/month	\$/month	\$/month
5/8	\$6.75	\$7.60	\$8.75	\$8.75	\$8.75	\$8.75
3/4	6.75	7.60	8.75	8.75	8.75	8.75
1	6.75	12.65	14.60	14.60	14.60	14.60
1 ½	6.75	25.35	29.15	29.15	29.15	29.15
2	6.75	40.55	46.65	46.65	46.65	46.65
3	6.75	76.05	87.45	87.45	87.45	87.45
4	\$6.75	\$126.75	\$145.75	\$145.75	\$145.75	\$145.75

<b>Volume Charges</b>						
<b>Classification</b>	<b>Existing Rates<sup>1</sup></b>	<b>Proposed Rates</b>				
		<b>August 1, 2010</b>	<b>March 1, 2010</b>	<b>Sept. 1, 2011</b>	<b>July 1, 2012</b>	<b>July 1, 2013</b>
		\$/Ccf	\$/Ccf	\$/Ccf	\$/Ccf	
<b>Residential</b>						
0 to 12 Ccf/bi-month	\$2.28	\$2.53	\$2.91	\$2.91	\$2.91	\$2.91
13 to 20 Ccf/bi-month	2.41	2.66	3.06	3.06	3.06	3.06
21 to 42 Ccf/bi-month	2.58	3.06	3.52	3.52	3.52	3.52
Over 42 Ccf/bi-month	\$2.76	\$3.46	\$3.98	\$3.98	\$3.98	\$3.98
<b>Landscape</b>	\$2.41	\$3.06	\$3.52	\$3.52	\$3.52	\$3.52
<b>All Other</b>	\$2.41	\$2.66	\$3.06	\$3.06	3.06	\$3.06

<sup>1</sup> Effective July 1, 2007.

The City installed one irrigation well that provides non-potable water to serve two City parks. The California Department of Parks and Beaches golf course is irrigated by a

second irrigation well owned by an independent contractor. The use of non-potable water from these two wells has resulted in substantial annual water savings for the City.

There are no un-metered connections within the City; billing is strictly by volume of use and size of the water meter providing the use.

**IMPLEMENTATION SCHEDULE:** The City has permanently incorporated this DMM into its policies.

**METHODS TO EVALUATE EFFECTIVENESS:** The City has completed installing new water meters on all existing services. Since completion, water use per capita has decreased.

**CONSERVATION SAVINGS:** Monitoring water use over time is essential in determining how much saving is due to accurate meters and market rates versus Stage 1 and Stage 2 Water Shortage Declarations in recent years. Water production is monitored daily and consumption is summarized monthly.

## **DMM 5 – Large Landscapes Conservation Programs**

**IMPLEMENTATION DESCRIPTION:** The City passed a resolution in 1989 approving landscape standards for water conservation. Since 1989 all new projects developed within the City have been required to have attractive, water conserving landscaping and irrigation systems that incorporate water-conserving measures. The intent is to allow creative landscape designs while using water conservation techniques. A list of acceptable trees, shrubs and other plants is provided (see Appendix H). Landscape and irrigation development plans that meet the City's guidelines are required for submission as part of the overall plan check and approval process. These plans are to be prepared by a licensed professional landscape architect or landscape contractor. They must include substantiation and verification of the water conserving nature of the landscaping design and irrigation systems chosen. The City continues to work with local nurseries, landscape designers and contractors to modify existing landscapes to be more water efficient. City personnel trained in turf management provide assistance to customers. Through the use of these guidelines, the City intends to reduce the amount of water used for outdoor purposes.

On September 8, 2009, the City Council passed a Resolution establishing Water Conservation Programs in Grover Beach as a part of the City's Local Stimulus Initiative, including a "Cash for Grass" Rebate Program. This program provides rebates for replacing lawn/turf with drought-tolerant landscaping and more efficient irrigation systems. Council also approved a rebate program for smart irrigation controllers and sensors that reduce water usage and maximize water and energy efficiency.

**IMPLEMENTATION SCHEDULE:** The City has permanently incorporated this DMM into its policies.

**METHOD TO EVALUATE EFFECTIVENESS:** With the installation of the new water meters, the City is able to review pre and post water utility bills from when customers have replaced their lawn with drought-tolerant landscaping to determine the difference/savings in water usage.

## **DMM 6 – High Efficiency Washing Machine Rebate Programs**

**IMPLEMENTATION DESCRIPTION:** On September 8, 2009, the City Council passed a Resolution establishing Water Conservation Programs in Grover Beach as a part of the City's Local Stimulus Initiative, including a Water Efficient Washing Machine Rebate Program. This program provides a tiered schedule of rebates to water customers for the purchase of energy efficient washing machines, which would be in addition to energy rebates provided by PG&E.

**IMPLEMENTATION SCHEDULE:** The City will continue to implement this DMM indefinitely.

**CONSERVATION SAVINGS:** Implementation of this program has resulted in an estimated water savings of 900 gallons per two-month period, per household who converts to water efficient washing machines. Clothes washers are the second largest water user in homes, next to toilets. Energy Star™ rated washers that also have a Water Factor at or lower than 9.5, use 35-50% less water and 50% less energy per load.

## **DMM 7 – Public Information**

**IMPLEMENTATION DESCRIPTION:** The City has various Public Information tools available, through the television, internet, and print. Television Channel 20, a Public Information Channel is available to the citizens of the City of Grover Beach. City Council meetings are broadcast over the channel and time slots can be made available to disseminate information to the Public including Stages of Action for a Water Shortage Emergency, Water Conservation Methods, Demand Management Methods and "How Are We Doing?" status reports.

The City of Grover Beach established by ordinance the Parks, Recreation and Beautification Commission in 2005 when the City Council combined the Parks and Recreation Commission and the Grover Beautiful Committee. This Commission is an advisory body to the City Council and Parks and Recreation Department. Part of the general scope of the duties and responsibilities of this Committee is to encourage low maintenance and drought tolerant planting.

Summer 2007, the City published a Water Conservation Bulletin that included information on the Water Alert at the time and various water conservation tips for the kitchen, laundry, bathroom, and outside. The Parks, Recreation and Beautification Commission held a Water Conservation and Landscaping Session, titled “Water Saving Tips for Your Landscaping” in September 2007.

The quarterly City newsletter, “The Sea Breeze”, has and will continue to serve as the primary communication vehicle for disseminating information to residents about water conservation, marketing the retrofit program to generate volunteers and for calling on public good will to use water resources with care.

In addition to press release materials, newspaper ads have been used. Fliers highlighting water conservation tips and techniques have been developed and distributed. Quarterly articles have appeared in “The Sea Breeze” which is sent to all addresses within City limits. In addition, conservation promotion inserts are sent with water bills as well as comparative use data. All new hookups and change of owner receive a pamphlet on water conservation from the City.

The most recent tool includes a Facebook page and City Website with information on water conservation and demand management.

**IMPLEMENTATION SCHEDULE:** The City has permanently incorporated this DMM into its policies.

**METHOD TO EVALUATE EFFECTIVENESS:** Taken as a whole, the Demand Management Measures in effect are insuring future water supply.

**BUDGET:** Costs associated with the implementation of this measure are incorporated into the Community Development Budget and Water Conservation Funds.

#### **DMM 8 – School Education**

**IMPLEMENTATION DESCRIPTION:** This DMM is implemented through the middle schools and high school that serve the City. At the high school level, grades 10 through 12, water conservation is taught as a part of the curriculum in the Environmental Science and Earth Science classes.

**IMPLEMENTATION SCHEDULE:** The school districts have incorporated water conservation education into its policies.

**METHOD TO EVALUATE EFFECTIVENESS:** There is no available method by which to evaluate the effectiveness of this measure.

**BUDGET:** Cost for the implementation of this DMM is built into the budget of the school districts.

## **DMM 9 – Water Conservation Coordinator**

**IMPLEMENTATION DESCRIPTION:** This position was created and filled by the City in 1989. The full-time Water Conservation Coordinator directed the development of a very effective general education campaign and retrofit program. As of late 1995, the position became vacant and the duties of coordinator became part of the Public Works Superintendent's department responsibilities. The Public Works Superintendent continues to act as Water Conservation Coordinator and implements the toilet retrofit program. The Building/Planning Technician has currently taken over some of the water conservation efforts, including implementation of the "Cash for Grass" and Water Efficient Washing Machine Rebate Programs.

**IMPLEMENTATION SCHEDULE:** The City has permanently incorporated this DMM into its policies.

**METHOD TO EVALUATE EFFECTIVENESS:** The monitoring of continued substantial consumption reduction is effectively managed by the coordinators.

**BUDGET:** The cost for this position has been incorporated into the budget of the Public Works Department and Water Conservation Funds.

## **DMM 10 – Water Waste Prohibitions**

**IMPLEMENTATION DESCRIPTION:** The South County Sanitation District is the reported responsible agency for this item. The City of Grover Beach is a member of this District for the collection and treatment of wastewaters. (Refer to Appendix D)

**IMPLEMENTATION SCHEDULE:** Not applicable

**METHOD TO EVALUATE EFFECTIVENESS:** Not applicable

**BUDGET:** Not applicable

### **DMM 11 – Conservation Pricing**

**IMPLEMENTATION DESCRIPTION:** The City has a conservation pricing measure in effect through its tiered water rates.

**IMPLEMENTATION SCHEDULE:** The City has permanently incorporated this DMM into its policies. (see attached Schedule of Water Service Rates)

### **DMM 12 – Conservation Programs for Commercial, Industrial and Institutional Customers**

All new commercial and industrial development within the City is required to install ultra-low-flush toilets, faucet aerators, etc. In addition, they are required to meet the requirements of the City's landscape standards for water conservation.

Due to the nature of commercial and industrial development in the City, there are no large water users. The City offers leak detection services for commercial and industrial water users.

**LEGAL AUTHORITY:**

Implementation of this Demand Management Measure would require the adoption of a Resolution by the City Council of the City of Grover Beach.

**IMPLEMENTATION SCHEDULE:** The City has determined that the implementation of this DMM would not be cost effective. The conservation requirements currently in place for these sectors is effectively managing consumption.

### **DMM 13 – Wholesale Agency Programs**

**IMPLEMENTATION DESCRIPTION:** The Lopez Water System operates as a wholesaler of water to the South County including Arroyo Grande, Oceano, Grover Beach, Pismo Beach and County Service area (CSA) 12 (Avila Beach area). The Lopez Reservoir is operated by Flood Control Zone 3, part of the County's Flood Control and Water Conservation District which is housed in the County's Engineering Department.

The Lopez System has an estimated safe annual yield of 8,730 AF.<sup>13</sup>

The safe annual yield is delivered in accordance with the water contracts which amount to a total entitlement of 4,530 AF for water supply. The remaining 4,200 acre-feet per year is reserved for downstream releases to maintain stream flows and groundwater recharge downstream. Management of the releases to avoid surface flow to the ocean has in the past resulted in an unreleased portion of the 4,200 AFY, which was periodically offered to the contractors as surplus water.

Surplus water had been unavailable for a number of years because of the dam remediation release water for habitat and drought. Starting with deliveries in 2010, surplus water has again been identified. 805 acre-feet was identified in 2009-2010 and including current estimates a total of 2,205 acre-feet is projected to be available through March 31, 2012.<sup>14</sup>

**IMPLEMENTATION SCHEDULE:** The City has permanently incorporated this DMM into its policies and plans to continually renew its contract with this wholesaler.

**METHOD TO EVALUATE EFFECTIVENESS:** The City has an entitlement of 800 AF per year as a result of the contract with this agency. Therefore, 800 acre-feet of groundwater is effectively saved each year by the implementation of this measure.

**BUDGET:** The total annual cost per acre-foot for this wholesale program is \$530.00, however, the price is expected to increase to \$1,600.00 per acre-foot within 2 years.

## **DMM 14 – Residential Ultra-Low-Flush Toilets Replacement Programs**

**IMPLEMENTATION DESCRIPTION:** By ordinance in 1990, the City required all existing toilets within the City limits to be replaced. Also by ordinance, effective March 1, 1990, all new construction within the City is required to include the use of 1.5 gallon ultra-low-flow toilets in bathroom facilities that are created as part of that construction. Also, to help offset any increases in water demand resulting from such new construction,

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<sup>13</sup> Source: Lopez Hydrology Review, June 1962, and Hydrologic Balance of Arroyo Grande Groundwater Basin, November, 1962

<sup>14</sup> Information provided by San Luis Obispo Department of Public Works, January, 2011.

retrofit in-lieu fees in the amount of \$1,936.00 per dwelling unit are required to be paid to install ultra-low-flush toilets, low flow shower heads and faucet aerators in a minimum of five existing building units. The in-lieu fee generated by each new dwelling unit is sufficient to retrofit five existing dwelling units. No fee is charged in those cases where existing, substandard housing is to be demolished and new construction erected in its place.

**IMPLEMENTATION SCHEDULE:** The City has permanently incorporated this DMM into its policies.

**METHOD TO EVALUATE EFFECTIVENESS:** Estimated water savings per unit installed is compared with actual consumption.

**CONSERVATION SAVINGS:** Water savings per year based on all available data and including DMM 2 is 70+ AF.

**BUDGET:** The unit cost per installation is \$200.00. The cost breakdown is as follows:

1. Material cost	\$80.00
2. Installation cost	75.00
3. Administrative cost	45.00
Total per unit	\$200.00

This project will be ongoing until all units within the City are retrofitted.

## Global Warming

The Northern Cities, consisting of the City of Arroyo Grande, City of Grover Beach, City of Pismo Beach and the Oceano Community Services District, County of San Luis Obispo, San Luis Obispo County Flood Control & Water Conservation District (Zone 3) and local landowners have actively and cooperatively managed surface water and groundwater resources for more than 30 years, with the goal of preserving the long-term integrity of water supplies in the Northern Cities Management Area (NCMA).

The Northern Cities Monitoring Program collects and analyzes data pertinent to water supply and demand, including:

- Land and water uses in the basin

- Sources of supply to meet those uses
- Groundwater conditions (including water levels and water quality).<sup>15</sup>

The City of Grover Beach is a member of the San Luis Obispo County Integrated Regional Water Management Planning Committee which contributes to the countywide Water Master Plan.

These ongoing activities are expected to alert not only the City of Grover Beach but the entire NCMA if anomalies occur to our supply of groundwater without regard as to whether global warming or any other factors are involved. Regional action would be initiated to mitigate identified threats to the health of the groundwater supply.

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<sup>15</sup> 2009 Annual Monitoring Report (NCMA) by Todd Engineers, April, 2010

# Appendices

## **Appendix A**

### **Resolution of Plan Adoption**

RESOLUTION NO. 11- \_\_\_\_\_

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF GROVER BEACH, CALIFORNIA, FORMALIZING THE ADOPTION OF THE 2010 URBAN WATER MANAGEMENT PLAN UPDATE AND WATER SHORTAGE CONTINGENCY PLAN**

**WHEREAS**, the City Council of the City of Grover Beach has received for consideration and review the 2010 Urban Water Management Plan Update; and

**WHEREAS**, preparation and adoption of an updated Urban Water Management Plan is required by the California Water Code every five years; and

**WHEREAS**, the 2010 Urban Water Management Plan Update includes a Draft Water Shortage Contingency Plan in compliance with State Water Code; and

**WHEREAS**, a copy of the 2010 Urban Water Management Plan Update was made available for public inspection and the City Council of the City of Grover Beach has conducted the required Public Hearing; and

**WHEREAS**, the City Council of the City of Grover Beach has received the final draft of the plan and finds that the plan includes all information necessary to meet the requirements of the California Water Code, Division 6, Part 2.6.

**NOW, THEREFORE, BE IT RESOLVED** that the City Council of the City of Grover Beach does hereby adopt the 2010 Urban Water Management Plan and Water Shortage Contingency Plan and authorizes the City Engineer to file the Plan pursuant to the provisions of the California Water Code.

On motion by \_\_\_\_\_, seconded by Council Member \_\_\_\_\_, and on the following roll-call vote, to wit:

AYES: Council Members –  
NOES: Council Members –  
ABSENT: Council Member –  
ABSTAIN: Council Members –

the foregoing Resolution was **PASSED, APPROVED, and ADOPTED** at a regular meeting by the City Council of the City of Grover Beach, California this 6<sup>th</sup> day of June, 2011.

\_\_\_\_\_  
JOHN P. SHOALS, MAYOR

Attest:

\_\_\_\_\_  
DONNA L. McMAHON, CITY CLERK

## **Appendix B**

### **Map of Master Water Plan**

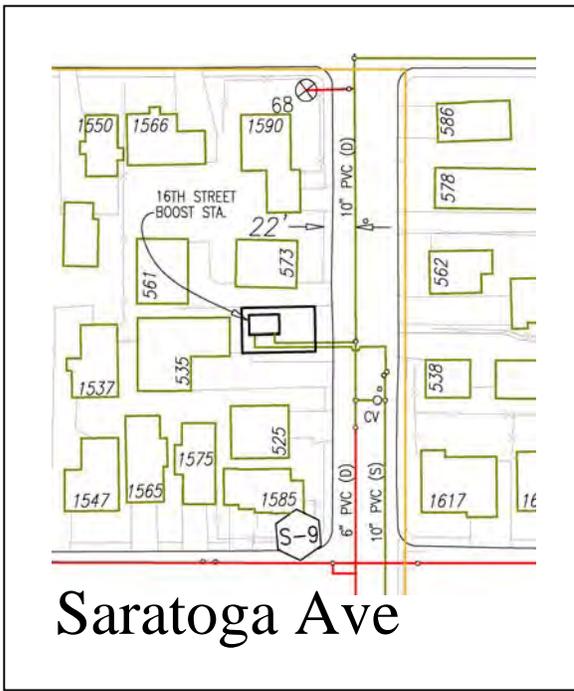


**LEGEND**

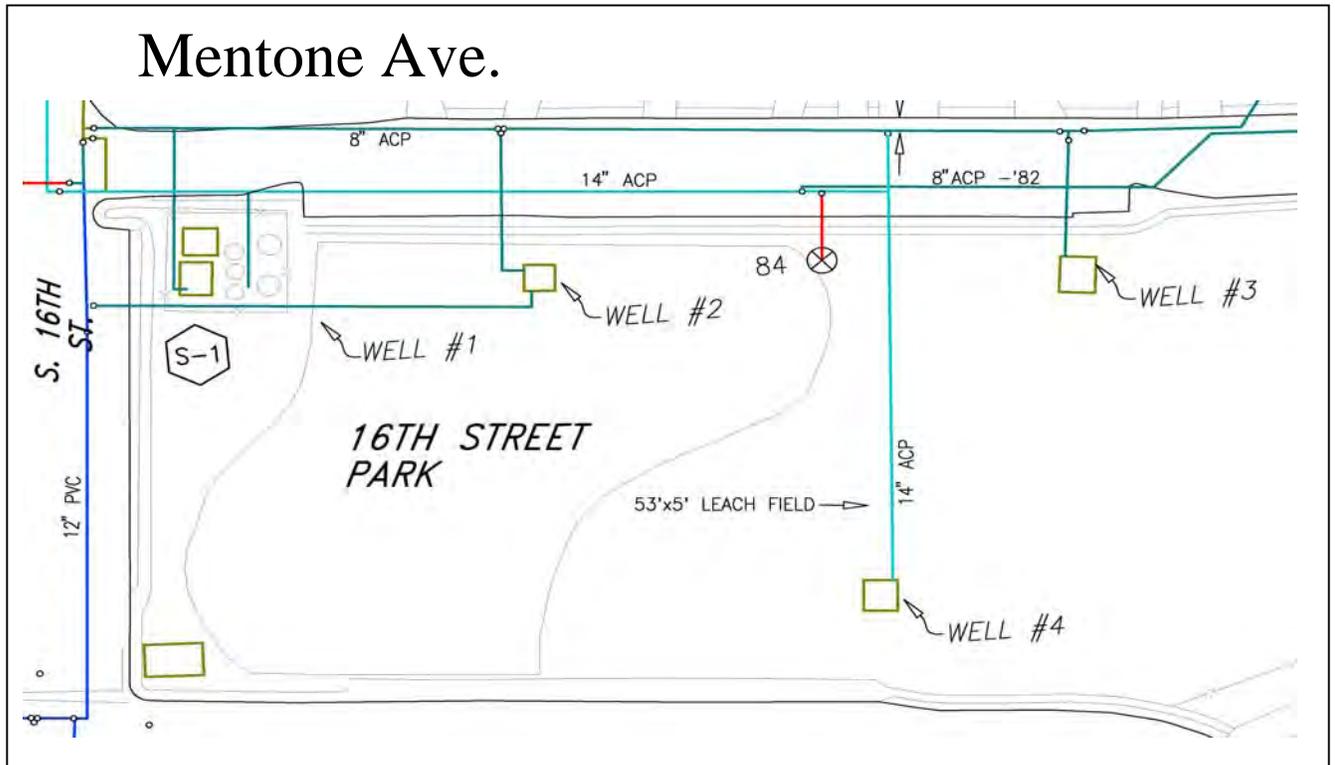
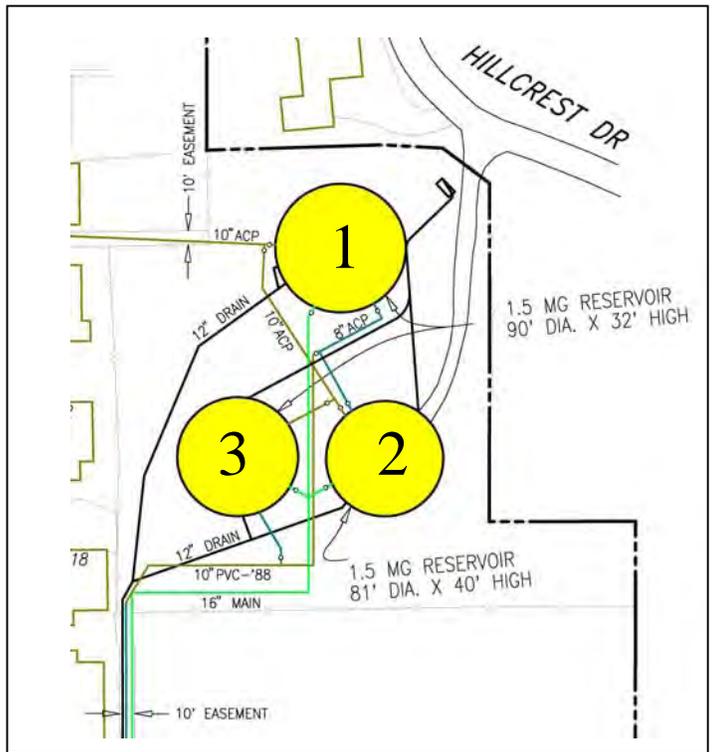
-  HYDRANT
-  WATER SAMPLING STATION
-  EXISTING 10" WL
-  EXISTING 12" WL
-  EXISTING 14" WL
-  EXISTING 16" WL
-  EXISTING 2" WL
-  EXISTING 4" WL
-  EXISTING 6" WL
-  EXISTING 8" WL
-  EXISTING 18" LOPEZ WL
-  EXISTING 6" PISMO WL
-  EXISTING 8" PISMO WL
-  EXISTING 12" PISMO WL
-  EXISTING VALVE
-  CITY LIMIT LINE

## **Appendix C**

### **Master Water Plan Detail Sheet**



Saratoga Ave



Mentone Ave.

Water Master Plan Detail Sheet

## **Appendix D**

### **Waste Water Treatment Plant Description**

## South San Luis Obispo County Sanitation District

### Wastewater Treatment

Clean water is one of our most precious natural resources. Yet every time we flush a toilet, pour oil down the drain or clean with strong household chemicals, we contaminate that resource. Before wastewater can be safely released back into our waterways, it must first be adequately treated. That treatment consists of subjecting the wastewater to a series of physical, chemical, and biological processes. Typically those processes occur at an industrial-scale wastewater treatment plant.

The treatment of sewage is a multi-stage process to renovate the wastewater before it either; reenters a body of water, is applied to the land or is reused. The goal is to reduce or remove organic matter, metals, solids, nutrients, disease-causing organisms and other various forms of pollutants.

The typical processes involved in wastewater treatment are *preliminary treatment, primary treatment, secondary treatment and final treatment*. During each of the first three processes settled solids, or *sludge*, is removed from the liquid waste stream and further treated within a sludge digester.

*Preliminary treatment* is the first form of treatment that the wastewater undergoes upon arrival at a treatment plant. Sticks, rags, large food particles, sand, gravel, toys, etc. are removed at this stage to protect the pumps and other various facilities used within the treatment plant.

*Primary treatment* is the second step in the treatment process and is intended to separate the suspended solids and greases from the wastewater. In this process, wastewater is passed into large circular tanks called primary clarifiers and held for several hours before being released for further treatment. The long detention times within these low velocity tanks allows for the heavier solids to settle to the bottom as sludge, while the lighter solids float to the surface as scum. Mechanically rotating arms collect the sludge and solids, allowing for distribution to the sludge digester for further treatment. The clarified wastewater remaining is now ready for the secondary treatment process.

*Secondary treatment* is a biological treatment process to remove dissolved organic matter from wastewater. Sewage microorganisms are cultivated and added to the wastewater. The microorganisms absorb organic matter from sewage as their food supply. Three separate approaches can be used to accomplish secondary treatment; *fixed film, suspended film and lagoon systems*.

*Fixed film systems* grow microorganisms on substrates such as rocks, sand or plastic. The wastewater is spread over the substrate, allowing the wastewater to flow past the film of microorganisms fixed to the substrate. As organic matter and nutrients are absorbed from the wastewater, the film of microorganisms grows and thickens. Trickling filters, rotating biological contactors, and sand filters are examples of fixed film systems.

*Suspended film systems* stir and suspend microorganisms in wastewater. As the microorganisms absorb organic matter and nutrients from the wastewater they grow in size and number. After the microorganisms have been suspended in the wastewater for several hours, they are settled out as sludge. Some of the sludge is pumped back into the incoming wastewater to provide "seed" microorganisms. The remainder is wasted and sent on to a sludge treatment process. Activated sludge, extended aeration, oxidation ditch, and sequential batch reactor systems are all examples of suspended film systems.

*Lagoon systems* are shallow basins which hold the waste-water for several months to allow for the natural degradation of sewage. These systems take advantage of natural aeration and microorganisms in the wastewater to renovate sewage.

*Final treatment* focuses on the removal of disease-causing organisms from the wastewater. Treated wastewater can be disinfected by adding chlorine or by using ultraviolet light. High levels of chlorine may be harmful to aquatic life in receiving streams. Treatment systems often add a chlorine-neutralizing chemical to the treated wastewater before stream discharge.

*Sludge* is generated throughout the sewage treatment process. Primary sludge, material that settles out during primary treatment, often has a strong odor and requires treatment prior to disposal. Secondary sludge is the extra microorganisms from the biological treatment processes. The goals of sludge treatment are to stabilize the sludge and reduce odors, remove some of the water thereby reducing volume, decompose some of the organic matter, thereby reducing volume, kill disease causing organisms and disinfect the sludge.

Untreated sludge is about 97 percent water. Settling the sludge and decanting off the separated liquid removes some of the water and reduces the sludge volume. Settling can result in sludge with about 92 to 96 percent water. More water can be removed from sludge by using sand drying beds, vacuum filters, filter presses, and centrifuges resulting in sludge with between 50 to 80 percent water. This dried sludge is called a sludge cake. Aerobic and anaerobic digestion is used to decompose organic matter to reduce volume. Digestion also stabilizes the sludge to reduce odors. Caustic chemicals can be added to sludge or it may be heat treated to kill disease-causing organisms. Following treatment, liquid and cake sludge are usually spread on fields, returning organic matter and nutrients to the soil.

Wastewater treatment processes require careful management to ensure the protection of the body of water that receives the discharge. Trained and certified treatment plant operators measure and monitor the incoming sewage, the treatment process and the final effluent to ensure regulatory compliance. You can help with that process by reducing the amount of water that you use throughout the day and by properly disposing of harmful chemicals. For more information on how user's can help protect our most valuable resource, please visit the *Environmental Programs* section of this web page.

## **Collection System**

The District owns and operates nearly 9 miles of collection sewer referred to as the District Trunk Line. The purpose of this line is to allow for the collective transport of wastewater from the smaller municipal lines of the three member agencies to the final destination of the District's Wastewater Treatment Plant. The Trunk Line was initially constructed as part of the original District design of 1963. It is comprised of sewer pipe ranging in size from 15-30 inches in diameter.

The pipe segments are primarily composed of either Vitrified Clay Pipe or Asbestos Cement Pipe. Due to the the naturally sloping coastal topography and owing to careful consideration and planning during the design phase of the collection system, the District's collection system operates entirely as a gravity fed sewer. As a result, the District is not dependent upon the use of pumps at any point in the collection system to convey the wastewater. The result is reduced annual operating expenses which in turn are passed directly on to the District's customers.

Annual average daily flow passing through the collection system is in the order of 2.9 million gallons per day with peak daily flows of approximately 3.16 million gallons per day. Routine video inspection of the entire system is performed every 4 years by means of Closed Circuit Television cameras (CCTV). The videos resulting from those inspections are reviewed by system engineers and accurate assessments are made of the system. System abnormalities and/or deficiencies noted within the collection system are ranked and prioritized, assisting in the development of short term and long term rehabilitation plans. In addition, the collection system is also cleaned on average every 4th year as part of the District's preventative maintenance plan.

## **Treatment Plant**

The wastewater collected within the District's Trunk Sewer Line begins the treatment process in the influent pumping plant. There it is passed through a Parshall metering flume to measure the quantity of influent wastewater to the plant. Currently, average annual daily flow at the plant is on the order of 2.88 million gallons per day (mgd), with peak day dry weather flow of approximately 3.37 mgd and peak hour wet weather flows of 8.03 mgd.

Once measured, the wastewater passes through an in-channel screen to mechanically separate and remove the larger debris. Typically this debris consists of sticks, rags, large food particles, paper products, etc. The removed debris is collected, ground, and hauled offsite to a landfill for disposal. The screened wastewater is then distributed to the primary clarifiers by means of the four raw sewage pumping units located within the pumping station.

Prior to arrival at the clarifiers the wastewater enters the clarifier control box. Under normal operations, the control box is designed to separate the waste stream into equal parts for distribution into one of the two primary clarifiers. The control box has the added function of isolating flow to either of the independent clarifiers during periods of maintenance and repairs.

Clarification is achieved at the plant by means of two identical primary clarifiers; one constructed as part of the original 1965 project and the other as part of the 1990 expansion. Each primary clarifier is 55 feet in diameter with a side wall depth of 9 feet. These dimensions allow for a combined volume of 320,625 gallons. Under average annual daily flow, the combined overflow rate of the clarifiers is 610gpd/sf and the combined detention time between the clarifiers is 2.65 hours.

The clarifiers serve to separate a large portion of the suspended solids from the waste stream. This is achieved by maintaining quiescent flow throughout detention, allowing for the heavier solids (*sludge*) to sink to the bottom of the tank and the lighter solids (*scum*) to rise to the surface.

The sludge which accumulates on the bottom of the tank is raked continuously towards the center column by a steel raking mechanism. This raking mechanism forces the sludge out of the clarifier through a sludge pocket near the center of the tank. The scum is removed from the clarifier by means of a skimmer assembly attached to one of the arms of the raking mechanism. As the skimmer arm revolves around the tank, scum is guided into a trough attached to the inside of the launder wall. The scum trough removes the scum from the tank and combines it with the sludge removed by the rakes. The removed sludge and scum are pumped to the plant digesters for treatment. The clarified wastewater eventually discharges over the effluent weirs and flows to the fixed film reactor to receive secondary treatment.

Secondary treatment is achieved at the plant by means of a single, fixed film reactor (FFR), constructed as part of the 1986 improvement project. The FFR utilizes a bio-filtration process which removes the dissolved organic matter from the wastewater. The FFR is 117 feet in diameter with a plastic media depth of 12 feet. Wastewater is distributed over microorganisms which grow on the plastic media substrate. The microorganisms absorb the organic matter from the wastewater as their food supply, utilizing much of the suspended colloidal and dissolved organic substrate matter for bioassimilation. As organic matter and nutrients are absorbed from the wastewater, the film of microorganisms grows and thickens, periodically sloughing off the plastic media surface. Partially decomposed organic matter, excess sloughed film, and dead film is carried off with the FFR effluent for further clarification in the secondary clarifier unit.

The secondary clarifier unit, constructed as part of the 1986 improvement project, performs much the same operation as the primary clarifier. The unit is 97 feet in diameter and has a side wall depth of 12 feet. These dimensions allow for a total volume of 665,000 gallons. Under average daily flow, the overflow rate of the clarifier is approximately 393gpd/sf and the detention time is 5.5 hours.

The final step in the treatment process at South San Luis Obispo Sanitation County District's Wastewater Treatment Plant is the disinfection of the treated effluent prior to release through the ocean outfall. This process occurs within the chlorine contact chamber and is achieved by the injection of sodium hypochlorite into the waste stream to kill the majority of all remaining bacteria. Once the wastewaters disinfected, it is discharged from the plant through the ocean outfall line.

For additional information on the ocean outfall line or the biosolids (sludge) handling and treatment at the District's Wastewater treatment plant, please click on the respective tabs.

## **Outfall**

Treated municipal wastewater is discharged to the Pacific Ocean through a 4,400 foot outfall/diffuser system as regulated by the California Regional Water Quality Control Board - NPDES Permit No. CA 0048003. The outfall terminates in approximately 55 feet of water. The design of the outfall is intended to diffuse the treated municipal waste prior to discharge, creating a minimum initial dilution of 165 parts seawater to 1 part treated municipal waste at the point of release.

This line also serves to convey treated wastewater from the City of Pismo Beach which shares this line by means of a connection at the District's treatment plant site. Discharge of treated municipal waste from Pismo Beach is regulated under California Regional Water Quality Control Board - NPDES Permit No. CA0048151.

The outfall pipe/diffuser system is inspected tri-annually to ensure proper operation and structural integrity of the system. The inspection is conducted from the shoreline to its ocean terminus and includes general observations and photographic records of the outfall/diffuser as well as that of the ocean bottom in the vicinity of the system.

## **Biosolids**

### **Description**

Biosolids is a term used by the water treatment industry that refers to treated sludge. Sludge, or "biosolids," is the byproduct of the treatment of domestic and commercial wastewater or sewage in a wastewater treatment plant. During waste water treatment, bacteria and other microorganisms break down components in wastewater into simpler and more stable forms of organic matter. Non-organic matter also settles into sludge. Biosolids in their liquid form look like muddy water and contain 1-10% solids. Biosolids may be dewatered in a second step of the treatment process, which turns it into a "cake" with the texture of a wet sponge. In this stage it contains 11-40% solids.

According to US EPA, biosolids that meet treatment and pollutant content criteria "can be safely recycled and applied as fertilizer to sustainably improve and maintain productive soils and stimulate plant growth." The US EPA's promulgated regulation is 40 CFR Part 503.

### **Plant Process**

At the South San Luis Obispo County Sanitation District the solids are collected at the Primary Clarifier and are either pumped to the Gravity Sludge Thickener, or directly to the Primary Digester. In the Primary Digester, the solids are heated to approximately 96 degrees and mixed using the pumped vortex method. Detention time in the Primary Digester is approximately 26 days.

The solids are then transferred to the Secondary Digester which is unheated and unmixed. This allows the sludge to cool and stratify. The supernatant is recycled through the plant for further treatment and the digested solids are drawn off for further processing.

Sludge drying takes place in one of two ways depending on the weather. During the winter months the District uses the centrifuge for the purpose of dewatering the sludge. The material is then stored in the sludge lagoon. Once the weather warms up, operations Staff begins the use of the drying beds with supplemental processing by the centrifuge. Polymer addition is required for proper operation of the centrifuge, however Staff has made several modifications to the feed system allowing for a dryer cake than usually obtained from similar machines (approx. 25%). The solids generated by the centrifuge and drying beds are then stockpiled onsite until transportation to a composting facility is scheduled.

Over the years, the South San Luis Obispo County Sanitation District has maintained an excellent record with the local Regional Board with respect to biosolids. In light of recent and pending regulations, for the last few years the South San Luis Obispo County Sanitation District has processed all biosolids through commercial composting facilities.

## **Appendix E**

### **Ordinance No. 92-7**

### **Self-Sufficiency of Utility Rates**

ORDINANCE NO. 92-7

**AN ORDINANCE OF THE CITY COUNCIL  
OF THE CITY OF GROVER CITY  
ESTABLISHING SELF-SUFFICIENCY OF  
UTILITY RATES AND IMPLEMENTING THE ENTERPRISE  
FUND POLICY THAT SEWER AND WATER FUNDS  
SHALL PAY THE FULL COSTS OF OPERATION**

**WHEREAS**, the City Council of Grover City has adopted a policy that water and sewer funds shall be enterprise funds and shall pay their full costs of operation;

**NOW, THEREFORE, BE IT ORDAINED** as follows:

Section 1. Part 2 - Water Fee Surcharge and Part 2.5 - Excessive Use Surcharge of Chapter 2 of Title VII of the Municipal Code is hereby repealed.

Section 2. Water utility rates shall be set at: Minimum monthly service charge shall be \$6.75 plus a per unit (one hundred cubic feet) charge of \$1.33.

Section 3. That portion of the Grover City Municipal Code entitled "Article VII—Public Works, Chapter 1, Sanitary Sewer System: Section 7180 is hereby amended as follows:

Section 7180. Sewer Rental Charge

Every person whose premises in the City are served by a connection with the system of sewerage of the City whereby the sewerage or industrial wastes, or both, are disposed of by the City through the sewerage treatment plan, or otherwise, shall pay a sewer rental charge based as follows, to wit:

A. One Dwelling

For each single family dwelling the sum of twelve dollars and sixty-eight cents (\$12.68) per month.

B. Two or More Dwellings

For each single family dwelling unit in any duplex, double house or other building containing two or more single family dwelling units, the sum of twelve dollars and sixty-eight cents (\$12.68) per month per dwelling unit.

C. Apartments

For each apartment house, the sum of twelve dollars and sixty-eight cents (\$12.68) per unit per month.

D. Hotel, Motel, Auto Court or Lodge

For each dwelling unit in any hotel, motel, auto court, or lodge, the sum of twelve dollars and sixty eight (\$12.68) per unit per month. A manager's unit is also twelve dollars and sixty-eight cents (\$12.68) per month.

E. Rooming House

For each rooming house where rooms are rented to others for lodging purposes, the sum of twelve dollars and sixty-eight cents (\$12.68) for the rooming house, plus five dollars and ninty-seven cents (\$5.97) per bedroom per month.

F. Mobile Home Space

For each mobile home space, the sum of twelve dollars and sixty-eight cents (\$12.68) per month.

G. Travel Trailer and Recreational Vehicle Space

For each travel trailer, recreational vehicle, camper, or camping space, the sum of eight dollars and ninty-five cents (\$8.95), plus two dollars and forty-six cents (\$2.46) for each fixture in a public building and three dollars and ninty-five cents (\$3.95) for each coin-operated washing machine per month.

H. Church

For each church, the sum of fourteen dollars and seventeen cents (\$14.17) per month, plus twelve dollars and sixty-eight cents (\$12.68) per month for any parsonage or dwelling unit connected thereto.

I. Public Places

For each theater, club house, or place of amusement, the sum of fourteen dollars and seventeen cents (\$14.17) per month.

J. Commercial Establishment

For each commercial establishment, wholesale or retail, the minimum of fourteen dollars and seventeen cents per month for up to five (5) fixtures, plus two dollars and forty-six cents (\$2.46) per month for each additional fixture.

K. Restaurants

For each restaurant the sum of two dollars and forty-six cents (\$2.46) per month per each 100 cubic feet, or fraction thereof, of water used, with a minimum of twelve dollars and sixty-eight cents (\$12.68) per month.

L. Car Washes and Laundromats

For each car wash and laundromat, the sum of one dollar and nineteen cents (\$1.19) per month per each 100 cubic feet, or fraction thereof, of water used with a minimum of five dollars and ninety-seven cents (\$5.97) per month.

M. Factories, Industrial Plants

1. For each factory or industrial plant with twenty (20) employees or less, fifteen dollars and sixty-six cents (\$15.66) per month.
2. For each additional employee over twenty (20), ninety-seven cents (\$0.97) per month. Higher rate where heavy discharge or character of sewer warrants.

N. Schools

For each public or private school, the minimum yearly charge shall be four dollars and forty-eight cents (\$4.48) per Average Daily Attendance (ADA) and employees, plus ninety-seven cents (\$0.97) per ADA and employees when the school has a cafeteria.

Section 4.

The Council shall review the water and sewer rates annually to determine appropriate levels to maintain self-sufficient rates, which may be adjusted annually by Resolution.

Section 5.

This Ordinance shall take effect thirty (30) days after its passage and within fifteen (15) days after its adoption, this Ordinance shall be posted in three public places within the City of Grover City, to-wit:

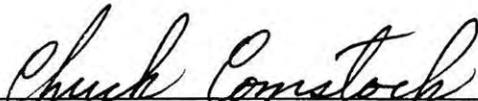
1. City Hall, 154 South Eighth Street, Grover City, CA
2. United States Post Office, 917 Grand Avenue, Grover City, CA
3. Grover City Chamber of Commerce, 177 South Eighth Street, Grover City, CA

This Ordinance was introduced and read on the 6th day of July, 1992, and passed and adopted on the 20th day of July, 1992, on the following roll call vote, to-wit:

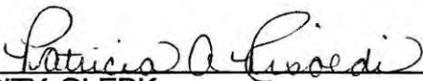
AYES: Munroe, Gates, Forister, Keith, Mayor Comstock

NOES: None

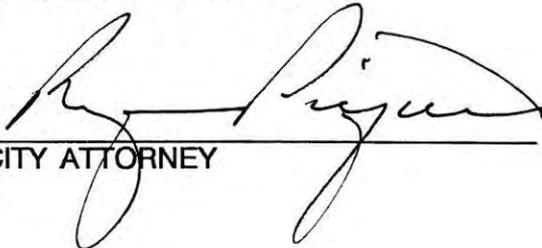
ABSENT: None

  
\_\_\_\_\_  
MAYOR

ATTEST:

  
\_\_\_\_\_  
CITY CLERK

APPROVED AS TO FORM:

  
\_\_\_\_\_  
CITY ATTORNEY

**Appendix F**

**Preliminary Survey SSLOCSD**

**Recycled Water Demands**

**PRELIMINARY**

Table 4-1. SSLOCSD Recycled Water Demands

Irrigation Site	Estimated Irrigated Area, Acres	Peak Month Demand, AF	Annual Demand, AF	Peak Flow, gpm
<b>LANDSCAPE IRRIGATION - SSLOCSD AREA</b>				
Caltrans Median	20.0	9.0	40.0	724
Soto Sports Complex (AG) - see Note 4.	-	-	-	-
X Mentone Basin Park (GB)	3.0	1.4	6.0	109
X 16th Street Park (GB)	2.0	0.9	4.0	72
Arroyo Grande Cemetery	18.0	8.1	36.0	652
Area Schools (per school projection)	3.0	1.4	6.0	109
X Grover Heights Park (GB)	4.0	1.8	8.0	145
Ramona Gardens Park (AG)	1.0	0.5	2.0	36
Costa Bella Park (AG)	0.5	0.2	1.0	18
El Camino Real Park (AG)	4.0	1.8	8.0	145
Rancho Grande Park (AG)	5.0	2.3	10.0	181
Terra de Oro Park (AG)	2.0	0.9	4.0	72
Strother Park (AG)	4.0	1.8	8.0	145
Oceano County Park (Oceano)	6.0	2.7	12.0	217
<b>SUBTOTAL:</b>	<b>72.5</b>	<b>32.6</b>	<b>145.0</b>	<b>2,625</b>
<b>LANDSCAPE IRRIGATION - NIPOMÓ AREA</b>				
Black Lake Golf Course (see Note 5)	75.0	33.8	150.0	246
Nipomo Regional Park	100.0	45.0	200.0	329
Cypress Ridge Golf Course (see Note 5)	-	-	-	-
Woodland Golf Course	150.0	67.5	300.0	493
<b>SUBTOTAL:</b>	<b>325.0</b>	<b>146.3</b>	<b>650.0</b>	<b>1,068</b>
<b>GROUNDWATER RECHARGE/STREAM AUG.</b>				
Arroyo Grande Creek Stream Flow	---	208.3	2,500.0	1,550
<b>SUBTOTAL:</b>	<b>---</b>	<b>208.3</b>	<b>2,500.0</b>	<b>1,550</b>
<b>NIPOMÓ GROUNDWATER RECHARGE</b>				
Groundwater Injection (see Note 6)	---	66.7	800.0	496
<b>SUBTOTAL:</b>	<b>---</b>	<b>66.7</b>	<b>800.0</b>	<b>496</b>
<b>DIRECT AGRICULTURAL IRRIGATION</b>				
Arroyo Grande Crop Irrigation	3,140.0	1,413.0	7,850.0	4,867
<b>SUBTOTAL:</b>	<b>---</b>	<b>1,413.0</b>	<b>7,850.0</b>	<b>4,867</b>
<b>INDUSTRIAL</b>				
Tosco/Unocal Refinery	---	1,290.0	1,290.0	800
<b>SUBTOTAL:</b>	<b>-</b>	<b>1,290.0</b>	<b>1,290.0</b>	<b>800</b>

**NOTES:**

1. Peak Month based on 0.45 AF/Irrigated Acre.
2. Annual Demand (landscape Irrigation) based on 2.0 AF/Irrigated Acre.
3. Peak flow (gpm) for turf irrigation (except golf courses) based on 2 times the Peak Day. Golf course peak flow assumes on-site storage, thus continuous delivery. Peak Day=1.5xpeak month; 9 hour Irrigation period at night
4. Irrigated with Storm Water, park estimated at 40 acres.
5. Based on half of acreage being serviced by recycled water; remainder served by on-site WWTP.  
For Cypress Ridge, all Irrigation demands are assumed to be taken care of by on-site WWTP.
6. Recharge rate based on meeting water quality objectives for TDS in the Nipomo-Mesa area.
7. Stream augmentation/GW discharge based on meeting Regional Board Basin Plan Objectives.
8. Annual demand (crop Irrigation) based on 2.5 AF/Irrigated acre.
9. Golf Course Demands based on availability of on-site storage to handle peak diurnal demands.
10. Crop Irrigation demand assumes on-site storage available to meet irrigation demands.

**Appendix G**

**Gentlemen's Agreement**

AGREEMENT REGARDING  
MANAGEMENT OF THE  
ARROYO GRANDE GROUNDWATER BASIN

A. Parties

This Agreement is entered into among the San Luis Obispo Farm Bureau, the Cities of Arroyo Grande, Pismo Beach, Grover Beach and the Oceano Community Services District (collectively referred to hereinafter as "Parties"). The Cities of Arroyo Grande, Pismo Beach, and Grover Beach and the Oceano Community Services District, are hereinafter referred to collectively as "Urban Parties."

B. Recitals

WHEREAS, in January 1983, a Technical Advisory Committee consisting of representatives of Arroyo Grande, Grover City, Pismo Beach, Oceano Community Services District, Port San Luis Harbor District, the Farm Bureau, Avila Beach County Water District and the County of San Luis Obispo ("Committee") determined in reliance on the 1979 Report of the Department of Water Resources entitled Ground Water in the Arroyo Grande Area that the safe yield of the Arroyo Grande Groundwater Basin ("Basin") is 9,500 acre feet per year;

WHEREAS, in or about February 1983, the Parties agreed to enter into a voluntary groundwater management plan to provide for effective management of groundwater resources in the Basin through which each party was given sufficient water to meet its needs as then projected; such needs being met in part by the City of Arroyo Grande foregoing 358 acre feet per year of its historical use and the City of Pismo Beach foregoing 20 acre feet per year of its historical use;

WHEREAS, this management plan provided a reasonable division of the safe yield of the Basin without court imposed groundwater basin adjudication;

WHEREAS, on February 9, 1983, the terms of the management plan were incorporated into Resolution No. 83-1 of the South San Luis Obispo County Water Association Approving the Recommendations of the Committee relating to the Basin (the "Resolution");

WHEREAS, each of the Parties have adopted individual resolutions endorsing the provisions of the Resolution;

WHEREAS, the Parties have generally complied with the terms and conditions of the Resolution; and

WHEREAS, general compliance with the Resolution has proven to be a fair and efficient means of managing and protecting groundwater resources in the Basin as confirmed by the revised final draft report prepared by the Department of Water Resources entitled, Water Resources of Arroyo Grande and Nipomo Mesa, January 2000.

**Appendix G**

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. Division of Safe Yield.

a. The parties agree to a division of the safe yield of the Basin as follows:

Applied Irrigation 5,300 acre feet

Subsurface flow to ocean 200 acre feet

Urban Use:

City of Arroyo Grande 1,202 acre feet

City of Grover Beach 1,198 acre feet

City of Pismo Beach 700 acre feet

Oceano Community Services District 900 acre feet

b. Any increase or decrease in the safe yield of the Basin attributable to changed operation of the Lopez Reservoir, or any other cause, shall first be divided between the Urban Parties and applied irrigation on a pro rata basis using the formula from the 1983 Gentlemen's Agreement, sixty percent (60%) to applied irrigation and forty percent (40%) to the Urban Parties. Thereafter, the first 378 acre feet per year of any increase of safe yield allocated to the Urban Parties shall be divided between the City of Arroyo Grande and the City of Pismo Beach on a pro rata basis (95% to Arroyo Grande and 5% to Pismo Beach).

c. The entitlements of each respective Urban Party may be increased based upon the conversion of irrigated agricultural lands to urban use. An Urban Party to this Agreement may increase its entitlement for urban use by a factor of three (3) acre feet per acre per year minus the calculated urban usage per acre per year upon the conversion of irrigated agricultural land to urban usage. "Irrigated agricultural land" shall be that land within the corporate limits of the party that was identified as irrigated agricultural land in the 1979 Department of Water Resources Report entitled Ground Water in the Arroyo Grande Area. This agricultural conversion factor may be applied to all acreage converted to urban use from January 1, 1983, throughout the life of this Agreement. Such an agricultural conversion factor is in the best interests of the overall Basin in that it will not result in any decline in the groundwater service over time. The Parties agree that no water should be converted to urban use within the Basin without establishing that it was irrigated agricultural land as defined in the 1979 Department of Water Resources Report, Groundwater in the Arroyo Grande Area.

d. The Parties agree and understand that the safe yield figures utilized in this Agreement are a product of the 1979 Department of Water Resources Report regarding the Arroyo Grande Basin as adjusted by the 1983 ad hoc Technical Advisory Committee and that the division of the resources is based upon the historical use of each party and a practical accommodation of each Party's needs as they existed at the time of the adoption of the 1983 agreement. It is agreed that the Parties will meet and confer on issues related to safe yield and division of existing water resources upon the

final adoption of the new Arroyo Grande Basin study performed by the Department of Water Resources, which is currently in draft.

2. Shared Information and Monitoring: The Urban Parties to this Agreement shall freely share information with each other regarding each of their respective uses of groundwater in the Basin, including all pumping data such as amounts of water extracted, well static water levels, and water quality. The Urban Parties to this Agreement shall meet on a quarterly basis to share this information and to discuss water usage and impacts upon the Basin. The Parties shall conduct a review of water usage and the impacts on Basin hydrology in 2010 and 2020.

3. Term:

a. This Agreement shall bind the Parties indefinitely absent a significant change of circumstances as to available water, water quality, or hydrogeology of the Arroyo Grande Basin. A significant changed circumstances shall allow any party to opt out of this Agreement if the significant change of circumstances put that party at risk of not being able to meet its potable water needs.

b. Significant changed circumstances shall include changes within the Basin or outside of the Basin, including but not be restricted to, a change in the Lopez Reservoir safe yield or an increase in Lopez Reservoir discharges for conservation purposes that threatens the ability of the urban Parties to obtain their contractual allotments under their Lopez agreements, or a significant change in groundwater yields or quality, or a reduction in foreign water imported by any Urban Party. The Parties recognize that rainfall within the watershed is the most significant factor in affecting the yield of Lopez Reservoir and the Basin.

c. The Parties shall revisit the issue of the allocation of groundwater resources within the Arroyo Grande Basin in 2010 and 2020 in the context of the review provided for in section 2 of this Agreement. The Parties shall make new allocations of groundwater resources at that time if circumstances justify it and if no harm will result to other groundwater users. Priority shall be given to reallocation of historical use of groundwater to Arroyo Grande and Pismo Beach that those agencies chose not to pursue in the entering into of the original Gentlemen's Agreement in 1983 should such new allocations be made.

d. A Party may opt out of this Agreement if significant changed circumstances arise as defined in this section. Such a party shall give all other parties to the agreement not less than six months written notice of its intention to opt out. The written notice shall describe in detail the significant changed circumstances upon which the Party bases its election to opt out of the Agreement.

4. Mediation Agreement: The Parties agree to mediate any disputes that arise out of the Parties' performance under this Agreement, or the interpretation of the terms of this Agreement, prior to instituting any litigation against or between any other party to this Agreement. Should a party institute litigation without first offering in good faith to mediate any such dispute, any party may move for an order compelling mediation and staying the proceedings in the litigation until after mediation has been completed. The prevailing party on a motion to compel mediation shall be entitled to recover its attorney's fees against any resisting party or any party who filed litigation without first

making a good faith attempt to mediate the dispute. This mediation requirement shall not apply where the health and safety of any of the Parties, or any of the Parties' residents, is threatened and they must seek, and have obtained, preliminary relief for the purposes of preserving health and safety.

5. No Third Party Beneficiaries: The Parties are entering into this Agreement in order to reasonably allocate existing groundwater resources between themselves and not to benefit any third parties. This agreement shall only be enforceable between the Parties themselves. This Agreement does not create any right enforceable by any person or entity that is not a party to this Agreement.

6. General Provisions:

a. The Parties warrant that all necessary approvals and authorizations have been obtained to bind them to all terms of this Agreement, and further warrant that the persons signing have authority to sign on behalf of their respective Parties.

b. Written notice under this Agreement shall be given by placing such notice in the first class mail, postage prepaid, or by hand delivery to the current address of the office of any Party to this Agreement.

c. No amendment to this Agreement will be binding on any of the Parties unless it is in writing and signed by an authorized representative of all of the Parties.

d. This Agreement will be construed in accordance with, and governed by, the laws of the State of California as applied to contracts that are executed and performed entirely in California.

e. If any provision of this Agreement is held invalid or unenforceable by any final judgment, it is the intent of the Parties that all other provisions of this Agreement be construed to remain fully valid, enforceable, and binding on the Parties.

f. This Agreement may be executed simultaneously in one or more counterparts, each of which will be considered an original, but all of which together will constitute one and the same instrument.

g. The Parties represent that prior to the execution of this Agreement, they consulted independent legal counsel of their own selection regarding the substance of this Agreement.

WHEREFORE, the Parties publicly consent to the terms and conditions of this Agreement by executing the same as set forth below.

Dated: August 24, 2001. City of Arroyo Grande

By: \_\_\_\_\_

Print Name and Title: Michael A. Lady, Mayor

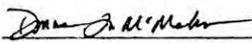
Dated: Aug 8, 2001. City of Pismo Beach

By: 

Attest:  Print Name and Title: Mayor Rudy Natoli  
City Clerk Sharon Jones

Dated: August 6, 2001. City of Grover Beach

By: 

Attest:  Print Name and Title: Mayor Richard W. Neufeld  
Donna L. McMahon  
Deputy City Clerk

Dated: \_\_\_\_\_, 2001. Oceano Community Services District

By: \_\_\_\_\_

Print Name and Title: \_\_\_\_\_

Dated: \_\_\_\_\_, 2001. San Luis Obispo County Farm Bureau

By: \_\_\_\_\_

Print Name and Title: \_\_\_\_\_

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**Appendix H**

**Resolution No. 89-102**

**Landscape Standards**

RESOLUTION NO. 89-102

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF GROVER CITY  
APPROVING LANDSCAPE STANDARDS FOR WATER CONSERVATION

WHEREAS, the City Council of the City of Grover City is concerned with the potential shortage of water for our area due to drought conditions over the last few years; and

WHEREAS, the City Council is encouraging Grover City residents to help conserve precious water resources in any way possible;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Grover City does hereby approve and adopt "Landscape Standards for Water Conservation" attached as Exhibit "A" to encourage the use of water conserving plant materials and irrigation designs.

On motion by Council Member Munroe, second by Council Member Santos, and carried on the following vote, to wit:

AYES: Council Members Munroe, Santos, Comstock, Mayor Ekbohm

NOES: None

ABSENT: Council Member Forister

the foregoing RESOLUTION NO. 89-102 was PASSED, APPROVED and ADOPTED this 5th day of September, 1989.

  
MAYOR DAVID R. EKBOM

ATTEST:

  
CITY CLERK

GROVER CITY  
LANDSCAPE STANDARDS FOR WATER CONSERVATION

PURPOSE

All new development projects within Grover City are required to have attractive, water conserving landscaping. The climate of the Central Coast is a semi-arid, Mediterranean type which poses special landscape problems as well as opportunities. Therefore, homeowners, developers, landscape architects, contractors, designers, and others involved with landscape design need to make efficient use of the increasingly limited water supply through the use of sensible and carefully planned landscape and irrigation designs.

These Landscape Standards have been developed to explain the expectations and requirements for landscaping water conservation in new development. These standards will be used in review of all development projects.

INTENT

The intent of these Landscape Standards is to allow creative landscape designs while using water conserving techniques. The City is looking to conserve water through landscape designs that create a better balance between water supply and demand. Through use of these guidelines, the City intends to reduce the amount of water used for landscaping businesses, houses, apartments, and public buildings. There are a wide variety of plants, supplies and design techniques available which enhance the landscape while saving water. All new public and private developments must follow these standards and encourage water conserving landscaping.

PROCEDURE

There are three categories of projects within these landscape standards. All new development will fall under at least one or more of these categories depending on its size and complexity.

1. All Projects -- Includes all new development projects including those exempt from Planning Commission Review and additions or remodels of fifty percent (50%) or greater of the current assessed value of the improvements as shown on the latest assessor's tax roll book.
2. Small or Medium Size Projects -- Include residential development of 4 or fewer units and commercial or industrial projects on lots less than 50,000 square feet in size buildings.
3. Large Projects -- Include residential projects of 5 or more units, and commercial or industrial projects on lots 50,000 square feet in size or greater.

The Community Development Department Staff shall evaluate projects, for compliance to these standards, during the building plan check. All development projects shall be provided with 2 sets of landscape and irrigation plans that conform to these guidelines.

SUBMITTAL REQUIREMENTS

I. REQUIRED FOR ALL PROJECTS -- Landscape and irrigation plans drawn by a licensed landscape architect or contractor. The plans must show water conserving measures in sufficient detail and clarity to demonstrate that projects conform to the guidelines, including:

A. Planting Plan

1. Title block showing job address and name of applicant; name, phone number, and license number of landscape designer.
2. North arrow and scale.
3. Property lines including any easements.
4. Any existing and/or proposed structures, driveways, walkways, decks, patios, porches, fences, walls, etc.
5. Show any existing landscaping and other natural features. Show any trees to be removed (indicate type and size).
6. Show all new landscaping materials being proposed. Include the location, type, size, quantity and species of plant materials including the common plant names. Also indicate mature sizes of all proposed trees.
7. Show the location, size and depth of all on-site retention basins (where applicable).

B. Irrigation Plan

1. Scale and north arrow.
2. Job address, applicant name; name, phone and license number of landscape designer.
3. Property lines including any easements.
4. All existing or proposed structures, driveways, walkways, decks, patios, porches, fences, walls, etc.
5. Location of water service and meter(s).
6. Location, size, and type of irrigation components. Also show the location of backflow prevention device(s), (indicate brand and model #).
7. Show drip lines, bubblers, spray heads, etc. (indicate spray patterns, brand and model #).

8. Show location of automatic controller(s) and electric control valve(s), (indicate brand and model #).
9. Show location, size and depth of all on-site retention basins (where applicable).

## II. REQUIREMENTS FOR SMALL AND MEDIUM SIZE PROJECTS

In addition to the above information, the following should also be provided for all projects requiring Planning Commission approval.

- A. Planting Notes -- Describing how the landscape design will meet needs of the site and proposed use, for example, screening, erosion control, and water conservation.
- B. Irrigation Notes -- Include notes or written description explaining the water conserving measures used in the irrigation design.

## III. REQUIREMENTS FOR LARGE PROJECTS

In addition to the above requirements the following should be included on the planting and irrigation plans:

- A. Maintenance Program -- Describe the general maintenance procedures including frequency and responsibilities for watering, replanting, irrigation equipment repair and programming, weed control and fertilizing.
- B. Planting and Irrigation Details -- Show planting, irrigation, staking and other applicable details which explain the landscape design and or water conservation measures.

DROUGHT RESISTENT PERENNIAL FLOWERING PLANTS,  
SHRUBS AND GROUNDCOVERS

PERENNIAL FLOWERING PLANTS

COMMON NAME

Achillea Ageratifolia	Greek Yarrow
Achillea Clauennae	Silvery Yarrow
Achillea Umbellata	
Achillea "Moonshine"	
Agapanthus	Lily of the Nile
Aloe	
Armeria Maritima	Common Thrift
Artemesia Absinthium "Lambrook Silver"	Common Wormwood
Artemesia Ludoviciana	Silver King
Artemesia "Powiscastle"	
Aurinia Saxatilis "Citrina"	
Balotta	
Bultonia Asteroides "Snowbank"	
Calamagrotis Fuliosa	
Centrathus Ruber	Jupiter's Beard
Cerastium Bieberstenii	
Cerastium Tomentosum	Snow in Summer
Convolvulus Cneorum	Bush Morning Glory
Convolvulus Mauritanicus	Ground Morning Glory
Cotinus Coggyoria "Pupureus"	Smoke Tree
Dietes Vegeta	
Echeveria	
Erigeron Glaucus	Beach Aster/Seaside Daisy
Erigeron "Moerheimii"	
Eriogonum Giganteum	St. Catherine's Lace
Eriogonum Umbellatum	
Eryngium Eburneum	Sea Holly
Euphorbia Characias Wulfenii	
Euphorbia Griffithii "Fireglow"	
Euphorbia Rigida	
Felecia Amelloides	Blue Marguerite
Festuca Amethystina	
Festuca Californica	
Festuca Idahoensis	
Gaura Lindheimeri	Gaura
Helianthemum	Sunrose
Helichrysum	
Helictotrichon Sempervirens	
Heuchera Bressingham Hybrids	Alum Root/Coral Bells
Iberis Sempervirens "Snowflake"	Evergreen Candytuft
Iris "Canyon Snow"	
Iris, Tall bearded	
Kniphofia	Red Hot Poker/Torch Lily
Lavandula Angustifolia "Hidcote"	
Lavandula Angustifolia "Munstead"	

PERENNIAL FLOWERING PLANTS

COMMON NAME

Lavandula Dentata	French Lavender
Lavandula Stoechas Nana	Spanish Lavender
Lechenaultia Bilboa	
Leonothus Leonurus	Lion's Tail
Libertia	
Lithodora Diffusa "Grace Ward"	
Lobelia Erinus	
Malva Alcea "Fastigata"	
Nepeta	
Onosma Tauricum	Golden Drops
Penstemon Meterophyllus	Blue Bedder
Penstemon Spectabilis	
Penstemon "Evelyn"	
Penstemon "Holly's White"	
Penstemon "Huntington Pink"	
Penstemon "Midnight"	
Perovskia Atriplicifolia	
Phlomis Russeliana	
Phlox Douglasii "Rosea"	
Phlox Drommondii	Annual Phlox
Phlox Subulata	Moss Pink
Phormium	New Zealand Flax
Plecostachys Serpyllifolia	
Puya	
Romneya Coulteri	Matilisa Poppy
Rudbeckia	
Ruta Graveolens	Rue, Herb of Grace
Salvia Clevelandii	
Salvia Farinacea "Victoria"	Mealycup Sage
Salvia Haematodes	
Salvia Leucantha	
Salvia Officinallis "Purpurea"	Garden Sage
Salvia Sclarea	Clary Sage
Santolina Virens	
Scabiosa Columbaria	Pincushion Flower
Senecio Bicolor (Cineraria)	Dusty Miller
Senecio Bicolor "Cirrus"	
Senecio Leucostachys	
Senecio "Sunshine"	Candidissimus
Sisyrinchium	
Sollya Heterophylla	Australian Bluebell Creeper
Stachys Byzantina "Silver Carpet"	
Stipa Cernua	
Stipa Gigantea	
Teucrium Chaemedrys	Germander
Teucrium Fruticans	Bush Germander
Thymus "Peter Davis"	Thyme
Verbascum	Mullein

PERENNIAL FLOWERING PLANTS

COMMON NAME

Verbena Bonariensis	Speedwell
Veronica Incana	Our Lord's Candle
Yucca Whipplei	
Zauschneria Californica	California Fuschia/Hummingbird Flower

GROUNDCOVERS

Artriplex Semibaccata	Australian Saltbush
Baccharis Pilularis	Dwarf Chaparral Broom
Carpobrothus Edulis	Ice Plant
Ceanthos Griseus "Compacta"	Wild Lilac
Ceanthos Griseus "Horizontalis"	Yankee Point
Artemisia Schmidtiana	Silver Mound
Arctostaphylos Edmundsii	Carmel Sur
Gazania Spp.	
Cotoneaster Danmeri	Bearberry Cotoneaster
Myoporum Debile	Myoporum
Pyracantha "Santa Cruz"	

SHRUBS

Artemisia Abrotanum	Southernwood
Artriplex Canescens	Saltbush
Artriplex Lentiformis	Quailbush
Berberis Mentorensis	Barberry
Buddleia Alternifolia	Butterfly bush
Catha Edulis	Khat
Ceanothus Megacarpus	Big Pod Ceanothus
Cistus Laurifolius	Laurel Rockrose
Correa Pulchella	Australian Fuschia
Cotoneaster	
Echium Fastosum	Pride of Madiera
Mahonia Aquifolium	Oregon Grape
Ribes Viburnifolium	Catalina Perfume
Rosemarinus Officinalis	Rosemary

DROUGHT RESISTANT LARGE SHRUBS,  
SMALL TREES (10-20 feet)

SHRUB OR TREE

COMMON NAME

Acacia Cyclops	Strawberry Tree
Acacia Longifolia	Frosty Blue
Acacia Verticillia	Wild Lilac
Arbutus Unedo	Mediterranean Fan Palm
Ceanothos	Pampas Grass
Ceanothus Arboreus	Willowleaf Cotoneaster
Chamaerops Humilis	Island Bush Poppy
Cortaderia Selloana	Hop Seed Bush
Cotoneaster Salicifolia	Coarse Flowered Mallee
Dendromecon Harfordii	Bushy Yate Tree
Dodonaea Viscosa	Fremont Silktassel
Eucalyptus Grossa	Dropping Melaleuca
Eucalyptus Lehmannii	New Zealand Flax
Garrya Fremonti	Cape Plumbago
Melaleuca Armillaris	Hollyleaf Cherry
Phorium Tenax	Spanish Bayonet Yucca
Plumbago Capensis	Lemonade Berry
Prunus Illicifolia	Common Flannel Bush
Yucca Aloifolia	Toyon
Rhus Integrifolia	
Fremontodendron Californicum	
Heteromeles Arbutifolia	

## **Appendix I**

**Resolution No. 05-49 & Resolution No. 10-45**

**Master Fee Schedule**

**RESOLUTION NO. 05-49**

**A RESOLUTION OF THE CITY COUNCIL OF THE  
CITY OF GROVER BEACH AMENDING THE MASTER FEE SCHEDULE**

**WHEREAS**, the City Council of the City of Grover Beach has created a Master Fee Schedule by adopting Resolution No. 03-61; and

**WHEREAS**, on June 2, 2005, the City Council conducted a Public Hearing, considered testimony, and approved recommendations regarding adjustments to the Master Fee Schedule for Water, Storm Water, and Wastewater Development Impact Fees.

**NOW, THEREFORE, BE IT RESOLVED, BY THE CITY COUNCIL OF THE CITY OF GROVER BEACH:**

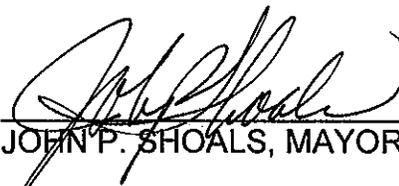
**THAT** the Master Fee Schedule be amended as set forth in Exhibit "A" attached to this Resolution; and

**THAT** the fees listed in Exhibit "A" of this Resolution shall become effective 60 days following the date of this Resolution on September 3, 2005.

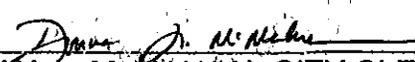
On motion by Council Member Lieberman, seconded by Council Member Ashton, and on the following roll-call vote, to wit:

AYES: Council Members - Ashton, Lieberman, Mayor Pro Tem Versaw, and Mayor Shoals  
NOES: Council Members - Ekbohm  
ABSENT: Council Members - None  
ABSTAIN: Council Members - None

the foregoing Resolution was **PASSED, APPROVED, and ADOPTED** at the Regular Meeting of the City Council of the City of Grover Beach, California, this 5<sup>th</sup> day of July, 2005.

  
\_\_\_\_\_  
JOHN P. SHOALS, MAYOR

ATTEST:

  
  
\_\_\_\_\_  
DONNA L. McMAHON, CITY CLERK

CITY OF GROVER BEACH  
 MASTER FEE SCHEDULE

Exhibit A

COMMUNITY DEVELOPMENT DEPARTMENT

Fee Description & Unit/Time	Current Fee
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DEVELOPMENT IMPACT FEES

Transportation Development Impact Fees

Fee/Unit of Service								
Single Family Residence (each)	Avg # of peak hour trips	1.00			\$			612.93
Multi Family Residence (each)	Avg # of peak hour trips	0.70			each \$			612.93
Mobile Home (each)	Avg # of peak hour trips	0.60			each \$			429.05
Commercial (1000 SF)	Avg # of peak hour trips	4.93			each \$			367.76
Office (1000 SF)	Avg # of peak hour trips	1.00			each \$			3,021.74
Industrial (1000 SF)	Avg # of peak hour trips	1.01			each \$			612.93
								619.06

Law Enforcement Development Impact Fees

Fee/Unit of Service								
Single Family Residence (each)	Avg # of peak hour trips	2.71			\$			44.07
Multi Family Residence (each)	Avg # of peak hour trips	3.68			each \$			119.43
Mobile Home (each)	Avg # of peak hour trips	2.55			each \$			162.18
Commercial (1000 SF)	Avg # of peak hour trips	8.00			each \$			112.38
Office (1000 SF)	Avg # of peak hour trips	1.50			each \$			352.56
Industrial (1000 SF)	Avg # of peak hour trips	1.01			each \$			66.11
								120.62

Fire Protection Development Impact Fees

Fee/Unit of Service Per Acre					\$			2,502.47
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Administrative Development Impact Fees

Fee/Unit of Service								
Single Family Residence (each)	Avg # of peak hour trips	2.71			\$			49.07
Multi Family Residence (each)	Avg # of peak hour trips	2.45			each \$			132.98
Mobile Home (each)	Avg # of peak hour trips	1.7			each \$			120.22
Commercial (1000 SF)	Avg # of peak hour trips	6.00			each \$			83.42
Office (1000 SF)	Avg # of peak hour trips	2.96			each \$			294.42
Industrial (1000 SF)	Avg # of peak hour trips	2.02			each \$			145.25
								268.62

CITY OF GROVER BEACH  
 MASTER FEE SCHEDULE

Exhibit A

COMMUNITY DEVELOPMENT DEPARTMENT

Fee Description & Unit/Time	Current Fee
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DEVELOPMENT IMPACT FEES

Water Development Impact Fees

5/8 inch meter	1.00 Capacity Factor	\$	1,070.00
3/4 inch meter	1.50 Capacity Factor	\$	1,605.00
1 inch meter	2.50 Capacity Factor	\$	2,675.00
1 1/2 inch meter	5.00 Capacity Factor	\$	5,350.00
2 inch meter	8.00 Capacity Factor	\$	8,560.00
3 inch meter	15.00 Capacity Factor	\$	16,050.00
4 inch meter	25.00 Capacity Factor	\$	26,750.00
6 inch meter	50.00 Capacity Factor	\$	53,500.00
8 inch meter	80.00 Capacity Factor	\$	85,600.00
10 inch meter	120.00 Capacity Factor	\$	128,400.00
12 inch meter	160.00 Capacity Factor	\$	171,200.00

Wastewater Development Impact Fees

5/8 inch meter	1.00 Capacity Factor	\$	991.00
3/4 inch meter	1.50 Capacity Factor	\$	1,487.00
1 inch meter	2.50 Capacity Factor	\$	2,478.00
1 1/2 inch meter	5.00 Capacity Factor	\$	4,955.00
2 inch meter	8.00 Capacity Factor	\$	7,928.00
3 inch meter	15.00 Capacity Factor	\$	14,865.00
4 inch meter	25.00 Capacity Factor	\$	24,775.00
6 inch meter	50.00 Capacity Factor	\$	49,550.00
8 inch meter	80.00 Capacity Factor	\$	79,280.00
10 inch meter	120.00 Capacity Factor	\$	118,920.00
12 inch meter	160.00 Capacity Factor	\$	158,560.00

Storm Water Development Impact Fees

per square foot of covered area		\$	0.2451
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**RESOLUTION NO. 10-45**

**A RESOLUTION OF THE CITY COUNCIL OF THE  
CITY OF GROVER BEACH AMENDING THE MASTER FEE  
SCHEDULE FOR WATER RATES**

**WHEREAS**, the City Council of the City of Grover Beach has created a Master Fee Schedule by adopting Resolution No. 03-61; and

**WHEREAS**, on June 21, 2010, the City Council conducted a Public Hearing, considered testimony, and approved recommendations regarding adjustments to the Master Fee Schedule for Water Rates; and

**WHEREAS**, consistent with requirements of Proposition 218, a Protest Notice and Hearing was conducted and the number of protests submitted to the City did not exceed the 50% threshold.

**NOW, THEREFORE, BE IT RESOLVED, BY THE CITY COUNCIL OF THE  
CITY OF GROVER BEACH:**

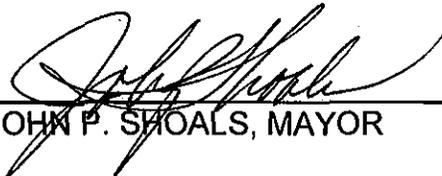
**THAT** the Master Fee Schedule be amended as set forth in Exhibit "A" attached to this Resolution; and

**THAT** the fees listed in Exhibit "A" of this Resolution shall become effective August 1, 2010.

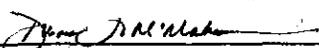
On motion by Council Member Bright, seconded by Mayor Shoals, and on the following roll-call vote, to wit:

**AYES:** Council Members - Bright, Mayor Pro Tem Nicolls, and Mayor Shoals  
**NOES:** Council Members - Mires and Peterson  
**ABSENT:** Council Members - None  
**ABSTAIN:** Council Members - None

the foregoing Resolution was **PASSED, APPROVED** and **ADOPTED** at a Regular Meeting of the City Council of the City of Grover Beach, California, this 6<sup>th</sup> day of July, 2010.

  
\_\_\_\_\_  
JOHN P. SHOALS, MAYOR

ATTEST:

  
\_\_\_\_\_  
DONNA L. McMAHON, CITY CLERK

**CITY OF GROVER BEACH  
MASTER FEE SCHEDULE**

**ADMINISTRATIVE SERVICES DEPARTMENT**

Fee Description & Unit/Time	Current Fee		August 1, 2010		March 1, 2011	
<b>Water Services</b>						
Minimum monthly water service charge						
5/8 Inch Meter	\$	6.75	\$	7.60	\$	8.75
3/4 Inch Meter	\$	6.75	\$	7.60	\$	8.75
1 Inch Meter	\$	6.75	\$	12.65	\$	14.60
1 1/2 Inch Meter	\$	6.75	\$	25.35	\$	29.15
2 Inch Meter	\$	6.75	\$	40.55	\$	46.65
3 Inch Meter	\$	6.75	\$	76.05	\$	87.45
4 Inch Meter	\$	6.75	\$	126.75	\$	145.75
<b>Residential: Per unit charge (100 cubic feet)</b>						
First 12 Units	\$	2.28	\$	2.53	\$	2.91
Next 8 Units	\$	2.41	\$	2.66	\$	3.06
Next 22 Units	\$	2.58	\$	3.06	\$	3.52
Over 42 Units	\$	2.76	\$	3.46	\$	3.98
<b>Landscape</b>	\$	2.41	\$	3.06	\$	3.52
<b>All Other Customers: Per Unit Charge (100 Cubic feet)</b>	\$	2.41	\$	2.66	\$	3.06

## **Appendix J**

### **Water Shortage Contingency Plan**

**WATER SHORTAGE CONTINGENCY PLAN 2010**

**WATER SHORTAGE CONTINGENCY PLAN ELEMENTS**

The City of Grover Beach shall implement an updated Water Shortage Contingency Plan for 2010 using the following as adapted from the seven steps recommended in the Urban Drought Guidebook 2008 Updated Edition:

- DEFINITION OF WATER SHORTAGE, STAGES OF ACTION
- PROVISION OF CONSUMPTION REDUCTION METHODS
- DEFINITION OF PROHIBITIONS AND PENALTIES
- METHODS FOR THE ANALYSIS OF IMPACT ON REVENUES AND EXPENDITURES AS WELL AS MEASURES TO OVERCOME THESE IMPACTS
- MECHANISMS TO DOCUMENT ACTUAL REDUCTIONS IN WATER USE RESULTING FROM IMPLEMENTATION OF THE WATER SHORTAGE CONTINGENCY PLAN

**DEFINITION OF WATER SHORTAGE**

The amount of rainfall in a given year or series of years is recommended as the basis for definition for stages of action. Rainfall, the ultimate source of recharge to the groundwater basin and surface water supplies, is readily monitored, and is recognized as the basis for defining drought. Rainfall is cumulated daily and summarized on an annual basis. City of Grover Beach rainfall averages approximately 16 inches per year. Rainfall at Lopez Recreation Area averages approximately 24 inches per year. A blended average of 20 inches of rainfall during a rainfall season (July 1 through June 30) will be the “**Benchmark**” amount used to determine what stage of action is necessary to be implemented.

San Luis Obispo County Division of Public Works maintains online rainfall sensors and Lopez Reservoir levels. Lopez Recreation Center (707) will be used in determining the annual rainfall amount in the Lopez Reservoir area. The City of Grover Beach Public Works Department maintains rainfall records from manual recordings taken daily at the City Yard. These recordings will be used in determining the annual rainfall amount in the City of Grover Beach.

Alternate (backup) sites Lopez Dam (737) and Oceano (795) located at 4<sup>th</sup> Street and Hwy 1 overcrossing will be used as a comparison to validate the rainfall amounts recorded at the official stations.

Ongoing groundwater monitoring of sentry wells along the coast in the Northern Cities Management Area is conducted on a quarterly basis. Any abnormal quarterly “Monitoring Report” shall be considered in determining the Stage of Action of a Water Shortage Declaration.

Yearly “**Blended Average Rainfall Amount**” is the average of “yearly” measured rainfall at the two official locations.

When the measured yearly “**Blended Average Rainfall Amount**” falls substantially below “**Benchmark**” for a given time and in the amounts defined in the following “Water Shortage Stages of Action”, a water shortage occurs.

## **WATER SHORTAGE STAGES OF ACTION**

Water Shortage Stages of Action shall be directly related to the defined “Benchmark”.

### **STAGE I - MINOR - VOLUNTARY**

Rainfall Condition is 65% of “Benchmark” rainfall or a quarterly “Monitoring Report” raises the concern of potential seawater intrusion.

### **STAGE II - MODERATE - VOLUNTARY**

Rainfall Condition is an average of 65% of “Benchmark” rainfall for two years in a row. Average will be determined beginning at the first year rainfall was 65% of “Benchmark.” If a quarterly “Monitoring Report” raises the concern of potential seawater intrusion, this condition shall be considered in making a Stage II determination.

### **STAGE III - SEVERE – MANDATORY\***

Rainfall Condition is an average of 65% of “Benchmark” rainfall for three years in a row. Average will be determined beginning at the first year rainfall was 65% of “Benchmark.” Other factors, including any report of seawater intrusion, will also be considered before making a Stage III determination.

### **STAGE IV - CRITICAL – MANDATORY\***

Rainfall Condition is an average of 65% of “Benchmark” rainfall for four years in a row. Average will be determined beginning at the first year rainfall was 65% of “Benchmark.” Other factors, including any report of seawater intrusion, will also be considered before making a Stage IV determination.

### **STAGE V – TERMINATES THE EMERGENCY RESPONSE**

Could be declared by the City Council when rainfall has returned to normal levels, Lopez Reservoir has returned to normal levels, monitoring reports are satisfactory and the City Council is convinced it is safe to do so. Remove all mandatory conservation measures.

\* Before declaring a Severe or Critical Water Shortage except in the case of a sudden or catastrophic event, a public hearing will be held at which consumers of such water supply shall have an opportunity to be heard to protest against the declaration and to present their respective needs to said governing board.<sup>1</sup>

The City Engineer will monitor the actual “Blended Rainfall Amount” and all monitoring reports at least on a seasonal basis. If the seasonal analysis indicates the first stage of action criteria may have been met, the City Engineer will notify the City Council and recommend the Council declare a “Stage I” water shortage. If the City Council declares a “Stage I” water shortage, the Director of Public Works/City Engineer of the City of Grover Beach will implement “Consumption Reduction Methods” (see next section).

The same procedure for monitoring and City Council notification will be followed for Stages II, III, IV, and V.

During any water shortage “Stage of Action” declared by the City Council, City Staff will closely monitor water consumption and make recommendations as appropriate to the City Council. When a “Stage V” condition is declared by the City Council, staff will return to monitoring seasonal rainfall and monitoring reports on at least an annual basis.

## **CONSUMPTION REDUCTION METHODS**

Once the City Council has declared a water shortage stage, measures will be implemented to meet water conservation goals. This section describes consumption reduction methods that will be implemented by the Director of Public Works in response to City Council declared water shortage “Stages of Action”. These measures range from public education to mandatory watering days.

The following measures and prohibitions shall be VOLUNTARY during a Stage I or Stage II water shortage and become MANDATORY during a Stage III or Stage IV water shortage.

- Notify all customers of the water shortage
- Mail information to all customers explaining the importance of water conservation
- Provide technical information to customers on means to promote water use efficiency
- Develop a media campaign to promote water conservation (incl. Channel 20)
- Develop or expand conservation programs such as low-flow toilet rebates
- Increase rates (Requires City Council action)
- Lower tiers (Requires City Council action)

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<sup>1</sup> Excerpt from Urban Drought Guidebook 2008 Updated Edition, Appendix A, Water Code Section 350-359

## **Prohibitions:**

The Urban Water Management Planning Act requires prohibitions against specific water use practices during water shortages. The prohibitions include:

- Use of potable water for street cleaning
- Unauthorized use of water from any fire hydrant
- Use of potable water to wash sidewalks or roadways where air-blowers or sweeping provides a reasonable alternative
- Use of potable water for construction purposes, such as consolidation of backfill unless no other source of water or method can be used
- Restaurant water service to patrons unless upon request
- Hydrant flushing except where required for public health and safety
- Refilling existing private pools except to maintain water levels
- Use of potable water for planting of turf and other new landscaping unless it consists of low water using, drought tolerant plants
- Use of water for washing cars, boats, sidewalks, driveways or other exterior surfaces without a quick-acting shut-off nozzle on the hose
- Operation of any ornamental fountain or car wash unless the water is re-circulated

Depending on the duration and severity of the water shortage and at the discretion of the City Council, the above measures can include prohibiting water use for planting any new landscaping, limiting landscape watering to specific days of the week, and discontinuing operation of all fountains.

## **PENALTIES**

The Water Shortage Contingency Plan imposes penalties at various shortage stages including house call warnings, double and triple water rates and disconnection. Any fines or penalties assessed under this Plan are subject to the provisions of Grover Beach Municipal Code.

When the City Council declares water shortage Stage III or IV, prohibitions become **MANDATORY**.

- Violation of mandatory prohibitions will result in penalties.
- A reduction in water use of 10% will be required during a Stage III water shortage.
- A reduction in water use of 25% will be required during a Stage IV water shortage.
- Customers will be responsible for achieving these goals.

During Stage III or IV Water Shortage Conditions, the Director of Public Works will be responsible for determining if any water account is in violation of the Consumption Reduction goal.

Any account found in violation of the Consumption Reduction goal will be monitored and managed on a monthly basis until the Consumption Reduction goal is achieved.

Step 1. The Director of Public Works will notify any account not meeting the goal and remind the account of the mandatory prohibitions and consumption reduction requirement. Penalties for non-compliance will also be described.

Step 2. The Director of Public Works will notify any account still not meeting the goal and make a house call to remind the account of the mandatory prohibitions and consumption reduction requirement. A written warning will be given that penalties for non-compliance will be exacted if compliance is not achieved within the next billing cycle after notice is given.

Step 3. The Director of Public Works will notify any account still not meeting the goal and remind the account of the mandatory prohibitions and consumption reduction requirement. Step 3 penalty is now invoked and consists of 100% increase of each tier of water rates for the billing cycle after this notice is given.

Step 4. The Director of Public Works will notify any account still not meeting the goal and remind the account of the mandatory prohibitions and consumption reduction requirement. Step 3 penalty is now increased and consists of 200% increase of each tier of water rates for the billing cycle after this notice is given.

Step 5. The Director of Public Works will notify any account still not meeting the goal and remind the account of the mandatory prohibitions and consumption reduction requirement. Step 3 penalty is now increased and consists of 300% increase of each tier of water rates for the billing cycle after this notice is given.

- Increased water rates will remain in effect until the first billing period after water use meets the consumption reduction goal set for the stage of water shortfall declared by the City Council.
- In the event an account becomes delinquent, standard non-payment and disconnection rules shall apply.
- Before a disconnected account may be reconnected, all outstanding billings and a standard reconnection fee shall be paid.

## **METHODS FOR THE ANALYSIS OF IMPACT ON REVENUES AND EXPENDITURES**

For the City of Grover Beach, effective implementation of the Water Shortage Contingency Plan would result in a decline in potable water sales.

Revenues derived from penalties for excessive water use or water wasting during the water shortage would not effectively offset lost revenues.

This penalty related revenue will be applied toward administration of the Water Shortage Contingency Plan. Declining water demands will be offset to a small degree by a decline in operating expenses related to the amount of water provided, such as pumping (energy) and water treatment costs.

During a Stage III or Stage IV Water Shortage, City Staff will analyze water production, consumption, and projected revenue compared to the normally expected revenue. Revenue shortfalls, if any, will be determined and any need for temporary water rate increases will be reported as appropriate to the City Council.

Any temporary water rate increases will apply to all water accounts and are **IN ADDITION** or cumulative to any water rate increases invoked under the **PENALTIES** section.

#### **MECHANISIMS TO DOCUMENT ACTUAL REDUCTIONS IN WATER CONSUMPTION**

During a Stage III or Stage IV Water Shortage, City Staff will analyze water production, consumption, and projected revenue compared to goals set by the City Council. Reports will be prepared as appropriate and will contain enough information to fully document decreased consumption in comparison to goals set based upon the Water Shortage Stage of Action declared by the City Council.