

FINAL REPORT

URBAN WATER MANAGEMENT PLAN 2010 UPDATE



CITY OF MARTINEZ

JUNE 2011



Balancing the Natural and Built Environment



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APPENDIX

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- A. Resolution of the City Council Adopting the Urban Water Management Plan and Notice of Public Hearing Affidavit of Publication
- B. Population Estimates
- C. City Metering and Water Consumption Classifications
- D. Water Rationing Documents from Past Droughts
- E. 1992 Urban Water Shortage Contingency Plan
- F. City of Martinez Emergency Response Plan (ERP) Summary
- G. Urban Water Management Planning Act
- H. Contra Costa Water District (CCWD) Projected Water Supply
- I. Annual Water Quality Report for 2009
- J. City of Martinez Model Landscape Ordinance
- K. CCWD 2009 and 2010 Demand Management Measures and Rebates
- L. Department of Water Resources UWMP Checklist

SECTION ONE

PLAN PREPARATION

1.1 PLAN ADOPTION

The City of Martinez has prepared the 2010 update of its Urban Water Management Plan to fulfill the requirements outlined in the California Urban Water Management Planning Act and the Water Conservation Bill of 2009. The updated plan was adopted by the City Council on June 1, 2011. A copy of the Resolution No. 067-11 to adopt the 2010 Urban Water Management Plan is provided in Appendix A. The plan was submitted to the California Department of Water Resources (DWR) and the State Library within 30 days of City Council approval. This plan includes all information necessary to meet the requirements of California Water Code, Division 6, Part 2.6 (Urban Water Management Planning).

To assist DWR staff in reviewing this UWMP, a copy of the DWR's suggested checklist entitled "Urban Water Management Plan Checklist, Organized by Subject" is provided in Appendix L. The left hand column of the checklist notes where the applicable information described to the right can be found within the body of this Plan.

1.2 PUBLIC PARTICIPATION

The City of Martinez encourages community participation in its urban water management planning activities. Community input has been encouraged during previous plan development. The 2010 plan format has been revised to more closely coincide with DWR planning review documents and to incorporate plan requirement changes due to legislative amendments enacted since 2005. Prior to its adoption, the plan was made available for public inspection and a noticed public hearing was held. Prior to the hearing, a notice providing time and place of hearing was published, in accordance with Section 6066 of the Government Code. A copy of the affidavit of publication for the public notice is included in Appendix A. Within 30 days after City Council approval, a copy of the Plan was made available for public review.

1.3 COORDINATION WITHIN THE CITY

The 2010 Urban Water Management Plan was prepared in coordination with various City departments. Coordination between the Community Development Department and Finance Department was essential in obtaining the information for population projections and current and historic water use required to prepare the plan.

1.4 INTER-AGENCY COORDINATION

Coordination between the City of Martinez and other agencies was key in the development of this plan. Agencies which participated and provided valuable information include:

- ◆ Contra Costa Water District (CCWD) – water supply and conservation information
- ◆ Central Contra Costa Sanitary District (CCCSD) – recycled water availability and use
- ◆ Mountain View Sanitary District (MVSD) – recycled water availability and use
- ◆ Contra Costa County – treated water customer service in County jurisdiction areas

- ◆ City of Pleasant Hill – treated water customer service in City jurisdiction areas

Implementation of Demand Management Measures (DMMs) within the City of Martinez is coordinated with Contra Costa Water District's (CCWD) conservation program. In October 1993, the CCWD board voted to implement DMMs throughout their entire service area, including retail customers within their wholesale water area. CCWD's Future Water Supply Study has identified water conservation as a component in its plan to meet future water demands within its service area.

A summary of the City's coordination with the appropriate agencies is shown in Table 1-1.

TABLE 1-1 COORDINATION WITH APPROPRIATE AGENCIES

Table 1-1 Coordination with Appropriate Agencies						
Check at least one box on each row	Participated in developing the plan	Commented on the draft plan	Attended public meetings	Was contacted for assistance	Was sent a copy of the draft plan	Was sent a notice of intention to adopt ¹
CCWD ²	x		x	x	x	x
CCCSD	x		x	x		x
MVSD	x		x	x		x
Contra Costa County			x		x	x
City of Pleasant Hill			x		x	x

1. Letter mailed on March 29, 2011 to notify agency of June 1, 2011 public hearing and plan to adopt UWMP.
2. The City's water use projections in 5 year increments through 2035 were provided to CCWD (Wholesale Agency) by email August 27, 2010.

SECTION TWO

MARTINEZ WATER SERVICE AREA DESCRIPTION

2.1 HISTORY

The City of Martinez is located in north central Contra Costa County along the Carquinez Strait. The water service area is approximately 10,000 acres, equating to a population of approximately 30,191 in 2010. Water service is provided for residential, commercial, industrial, public and irrigation customers, and for fire protection uses.

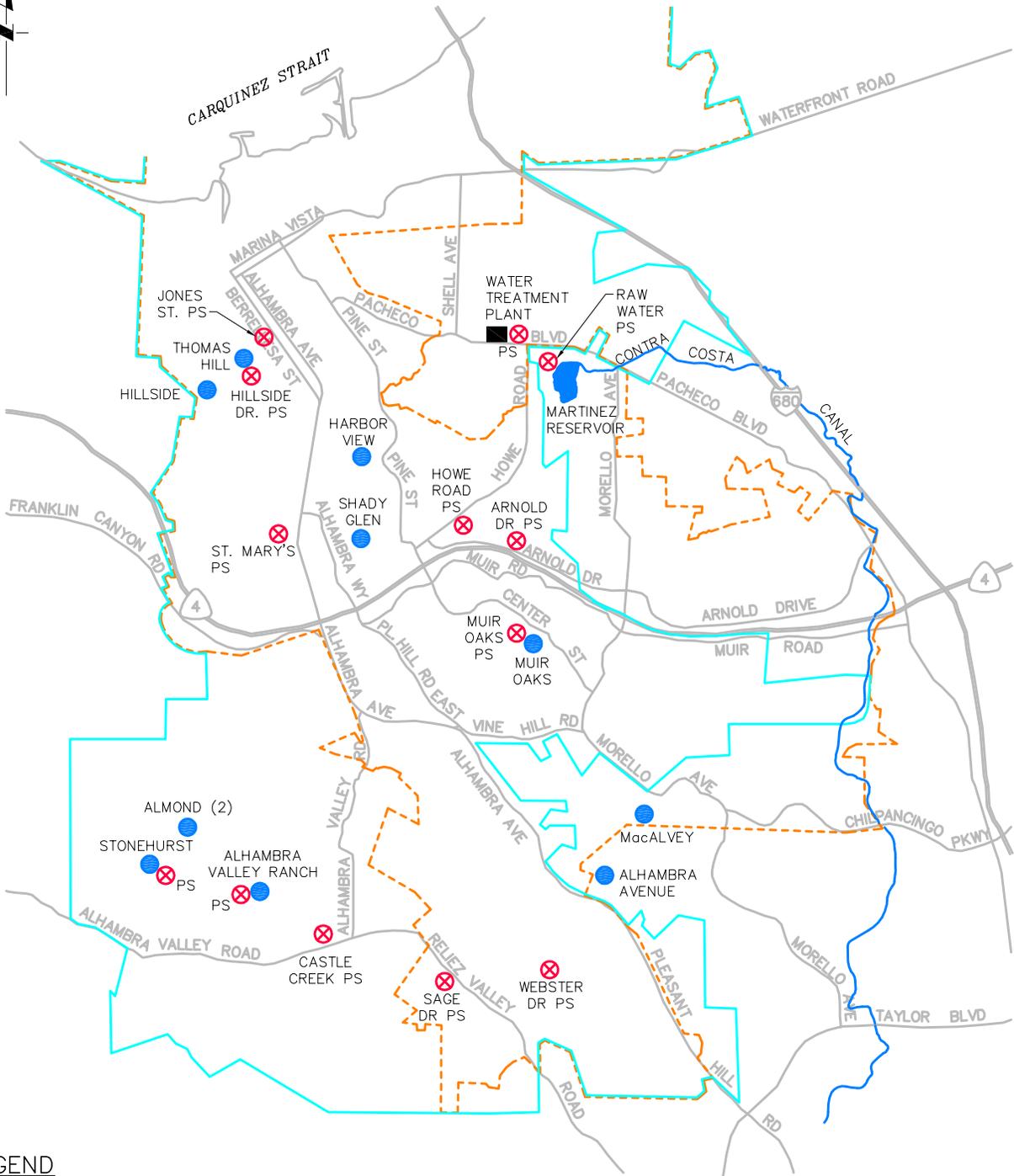
On May 26, 1887, a franchise to operate a water system was obtained by the West Hill Water and Electric Light Company from the Town of Martinez. The water system supplied the Town of Martinez and its supply consisted of seven wells. On December 7, 1898, the Port Costa Water Company purchased the system. The Port Costa Water Company system included a group of wells and a pumping station near Concord. The Port Costa Water Company abandoned this source in 1911 and a new supply of water was obtained from seven artesian wells and a new pumping station.

The Town of Martinez purchased the distribution system in 1918 from the Port Costa Water Company who agreed to furnish water to Martinez at wholesale rates on a metered basis. At that time the distribution system included about 9 miles of pipeline. The purchase cost of the distribution system and Thomas Hill Reservoir was \$170,000.

The California Water Service Company purchased the Port Costa Water Company holdings on April 19, 1927. In 1930, the California Water Service Company completed construction of a rapid sand filter plant and a one million gallon storage reservoir and began treatment of water pumped from the Sacramento River. They continued to provide Martinez with water until June 15, 1949. At that time, the City of Martinez put their newly completed rapid sand filter plant in use and began taking water from the Terminal Reservoir of the Contra Costa Canal. This portion of the Water Purification Plant is known as Water Treatment Plant No. 1. In 1968, additional treatment capacity was added as Water Treatment Plant No. 2 was put on line. Both plants operated until 1974 when Water Treatment No. 1 was removed from service. Water Treatment Plant No. 2 has filtering capacity of 11.2 mgd. In 1991, Water Treatment Plant No. 2 was expanded to include ozone application to the water for disinfection and taste and odor control. In 2000, the Plant No. 1 filters were refurbished to add 3.5 mgd filtration capacity, for a total filtration capacity of 14.7 mgd. Recent improvements include the replacement of the fluoride dry feed system with a fluorosilicic acid liquid feed system in 2008.

2.2 WATER SERVICE AREA

The City of Martinez's water service area encompasses over 10,000 acres. Figure 2-1 shows the City water service area boundaries, the City limits, and major pumping and storage facilities within the City. As illustrated in the figure, the water service boundaries for the City's water system are not contiguous with the city limits. The water service area extends outside City limits along the northeast, southeast, and southwest borders of the City. These areas include County areas and part of the City of Pleasant Hill. Along the eastern side of the City, CCWD provides retail water service to a number of customers within the Martinez City limits. The East Bay Municipal Utility District (EBMUD) provides service to the area directly south of the City water service area.



LEGEND

- - - CITY LIMITS
- WATER SERVICE BOUNDARY
- ⊗ PUMP STATION (PS)
- RESERVOIR

0 1/4 1/2 1 MILE

PSOMAS

6MAR1704FC2-1
KWM 1/11/11



CITY OF MARTINEZ

**CITY OF MARTINEZ
2010 UWMP UPDATE**

**WATER SERVICE AREA
AND FACILITY LOCATIONS**

FIGURE NO.
2-1
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Land uses within the water service boundary include residential, commercial, industrial, public agencies, and parks. There is no irrigated agriculture within the water service area. The land use is more diverse in the northern portion of the water service area. The southerly three quarters of the service area is generally residential and park land uses.

2.3 WATER TREATMENT AND DISTRIBUTION FACILITIES

The City's water utility operates treatment, storage, pumping, transmission, distribution and fire protection facilities which deliver water for use by customers located inside the water service area. Major treatment, pumping and storage facilities are shown on Figure 2-1. Responsibility for operating the system lies with the Community Development Department, which has a Water Superintendent who manages the treatment plant, pump stations, and reservoirs. A Maintenance Superintendent is responsible for system meter reading and maintaining the water distribution system. The Community Development Director is responsible for design and construction of water projects. The City Council of Martinez has responsibility for approving rates and charges for the water utility.

2.3.1 RAW WATER CONVEYANCE

Since 1949, the City of Martinez has purchased untreated water from CCWD and withdrawn it from the Martinez Reservoir. The Martinez Reservoir lies at the terminus of the Contra Costa Canal and CCWD's Shortcut Pipeline. It provides regulating storage to capture flows from the canal and Shortcut Pipeline operations. The Contra Costa Canal is part of the Central Valley Project developed by the U.S. Bureau of Reclamation. CCWD operates and maintains the canal system, the untreated canal water, and wholesales water to the City and other agencies.

Water for the City of Martinez's filtration plant is withdrawn from the Martinez Reservoir through a 30-inch welded steel pipeline. This reservoir is an open, earthen reservoir and is estimated to have capacity of 79.6 mg based on a 2003 bathymetry. Some additional sedimentation has occurred since that time. The raw water pipeline is approximately 2,000 feet in length and was constructed in 1949. The raw water pipeline is scheduled to be replaced by the City in the near future. A pumping station is available to pump water from the reservoir to the treatment plant when reservoir water levels are not high enough to provide sufficient gravity flow rates to meet the City's needs.

2.3.2 WATER TREATMENT PLANT

The City water treatment plant is located at the corner of Howe Road and Pacheco Avenue along the northern boundary of the City. The plant is a conventional treatment plant with pre-ozonation, coagulation, flocculation, sedimentation, mixed media GAC (granular activated carbon) filtration and intermediate ozonation (after sedimentation).

The plant was constructed in three stages, including Plant No. 1 constructed in 1948, Plant No. 2 constructed in 1968, and the ozone production facility constructed in 1991. The oldest section (Water Treatment Plant No. 1 or Plant No. 1) was built in 1948 and discontinued operation in 1971. However, the filter units in Plant No. 1 were refurbished in 2000 to restore filtration capacity of 3.5 mgd to supplement the treatment capacity of Plant No. 2. The Plant No. 1 raw water influent meter, coagulation, flocculation and sedimentation units are currently out of service and have been abandoned in place.

Water Treatment Plant No. 2, or Plant No. 2, includes facilities for coagulation, flocculation and sedimentation, as well as a majority of the filter capacity of the plant. The filter media and underdrains

in Plant No. 2 have a capacity of 11.2 mgd. The plant has a total capacity of 14.7 mgd based on rated filter capacity.

The ozone facilities at the treatment plant were placed into service in 1991. The ozone process is used to provide preconditioning for water coming into the plant and disinfection and taste and odor control for the treated water. A fluorosilicic acid liquid feed system replaced the existing fluoride dry feed system in 2008. The old dry feed system was removed from the top floor of the chemical storage building and a fluorosilicic acid tank was installed in a former clarifier located near the chemical storage building. The former clarifier was converted to a containment basin for the tank.

If the treatment plant cannot produce water due to an emergency, treated water can be diverted to the City distribution system from the CCWD distribution system through two interties. One intertie is located at the City water treatment plant and the other is located in the distribution system at Elderwood Drive and Alhambra Avenue. Intertie use is described in greater detail in Section 5.

2.3.3 PUMPING STATIONS

The City currently has six primary pump stations supplying water to four distribution system pressure zones. Each pressure zone provides water pressure based on the overflow elevations of the storage reservoirs in the zone, and water service pressures generally range from 40 psi to 110 psi. Zone 1 serves the lowest elevations in the City and Zone 4 serves the highest elevations. Four small hydropneumatic systems serve areas higher than their respective, adjacent pressure zone.

2.3.4 RESERVOIRS

The City currently operates eleven ground level treated water storage reservoirs, which have a total capacity of 9.57 million gallons (mg). The clearwell storage at the water treatment plant provides an additional 0.75 mg. The reservoirs are located throughout each of the four pressure zones in the service area to serve the different elevations within the City. There are three reservoirs each in the two lowest and largest pressure zones, Zones 1 and 2. Two smaller reservoirs each in Zones 3 and 4 provide service for those areas. Zone 2A has one reservoir.

Storage is primarily used for (1) meeting diurnal fluctuations in demand, (2) providing water to meet fire demands, and (3) providing water during emergencies such as pump failure. The water level in each storage tank will rise and fall a few feet during the course of each day as demand for water changes. The daily variation during maximum day demands is about 5 to 10 percent of the total storage volume. The storage can also serve overnight demands during low demand periods, allowing the treatment plant to be shut down for maintenance. The storage also provides surge relief.

2.3.5 PIPELINES AND VALVES

The City distribution system contains about 100 miles of pipeline ranging from 2-inch diameter to 18-inch diameter. Approximately 12.5 miles of pipeline are 14 to 18-inch diameter transmission mains. Most of the distribution system within the service area is adequately served by the transmission mains which provide service to the distribution network loops.

Zone valves are provided in system pipelines to separate the high and low pressure zones. In some areas, dual zone valves are provided to prevent accidental over pressurizing of the lower pressure system when a zone valve is mistakenly opened. However, most zone valves are a single valve within a pipeline.

2.4 CLIMATE

The Martinez service area generally has hot, dry summers and cool, wet winters. In the summer, a steady marine wind blows through the Golden Gate Bridge and up the Carquinez Strait. Velocities of 15 to 25 knots or more are common in the late afternoon and in the evening. In the morning, 10 knots or less can be expected. In December and January, tulle fog is common and may last for several days at a time. The average monthly evapotranspiration, rainfall, and temperatures are listed in Table 2-2.

TABLE 2-1 CLIMATE

Month	Standard Average ETo ¹ (inches)	Average Rainfall ² (inches)	Daily Max Temperature ² (degrees F)	Daily Min Temperature ² (degrees F)
January	0.95	3.93	55.2	38.8
February	1.75	3.67	60.9	41.7
March	3.48	2.86	66.2	44.2
April	5.37	1.16	71.8	45.7
May	6.88	0.48	78.9	49.6
June	7.79	0.10	85.4	53.3
July	8.29	0.02	89.0	54.5
August	7.24	0.06	88.2	54.4
September	5.33	0.19	84.9	53.4
October	3.63	0.95	76.4	49.0
November	1.76	2.52	64.1	43.3
December	1.01	3.52	55.6	38.7
Annual	53.48	19.44	73.1	47.2

1. Standard Average ETo from California Irrigation Management Information System (CIMIS) Station 170, Concord, CA. Station 170 is CIMIS station closest to the city of Martinez. Actual ETo in Martinez is likely slightly lower than values measured at Station 170.
2. Data obtained from Western Regional Climate Center (WRCC), Desert Research Institute, Reno, Nevada (<http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5378>); WRCC program administered by the National Oceanic and Atmospheric Administration (NOAA); data extracted from monitoring Station 045378 at Martinez Water Plant, CA period February 20, 1970 through December 31, 2010.

The average annual precipitation varies across the City from the rain shadow effect of the East Bay Hills. The higher elevations in the southwestern part of the service area have an annual average precipitation of about 22.5 inches per year. The lower elevation areas to the northeast along the waterfront have an annual average precipitation of about 15 inches per year.

2.5 TOPOGRAPHY

Service area elevations range from sea level in the downtown Martinez area to over 700 feet in the Stonehurst development in the southwestern corner of the service area. Nearly all of the service area water demand is included in the two lowest pressure zones. Minimum service pressures of 40 psi are maintained in each pressure zone. The first pressure zone generally includes elevations up to 170 feet and the second pressure zone serves elevations up to 320 feet. A third, less-populated, pressure zone has elevations between 300 and 460 feet and the highest pressure zone serves elevations up to 670 feet.

2.6 SERVICE AREA POPULATION

The City of Martinez's water service area does not correspond with the City limits and thus its population is not equal to the City's population. In order to determine existing and future population projections for the water service area, the water service area population was first estimated for the years 2000 and 2010. The water service area population was estimated for these years by determining its difference from the City's population. This difference was determined by estimating the population in the areas where their boundaries digress and adding or subtracting that population, as appropriate. Figure 2-2 highlights the areas between the water service area and City boundaries.

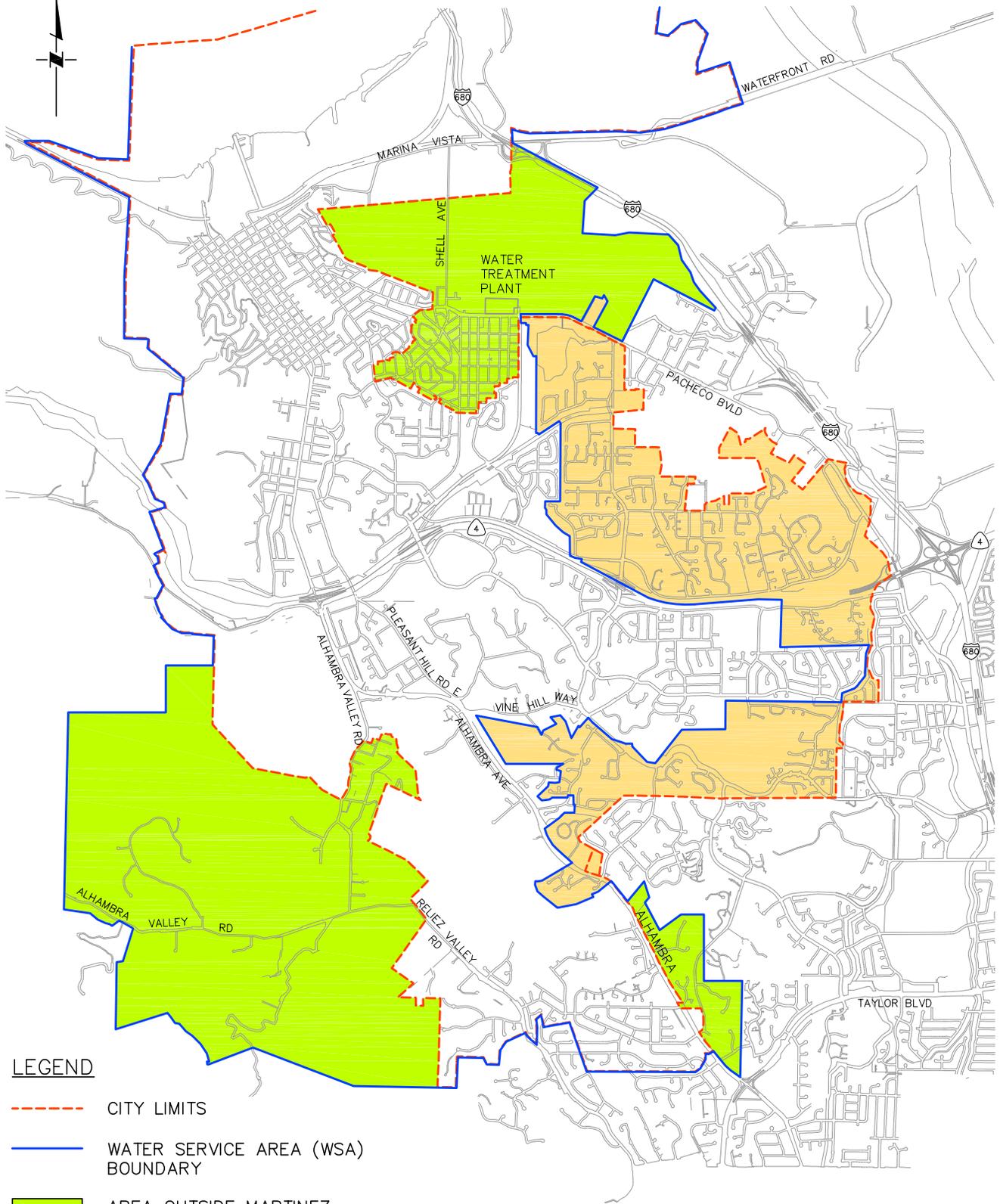
For year 2000 estimates, Census data was used to estimate populations in the areas between the City limits and water service area boundary. U.S. Census Bureau's county/tract/block maps were used to determine which blocks lie in the areas between the water service area and City boundaries. If half or more of a block's area was between the boundaries, then it was included, and if less than half was between the boundaries, then it was not included. To determine the water service area population in 2000, the Census block populations were added or subtracted to the City of Martinez's total population estimate from the Census. Census block populations outside of the City limits but within the water service area were added to the City's population estimate. Block populations inside the City limits but outside of the water service area were subtracted from the City population estimate.

The City of Martinez total population was 35,866 according to the 2000 Census. Analysis of Census blocks between the City and water service area determined that there were approximately 6,326 less people in the water service area than in the City of Martinez in 2000. This difference led to a water service area population estimate of 29,540 people in 2000, which is 82.4 percent of the City of Martinez population. For additional information concerning the Census blocks between the city and water service area boundaries, refer to Appendix B.

Because 2010 Census data was not available at the time this report was prepared, parcel maps and estimates from the Department of Finance (DOF) were used to estimate the water service area population in 2010. Consistent with the 2000 estimates described above, the water service area population was determined by estimating its difference from the City population estimate. The populations in the areas between the water service area and City boundary, shown in Figure 2-2, were added or subtracted to DOF's 2010 City population estimate. Populations outside of the City limit and within the water service area were added to the City population estimate. Populations inside the City limits but outside of the water service area were subtracted from the City population estimate.

To determine 2010 populations in areas between the water service area and City boundary, parcel maps were used to count the number of housing units served in these areas. This number of housing units was then multiplied by the average persons per household in the City of Martinez in 2010, estimated to be 2.407 persons per household from DOF. Data from the 2000 Census indicated that there were no group quarters in the area between the water service area and City boundaries. It was assumed that there were also no group quarters in these areas in 2010. DOF estimated that the City of Martinez's population was 36,663 on January 1, 2010. It was determined that there were approximately 6,472 less people in the water service area than in the City of Martinez in 2010. This difference led to a water service area population estimate of 30,191 people in 2010, which is 82.4 percent of the City's population.

The estimates of the water service area population in 2000 and 2010 revealed that the percentage of the water service area compared to the City population has remained relatively constant for the past 10 years, which is logical for a City that is mostly built out. In fact, both estimates determined that the



LEGEND

- CITY LIMITS
- WATER SERVICE AREA (WSA) BOUNDARY
- AREA OUTSIDE MARTINEZ INCLUDED IN WSA
- AREA IN MARTINEZ NOT INCLUDED IN WSA

PSOMAS

6MAR1704FIG2-2
HJH 8/31/10



CITY OF MARTINEZ

**CITY OF MARTINEZ
2010 UWMP UPDATE**

**AREAS BETWEEN CITY AND
WATER SERVICE AREA BOUNDARIES**

FIGURE NO.

2-2

JOB NO.

6MAR1704

water service area to be 82.4 percent compared to the City population. Because this percentage has remained constant, the water service area population was determined as a percentage of the City population for population projections. It was assumed that the water service area population will be 82.4 percent of the City population for projections through 2035. Table 2-2 shows population projections for the City of Martinez and the water service area. City population projections were determined from the Association of Bay Area Governments (ABAG). For detailed data concerning population estimates, refer to Appendix B.

TABLE 2-2 WATER SERVICE AREA POPULATION

	Population					
	2010	2015	2020	2025	2030	2035
City Population ¹	36,663	37,900	38,700	39,200	40,300	41,400
Service Area Population ²	30,191	31,209	31,868	32,280	33,186	34,091

1. City population estimate for 2010 from DOF. City population estimates for 2015 through 2035 from ABAG
 2. Service area population assumed to be 82.4 percent of City population.

SECTION THREE

SYSTEM DEMANDS

3.1 INTRODUCTION

This section describes the current and projected water demands for various customer classifications within the City of Martinez water service area. The City's metered water supply records, water purchase records, treatment plant production, population estimates, water meter inventories, and previous Urban Water Management Plans were used to:

- ◆ Determine current water use by customer classification
- ◆ Estimate unaccounted for water and other losses in the water system
- ◆ Determine baseline daily per capita usage
- ◆ Determine water use targets
- ◆ Project future water demands by customer classification

3.2 WATER DEMANDS

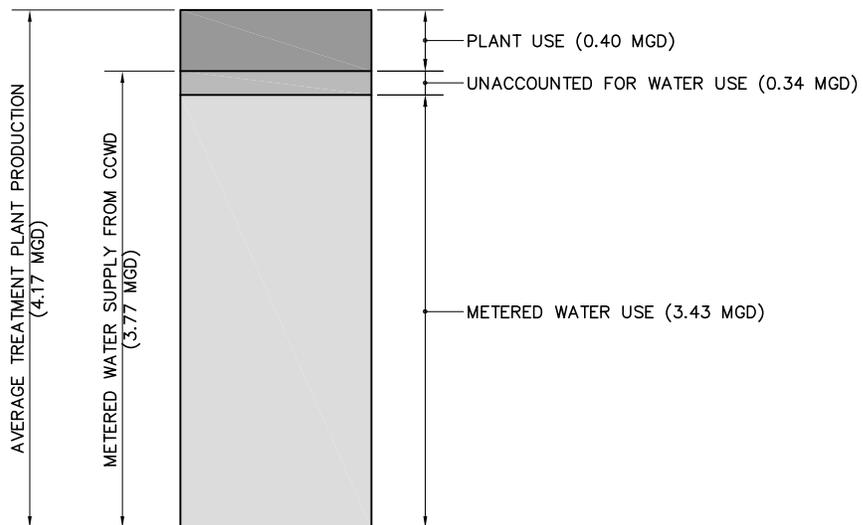
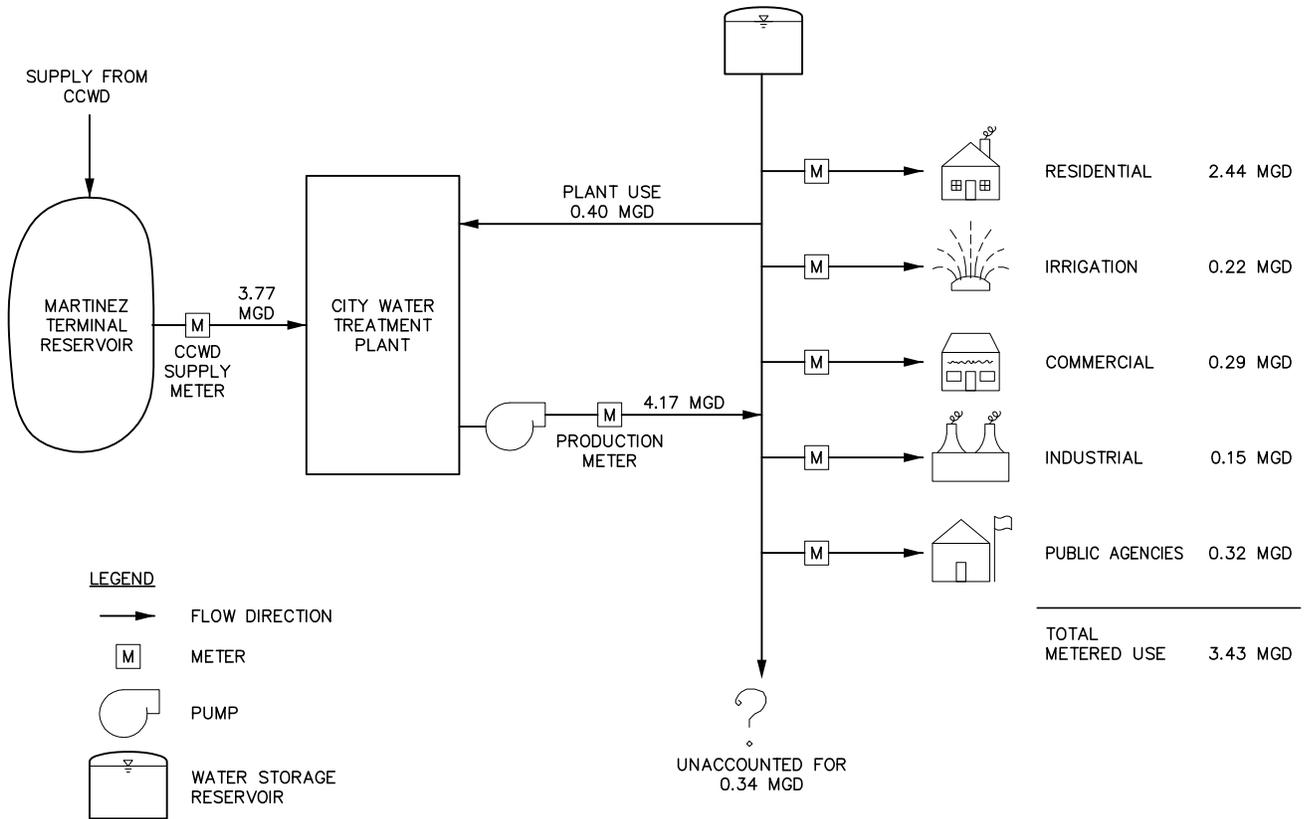
The City provided customers with 3,837 AFY (3.43 mgd) of metered water in 2010. Metered water use included treated water deliveries to the distribution system that were measured at the customer location on a bi-monthly basis. These uses were regularly measured by City-owned water meters at the water service connection to the City system. Metered water use records are maintained by City staff for billing purposes. For purposes of this plan, metered water use was divided into seven customer classifications, including:

- ◆ Single Family Residential
- ◆ Multi-family Residential
- ◆ Commercial
- ◆ Industrial
- ◆ Institutional and Government
- ◆ Landscape Irrigation
- ◆ Agricultural

The 2010 water use for each customer classification was determined from consumption records by class and meter size provided by the City. The billing and meter classifications used by the City are listed in Appendix C. The 2010 water use for each classification is shown on Figure 3-1.

There are no agricultural users or unmetered water service connections to customers within the City water service area. Some unmetered water use does occur at the treatment plant as treated water is diverted from the distribution system to meet treatment plant operational needs. Since these uses are generally non-consumptive, they do not increase the water supply needs for the City. However, the plant water uses do cause increases in the plant production rate above the water supply rate.

Metered water use does not include unaccounted for water or water used at the treatment plant. The unaccounted for water losses was determined from the difference between the water



NOTE:
MEASURED WATER USAGE IN 2010 WAS SIGNIFICANTLY LOWER THAN NORMAL YEAR USAGE DUE TO DROUGHT AND MANDATORY RATIONING.

supplied from CCWD (wholesale water supply) and the metered water use. The water use at the treatment plant, including backwash water for filters and water for other plant operations, was treated to meet metered demand, but was not included in the daily supply delivery. This plant water use was produced and pumped through the plant production meter into the system, then was diverted back into the plant through unmetered and metered connections from the system. The metered process water use at the City of Martinez Water Treatment Plant was not included in the 3,837 AFY (3.43 mgd) distribution system metered use totals for 2010. The water treatment plant use was determined from the difference between the plant production meter and the water supplied from CCWD.

The average metered water demand percentages for water use classification included a large residential use classification which made up about 54.5 percent of the total annual water consumption in 2010. Approximately 9.1 percent of the 2010 water supply was not delivered to City metered customers and was considered unaccounted for water. Single and multi-family residential water use measurements are combined on Figure 3-1. Table 3-1 contains the City’s metered water deliveries to specific customer sector classes for the years of 2005 and 2010. It also contains the number of accounts for each sector class and the volume of unaccounted for water.

TABLE 3-1 WATER DELIVERIES, ACTUAL METERED WATER USE

Customer Sector	2005		2010	
	# of Accounts ¹	Volume (AFY)	# of Accounts ²	Volume (AFY)
Single Family	8,493	2,888	8,595	2,299
Multi-Family ³	458	545	464	434
Commercial	372	507	371	324
Industrial	161	113	127	172
Institutional and Government	161	632	157	360
Landscape	159	352	167	248
Agricultural	0	0	0	0
Unaccounted Water ⁴	NA	192	NA	384
Total Demand⁵	9,805	5,229	9,881	4,221

¹ Number of accounts equal to the estimated number of active meters. Number of active meters assumed to be 98.3 percent of the total meters for each customer sector, percent equal to 2010 percent of active meters.

² Number of accounts is equal to total number of active meters.

³ Multi-family units are classified as complexes in which one meter serves more than one unit. If a building contains more than one unit (i.e. attached) and each unit contains its own water meter, then each unit has been classified as a single family residence.

⁴ Unaccounted losses are equal to the difference between meter customer sector totals and CCWD deliveries.

⁵ Total demand equal to total deliveries from CCWD.

The City’s metered water deliveries were significantly less in 2010 than in 2005 because of mandatory water rationing in 2009 and 2010. This rationing is further discussed in Section 5.

3.3 BASELINES AND TARGETS

The 10-year baseline daily per capita water use was determined from the water service area’s average daily per capita usage from 1997 through 2006. The average usage during these years was estimated from the total annual volume of water supplied to the City from CCWD and population estimates for the water service area.

As mentioned in Section 2, the water service area boundary and population do not match those of the City. Because limited information was available concerning the number and class of service

connections outside of the water service area but within City limits, population per connection ratios could not be used to estimate the water service area population during baseline years. Since the percentage of the water service area population compared to the City population appears to remain relatively constant, based on population estimates from 2000 and 2010, the water service area population was determined as a percentage of the City population for baseline calculations. It was assumed that the water service area is 82.4 percent of the City’s population for the baseline period from 1997 through 2006. The methods for determining this percentage are explained in greater detail in Section 2. City population estimates were obtained from the Department of Finance. Table 3-2 shows the annual daily per capita water use from 1997 to 2006 and the baseline daily per capita usage.

TABLE 3-2 BASE DAILY PER CAPITA WATER USE – 10 YEAR RANGE

Base Period Year		Water Service Area Population	Daily System Gross Water Use ² (MGD)	Annual Daily Per Capita Water Use (GPCD)
Sequence Year	Calendar Year			
Year 1	1997	28,524	4.912	172
Year 2	1998	28,893	4.477	155
Year 3	1999	29,201	4.743	162
Year 4	2000	29,540	4.781	162
Year 5	2001	29,909	4.715	158
Year 6	2002	30,194	4.701	156
Year 7	2003	30,306	4.773	157
Year 8	2004	30,308	4.822	159
Year 9	2005	30,115	4.669	155
Year 10	2006	29,758	4.865	163
Baseline Daily Per Capita Water Use:				160

¹ Water service area population assumed to be 82.4% of City population estimates from the Department of Finance.

² Daily system gross water use determined from annual CCWD deliveries to City.

The City’s 10-year baseline daily per capita usage from 1997 to 2006 was determined to be 160 gallons per capita day (GPCD). Due to mandatory rationing in 2009 and 2010, the City’s daily per capita usage in 2010 was only 125 gallons per capita day, over 20 percent less than this 10-year baseline. This rationing is discussed in further detail in Section 5.

The City will be required to reduce its future daily per capita usage to meet the requirements of the 20 x 2020 Water Conservation Plan. The City of Martinez will participate in a regional 20 x 2020 Water Conservation Plan through CCWD. With participation in the regional 20 x 2020 Plan, it may be required for the City to meet reduction requirements of the 20 x 2020 Conservation Plan individually. In this case, the City would be required to reduce its 10-year baseline daily per capita usage by 20 percent by 2020, and by an interim target of 10 percent by 2015. Table 3-3 indicates reduction targets for the City to meet the 20 x 2020 Water Conservation Plan individually.

TABLE 3-3 MAXIMUM DAILY PER CAPITA WATER USE REDUCTIONS REQUIRED BY 20 X 2020 PLAN

Year	GPCD Reduction Required for 20x2020 Plan	Annual Daily Per Capita Water Use (GPCD)
10-Year Base	--	160
2015	10%	144
2020	20%	128

¹ Reductions shown are from 10-year baseline daily per capita use from 1997 through 2006, per Table 3-2.

For the City to meet the requirements of the 20 x 2020 Water Conservation Plan individually, it will be required to reduce its usage to 144 GPCD by 2015 and 128 GPCD by 2020. Because the City will participate in a regional effort through CCWD, the City may be allowed to have individual reductions less than this if CCWD's region as a whole can meet the requirements of the 20 x 2020 Water Conservation Plan. CCWD is currently in the process of determining specific reduction requirements for the individual agencies involved in the regional 20 x 2020 Conservation Plan.

If it is determined that the City must meet the requirements of 20 x 2020 individually, the City's reduction must be greater than 5 percent of its 5-year base range daily per capita water use by 2020. Table 3-4 shows the City's 5-year range base daily per capita water use from 2004 through 2008.

TABLE 3-4 BASE DAILY PER CAPITA WATER USE – 5 YEAR RANGE

Base Period Year		Water Service Area Population ¹	Daily System Gross Water Use ² (MGD)	Annual Daily Per Capita Water Use (GPCD)
Sequence Year	Calendar Year			
Year 1	2004	30,308	4.822	159
Year 2	2005	30,115	4.669	155
Year 3	2006	29,758	4.865	163
Year 4	2007	29,648	4.947	167
Year 5	2008	29,746	4.744	159
Baseline Daily Per Capita Water Use:				161

¹ Water service area population assumed to be 82.35% of City population estimates from the Department of Finance.

² Daily system gross water use determined from annual CCWD deliveries to City.

The 5-year baseline daily per capita usage from 2004 to 2008 was determined to be 161 GPCD. A 5 percent reduction from this value would give a per capita usage of 153 GPCD by 2020. Since this value is higher than the 20 percent reduction from the 10 year baseline (shown in Table 3-3), a reduction to 128 GPCD by 2020 is the maximum reduction that can be required for conformance to the 20 x 2020.

3.4 PROJECTED WATER DEMANDS AND SERVICE CONNECTIONS

Demand projections for the City's water service area were calculated from annual daily per capita water use targets and population projections for the water service area. Future daily per capita water uses cannot be determined until specific reduction requirements for the City of Martinez are determined by CCWD's 20 x 2020 Water Conservation Plan. To determine the range of future water usage that may occur, demand was estimated using both the maximum reduction requirements for compliance with CCWD's regional 20 x 2020 Plan, listed in Tables 3-3, and assuming no future

reductions from the 10-year baseline usage. Actual future water use will depend upon reduction requirements determined by CCWD for compliance with the regional 20 x 2020 Plan. Table 3-5 shows demand projections if Martinez meets the reduction requirements of the 20 x 2020 Water Conservation Plan individually. This is the maximum reduction that can be required by the 20 x 2020 Water Conservation Plan.

TABLE 3-5 TOTAL PROJECTED WATER DEMAND, MAXIMUM REDUCTIONS PER 20 X 2020 PLAN

Year	Projected Water Service Area Population ¹	Daily Per Capita Water Use ² (GPCD)	Water Demand Volume (Acre-ft per year)
2015	31,209	144	5,034
2020	31,868	128	4,569
2025	32,280	128	4,628
2030	33,186	128	4,758
2035	34,091	128	4,888

¹ Water service area population assumed to be 82.35% of City population estimates from ABAG.

² Daily per capita water use per Table 3-3.

Although the water service area population is expected to increase from 2010 to 2035, the total water demand will be less in 2035 than the 2010 demand if the City meets the 20 x 2020 conservation requirements individually. If CCWD’s 20 x 2020 Conservation Plan allows, Martinez may have lower individual reductions and thus higher daily per capita usage than values shown in Table 3-5. Higher daily per capita water use would lead to higher water demand volumes from 2015 to 2035. If CCWD determines that individual reductions are not required from the City, then demand volumes from 2015 to 2035 would be significantly higher than values shown in Table 3-5. Table 3-6 shows the City’s projected demand without future reductions, assuming the 10-year baseline usage through 2035. The daily per capita water use and water demand volumes shall be less than the values shown in Table 3-6 if required by CCWD’s 20 x 2020 Plan.

TABLE 3-6 TOTAL PROJECTED WATER DEMAND, WITHOUT FUTURE REDUCTIONS

Year	Projected Water Service Area Population ¹	Daily Per Capita Water Use ² (GPCD)	Water Demand Volume (Acre-ft per year)
2015	31,209	160	5,593
2020	31,868	160	5,711
2025	32,280	160	5,785
2030	33,186	160	5,948
2035	34,091	160	6,110

¹ Water service area population assumed to be 82.35% of City population estimates from ABAG.

² Daily per capita water use equal to 10 year baseline, per Table 3-2.

Tables 3-5 and 3-6 show that the City of Martinez’s future water demand volumes may be significantly affected by the requirements of CCWD’s 20 x 2020 Water Conservation Plan. If no individual reductions are required for Martinez from CCWD’s Conservation Plan, then Martinez’s water demand volume could be as high as 6,110 acre-ft per year in 2035. This demand volume is 1,222 acre-ft more than the 4,888 acre-ft per year required in 2035 if Martinez makes reductions to meet the 20 x 2020 Conservation Plan individually.

The percentages of water use in each sector have remained relatively constant through the changes in water demand since 1990. In order to project future water demands per customer sectors, each sector’s

percent of the total use was determined from past usage. The sector’s percentage of total use was determined from 2005 through 2010 averages. Table 3-7 lists each customer sector’s percentage of total use that was used for demand projections.

TABLE 3-7 PERCENT USE PER SECTOR

Water Use Sector	Percent of Total Use
Single Family	54.9
Multi-Family ¹	10.0
Commercial	8.3
Industrial	2.7
Institutional and Government	9.9
Landscape	6.4
Agricultural	0.0
Unaccounted Losses ²	7.9

¹Multi-family units are classified as complexes in which one meter serves more than one unit. If a building contains more than one unit (i.e. attached) and each unit contains its own water meter, then each unit has been classified as a single family residence.

²Unaccounted losses are equal to the difference between meter customer sector totals and CCWD deliveries.

The percentage of total use by each customer sector remained relatively constant from 2005 to 2010. The majority of use comes from the residential sector, which accounts for approximately 55 percent of the total annual water consumption. The unaccounted for water use projection was determined to be approximately 8 percent of the water supply, this projected value may be reduced in the future if the City replaces customer water meters and conducts audits for leak detection.

The percent of total use per customer sector along with total projected demands were used to determine the projected water demand per sector. The requirements of CCWD’s 20 x 2020 Water Conservation Plan may significantly affect Martinez’s future reductions and water demand volumes. To determine the possible range of future metered deliveries by customer class, projections were determined assuming the maximum reduction requirements from the 20 x 2020 Water Conservation Plan, as well as the 10 year baseline usage without future reductions. Table 3-8 lists the projected demands per customer sector if Martinez meets the reduction requirements of the 20 x 2020 Water Conservation Plan individually. These volumes represent the lowest demand targets that can be required by the 20 x 2020 Water Conservation Plan. It should be noted that the percentages could be affected if recycled water is introduced into the City water service area and utilized to offset some of the potable water currently used for landscape irrigation. For a discussion of the potential for recycled water use, see Section 4.

**TABLE 3-8 PROJECTED METERED WATER DELIVERIES,
MAXIMUM REDUCTIONS PER 20 X 2020 PLAN**

Customer Sector	Volume (Acre-feet/year)				
	2015	2020	2025	2030	2035
Single Family	2,764	2,509	2,541	2,613	2,684
Multi-Family ¹	504	457	463	476	489
Commercial	418	380	385	395	406
Industrial	135	123	124	128	131
Institutional and Government	497	451	457	469	482
Landscape	320	290	294	302	311
Agricultural	0	0	0	0	0
Unaccounted Losses ²	396	359	364	374	384
Total Deliveries	5,034	4,569	4,628	4,758	4,888

¹Multi-family units are classified as complexes in which one meter serves more than one unit. If a building contains more than one unit (i.e. attached) and each unit contains its own water meter, then each unit has been classified as a single family residence.

If CCWD's regional 20 x 2020 Plan determines that the City of Martinez will be required to make less reduction by 2020 to conform to the regional 20 x 2020 Plan, then demand volumes per sector could be significantly higher than values shown in Table 3-8. Table 3-9 lists demand projections per customer sector assuming the 10-year baseline usage without future reductions. Target volumes shall be less than the values listed in Table 3-10 if required by CCWD's 20 x 2020 Plan.

**TABLE 3-9 PROJECTED METERED WATER DELIVERIES,
WITHOUT FUTURE REDUCTIONS**

Customer Sector	Volume ² (Acre-feet/year)				
	2015	2020	2025	2030	2035
Single Family	3,071	3,136	3,177	3,266	3,355
Multi-Family ¹	560	571	579	595	611
Commercial	465	475	481	494	508
Industrial	150	153	155	160	164
Institutional and Government	552	563	571	587	603
Landscape	356	363	368	378	388
Agricultural	0	0	0	0	0
Unaccounted Losses ²	440	449	455	468	481
Total Deliveries	5,593	5,711	5,785	5,948	6,110

¹Multi-family units are classified as complexes in which one meter serves more than one unit. If a building contains more than one unit (i.e. attached) and each unit contains its own water meter, then each unit has been classified as a single family residence.

² Volumes assumes daily per capita water use equal to 10 year baseline, per Table 3-2.

The projected numbers of metered accounts for each customer sector through 2035 are listed in Table 3-10. From 2000 to 2010 the number of active meters increased from 9,708 to 9,881. This is an annual increase of approximately 0.18 percent. The projections assume that this percent annual increase will remain constant through 2035.

TABLE 3-10 PROJECTED NUMBER OF METERED ACCOUNTS

Customer Sector	Service Connections				
	2015	2020	2025	2030	2035
Single Family	8,671	8,748	8,826	8,904	8,983
Multi-Family ¹	468	472	476	481	485
Commercial	374	378	381	384	388
Industrial	128	129	130	132	133
Institutional and Government	158	160	161	163	164
Landscape	168	170	171	173	175
Agricultural	0	0	0	0	0
Total Connections	9,969	10,057	10,146	10,236	10,327

¹ Multi-family units are classified as complexes in which one meter serves more than one unit. If a building contains more than one unit (i.e. attached) and each unit contains its own water meter, then each unit has been classified as a single family residence.

There are not currently any large development projects scheduled for construction within the City water service area. Preliminary plans have been developed for the Alhambra Highland subdivision (estimated 112 single family units), but if and when the project will be constructed is unknown. Since actual development schedules continue to vary from initial estimates, the service connections estimates do not reflect the scheduling of individual development projects.

3.5 PLAN TO MEET REDUCTION TARGETS

The City of Martinez and the CCWD regional alliance have already made significant progress towards meeting the 20x2020 urban water use target. Some of the progress can be attributed to the mandatory rationing in 2009 and 2010 due to recent drought conditions and the current economic downturn. In 2010 the City's daily per capita water use was approximately 125 GPCD, which is lower than the 2020 urban water use target of 128 GPCD. The 2009 and 2010 rationing is further discussed in Section 5.

The City and CCWD will continue to implement the Water Conservation Program, described in Section 6. The Water Conservation Program is designed to reduce long-term water demand in conformance with CCWD's future water supply study. The Conservation Program played a key role in helping customers meet their reduction goals for the 2009 and 2010 reductions and will be an important tool for the City and the CCWD regional alliance in meeting its 2020 urban water use target.

In addition to active conservation activities implemented through CCWD's Conservation Program, passive conservation is also achieved through state and local efficiency codes. Efficiency codes that require efficient fixtures and appliances, grant funding to promote water conservation, residential weather-based irrigation controllers, and efficient landscape practices are expected to achieve additional water use reductions in CCWD's service area.

Future recycled water projects outside of the City water service area but within CCWD's service area may also contribute towards the City achieving water use reduction goals. With involvement in the regional 20 x 2020 alliance, the City may benefit from these recycled water projects and the City's individual reduction targets may be decreased, if the region as a whole can still meet its reduction targets. For more information on future recycled water projects within the CCWD service area, refer

to the Section 4.

3.6 LOW-INCOME WATER DEMAND PROJECTIONS

Future low-income housing water demand projections were determined based on housing and income projections for the City of Martinez provided by ABAG, who oversees the Regional Housing Needs Allocation process in the Bay Area. The current low-income usage was estimated as a percentage the total residential demand. This percentage was determined to be equal to the percentage of housing currently in the lower two income quartiles in Martinez, which include households with a total income of less than \$45,000 (in 1989 dollars). Projections assume the maximum daily per capita water use reductions required by 20 x 2020 Plan, as indicated in Table 3-3, and that low income housing population will increase in proportion to the overall population growth within the City. Table 3-11 lists low income water demand projections.

TABLE 3-11 LOW-INCOME WATER DEMAND PROJECTIONS

Low-Income Water Use	Estimated Volume (Acre-feet/year)					
	2010	2015	2020	2025	2030	2035
Total	1,091 ¹	1,015 ²	921 ²	933 ²	959 ²	986 ²

¹ 2010 demand adjusted to reflect anticipated water deliveries in a normal year, absent the drought and mandatory rationing required in 2009-2010.

² Assumes daily per capita water use reductions, per Table 3-3.

Although the low-income population is expected to increase from 2010 to 2035, the low income water demand is expected to be less in 2035 than the current demand due to the reduction requirements of the 20 x 2020 Conservation Plan. If CCWD’s 20 x 2020 Conservation Plan allows for the City to have lower reductions than those indicated in Table 3-3, then the low-income usage may be higher than values indicated in Table 3-11.

SECTION FOUR

SYSTEM SUPPLIES

4.1 WATER SOURCES

The City of Martinez purchases all of its water untreated from CCWD. The City water supply comes from the Contra Costa Canal which terminates in the Martinez Reservoir near the City water treatment plant. The water is sold to Martinez based on CCWD’s rate structure per unit of water delivered. The City has received all of its untreated water supply from CCWD since 1949, and has no other water supply providers and no other developed water sources.

Since a contract does not exist between CCWD and the City of Martinez for a fixed delivery amount, water supply has been set equal to projected demand, described in Section 3. During periods of drought, CCWD has established supply limits based on a percentage of the demand from the previous years. The projected future supply projections through 2035 are listed in Table 4-1. Supply projections assume the maximum per capita reductions that can be required by the 20 x 2020 Water Conservation Plan, as shown in Table 3-3. Because the City will participate in a regional 20 x 2020 Plan through CCWD, the City’s reduction requirements may be less than these values, if the region as a whole can meet the requirements of the 20 x 2020 Water Conservation Plan. Less reduction in the City water demand would require commensurate higher projected supply volumes from CCWD.

TABLE 4-1 PROJECTED WATER SUPPLIES

Water Supply Sources	Water Supply Volume (acre-feet per year)				
	2015	2020	2025	2030	2035
Wholesale Purchase from Contra Costa Water District	5,026	4,556	4,615	4,745	4,875
City-Produced Groundwater	7.8	13.4 ¹	13.4 ¹	13.4 ¹	13.4 ¹
City-Produced Surface Water	0	0	0	0	0
Transfers In	0	0	0	0	0
Exchanges In	0	0	0	0	0
Recycled Water	0	0	0	0	0
Desalination	0	0	0	0	0
Total²	5,034	4,569	4,628	4,758	4,888

¹ Assumes 5.6 AFY production from future well at Nancy Boyd Park, equal to the park’s current demand.

² Volumes assume daily per capita water use reductions for 20 x 2020 conservation plan per Table 3-3.

The City currently produces groundwater from one well used to irrigate Hidden Lakes Park. The City has plans to install a well for irrigation of Nancy Boyd Park in 2012. The City currently has no surface water diversion facilities, or desalination facilities. There are no transfer exchanges of untreated water within the service area. The City does not currently supply any recycled water and there is no recycled water supplied to other agencies within the water service area.

Historical and projected water supplies from CCWD are shown in Figure 4-1. The actual water supply in 2010 was significantly lower than normal year usage and the projected supply volumes, due to drought and mandatory rationing that occurred in 2009 and 2010. The actual water supply in 2010 was

4,221 acre-ft. It is estimated that the water supply would have been approximately 5,400 acre-feet if 2010 had been a normal year, assuming that the per capita usage would have been 160 GPCD (the 10-year baseline from 1997 to 2006) during a normal year.

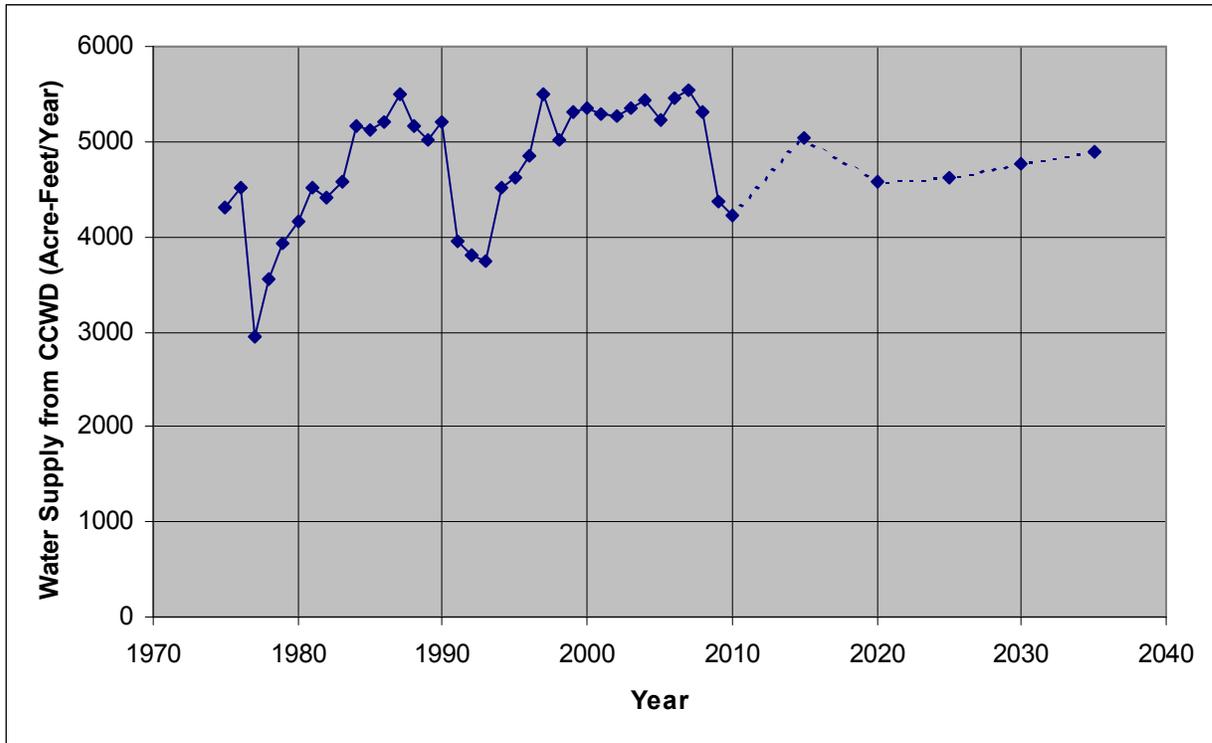


FIGURE 4-1 WATER SUPPLY PROJECTIONS

4.2 GROUND WATER

Currently, the City only produces approximately 7,000 gallons per day (7.84 AFY) of groundwater from the well at the Hidden Lakes Park. The City plans to install a well at Nancy Boyd Park, which is scheduled for completion in 2012. The future production from the well at Nancy Boyd Park unknown, but it is estimated that production will be similar to the current usage at the park, which is approximately 5,000 gallons per day (5.6 AFY). After completion of the well at Nancy Boyd Park, the City’s total groundwater production from the two wells is estimated to be only 13.4 AFY. This groundwater production is insignificant in comparison to the City’s overall supply needs. The City has no major groundwater production facilities for water supply and there are no major groundwater basins underlying the City. The nearest groundwater basin is the Ygnacio Valley groundwater basin (Basin 2-6) on the east side of Interstate 680.

4.3 TRANSFER OPPORTUNITIES

There is no transfer or exchange of untreated water into or out of the water service area. The City has an agreement with CCWD in which the City provides treated water to the Port Costa community west of Martinez in exchange for an equal amount of treated water delivered from the CCWD water service area into the City water service area. The delivery of CCWD treated water to the City is metered at the

emergency intertie locations between the two systems. The emergency intertie use is described in greater detail in Section 5. CCWD formerly supplied treated water to Port Costa through an existing pipeline that passed through the City of Martinez. The pipeline was taken out of service. Through agreement between Contra Costa County, CCWD and the City, the City agreed to provide water from a connection to the City system, in lieu of CCWD construction of a new service line through the City for service to Port Costa. Under the terms of the agreement, CCWD provides a volume of treated water, approximately equal to that used by Port Costa community, to the City of Martinez system through the metered Elderwood intertie connection. Flow control at the intertie consists of a partially opened valve. Metered flows are monitored on a monthly basis and valve position changes are made as necessary to balance the volume of treated water provided to Port Costa with that received from CCWD. Port Costa average daily demands are small in comparison with City demands.

4.4 DESALINATED WATER OPPORTUNITIES

The City does not currently have any desalination production facilities for water supply. The City is adjacent to the Carquinez Strait which is a brackish water source with potential for desalination in the future. The City does not currently have any plans to develop desalination facilities for water supply.

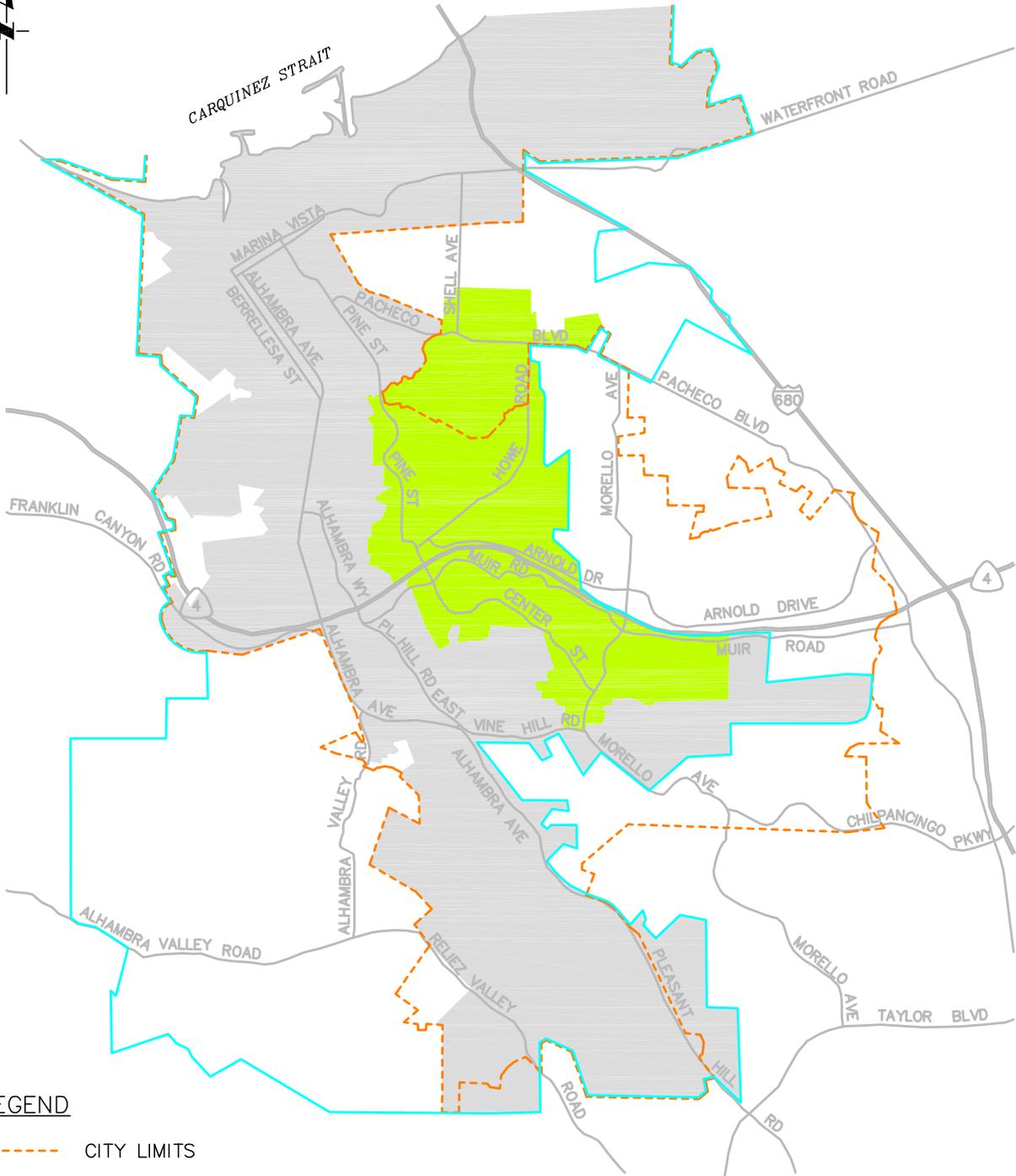
4.5 RECYCLED WATER OPPORTUNITIES

The City does not currently supply any recycled water and there are not currently any recycled water projects planned. However, wastewater generated from the water service area is recycled and used outside the water service area boundaries. Recycled water may offset some of the treated water demand in the future.

There are currently no customers within the Martinez water service area that use recycled water as a replacement for the City's treated water. During past droughts, the Shell Oil Refinery, near the City's water treatment plant, offset some of their untreated water supply from CCWD with recycled water from CCCSD. Though, Shell Refinery has not used CCWD's recycled water since the 1991 drought. CCCSD effluent does not currently meet refinery water quality requirements for cooling towers and other process uses. CCCSD is currently seeking Federal and State grant funding to develop facilities to meet these more stringent water quality requirements.

Two sanitary districts provide wastewater collection and treatment for the Martinez water service area, as shown on Figure 4-2. CCCSD collects and treats about two-thirds of the wastewater generated within the Martinez water service area. The remainder of the wastewater from the east central portion of the water service area is collected and treated by MVSD. This area is roughly bounded by Pacheco Boulevard on the north, Bush and Pine Streets on the west, and Center Street on the south. Both sanitary districts also serve portions of the CCWD treated water service area. The amount of recycled water generated from the City water service area is not known due to the complexity of the overlapping of boundaries for the City, the City water service area, and the sanitary districts serving both the City of Martinez and other areas.

The Shell Oil Refinery currently discharges 5 to 8 mgd of effluent from their wastewater treatment plant into the Carquinez Strait. In 2010, the City of Martinez and Shell Oil Refinery staff met to discuss the potential for use of recycled water from the Shell refinery within the Martinez service area for irrigation purposes. Shell's effluent does not currently meet Title 22 of the California Code of Regulations and cannot be used for public irrigation without additional treatment. The City's use of



LEGEND

-  CITY LIMITS
-  WATER SERVICE BOUNDARY
-  MT. VIEW SANITARY DISTRICT SERVICE AREA
-  CENTRAL CONTRA COSTA SANITARY DISTRICT SERVICE AREA

0 1/4 1/2 1 MILE



PSOMAS

6MAR1704FC4-2
KWM 1/11/11



**CITY OF
MARTINEZ**

**CITY OF MARTINEZ
2010 UWMP UPDATE**

**WASTEWATER
SERVICE AREAS**

FIGURE NO.

4-2

JOB NO.
6MAR1704

Shell’s treated effluent is not economically feasible, at least in the near future, due to the costs that would be required for additional treatment, pumping, distribution, storage, and associated permitting.

4.5.1 CENTRAL CONTRA COSTA SANITARY DISTRICT (CCCSD)

The CCCSD Wastewater Treatment Plant is located in Martinez at the intersection of I-680 and Highway 4. CCCSD currently serves portions of Martinez, Concord, Clayton, Pleasant Hill, Orinda, Lafayette, Walnut Creek, Moraga, Alamo, Danville, and San Ramon. CCCSD was created in 1946 to serve central Contra Costa County's rapidly growing population. For health and environmental reasons, central county residents needed a modern sewage system that included both a sewer pipeline system and a treatment plant. During CCCSD’s first decade, more than 300 miles of sewer pipelines were installed and a 4.5 mgd primary treatment plant was constructed. During the 1950s and 1960s wastewater flows increased and by 1968 the plant had capacity to treat 30 mgd. In 1973, CCCSD started construction of an advanced wastewater treatment plant to include filtration for water reclamation for industrial reuse. However, the regulations requiring advanced wastewater treatment were eliminated while the plant was under construction, and completing the plant as originally designed became financially impractical. Instead, the current treatment facility was successfully completed as a secondary treatment plant. Effluent from the activated sludge secondary treatment process is disinfected and discharged to an outfall in Suisun Bay. The secondary treated effluent does not meet the requirements of Title 22 and additional treatment will be required before it is suitable for recycled water use. The secondary treatment facilities have a current NPDES permitted capacity of 53.8 mgd, with a current average dry weather flow of about 40 mgd. A portion of the wastewater collected at the treatment plant is treated for recycled water use in CCCSD’s filtration plant. The filtration plant uses dual media gravity filtration and ultra violet and sodium hypochlorite disinfection facilities to produce Title 22 unrestricted use effluent. The filtration plant is permitted for 3.8 mgd.

CCCSD EXISTING RECYCLED WATER APPLICATIONS

Effluent from CCCSD’s filtration plant is recycled for industrial reuse and irrigation. There is a 30 million gallon storage reservoir at CCCSD’s plant for recycled water. Approximately 1,200 AFY (1.07 mgd) of recycled water is currently used for in-plant use, another 600 AFY (varies seasonally) is used to supply irrigation water to approximately 33 of CCWD’s irrigation customers such as Contra Costa County Club Golf Course, Buchanan Fields Golf Course, and Chilpancingo Park. Table 4-2 lists CCCSD’s current and projected total wastewater collection, treated volume that will meet recycled water standards, and volume of secondary treated effluent that will be discharged into the Suisun Bay.

TABLE 4-2 ESTIMATED WASTEWATER COLLECTED AND TREATED BY CCCSD

CCCSD Recycled Water – Water Collection and Treatment (Acre-ft per year)							
Type of Wastewater	2005	2010	2015	2020	2025	2030	2035
Wastewater collected	39,800	36,400	39,600	42,900	46,100	49,300	52,500
Volume that meets Title 22 recycled water standard	1,800	1,800	1,980	2,170	2,360	2,360	5,160 ¹
Effluent disposed through outfall into Suisun Bay (secondary treated effluent)	38,000	34,600	37,620	40,730	43,740	46,940	47,340

¹ Value assumes that additional treatment will be added at CCCSD’s treatment plant. Value exceeds current filtration plant capacity.

The amount of wastewater generated from the City water service area is not known due to the overlapping of boundaries for the City, the City water service area, and CCCSD serving both the City of Martinez and other areas. Though a portion of the wastewater from the City's water service area is recycled by CCCSD for irrigation reuse, all of this recycled water is currently used outside of the Martinez water service area.

POTENTIAL OPPORTUNITIES

The distribution system for CCCSD's recycled water is being constructed in phases. In each phase, additional customers are added as the distribution pipelines are constructed to the customer service location. In 1996, CCCSD and the CCWD reached agreement for the construction of the first phase, allowing CCCSD to supply recycled water to specific areas of Concord and Pleasant Hill "Zone 1". More than half of this phase has been constructed. Pipelines in this zone currently deliver recycled water to large landscape irrigation customers (formerly CCWD customers). At build out, this phase of the project will eventually deliver 1,162 AFY (varies seasonally) of recycled water to portions of Pleasant Hill and Concord.

In 2010, CCCSD began work on a Recycled Water Facilities Plan for the naval weapons station redevelopment in Concord, outside of the City's Water Service Area. The facilities plan is expected to be completed in 2011. The actual redevelopment of the property and construction of supporting infrastructure is not expected to begin for another five to ten years because of additional environmental documentation and planning work. Recycled water demand for the new development is estimated to be approximately 2,800 AFY at build out. Additional treatment at CCCSD's plant will be required to supply this additional demand.

CCCSD is continuing efforts to develop a refinery recycled water project that would provide up to 22,500 AFY (20 mgd every day) of recycled water to the Shell and Tesoro Refineries. CCCSD has an existing recycled water pipeline that enters the Shell Oil Refinery, which was used during past droughts to supply the refinery. But CCCSD effluent does not currently meet refinery water quality requirements for cooling towers and other process uses, as previously mentioned. Because the refinery recycled water projects would be costly, CCCSD is pursuing outside funding assistance and project partners to make the project cost-effective. It may be a viable option in the future for the City of Martinez to tap directly into CCCSD's recycled water line prior to its entrance to the Shell refinery, at Pacheco Blvd. However, this pipeline is currently being used by CCWD to bypass untreated water during a maintenance project. It could be several years before this pipeline is available for use.

The Martinez Zone (formerly known as Zone 2) includes customers in both the CCWD and City service area. It is the third phase of the project and is not currently within the 10-year planning window for the Central Contra Costa Sanitary District (CCCSD) recycled water program. Projects for large users, such as golf courses, are being looked at on a case by case basis to be served with satellite treatment plants.

The CCCSD filtration plant currently produces quality Title 22 unrestricted use effluent near the City service area, making future potential recycled water use very realistic. Recycled water may offset some of the treated water demand in the future, although the implementation date is uncertain. There are no projected uses of CCCSD's recycled water in the City of Martinez service area currently planned for the near future.

Four landscape irrigation locations have been identified in the City, including:

- ◆ Pine Meadows Golf Course
- ◆ Hidden Valley Park
- ◆ Nancy Boyd Park
- ◆ John Swett Elementary School

The recycled water use for these areas would offset potable water use at the sites. Because scheduling of design and construction of facilities is not currently within the 10-year planning window for the Central Contra Costa Sanitary District (CCCSD) recycled water program, no date for implementation of recycled water supply to these sites has been set. The irrigation and industrial water customers within the City water service area are relatively small water users compared with the CCCSD's currently targeted large water users. However, the City expects that recycled water use will increase such that the distribution system will need to be expanded further into the Martinez service area. To achieve this, the City of Martinez will continue to coordinate with CCCSD and CCWD to implement recycled water projects that will offset the use of treated water to irrigation and industrial users in the City water service area.

4.5.2 MOUNTAIN VIEW SANITARY DISTRICT (MVSD)

The MVSD Wastewater Treatment Plant is located near the Shell Oil Refinery on unincorporated land. The MVSD was established in 1923 to provide sewer service to unincorporated areas east of the City of Martinez. The District currently operates a wastewater filtration system with an ultraviolet disinfection system, which was the first full-scale operation of this type in Northern California when constructed. The District's initial sewer system fed into a large community septic tank. In 1951, the District installed primary treatment units. Secondary treatment began in 1968 with the addition of a secondary clarifier, digester, thickener, and a high rate biofilter.

MVSD EXISTING RECYCLED WATER APPLICATIONS

To meet effluent disposal limits outlined by the Regional Water Quality Board in 1974, the District reclaimed valuable wetlands in the vicinity of the treatment site, rather than discharging into a deep water outfall line. All wastewater treated by the MVSD is discharged into the adjacent wetland. As the flows of wastewater to the treatment plant increased, the acreage of the wetlands has grown from 20 to 86 acres, and another 100 acres was gained as a result of joint management with other agencies. Reclaimed effluent from the wetlands discharges to Suisun Bay via Payton Slough. The MVSD plant is permitted to discharge 3,584 AFY (3.2 mgd).

MVSD now serves approximately 25,000 residents in the both the City of Martinez and in unincorporated areas by treating an average daily flow of 2,020 AFY (1.8 mgd). Effluent from the plant is not currently certified for Title 22 California Code of Regulations and does not meet recycled water standards for the City's use. Table 4-4 lists MVSD's current and projected water collection and treated volume that meets recycled water standards.

TABLE 4-3 ESTIMATED WASTEWATER COLLECTED AND TREATED BY MVSD

MVSD Recycled Water – Water Collection and Treatment (Acre-ft per year)							
Type of Wastewater	2005	2010	2015	2020	2025	2030	2035
Wastewater collected	2,020	2,020	2,020	2,020	2,020	2,020	2,020
Volume that meets Title 22 recycled water standard	0	0	0	0	0	0	0

MVSD is not anticipating any growth and expects their average daily flow will remain around 2,020 AFY (1.8 mgd) through 2035. Effluent from MVSD’s plant does not currently meet recycled water standards for use within the City of Martinez water service area. MVSD does not currently have any planned projects to improve treatment at their plant to meet Title 22. The amount of recycled water generated from the City water service area is not known due to the overlapping of boundaries for the City, the City water service area, and with MVSD serving both the City of Martinez and other areas. It is estimated that approximately 40 percent of the water that MVSD collects is from the City’s water service area. The current amount of service area water recycled by MVSD for wetland restoration and wildlife habitat is estimated to be 900 AFY, although all recycled water use is outside of the Martinez water service area.

All of MVSD’s 2,020 AFY (1.8 mgd) effluent is currently discharged into the adjacent wetlands. Though, only approximately 900 AFY (0.8 mgd) is required to maintain the wetlands and considered recycled water. Superfluous discharges into the wetlands are considered non-recycled wastewater that could potentially be used for other recycled water opportunities in the future. Table 4-5 lists the current and projected of volume of unused effluent that could potentially become a recycled water source.

TABLE 4-4 MVSD NON RECYCLED WASTEWATER DISPOSAL

MVSD Recycled Water – Non Recycled Wastewater Disposal							
Method of disposal	Treatment Level	2010	2015	2020	2025	2030	2035
Discharge to wetlands, over and above volume required to maintain wetlands	Secondary	1,120	1,120	1,120	1,120	1,120	1,120

MVSD POTENTIAL OPPORTUNITIES

As discussed above, approximately 900 AFY (0.8 mgd) of MVSD’s effluent is required to maintain the wetlands, this leaves approximately 1,120 AFY (1 mgd) available for other recycled water uses. MVSD does not anticipate any growth and anticipates that these values should remain constant through 2035. Effluent from the plant is not currently certified for Title 22 California Code of Regulations and cannot be used for public irrigation. In order for the City to use recycled water from MVSD, additional treatment would be required. No projects are currently planned for MVSD to supply the City of Martinez recycled water in the near future. MVSD does not currently have any plans to add additional treatment to meet the requirements of Title 22.

4.6 RECYCLED WATER MARKETING IN CITY WATER SERVICE AREA

4.6.1 MARKETING AND PLANNING STRATEGY

CCCSD, along with local water agencies, has focused on education and public involvement to gain acceptance for recycled water use. The CCCSD Planning Department developed an extensive program to evaluate various issues regarding recycled water use. These issues included:

- ◆ Identification of potential customers
- ◆ Establishing technical requirements
- ◆ Evaluating regulatory requirements
- ◆ Establishing water quality standards
- ◆ Development of customer service regulations
- ◆ Conducting environmental assessments
- ◆ Determining existing water service capacity
- ◆ Development of implementation schedule
- ◆ Conducting reliability assessment
- ◆ Establishing emergency backup supply
- ◆ Conducting economic and financial assessments

Irrigation and industrial reuse customers identified were contacted regarding interest in recycled water and any special needs that they would require. These customers were not segregated by their proximity to the CCCSD filtration plant or reclaimed water pipelines.

4.6.2 ECONOMIC FEASIBILITY

As described previously, only customers with large demands near the reclaimed water facilities were included in the initial CCCSD project. This was necessary for implementation of a cost effective project. CCCSD has received support among current and potential recycled water customers and does not plan to implement a mandatory use ordinance. The current costs for providing recycled water service in the CCWD service area include the costs for treatment and CCWD facilities offset fees to cover the sunk costs of current water supply facilities. Under the current rate structure, the sum of the CCWD offset costs for existing facilities and the recycled water treatment costs is slightly higher than alternative sources (potable water or untreated canal water) delivery costs. Cost reductions for recycled water production could occur with grant funding of capital projects for recycled water facilities. This would reduce the recycled water delivery cost to be competitive with current treated and untreated water delivery costs.

4.6.3 PROPOSED ACTIONS TO ENCOURAGE USE OF RECYCLED WATER

Recycled water use provides many advantages to its customers, including reduced costs for water and fertilizer and increased reliability during drought conditions. As described previously, recycled water rates are lower than potable water rates by approximately 20 percent. Recycled water also contains basic nutrients which makes recycled water attractive to landscape customers. Although cost and nutrients encourage reclaimed water use, the largest advantage is reliability. During periods of water

rationing, recycled water customers will not be affected by quantity restrictions or increased water rates.

4.6.4 PLAN FOR OPTIMIZING THE USE OF RECYCLED WATER

The CCCSD Planning Department worked with the City of Martinez, CCWD, EBMUD, and various consultants to develop a list of potential recycled water customers. Although the ultimate distribution system contains 326 of the 333 potential customers identified, only customers with large demands located near the treatment facility or main distribution lines were determined economically feasible for the initial project. These customers are included in the future projects envisioned for the CCCSD recycled water project. The scheduling of design and construction of facilities is not currently within the 10-year planning window for the CCCSD recycled water program; therefore no date for implementation of recycled water supply to these sites has been set and no recycled water use is projected in this UWMP, to be conservative. However, future UWMPs should update information on this potential source, as appropriate.

SECTION FIVE

WATER SUPPLY RELIABILITY AND WATER SHORAGE CONTINGENCY PLAN

5.1 WATER SUPPLY RELIABILITY

CCWD provides the entire City untreated water supply. CCWD routinely conducts Future Water Supply Studies (FWSS) which address long term supply issues. The City is working in conjunction with CCWD to ensure sufficient and reliable future water supplies by identifying future water reduction and supply augmentation components. CCWD is committed to developing water sources which meet the demands of their retail and wholesale customer's future needs.

The water reliability goal adopted by the CCWD Board of Directors is to meet 100 percent of demand in normal years and at least 85 percent of demand during drought conditions. The remaining 15 percent would be met by a combination of short-term water purchases and a voluntary short-term conservation program. The purchase of water would be consistent with their Future Water Supply Implementation Program. Short-term demand management measures include a maximum 5 percent water use reduction in Year 2 of a multi-year drought, and 15 percent water use reduction in Year 3 of a multi-year drought. The supply reliability for the City water service area is listed in Table 5-1.

TABLE 5-1 CCWD WATER SUPPLY RELIABILITY

Water Supply Conditions	Average Water Year	Single Dry Water Year	Multiple Dry Water Years			
			Year 1	Year 2	Year 3	Year 4
Expected Water Delivery	100 percent	95 percent	100 percent	95 percent	85 percent	N/A

Source: CCWD 2010 Urban Water Management Plan

N/A- not available. The CCWD's 2010 UWMP only modeled a 3 year multiple dry-water year period. Data is not available for a four-year multiple dry water year period.

For the basis of water year data, CCWD uses an average water year below normal or wetter year on the Sacramento River Hydrologic Region 40-30-30 Water Supply Index. CCWD's basis for a single dry water year is 1977 conditions. CCWD's basis for multiple dry years is 1987 to 1992 conditions.

CCWD is almost entirely dependent on the Delta for its water supply. CCWD's long-term Central Valley Project (CVP) contract was renewed in May 2005 and has a term of 40 years. The contract with the USBR provides for a maximum delivery of 195,000 acre-feet per year from the CVP, with a reduction in deliveries during water shortages including regulatory restrictions and drought. The Municipal and Industrial (M&I) Water Shortage Policy defines the reliability of CCWD's CVP supply and was developed by USBR to establish CVP water supply levels that would sustain urban areas during severe or continuing droughts. The M&I Water Shortage Policy provides for a minimum allocation of 75 percent of adjusted historical use until irrigation allocations fall below 25 percent.

During periods of drought, CCWD has reduced water supply to the City by a percentage of the amount of water used in the previous years. This reduction occurred during droughts in 1977, 1991, and 2009. The changes in water supply and the recovery of water demands following the drought are shown on Figure 4-1. The resulting demonstrated water use reduction from the previous year was approximately 34 percent in 1977, 24 percent in 1991, and 22 percent in 2009. Water use in years

following reduction years was slightly lower than average, probably because City residents continued to conserve water.

In 1977 CCWD reduced their water allocation to the City by 30 percent. The water supply for 1977 was limited to 70 percent of the measured water demand for 1976. This was the first time a reduction in the City's water supply was imposed by CCWD. A City resolution was passed in 1977 which established mandatory water rationing and prohibited water waste. A 34 percent water use reduction was achieved by implementing these measures.

On March 6, 1991, the CCWD Board of Directors passed a resolution to implement an emergency water use reduction plan in response to drought reductions in water supply to the District. The resolution included a reduction goal of approximately 25 percent in untreated water supply for calendar year 1991 to the Martinez water system. This reduction was based on a 50 percent reduction in the USBR contract entitlement for CCWD, which resulted in approximately 25 percent reduction from the prior year deliveries.

Because of CCWD's water supply reduction, the Martinez City Council adopted Resolution No. 47-91 on April 3, 1991. This resolution established mandatory water use reductions commencing on May 1, 1991, varying by customer classification, for all customers of the Martinez water system.

On June 26, 1991, CCWD amended the Emergency Water Reduction Plan. The revised program provided for a voluntary 15 percent water reduction by all of the District's untreated water customers. This change in allocation was made possible by the reduction in use by CCWD water users, CCWD's securing of State of California Water Bank water, reductions in use by Gaylord Paper in Antioch, and by a more favorable revised reduction in water supply allotment imposed on CCWD by the USBR. On July 17, 1991, the City of Martinez changed from a mandatory water rationing program to a voluntary water conservation program.

During the period from May to July of 1991 when a mandatory reduction of 25 percent in water use was imposed, the City of Martinez reduced water use by 30 percent. The water reduction achieved during the entire 1991 calendar year was 24 percent of the water use in 1990. Appendix D contains information regarding water rationing during the drought conditions in 1977 and 1991.

In 2009, CCWD allocated the City of Martinez Water System 85 percent of the historical average used in 2005, 2006, and 2007. To adhere to CCWD's reduction, the City of Martinez Council adopted Resolutions No. 044-09 and 010-10. These resolutions established mandatory water use reductions of 15 percent, to take effect June 1, 2009. Customers failing to meet the requirements of the resolutions were penalized with increased rates for their usage in excess of the requirements. During the reduction period, the City was able to reduce its water usage by approximately 22 percent and the City did not incur any penalties from CCWD.

CCWD lifted all of the restrictions on their customers effective May 1, 2010. On April 1, Martinez City Council lifted water restrictions, effective the first billing cycle to follow. Resolution No. 032-10 rescinded the mandatory reductions required by Resolutions 044-09 and 010-10 and promoted voluntary water conservation. Due to a 60-day billing cycle, some City customers did not have the restriction lifted until June 1, 2010.

The City of Martinez experienced water supply shortages in 1977, 1991, and 2009. In response to each shortage, the City was successful in achieving water reduction beyond the necessary limits in each year. As the community continues to implement demand management measures (DMMs,

described in Section 6) and becomes more water efficient, it will become increasingly difficult to reduce water consumption during water shortages. This is known as "demand hardening". CCWD incorporates the impacts of demand hardening into its water supply planning and will attempt to avoid imposing unfair reductions on its retail and wholesale customers that would result in economic losses or other undue hardships.

5.2 WATER SUPPLY AND DEMAND COMPARISONS

The anticipated water supply and demand for the City water service area under normal, single dry, and three year drought conditions are described in this section. Demand and supply projections assume the maximum per capita reductions that can be required by the 20 x 2020 Water Conservation Plan, as shown in Table 3-3. Because the City will participate in a regional 20 x 2020 Plan through CCWD, the City's reduction requirements may be less than these values, if the region as a whole can meet the requirements of the 20 x 2020 Water Conservation Plan. Less reduction would lead to higher projected demand and supply volumes.

5.2.1 NORMAL WATER SUPPLY AND DEMAND CONDITIONS

The City of Martinez receives its entire untreated water supply from CCWD. The City supply and demand projections are listed in Table 5-2. CCWD has identified and quantified planned sources of water for normal year supply and will provide water supply to meet projected City Service Area demands through 2035.

TABLE 5-2 SUPPLY AND DEMAND - NORMAL YEAR

	2015	2020	2025	2030	2035
Supply Volume ¹ (AFY)	5,034	4,569	4,628	4,758	4,888
Demand Volume ¹ (AFY)	5,034	4,569	4,628	4,758	4,888
Difference (AFY)	0	0	0	0	0
Difference as Percentage of Supply	0	0	0	0	0
Difference as Percentage of Demand ²	0	0	0	0	0

1. Supply and demand projections assume the maximum daily per capita reductions that can be required by the 20 x 2020 Water Conservation Plan, per Table 3-3.

2. Source: CCWD Supply Reliability Analysis, refer to Appendix H.

5.2.2 SINGLE DRY YEAR WATER SUPPLY AND DEMAND CONDITIONS

During a single dry year, CCWD's policy is to provide at least 95 percent of water demands. The City water service area demands are assumed to be equivalent to a normal year condition. The increased irrigation uses due to lack of rainfall are considered to be equivalent to voluntary conservation efforts performed by water customers during that year. The City's projected supply versus demand for a single dry year is shown in Table 5-3.

TABLE 5-3 SUPPLY AND DEMAND – SINGLE DRY YEAR

	2015	2020	2025	2030	2035
Supply Volume ¹ (AFY)	5,034	4,569	4,582	4,568	4,644
Demand Volume ¹ (AFY)	5,034	4,569	4,628	4,758	4,888
Difference (AFY)	0	0	46	190	244
Difference as Percentage of Supply	0	0	1.0	4.2	5.3
Difference as Percentage of Demand ²	0	0	1.0	4.0	5.0

1. Supply and demand projections assume the maximum daily per capita reductions that can be required by the 20 x 2020 Water Conservation Plan, per Table 3-3.

2. Source: CCWD Supply Reliability Analysis, refer to Appendix H.

5.2.3 MULTIPLE DRY YEAR WATER SUPPLY AND DEMAND CONDITIONS

During a multiple, three-year dry period, CCWD’s goal is to provide 100 percent of its normal year water demands in the first year, at least 95 percent of its normal year water demand in the second dry year, and at least 85 percent of its normal year water demand in the third dry year. The City water service area demands are assumed to be equivalent to a normal year condition for the first dry year, but lowered due to voluntary conservation or imposition of a Stage II Water Alert condition with mandatory water rationing if voluntary conservation methods are not providing the necessary 5 to 15 percent reduction in water use during the second and third dry year respectively. Table 5-4 lists supply and demand for multiple dry years.

TABLE 5-4 SUPPLY AND DEMAND – MULTIPLE DRY YEAR EVENTS

	2015	2020	2025	2030	2035	
Multiple-dry year first year supply¹	Supply Volume ¹ (AFY)	5,034	4,569	4,628	4,758	4,888
	Demand Volume ¹ (AFY)	5,034	4,569	4,628	4,758	4,888
	Difference (AFY)	0	0	0	0	0
	Difference as Percentage of Supply	0	0	0	0	0
	Difference as Percentage of Demand ²	0	0	0	0	0
Multiple-dry year second year supply	Supply Volume ¹ (AFY)	5,034	4,569	4,582	4,568	4,644
	Demand Volume ¹ (AFY)	5,034	4,569	4,628	4,758	4,888
	Difference (AFY)	0	0	(46)	(190)	(244)
	Difference as Percentage of Supply	0.0	0.0	1.0	4.2	5.3
	Difference as Percentage of Demand ²	0.0	0.0	1.0	4.0	5.0
Multiple-Dry year third year supply	Supply Volume ¹ (AFY)	4,631	4,203	4,073	4,044	4,155
	Demand Volume ¹ (AFY)	5,034	4,569	4,628	4,758	4,888
	Difference (AFY)	(403)	(366)	(555)	(714)	(733)
	Difference as Percentage of Supply	8.7	8.7	13.6	17.6	17.6
	Difference as Percentage of Demand ²	8.0	8.0	12.0	15.0	15.0

1. Supply and demand projections assume the maximum daily per capita reductions that can be required by the 20 x 2020 Water Conservation Plan, per Table 3-3.

2. Source: CCWD Supply Reliability analysis, refer to Appendix H.

5.3 WATER QUALITY IMPACTS ON FUTURE WATER SUPPLY

CCWD provides the entire City untreated water supply and mitigates deterioration of water quality from Delta water with new projects such as the Alternative Intake Project, Canal Encasement Project, and the Freeport Regional Water Project facilities. New projects are also being planned to ensure adequate supply of high quality water. For the City's Annual Water Quality Report from 2009, see Appendix I. Also, more information can be found in the CCWD 2010 UWMP. No water quality impacts are projected for CCWD water supplies.

5.4 WATER SHORTAGE CONTINGENCY PLANNING

City preparations for water shortages generally include two components:

- ◆ Identification of additional supply sources in case of water shortage.
- ◆ Management of demands from existing customers when shortages occur.

The City of Martinez receives its entire untreated water supply from CCWD, who has identified and quantified planned sources of water for a normal year and will provide water supply to meet the projected City service area demands through 2035. When the United States Bureau of Reclamation (USBR) imposes CVP reductions in water supply to CCWD, CCWD will purchase water from other sources to supplement the available water from USBR; however some water supply reductions will be passed along to its wholesale customers. The water supply reliability goal adopted by the CCWD Board of Directors is to meet the reliability of the CCWD supply as previously listed in Table 5-1.

CCWD has several short-term supplemental supply options available during a water shortage. These options include application of a "hardship" water request to the USBR, potential water purchases from the "State Water Bank", possible arrangements with East Contra Costa Irrigation District and Bethel Byron Irrigation District, desalination at Mallard Slough, new groundwater facilities, and increased water recycling. During past shortages, the State Water Bank, increased water recycling and increased groundwater pumping were used. This increase in available water supply was then passed along to the City of Martinez and other CCWD customers.

Since the CCWD is developing additional sources of water supply for drought, the City of Martinez has not independently sought to develop other, independent supplies. In the future, the City could possibly utilize desalination of brackish water from Carquinez Strait due to its waterfront location. However, no desalination projects are currently planned due to the excessive capital and operating cost for this water source compared with delivery of untreated water from CCWD.

5.5 CITY OF MARTINEZ WATER SHORTAGE CONTINGENCY PLAN

The City of Martinez must plan for conditions of water shortage caused by reduction in supply from CCWD or by failure of conveyance and treatment facilities within the City to provide treated water to the distribution system. The greatest water shortage experienced by the City occurred in response to a drought. In 1977, the City of Martinez was imposed a 30 percent reduction in water supply from the previous year's demand. The City recognizes that shortages greater than 30 percent are possible in the future and must be planned for by the City, and this section outlines reduction goals up to 50 percent.

The City of Martinez developed its first formal Urban Water Shortage Contingency Plan in 1992 and submitted it to the California Department of Water Resources. The Plan was developed based on experience obtained during water shortages in 1977 and 1991. This plan is used to aid the City in

anticipating drought conditions and to mitigate impacts including a supply shortfall, financial hardships on both the community and the City, and deterioration of customer relations. The 1992 Urban Water Shortage Contingency Plan is provided in Appendix E.

The plan addresses a four stage reduction sequence which includes water rationing up to a 50 percent reduction. The plan includes Resolution No 47-91, "Establishing Water Conservation Measures and Reducing the Use of Water Furnished by the Martinez Water System during the Water Shortage Emergency." This resolution was first implemented in 1991 to meet the 25 percent reduction in untreated water supply from CCWD. The resolution establishes restrictions on new service connections, prohibits and enforces water waste and non-essential water use, outlines water rationing restrictions, billing changes and penalties, and establishes exceptions and appeal procedures. Resolution No. 47-91 is provided in Appendix D.

5.5.1 THREE YEAR MINIMUM WATER SUPPLY

The City water supply is provided by CCWD, which obtains almost all its water supply from the Delta. The primary source for CCWD water is the United States Bureau of Reclamations (USBR's) Central Valley Project (CVP). CVP water consists of unregulated and regulated flows from storage releases from Shasta, Folsom, and Clair Engle Reservoirs into the Sacramento River. The driest three year periods experienced in the Central Valley Basin occurred during longer droughts in 1928-1934 and more recently in 1987-1992. The later drought required implementation of water rationing and other demand management measures as previously described. Although this supply has a minimum allocation of 75 percent of adjusted historical use until irrigation allocations fall below 25 percent, CCWD has planned other water supply projects to supplement the CVP supply and maintain a minimum of 85 percent of the demand in a second or third dry year.

For near term drought conditions, CCWD's goal is to provide 100 percent of its normal year water demands in the first year and second dry year, and at least 91 percent of its normal year water demand in the third dry year, refer to Appendix H for CCWD's Supply Reliability Analysis. The City anticipates the ability to meet water demands through the next three years based on the driest historic three-years (1987 to 1992 conditions) as shown in Table 5-5.

TABLE 5-5 MINIMUM THREE YEAR ESTIMATED WATER SUPPLY

Source	Normal Year			Multiple Dry Years ²		
	2011	2012	2013	2011	2012	2013
CCWD Supply ¹	5,340	5,260	5,180	5,340	5,260	4,700

1. Supply interpolated from estimated normal 2010 usage and 2015 supply estimate (assuming maximum daily per capita reductions that can be required by the 20 x 2020 Water Conservation Plan, per Table 3-3).
2. Supply deficit during multiple dry years from CCWD Supply Reliability Analysis, refer to Appendix H.

5.5.2 EMERGENCY SUPPLY FOR CATASTROPHIC WATER SUPPLY INTERRUPTIONS

Since natural disasters or major accidents can occur at any time, whether they are caused by nature or man made, the City of Martinez has developed an Emergency Response Plan (ERP) for the water system. The plan was first created in 1994, and was updated in 2004. The City water system ERP provides a framework for directing City-wide responses to a number of emergency situations including associated with natural disasters such as earthquakes, technological incidents, and terrorist operations. A description of the ERP contents is included in Appendix F.

The City of Martinez ERP is a series of documents and worksheets that provide valuable information that should be used in the event of an emergency. In addition to providing contact information, water system information, and procedural information, the ERP provides insight into personnel safety and training, and background information on State and federal emergency operations systems.

The ERP is reviewed and updated often to ensure that the information is not out of date. Martinez Water System staff and supervisors are familiar with the information and procedures outlined in these documents. The ERP is considered a living document that is constantly evolving and revised as the functions, facilities and personnel of the water system change.

This plan is intended to set in motion automatically and without direct orders, the preliminary steps required to provide customers the maximum amount of potable water necessary to ensure healthful standards. The ERP manual contains pertinent information, such as guidelines for prioritizing water distribution and interconnecting with other water systems.

Loss of power will impact water supply operations. The plant site has emergency power available as treatment plant power needs are supplied by a generator should a power failure occur. However, the plant capacity and distribution system pumping capacities will be limited since generators do not provide complete power needs. The plant operation with use of generator power alone is tested annually to ensure system operation.

Since CCWD is the sole source of untreated water for the City, a loss of untreated water supply for CCWD would also impact the City. The City service area receives its untreated water supply from Martinez Reservoir, which provides a few days of water supply storage should deliveries from the canal system become interrupted by loss of canal or CCWD's shortcut pipeline facilities. The number of days of supply will be dependent on City water use which would be primarily governed by the season and Shell refinery withdrawals from Martinez Reservoir. The capacity of the reservoir has been reduced by sedimentation that has occurred since its construction. The volume is currently estimated to be 79.6 mg based on a 2003 bathymetry. Assuming a usage of 160 GPCD (the base daily per capita usage from Table 3-2) at the current water service area population, and no withdrawals by Shell, the reservoir volume could supply water for just over 16 days of average annual demand to the City service area. If Martinez Reservoir or the raw water intake structure is damaged and cannot provide untreated water supply to the treatment plant, the City service area would need to be supplied by potable water through interties with CCWD.

A City treatment plant failure could cause a loss of treated water supply to the City water service area. Potential emergency conditions include:

- ◆ Failure (leakage, collapse or rupture) of the untreated water delivery pipeline to City treatment plant
- ◆ Failure of City water treatment plant

If the treatment plant cannot produce water due to any of the emergency conditions listed, treated water can be diverted to the City distribution system from the CCWD distribution system through two interties. The Pacheco Boulevard intertie is located at the City water treatment plant and the Elderwood Drive intertie is located in the distribution system at Elderwood Drive and Alhambra Avenue. Each intertie is expected to provide about 1,400 gpm of treated water, for a total of 2,800 gpm supply (4 mgd) to the City water service area. These two interties can supply approximately 70 to 75 percent of the projected average daily demands through 2020, and less than 40 percent of the

projected maximum day demands. However, water demands would likely be reduced by emergency public notifications of mandatory water use restrictions described in Section 5.5.3 should any of the above described emergency conditions occur.

The two interties discharge into two different pressure zones within the City, allowing both pressure zones to be served independently in an emergency condition. The intertie at the treatment plant is served from the CCWD Zone 1 system, which operates on a reservoir overflow elevation of 220 feet. Since this level is 40 feet lower than the 260 feet overflow elevation of the City’s Zone 1, the treated water must be diverted to the plant clearwell for pumping into the distribution system by the treatment plant pumping station. This intertie has rarely been used, and then only during short treatment plant shutdowns required during construction of treatment plant upgrades. This intertie could not be used for service during a failure of the treatment plant clearwell and/or treatment plant pumping and piping since these facilities must be used to boost the pressure to the City Zone 1 pressure level.

The second intertie connection into the City’s Zone 2 at Elderwood Drive and Alhambra Avenue is served from the CCWD Zone 4. This CCWD zone is a hydropneumatic system that draws water from reservoirs with 440 feet overflow elevations. The City Zone 2 reservoirs have overflow elevations of 410 feet, and could easily be supplied by the system pressure from CCWD Zone 4.

5.5.3 RATIONING STAGES AND REDUCTION GOALS

The City has developed a four-stage rationing plan which is used during a water supply shortage. This plan involves both voluntary and mandatory rationing up to a 50 percent reduction in water use. The rationing stage implemented depends on the restriction imposed by CCWD on the City. A water crisis within the water service area could also cause the shortage conditions and implementation of any rationing stage as appropriate. Table 5-6 outlines each of these four reduction stages.

TABLE 5-6 WATER RATIONING STAGES AND REDUCTION GOALS

Shortage Condition	Stage	Description	Customer Reduction Goal	Type of Rationing Program
Up to 15%	I	Voluntary Conservation	15%	Voluntary
15-30%	II	Water Alert	30%	Mandatory
30-40%	III	Water Emergency	40%	Mandatory
40-50%	IV	Water Crisis	50%	Mandatory

STAGE I - VOLUNTARY CONSERVATION

Stage 1 involves voluntary rationing up to 15 percent. This is similar to rationing imposed in 1991. Stage 1 usage reduction is instigated through public information from numerous sources. The Martinez water system customers responded with a concerted effort in reducing their water use during the 1991 water shortage. A reduction of 25 percent was achieved during the 1991 calendar year, even though the goal was 15 percent.

STAGE II - MANDATORY RATIONING

Stage II rationing requires rationing efforts between 15 and 30 percent. This program was implemented in 1977, for a short period in 1991, and again in 2009 to meet water supply reductions. The City of Martinez believes a 30 percent reduction in water use is possible through increased public information efforts and water conservation regulations outlined in Resolution No. 47-91.

STAGE III – MANDATORY RATIONING

Mandatory rationing for a Stage III water supply shortage is necessary to reduce water use between 30 and 40 percent. These levels are reached by reducing water allocations for each customer sector to lower percentages than those required by Stage II rationing. The City of Martinez has not been faced with rationing at these levels in the past. Penalties for non-compliance may be similar to those imposed by Resolution 47-91 in 1991.

STAGE IV - MANDATORY RATIONING

A Stage IV mandatory rationing program requires water use to be reduced by 40 to 50 percent. This program requires drastic reductions in water use by all customer sectors. Penalties for non-compliance with Stage IV rationing may be more severe than was shown in Resolution 47-91 for rationing in 1991.

WATER SHORTAGES AND TRIGGERING MECHANISMS

Water rationing has occurred in 1977, 1991, and 2009 in the City of Martinez in response to various shortages in water supply. These rationing conditions occurred because of reduction in untreated water supply by CCWD. Although a water shortage may occur due to water contamination or a problem with a water facility or process, this would be a relatively short-term condition. A water shortage has not occurred in the past for any other reason than to address drought conditions. During a drought imposed water supply shortage, the City imposes the same degree of water reduction on its customers that is imposed by CCWD.

5.5.4 WATER ALLOCATION METHODS

The City has established allocation methods for each customer sector. Single family and multi-family customers are allocated water through percentage reductions, gallons per dwelling unit, and gallons per capita depending on the particular rationing stage implemented. Commercial, industrial, irrigation and public customer sectors are allocated water on a percentage reduction from their previous year's. These allocations are listed in Table 5-7. A certain amount of water is allocated for fire prevention purposes.

The City of Martinez determines the water allocation to each customer and calculates their allotment according to the information shown in Table 5-7. Each bill for water service states the water ration for the service applicable to the following billing period. If a customer's use is under the allotment in any given billing period, the water may be "banked" for future use during that year. A written appeal may be filled to request an exception to the granted water allotment.

TABLE 5-7 WATER ALLOCATION FOR RATIONING STAGES

Water Use Sector	Stage II	Stage III	Stage IV
Single Family	200 gal/DU/day	90 gpcd (single occupant) then 50 gpcd additional	50 gpcd
Multi-Family	85%	70 gpcd (single occupant) then 50 gpcd additional	50 gpcd
Commercial	75%	70%	60%
Industrial	85%	75%	70%
Institutional and Government	75%	70%	60%
Landscape	25%	25%	5%

The water reduction goals for the 2009 rationing program varied slightly from the allotments listed in Table 5-7 and are listed in Appendix D.

PRIORITY BY USE

During various stages of water rationing, each customer sector has varying water supply allocations based on the previous year's usage. Numerous factors were used in the development of each allocation. These factors include minimum health and safety standards as well as minimum water requirements for commercial and industrial customers so employment can be maintained within the City. Each customer sector's allocated water supply percentage for Stages II through IV is listed in Table 5-7. Since certain customers may be unable to meet their specific allocated water supply, a list of exceptions has been compiled and an appeal procedure developed. Grounds for granting an exception include the following:

- ◆ Mandated allocation would cause an unnecessary and undue hardship to the applicant, including but not limited to adverse economic impacts such as loss of production or jobs.
- ◆ Mandated allocation would cause an emergency condition affecting the health, sanitation, fire protection or safety of the applicant or the public.
- ◆ Medical requirements with written verification by physician (if requirements are limited by household size).
- ◆ Household size-single family residence, presence of more than four permanent residents (must reside in residence more than 4 months per year).
- ◆ Care of livestock (if requirements are limited by household size).
- ◆ Small multi-family dwelling units with a lower allocation than an equivalent single family dwelling unit (based on total number of occupants).
- ◆ Other reasons may be considered through the appeal process.

HEALTH AND SAFETY REQUIREMENTS

During Stage I and II shortages, residential customers may need to adjust water use to meet the voluntary goal or the Stage II allocated 200 gallons per dwelling unit per day. This amount of water is sufficient for essential interior water use without habit or plumbing fixture changes. Under Stage III and IV rationing, a sufficient amount of water has been allocated to each customer to meet health and safety requirements. Customers may be required to make changes in their interior water use habits such as flushing toilets less frequently and reducing shower length.

5.5.5 MANDATORY PROHIBITIONS ON WATER WASTING

During water shortages, the City of Martinez mandates prohibition of water waste and non-essential use of water. These restrictions are part of Resolution 47-91. The resolution states that no water furnished by the Martinez water system shall be wasted. All water withdrawn from the Martinez water system facilities shall be put to reasonable beneficial use. Water shall not be used for any purpose declared to be non-essential by the resolution. The following uses of water are declared to be non-essential:

- ◆ Washing a sidewalk, driveway, parking area, tennis court, patio or other exterior paving area, except for public safety or sanitary purposes.

- ◆ Using water in a decorative fountain.
- ◆ Irrigating any turf or ground cover planted after adoption of the resolution.
- ◆ Non-commercial washing of any motor vehicle, trailer or boat with a hose except when using a shut-off nozzle.
- ◆ Filling any swimming pool constructed under a building permit issued after adoption of the resolution, except with water from a source acceptable to the Martinez water system.
- ◆ Completely refilling an existing swimming pool, except a publicly owned pool refilled for reasons of public health or except where the water is recycled.
- ◆ Any use of water from a fire hydrant, except to fight fire and except such specified uses from specific hydrants which the Martinez water system from time to time determines to be necessary in the public interest.

If and when the Martinez water system becomes aware of a violation of any provisions listed above, a written notice is delivered to the premises where the violation occurred and mailed to the person who is regularly billed for the service. Notice may also be given to any other person known to the Martinez water system to be responsible for the violation or its correction. The notice describes the violation and orders that it be corrected, cured or abated immediately or within such specified time as the Martinez water system determines is reasonable under the circumstances. If the order is not complied with, the Martinez water system may disconnect the service or place flow restrictors where the violation occurred without further notice. Flow restrictors are to remain in place a minimum of three (3) days and the customer is charged for their removal. Upon a second such violation and each subsequent violation, a similar notice is delivered and the water to that connection is disconnected or restricted for a minimum of seven (7) days. The customer is charged to have the service restored to normal.

5.5.6 RATE STRUCTURE UNDER RATIONING

Proposed measures to overcome revenue impacts of rationing include development of reserves and a drought surcharge on water use. The City of Martinez bases its water system budget on previous year use and anticipated drought conditions. Revenue reduction caused by a reduction in water usage could be made up from reserves, or a drought surcharge could be imposed on water users of the system as was done during the 1991 drought. Although no significant expenditures are anticipated to implement water conservation measures during a drought, large expenditures may be necessary under a catastrophic supply interruption. Funding for these would be made up from reserves or obtained through State and Federal aid packages (i.e. FEMA).

During the 1991 rationing program, an extra charge was established for water withdrawn from the Martinez water system by any service connection in excess of its allotted amount. This penalty is outlined in Resolution No. 47-91. Table 5-8 shows the penalties imposed in 1991. This rate structure will be reviewed and modified prior to implementation of a future rationing program.

TABLE 5-8 1991 EXCESS USE CHARGES PER BILLING PERIOD¹ (STAGE II RATIONING)

Customer Sector	Excess Use Above Allotment	Excess Charge
Single Family	First 500 cubic feet	2 X Unit Price
	Next 500 cubic feet	3 X Unit Price
	Excess beyond 1,000 cubic feet	4 X Unit Price
All Other Users	First 10% excess	2 X Unit Price
	Next 10% excess	3 X Unit Price
	Additional excess	4 X Unit Price

¹Billing period is bi-monthly.

During the 1991 rationing program, Resolution No. 47-91 also called for installation of flow restrictors in services where the quantity of water withdrawn exceeded the water ration allotment by 20 percent and 20 hundred cubic feet per service during two (2) consecutive billing periods. Flow restrictors remain in place a minimum of seven (7) days the first time installed and fourteen (14) days each consecutive time thereafter. The customer is charged for each time restrictors are installed. Fees owed must be paid in full before the flow restrictor can be removed.

During the 2009 rationing program that lasted 11 months, customers were charged 4 times the unit price for their water usage in excess of reduction requirements. Though, for single family and multi family accounts, penalty charges were not issued if usage was less than 300 gallons per day.

5.5.7 WATER USE MONITORING MECHANISMS

The primary consumption reduction method for demand management is voluntary conservation and mandatory water rationing. The water shortage stage and the projected reductions are listed in Table 5-6. Since the Martinez water service area is a fully metered distribution system, violators can easily be identified and excessive water usages be remedied through financial penalties and disruption of service.

Water use can be monitored on a daily basis at the water treatment plant. Untreated water supplied to the Martinez Water Treatment Plant is metered as it enters the facilities and the exact amount of potable water produced is measured continually and recorded on a daily basis. The Water Superintendent evaluates the water production in relation to the allotted water supply. If the rationed allotment is exceeded, the Water Superintendent will contact the Community Development Director, who will then inform the City Council so corrective action can be taken.

SECTION SIX

WATER CONSERVATION PROGRAMS

The City of Martinez is an untreated water customer (retailer) of CCWD, which receives water supply through the Contra Costa Canal. CCWD is an urban water supplier and a member of the California Urban Water Conservation Council (CUWCC) and submits annual reports to that council in accordance with the “Memorandum of Understanding Regarding Urban Water Conservation in California,” dated September 1991. In October 1993, the CCWD Board voted to implement Demand Management Measures (DMMs) throughout their entire service area, including the retail customers within their wholesale water area. CCWD's wholesale customers include Diablo Water District (DWD), Antioch, Pittsburg, Martinez, and Southern California Water Company serving Bay Point. These five retailer water suppliers work in conjunction with CCWD to implement and coordinate the DMMs.

Prior to 1993, the City of Martinez program consisted of single family surveys and low flow showerhead distribution. These continued to be implemented by CCWD after their program of DMMs was implemented throughout their service area. In 1994, the Ultra Low Flow Toilet (ULFT) replacement program was instituted. The CCWD program now includes surveys for all customer classes and incentive programs for numerous water saving devices. Both the surveys and the replacement programs have changed to increase the effectiveness of the program and the sustainability of water savings. The CCWD Water Conservation Program is comprised of several key elements, each of which targets a specific customer base and satisfies the requirements of specific DMMs.

The City of Martinez is not a member of the CUWCC and does not submit a Retail Water Agency Annual Report to the CUWCC. A summary of all current Demand Management Measures (DMMs) being implemented within the City water service area by either the City or CCWD is provided herein, with the City's current program described for each DMM. Further information on the CCWD Water Conservation Program is included in the CCWD Urban Water Management Plan 2010 Update. Data on specific demand management measures and rebates provided within the Martinez water service area during 2009 and 2010 fiscal years is provided in Appendix K.

DMM 1 - WATER SURVEY PROGRAMS FOR SINGLE FAMILY AND MULTI-FAMILY RESIDENTIAL CUSTOMERS

Definition

Implementation methods shall be at least as effective as identifying the top 20 percent of water users in each sector, directly contacting them (e.g., by mail and/or telephone) and offering the service on a repeating cycle; providing incentives sufficient to achieve customer implementation (e.g., free shower heads, hose and sprinkler timers, etc.). (Water Code Section 10631(f), 1-A)

PROGRAM

This DMM is implemented by the City and CCWD. The City has trained staff to conduct water surveys. CCWD also performs water surveys when requested by the City. This program was implemented independently by the City of Martinez prior to October 1993. Since that time, a number of water audits have been completed by CCWD. The City of Martinez water superintendent provides water metering information to the CCWD water conservation coordinator as necessary for implementation of the water survey program.

CCWD's residential survey program is promoted through the distribution of brochures and bill inserts, listings in the City newsletter, and by direct referral from customer service staff. A trained surveyor spends approximately one hour at the customer's home. During the survey, City or CCWD staff will inspect irrigation stations and provide a checklist of suggested improvements, provide irrigation scheduling information to assist with programming the timer, check for signs of leaks, demonstrate how to read the water meter and use it to monitor usage, provide high-efficiency showerheads and kitchen faucet aerators, and provide useful conservation tips to help customers manage their water use. Eligible customers are provided information on the District's toilet and clothes washer rebate programs.

The Multi-Family Residential Survey Program targets apartment complexes and other multi-family customers. The program is marketed in conjunction with the toilet and clothes washer rebate programs as well as several commercial irrigation equipment rebate programs. During the survey, plumbing fixtures are flow tested and high-efficiency fixtures are installed or provided to replace high-volume fixtures, such as showerheads, and faucet aerators. A report is provided to the customer that lists the number and location of leaks found, an inventory of toilets by flush volume, and a list of showerheads and aerators installed.

DMM 2 - RESIDENTIAL PLUMBING RETROFIT

Definition

2c. PLUMBING RETROFIT

Implementation methods shall be at least as effective as delivering retrofit kits including high quality low-flow shower heads to pre-1980 homes that do not have them and toilet displacement devices or other devices to reduce flush volume for each home that does not already have ULF toilets, offering to install the devices; and following up at least three times. (Water Code Section 10631(f), 1-B)

PROGRAM

The City of Martinez, along with CCWD emphasizes High-Efficiency toilets (1.28 gallons per flush) that are EPA WaterSense certified. In addition, both the City and CCWD provide free low-flow shower heads, faucet aerators, and leak detection dye tablets at their facilities.

DMM 3 - SYSTEM WATER AUDITS, LEAK DETECTION AND REPAIR

Definition

Implementation methods shall be at least as effective as at least once every three years completing a water audit of the water supplier's distribution system using methodology such as that described in the American Water Works Association's "Manual of Water Supply Practices, Water Audits and Leak Detection;" advising customers whenever it appears possible that leaks exist on the customer's side of the meter, and performing distribution system leak detection and repair whenever the audit reveals that it would be cost effective. (Water Code Section 10631(f), 1-C)

PROGRAM

The methodology presented in the American Water Works Association's "Manual of Water Supply Practices, Water Audits and Leak Detection" (AWWA M36) is desirable in reducing water lost to leaks. Many of the recommendations noted in the manual are currently integrated into the City's regular operations and maintenance procedures. For example, the City has recently conducted a pre-

screening system audit to determine the need for a full-scale system audit. The pre-screening audit consisted of determining metered sales, other system verifiable uses, and the total supply in the system. The metered sales plus verifiable uses were subtracted from the total supply into the system to arrive at an estimated loss of water due to leaks. During 2010, the volume of unaccounted for water losses within the City's treated water distribution system was estimated to be 9.1%. This was determined by the difference between the metered customer usage and CCWD deliveries to the City (for further information see Section 3). The City believes that actual leakage in the system is lower than the data suggests due to inaccurate water meters. Over the approximately 100 miles of distribution system piping, this loss is well within industry standards for a well-operated system. Therefore, a full-scale system audit is not necessary at this time. However, since CCWD is the signatory of the MOU, and is the water supplier for the City of Martinez, they are required to complete a system water audit for the Treated Water Service Area once every three years. Therefore, the City of Martinez is planning to contact CCWD to discuss issues regarding expansion of its leak detection and repair activities so that more customer and city-side leaks can be located and repaired.

DMM 4 - METERING WITH COMMODITY RATES FOR ALL NEW CONNECTIONS AND RETROFIT OF EXISTING CONNECTIONS

Definition

Implementation methods shall be requiring meters for all new connections and billing by volume of use; and establishing a program for retrofitting any existing unmetered connections and billing by volume of use; for example, through a requirement that all connections be retrofitted at or within six months of resale of the property or retrofitted by neighborhood. (Water Code Section 10631(f), 1-D)

PROGRAM

All service connections within the Martinez water service area are provided with water meters. There are no unmetered water service connections within the City. The City's meters are classified into one of nine sectors, which were reduced to six customer sectors for the UWMP. The nine sectors include single family, multi-family, commercial, industrial, fire service, public City facilities, public facilities other than City facilities, City irrigation, and irrigation other than City uses. The meter and consumption classifications are included in Appendix C. The City of Martinez bills each customer based on the volume of water used. Billing is based on a uniform rate structure. Further details on the rate structure are listed under DMM 11.

DMM 5 - LARGE LANDSCAPE CONSERVATION PROGRAMS AND INCENTIVES

Definition

Implementation methods shall be at least as effective as identifying all irrigators of large (at least 3 acres) landscapes (e.g., golf courses, green belts, common areas, multi-family housing landscapes, schools, business parks, cemeteries, parks and publicly owned landscapes on or adjacent to road rights-of-way); contacting them directly (by mail and/or telephone); offering landscape audits using methodology such as that described in the Landscape Water Management Handbook prepared for the California Department of Water Resources; and cost-effective incentives sufficient to achieve customer implementation; providing follow-up audits at least once every five years; and providing multi-lingual training and information necessary for implementation. In addition, enacting and implementing landscape water conservation ordinances, or if the supplier does not have the authority to enact ordinances, cooperating with cities, counties and the green industry in the service area to

develop and implement landscape water conservation ordinances pursuant to the 'Water Conservation in Landscaping Act' (Government Code 65591 et. seq.). (Water Code Section 10631(f), 1-E)

PROGRAM

This DMM is implemented by CCWD on a system-wide basis. The Large Landscape Survey Program is marketed to commercial, institutional, and multi-family customers with the highest landscape water use. These customers within the City of Martinez are contacted by CCWD through direct mail pieces and phone calls. Since the program's beginning, it has developed an excellent reputation for the assistance it provides and has resulted in a number of completed water audits within the City's service area.

CCWD's surveys include an inspection of the irrigation system, the plant material, and irrigation schedules. A report is then submitted to the property owner or manager, listing improvements that can be made to the irrigation equipment, and/or to the maintenance of the site. Customers whose sites have inefficient irrigation timers or other inefficient irrigation devices are encouraged to participate in the irrigation upgrade program, which offers rebates on select irrigation equipment. After participating in the program, customers are sent four (4) post cards each year to remind them to adjust their watering schedules and to check their irrigation systems.

The City of Martinez adopted a Model Landscape Ordinance on January 11, 1993. A copy of Ordinance 1195 C.S. is included in Appendix J. These regulations are incorporated into the City's Building and Planning Department plan reviews and permitting processes. The City works with nurseries, landscape designers, contractors and new homeowners, to provide water efficient landscapes. The City of Martinez has distributed various publications to its water customers regarding landscape practices. These publications include:

- ◆ "Put your Garden on a Water Diet and Watch It Grow," California Association of Nurserymen.
- ◆ "Landscape Water Control Guide"
- ◆ "Drought Survival Guide for Home and Garden." Sunset Magazine reprint.

DMM 6 - HIGH EFFICIENCY WASHING MACHINE REBATE PROGRAMS

Definition

Implementation methods shall be enacted to provide incentives for replacement of older less efficient washing machines with newer, high-efficiency models. (Water Code Section 10631(f), 1-F)

PROGRAM

CCWD, in coordination with eight other water agencies, implemented a Bay Area Regional Clothes Washer Rebate Program. The CCWD program has offered rebates from \$50 to \$100 to residential customers who purchase clothes washers with a minimum water use efficiency, or water factor. The program is marketed primarily through the retail appliance stores. In addition, CCWD markets the program through the City bill insert, the Single Family Survey Program, and through newspaper advertisements.

DMM 7 - PUBLIC INFORMATION PROGRAMS

Definition

Implementation methods shall be at least as effective as ongoing programs promoting water conservation and conservation related benefits including providing speakers to community groups and the media; using paid and public service advertising; using bill inserts; providing information on customer's bills showing use in gallons per day for the last billing period compared to the same period the year before; providing public information to promote other water conservation practices; and coordinating with other governmental agencies, industry groups and public interest groups. (Water Code Section 10631(f), 1-G)

PROGRAM

The City of Martinez promotes water conservation through public information. The City provides public information through water bill inserts or messages, City newsletter articles, brochures and demonstration gardens. The customer's previous year water usage was formerly included on each bill for water use comparison by the customers. With the change to a new municipal billing system implemented by the City, the previous year water usage is no longer included on the monthly billing.

CCWD also provides supporting services to the City of Martinez's public information program on a service area-wide basis. CCWD provides Martinez water system customers with the following:

- ◆ Brochures for each conservation program
- ◆ Information booths: Farmer's markets, Annual Spring and Fall Home and Garden shows
- ◆ Sunset magazine re-prints and brochures
- ◆ Speakers bureau
- ◆ CCWD water conservation website at www.ccwater.com/conserv
- ◆ Demonstration gardens
- ◆ ON TAP newsletters
- ◆ Conservation post cards
- ◆ School newsletters

DMM 8 - SCHOOL EDUCATION PROGRAMS

Definition

Implementation methods shall be at least as effective as ongoing programs promoting water conservation and conservation related benefits including working with the school districts in the water supplier's service area to provide educational materials and instructional assistance. (Water Code Section 10631(f), 1-H)

PROGRAM

The school education program reaches students in private and public schools with information on water issues and conservation. CCWD provides school education programs within the Martinez water service area. Grades targeted include first through twelfth while reaching approximately 28,000 students and teachers per year. CCWD provides assemblies, books, maps, charts, posters, professional plays, science fairs, teacher grants, teacher training, tours, videos, water awareness month activities and student newsletters. The City of Martinez also provides students with tours of their Water Treatment Plant.

DMM 9 - CONSERVATION PROGRAMS FOR COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL (CII) ACCOUNTS

Definition

Implementation methods shall be at least as effective as identifying and contacting the top 10 percent of the industrial and commercial customers directly (by mail and/or telephone); offering audits and incentives sufficient to achieve customer implementation; and providing follow-up audits at least once every five years if necessary. (Water Code Section 10631(f), 1-I)

PROGRAM

DMM 9 is implemented by CCWD on a service area-wide basis, and includes both wholesale and retail customers. The Commercial survey program focuses on toilets, showers, kitchens, cooling systems, icemakers and other interior water uses, as well as exterior portions, which was discussed in DMM 5. The program markets the top 20% of the District's Commercial, Industrial and Institutional customers through direct mail pieces and phone calls. Rebates are offered as an incentive to upgrade to more efficient equipment.

DMM 9A - CII HIGH-EFFICIENCY TOILET (HET) REBATE PROGRAM

The program provides a rebate incentive to encourage customers to replace existing older high-volume toilets with high-efficiency models.

DMM 10 - WHOLESALE AGENCY PROGRAMS

Definition

Implementation shall consist of at least the following actions: Wholesale Water Agency shall provide conservation-related technical support and information; financial incentives, or equivalent resources; and, when mutually agreeable and beneficial, operate all or any part of the conservation-related activities which a given retail supplier is obligated to implement under the DMM's cost-effectiveness test. (Water Code Section 10631(f), 1-J)

PROGRAM

The City of Martinez is not a wholesale water agency and therefore does not implement this DMM, but does get assistance implementing many of the DMMs from its wholesaler, CCWD, as discussed in this section.

DMM 11 - CONSERVATION PRICING

Definition

Implementation methods shall be at least as effective as eliminating nonconserving pricing and adopting conserving pricing. For signatories supplying both water and sewer, this DMM applies to pricing of both water and sewer service. Signatories that supply water but not sewer service shall make a good faith effort to work with sewer agencies so that those sewer agencies adopt conservation pricing for sewer service. (Water Code Section 10631(f), 1-K)

PROGRAM

The City of Martinez has a uniform rate structure for water service within its service area. Residential customers who qualify receive a lifeline allotment. The uniform rate structure does not encourage high water use. Most of the customers of the Martinez water system receive sewer service from either Central Contra Costa Sanitary District (CCCSD) or Mountain View Sanitary District. A small portion of customers outside the western City limit are served by septic systems. Both sanitary districts impose fixed rates for sewer service on single family and multi-family residential customers. Sewer rates for commercial, industrial and public customers are based on water usage and are billed at a uniform rate. Sewer service fees based on water usage promote water conservation.

DMM 12 - CONSERVATION COORDINATOR

Definition

Implementation methods shall be at least as effective as designating a water conservation coordinator responsible for preparing the conservation plan, managing its implementation, and evaluating the results. For very small water suppliers, this might be a part-time responsibility. For larger suppliers this would be a full-time responsibility with additional staff as appropriate. This work should be coordinated with the supplier's operations and planning staff. (Water Code Section 10631(f), 1-L)

PROGRAM

The City of Martinez has designated the Water Superintendent responsible for the position of Water Conservation Coordinator. Since many of the DMM are implemented by CCWD, the City's Water Conservation Coordinator does not spend a large amount of time dedicated to water conservation programs. The City continues to be involved in water conservation programs implemented by CCWD.

DMM 13 - WATER WASTE PROHIBITION

Definition

Implementation methods shall be enacting and enforcing measures prohibiting gutter flooding, sales of automatic (self regenerating) water softeners, single pass cooling systems in new connections, non-recirculating systems in all new conveyer car wash and commercial laundry systems and non-cycling decorative water fountains. (Water Code Section 10631(f), 1-M)

PROGRAM

The City of Martinez has an ordinance for water waste which is adopted during water shortages. This ordinance prohibits gutter flooding, non-recirculating fountains, hosing of hard surfaces, non-commercial washing of motor vehicles, boats and trailers, filling of swimming pools, and use of water from a water hydrant. This ordinance is provided in Appendix D.

DMM 14 - RESIDENTIAL HIGH-EFFICIENCY TOILET REBATE PROGRAM

Definition

An Implementation program for replacement of existing high-water-using toilets with ultra-low-flush toilets (1.6 gallons or less) in residential, commercial and industrial buildings shall be enacted. Such programs would be at least as effective as offering rebates of up to \$100 for each replacement that would not have occurred without the rebate, or requiring the replacement at time of resale, or requiring the replacement at the time of change of service. (Water Code Section 10631(f), 1-N)

PROGRAM

CCWD offers rebates to both single family and multi-family residential customers to encourage them to replace older high volume toilets with new high-efficiency models. The program is marketed through bill inserts, newspaper advertisements, banners, and direct mail.

APPENDIX A

**RESOLUTION OF THE CITY COUNCIL
ADOPTING THE UWMP AND
NOTICE OF PUBLIC HEARING
AFFIDAVIT OF PUBLICATION**



A. Polignone

RESOLUTION NO. 067-11

ADOPTING UPDATED CITY OF MARTINEZ 2010 URBAN WATER MANAGEMENT PLAN AND DIRECT STAFF TO PREPARE A FINAL PLAN IN ACCORDANCE WITH CALIFORNIA WATER CODE, URBAN WATER MANAGEMENT PLANNING ACT AND THE CALIFORNIA WATER CONSERVATION BILL OF 2009

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

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

WHEREAS, the City commenced a review of its existing Urban Water Management Plan in 2010, and based upon such review has prepared a revised and updated District Urban Water Management Plan for adoption in 2011; and

WHEREAS, a draft of the 2010 Urban Water Management Plan has been made available for public inspection and all comments received from the public and from public agencies have been reviewed and considered, and a duly noticed public hearing was conducted by the City Council on June 1, 2011 prior to adoption of the proposed revisions to the City's Urban Water Management Plan, all in accordance with the Act; and

WHEREAS, the City of Martinez did prepare, and shall file, said Plan with the California Department of Water Resources by December 31, 2011.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Martinez that the Urban Water Management Plan, as presented, is adopted.

* * * * *

I HEREBY CERTIFY that the foregoing is a true and correct copy of a resolution duly adopted by the City Council of the City of Martinez at a regular meeting of said Council held on 1ST day of June, 2011, by the following vote:

AYES: Councilmembers Michael Menesini, Mark Ross, Vice Janet Kennedy, and Mayor Rob Schroder

NOES: None

ABSENT: Councilmember Lara DeLaney



RICHARD G. HERNANDEZ, CITY CLERK
CITY OF MARTINEZ

STATE OF CALIFORNIA, COUNTY OF CONTRA COSTA

In the Matter of

NOTICE OF PUBLIC HEARING

City of Martinez

Affidavit of Publication

STATE OF CALIFORNIA, COUNTY OF CONTRA COSTA } ss.

NOTICE OF PUBLIC HEARING

Notice is hereby given that the City Council of the City of Martinez will hold a Public Hearing in accordance with the Martinez Municipal Code, Urban Water Management Planning Act, and the California Water Conservation Bill of 2009 on: June 1, 2011, at 7:00 p.m., City Hall Council Chambers, 525 Henrietta Street, Martinez, CA 94553.

The Purpose of this hearing is to adopt a resolution approving the 2010 Urban Water Management Plan. A copy of which is on file in the City Clerk's Office for public inspection and on the City Website (www.cityofmartinez.org).

For additional information, please contact Alan Pellegrini, Water Superintendent at (925) 372-3587.

All interested persons are invited to attend this Hearing and take the opportunity to speak and/or present other evidence. In accordance with Section 65009 of the California Government Code, anyone wishing to challenge action taken on the above item in court may be limited to raising only those issues he/she or someone else raised at the above-described Public Hearing(s) or in written correspondence addressed and delivered to the City at or prior to the Public Hearing.

Richard G. Hernandez
City Clerk
By: Mercy G. Cabral
Deputy City Clerk
Date: 5/20/2011

No 35049
Published
May 21, 2011

Barbara M. Cetko being duly sworn, deposes and says, that at all times herein named was, and now is a citizen of the United States of America, over the age of eighteen years, and a resident of said County of Contra Costa. That he is not nor was at any time herein named a party to the above entitled proceedings, or interested therein, and that all of said time was, and now is the principal clerk of the printer of the MARTINEZ NEWS-GAZETTE, a newspaper printed, published and circulated in said Contra Costa County, and as such principal clerk had charge of all advertisements in said newspaper. That the said MARTINEZ NEWS-GAZETTE, is a newspaper of general circulation as that term is defined by Section 6000 of the Government Code of the State of California, in the said County of Contra Costa published for the dissemination of local and telegraphic news and intelligence of a general character, having a bona fide subscription list of paying subscribers and which has been established, printed and published in said county for more than one year last past, and which is not devoted to the interests or published for the entertainment of a particular class, profession, trade, calling, race or denomination, or any number thereof.

That the Notice of Public Hearing

of which the annexed is a printed copy, was printed and published

in said paper at least One (1) time

to wit: from the 21st day of May 2011

to the 21st day of May 2011

both days included, to wit:

May 21, 2011

That the said notice was published in the newspaper proper and

APPENDIX B

POPULATION ESTIMATES



2000 Census Data
For Blocks Between
the City of Martinez and
Water Service Area Boundaries

Geography	Total population: Total	Population Added to WSA
Block 1000, Block Group 1, Census Tract 3190, Contra Costa County, California	17	17
Block 1001, Block Group 1, Census Tract 3190, Contra Costa County, California	55	55
Block 1002, Block Group 1, Census Tract 3190, Contra Costa County, California	26	26
Block 1003, Block Group 1, Census Tract 3190, Contra Costa County, California	31	31
Block 1004, Block Group 1, Census Tract 3190, Contra Costa County, California	40	40
Block 1005, Block Group 1, Census Tract 3190, Contra Costa County, California	40	40
Block 1006, Block Group 1, Census Tract 3190, Contra Costa County, California	34	34
Block 1007, Block Group 1, Census Tract 3190, Contra Costa County, California	25	25
Block 1008, Block Group 1, Census Tract 3190, Contra Costa County, California	50	50
Block 1009, Block Group 1, Census Tract 3190, Contra Costa County, California	58	58
Block 1010, Block Group 1, Census Tract 3190, Contra Costa County, California	54	54
Block 1011, Block Group 1, Census Tract 3190, Contra Costa County, California	35	35
Block 1012, Block Group 1, Census Tract 3190, Contra Costa County, California	23	23
Block 1013, Block Group 1, Census Tract 3190, Contra Costa County, California	60	60
Block 1014, Block Group 1, Census Tract 3190, Contra Costa County, California	20	20
Block 2000, Block Group 2, Census Tract 3190, Contra Costa County, California	34	34
Block 2001, Block Group 2, Census Tract 3190, Contra Costa County, California	46	46
Block 2002, Block Group 2, Census Tract 3190, Contra Costa County, California	39	39
Block 2003, Block Group 2, Census Tract 3190, Contra Costa County, California	49	49
Block 2004, Block Group 2, Census Tract 3190, Contra Costa County, California	59	59
Block 2005, Block Group 2, Census Tract 3190, Contra Costa County, California	9	9
Block 2006, Block Group 2, Census Tract 3190, Contra Costa County, California	59	59
Block 2007, Block Group 2, Census Tract 3190, Contra Costa County, California	40	40
Block 2008, Block Group 2, Census Tract 3190, Contra Costa County, California	61	61
Block 2009, Block Group 2, Census Tract 3190, Contra Costa County, California	47	47
Block 2010, Block Group 2, Census Tract 3190, Contra Costa County, California	39	39
Block 2011, Block Group 2, Census Tract 3190, Contra Costa County, California	450	450
Block 2012, Block Group 2, Census Tract 3190, Contra Costa County, California	35	35
Block 2013, Block Group 2, Census Tract 3190, Contra Costa County, California	30	30
Block 2014, Block Group 2, Census Tract 3190, Contra Costa County, California	30	30
Block 2015, Block Group 2, Census Tract 3190, Contra Costa County, California	25	25
Block 2016, Block Group 2, Census Tract 3190, Contra Costa County, California	23	23
Block 2017, Block Group 2, Census Tract 3190, Contra Costa County, California	25	25
Block 2018, Block Group 2, Census Tract 3190, Contra Costa County, California	27	27
Block 2019, Block Group 2, Census Tract 3190, Contra Costa County, California	95	0
Block 2020, Block Group 2, Census Tract 3190, Contra Costa County, California	140	0
Block 3000, Block Group 3, Census Tract 3190, Contra Costa County, California	56	56
Block 3001, Block Group 3, Census Tract 3190, Contra Costa County, California	79	79
Block 3002, Block Group 3, Census Tract 3190, Contra Costa County, California	57	57
Block 3003, Block Group 3, Census Tract 3190, Contra Costa County, California	34	34
Block 3004, Block Group 3, Census Tract 3190, Contra Costa County, California	7	7
Block 3005, Block Group 3, Census Tract 3190, Contra Costa County, California	11	11
Block 3006, Block Group 3, Census Tract 3190, Contra Costa County, California	113	0
Block 3007, Block Group 3, Census Tract 3190, Contra Costa County, California	18	18

2000 Census Data
For Blocks Between
the City of Martinez and
Water Service Area Boundaries

Block 3008, Block Group 3, Census Tract 3190, Contra Costa County, California	56	0
Block 3009, Block Group 3, Census Tract 3190, Contra Costa County, California	4	0
Block 3010, Block Group 3, Census Tract 3190, Contra Costa County, California	7	0
Block 3011, Block Group 3, Census Tract 3190, Contra Costa County, California	9	0
Block 3012, Block Group 3, Census Tract 3190, Contra Costa County, California	7	0
Block 3013, Block Group 3, Census Tract 3190, Contra Costa County, California	101	0
Block 3014, Block Group 3, Census Tract 3190, Contra Costa County, California	27	0
Block 3015, Block Group 3, Census Tract 3190, Contra Costa County, California	367	0
Block 3016, Block Group 3, Census Tract 3190, Contra Costa County, California	22	0
Block 3017, Block Group 3, Census Tract 3190, Contra Costa County, California	125	0
Block 3018, Block Group 3, Census Tract 3190, Contra Costa County, California	177	0
Block 3019, Block Group 3, Census Tract 3190, Contra Costa County, California	518	0
Block 3020, Block Group 3, Census Tract 3190, Contra Costa County, California	33	0
Block 3021, Block Group 3, Census Tract 3190, Contra Costa County, California	66	0
Block 3022, Block Group 3, Census Tract 3190, Contra Costa County, California	61	0
Block 3023, Block Group 3, Census Tract 3190, Contra Costa County, California	974	0
Block 3024, Block Group 3, Census Tract 3190, Contra Costa County, California		0
Block 3025, Block Group 3, Census Tract 3190, Contra Costa County, California	72	0
Block 3026, Block Group 3, Census Tract 3190, Contra Costa County, California	227	0
Block 3027, Block Group 3, Census Tract 3190, Contra Costa County, California	111	0
Block 3028, Block Group 3, Census Tract 3190, Contra Costa County, California	20	0
Block 3029, Block Group 3, Census Tract 3190, Contra Costa County, California	42	0
Block 3030, Block Group 3, Census Tract 3190, Contra Costa County, California	26	0
Block 4000, Block Group 4, Census Tract 3190, Contra Costa County, California	22	0
Block 4001, Block Group 4, Census Tract 3190, Contra Costa County, California	9	0
Block 4002, Block Group 4, Census Tract 3190, Contra Costa County, California	12	0
Block 4003, Block Group 4, Census Tract 3190, Contra Costa County, California	27	0
Block 4004, Block Group 4, Census Tract 3190, Contra Costa County, California	21	21
Block 4005, Block Group 4, Census Tract 3190, Contra Costa County, California	44	44
Block 4006, Block Group 4, Census Tract 3190, Contra Costa County, California	4	4
Block 4007, Block Group 4, Census Tract 3190, Contra Costa County, California	45	45
Block 4008, Block Group 4, Census Tract 3190, Contra Costa County, California	19	19
Block 4009, Block Group 4, Census Tract 3190, Contra Costa County, California	32	32
Block 4010, Block Group 4, Census Tract 3190, Contra Costa County, California	28	28
Block 4011, Block Group 4, Census Tract 3190, Contra Costa County, California	77	77
Block 4012, Block Group 4, Census Tract 3190, Contra Costa County, California	28	28
Block 4013, Block Group 4, Census Tract 3190, Contra Costa County, California	48	48
Block 4014, Block Group 4, Census Tract 3190, Contra Costa County, California	50	50
Block 4015, Block Group 4, Census Tract 3190, Contra Costa County, California	31	31
Block 4016, Block Group 4, Census Tract 3190, Contra Costa County, California	48	48
Block 4017, Block Group 4, Census Tract 3190, Contra Costa County, California	42	42
Block 4018, Block Group 4, Census Tract 3190, Contra Costa County, California	39	39
Block 5000, Block Group 5, Census Tract 3190, Contra Costa County, California	38	0
Block 5001, Block Group 5, Census Tract 3190, Contra Costa County, California	40	0
Block 5002, Block Group 5, Census Tract 3190, Contra Costa County, California	40	0
Block 5003, Block Group 5, Census Tract 3190, Contra Costa County, California	54	0
Block 5004, Block Group 5, Census Tract 3190, Contra Costa County, California	36	0
Block 5005, Block Group 5, Census Tract 3190, Contra Costa County, California	27	0
Block 5006, Block Group 5, Census Tract 3190, Contra Costa County, California	85	0

2000 Census Data
For Blocks Between
the City of Martinez and
Water Service Area Boundaries

Block 5007, Block Group 5, Census Tract 3190, Contra Costa County, California	116	116
Block 5008, Block Group 5, Census Tract 3190, Contra Costa County, California	58	58
Block 5009, Block Group 5, Census Tract 3190, Contra Costa County, California	42	0
Block 5010, Block Group 5, Census Tract 3190, Contra Costa County, California	14	0
Block 5011, Block Group 5, Census Tract 3190, Contra Costa County, California	50	0
Block 5012, Block Group 5, Census Tract 3190, Contra Costa County, California	55	0
Block 5013, Block Group 5, Census Tract 3190, Contra Costa County, California	6	0
Block 5014, Block Group 5, Census Tract 3190, Contra Costa County, California	21	21
Block 5015, Block Group 5, Census Tract 3190, Contra Costa County, California	50	50
Block 5016, Block Group 5, Census Tract 3190, Contra Costa County, California	33	33
Block 5017, Block Group 5, Census Tract 3190, Contra Costa County, California	13	13
Block 6000, Block Group 6, Census Tract 3190, Contra Costa County, California	98	0
Block 6001, Block Group 6, Census Tract 3190, Contra Costa County, California	56	0
Block 6002, Block Group 6, Census Tract 3190, Contra Costa County, California	55	0
Block 6003, Block Group 6, Census Tract 3190, Contra Costa County, California	76	0
Block 6004, Block Group 6, Census Tract 3190, Contra Costa County, California	35	0
Block 6005, Block Group 6, Census Tract 3190, Contra Costa County, California	107	0
Block 6006, Block Group 6, Census Tract 3190, Contra Costa County, California	28	0
Block 6007, Block Group 6, Census Tract 3190, Contra Costa County, California	13	0
Block 6008, Block Group 6, Census Tract 3190, Contra Costa County, California	17	0
Block 6009, Block Group 6, Census Tract 3190, Contra Costa County, California	40	0
Block 6010, Block Group 6, Census Tract 3190, Contra Costa County, California	42	0
Block 6011, Block Group 6, Census Tract 3190, Contra Costa County, California	48	0
Block 6012, Block Group 6, Census Tract 3190, Contra Costa County, California	10	0
Block 6013, Block Group 6, Census Tract 3190, Contra Costa County, California	98	0
Block 6014, Block Group 6, Census Tract 3190, Contra Costa County, California	53	0
Block 6015, Block Group 6, Census Tract 3190, Contra Costa County, California	27	27
Block 6016, Block Group 6, Census Tract 3190, Contra Costa County, California	39	39
Block 6017, Block Group 6, Census Tract 3190, Contra Costa County, California	21	21
Block 6018, Block Group 6, Census Tract 3190, Contra Costa County, California	8	0
Block 6019, Block Group 6, Census Tract 3190, Contra Costa County, California		0
Block 1000, Block Group 1, Census Tract 3200.01, Contra Costa County, California		0
Block 1001, Block Group 1, Census Tract 3200.01, Contra Costa County, California		0
Block 1002, Block Group 1, Census Tract 3200.01, Contra Costa County, California		0
Block 1003, Block Group 1, Census Tract 3200.01, Contra Costa County, California	413	0
Block 1004, Block Group 1, Census Tract 3200.01, Contra Costa County, California		0
Block 1005, Block Group 1, Census Tract 3200.01, Contra Costa County, California	159	0
Block 1006, Block Group 1, Census Tract 3200.01, Contra Costa County, California	108	0
Block 1007, Block Group 1, Census Tract 3200.01, Contra Costa County, California	157	0
Block 2000, Block Group 2, Census Tract 3200.01, Contra Costa County, California	70	0
Block 2001, Block Group 2, Census Tract 3200.01, Contra Costa County, California	361	0
Block 2002, Block Group 2, Census Tract 3200.01, Contra Costa County, California	34	0
Block 2003, Block Group 2, Census Tract 3200.01, Contra Costa County, California	340	0
Block 2004, Block Group 2, Census Tract 3200.01, Contra Costa County, California	15	-15
Block 2010, Block Group 2, Census Tract 3200.01, Contra Costa County, California	101	-101
Block 2011, Block Group 2, Census Tract 3200.01, Contra Costa County, California	418	-418
Block 2012, Block Group 2, Census Tract 3200.01, Contra Costa County, California	56	-56
Block 3007, Block Group 3, Census Tract 3200.01, Contra Costa County, California	257	257
Block 3008, Block Group 3, Census Tract 3200.01, Contra Costa County, California		0

2000 Census Data
For Blocks Between
the City of Martinez and
Water Service Area Boundaries

Block 2002, Block Group 2, Census Tract 3200.02, Contra Costa County, California	48	-48
Block 2003, Block Group 2, Census Tract 3200.02, Contra Costa County, California	286	-286
Block 2004, Block Group 2, Census Tract 3200.02, Contra Costa County, California	41	-41
Block 2005, Block Group 2, Census Tract 3200.02, Contra Costa County, California	156	-156
Block 2006, Block Group 2, Census Tract 3200.02, Contra Costa County, California	21	-21
Block 2007, Block Group 2, Census Tract 3200.02, Contra Costa County, California	1519	-1519
Block 2008, Block Group 2, Census Tract 3200.02, Contra Costa County, California	106	-106
Block 2009, Block Group 2, Census Tract 3200.02, Contra Costa County, California	77	-77
Block 2010, Block Group 2, Census Tract 3200.02, Contra Costa County, California	25	-25
Block 2011, Block Group 2, Census Tract 3200.02, Contra Costa County, California	213	-213
Block 2012, Block Group 2, Census Tract 3200.02, Contra Costa County, California	205	-205
Block 2013, Block Group 2, Census Tract 3200.02, Contra Costa County, California	57	-57
Block 2014, Block Group 2, Census Tract 3200.02, Contra Costa County, California	21	-21
Block 2015, Block Group 2, Census Tract 3200.02, Contra Costa County, California	238	-238
Block 2016, Block Group 2, Census Tract 3200.02, Contra Costa County, California		0
Block 2017, Block Group 2, Census Tract 3200.02, Contra Costa County, California	19	-19
Block 2020, Block Group 2, Census Tract 3200.02, Contra Costa County, California	44	-44
Block 2021, Block Group 2, Census Tract 3200.02, Contra Costa County, California	317	-317
Block 2022, Block Group 2, Census Tract 3200.02, Contra Costa County, California	129	-129
Block 2023, Block Group 2, Census Tract 3200.02, Contra Costa County, California	51	-51
Block 2024, Block Group 2, Census Tract 3200.02, Contra Costa County, California	469	-469
Block 2025, Block Group 2, Census Tract 3200.02, Contra Costa County, California	28	-28
Block 2026, Block Group 2, Census Tract 3200.02, Contra Costa County, California	100	-100
Block 2027, Block Group 2, Census Tract 3200.02, Contra Costa County, California	500	-500
Block 2028, Block Group 2, Census Tract 3200.02, Contra Costa County, California		0
Block 2029, Block Group 2, Census Tract 3200.02, Contra Costa County, California	61	-61
Block 2030, Block Group 2, Census Tract 3200.02, Contra Costa County, California	94	-94
Block 2031, Block Group 2, Census Tract 3200.02, Contra Costa County, California	134	-134
Block 3000, Block Group 3, Census Tract 3200.02, Contra Costa County, California	1179	-1179
Block 3011, Block Group 3, Census Tract 3200.02, Contra Costa County, California		0
Block 3012, Block Group 3, Census Tract 3200.02, Contra Costa County, California	128	-128
Block 3013, Block Group 3, Census Tract 3200.02, Contra Costa County, California	70	-70
Block 3014, Block Group 3, Census Tract 3200.02, Contra Costa County, California	127	-127
Block 3015, Block Group 3, Census Tract 3200.02, Contra Costa County, California	86	-86
Block 3016, Block Group 3, Census Tract 3200.02, Contra Costa County, California	77	-77
Block 1000, Block Group 1, Census Tract 3211.01, Contra Costa County, California		0
Block 1001, Block Group 1, Census Tract 3211.01, Contra Costa County, California	50	-50
Block 1002, Block Group 1, Census Tract 3211.01, Contra Costa County, California	199	-199
Block 1003, Block Group 1, Census Tract 3211.01, Contra Costa County, California	37	-37
Block 1004, Block Group 1, Census Tract 3211.01, Contra Costa County, California	19	-19
Block 1005, Block Group 1, Census Tract 3211.01, Contra Costa County, California	20	-20
Block 1012, Block Group 1, Census Tract 3211.02, Contra Costa County, California	249	-249
Block 2000, Block Group 2, Census Tract 3211.02, Contra Costa County, California	295	-295
Block 2001, Block Group 2, Census Tract 3211.02, Contra Costa County, California	54	-54
Block 2006, Block Group 2, Census Tract 3211.02, Contra Costa County, California	738	738
Block 2010, Block Group 2, Census Tract 3211.02, Contra Costa County, California		0
Block 3000, Block Group 3, Census Tract 3211.02, Contra Costa County, California	634	-634
Block 3001, Block Group 3, Census Tract 3211.02, Contra Costa County, California	17	-17
Block 3002, Block Group 3, Census Tract 3211.02, Contra Costa County, California	4	-4

2000 Census Data
For Blocks Between
the City of Martinez and
Water Service Area Boundaries

Block 3003, Block Group 3, Census Tract 3211.02, Contra Costa County, California	28	-28
Block 3006, Block Group 3, Census Tract 3211.02, Contra Costa County, California	81	-81
Block 3007, Block Group 3, Census Tract 3211.02, Contra Costa County, California	174	-174
Block 3009, Block Group 3, Census Tract 3211.02, Contra Costa County, California	168	-168
Block 3010, Block Group 3, Census Tract 3211.02, Contra Costa County, California	6	-6
Block 3011, Block Group 3, Census Tract 3211.02, Contra Costa County, California	3	-3
Block 3012, Block Group 3, Census Tract 3211.02, Contra Costa County, California		0
Block 3013, Block Group 3, Census Tract 3211.02, Contra Costa County, California	16	-16
Block 3014, Block Group 3, Census Tract 3211.02, Contra Costa County, California	12	-12
Block 3015, Block Group 3, Census Tract 3211.02, Contra Costa County, California	37	-37
Block 3021, Block Group 3, Census Tract 3211.02, Contra Costa County, California		0
Block 3022, Block Group 3, Census Tract 3211.02, Contra Costa County, California	11	-11
Block 3023, Block Group 3, Census Tract 3211.02, Contra Costa County, California		0
Block 3024, Block Group 3, Census Tract 3211.02, Contra Costa County, California	37	-37
Block 4000, Block Group 4, Census Tract 3211.02, Contra Costa County, California	52	-52
Block 4001, Block Group 4, Census Tract 3211.02, Contra Costa County, California	175	-175
Block 4002, Block Group 4, Census Tract 3211.02, Contra Costa County, California	26	-26
Block 4003, Block Group 4, Census Tract 3211.02, Contra Costa County, California	871	-871
Block 4007, Block Group 4, Census Tract 3211.02, Contra Costa County, California	65	-65
Block 4008, Block Group 4, Census Tract 3211.02, Contra Costa County, California		0
Block 4009, Block Group 4, Census Tract 3211.02, Contra Costa County, California	108	-108
Block 4010, Block Group 4, Census Tract 3211.02, Contra Costa County, California	246	-246
Block 4029, Block Group 4, Census Tract 3220, Contra Costa County, California	31	31
Block 2002, Block Group 2, Census Tract 3560.02, Contra Costa County, California	48	48
Block 2003, Block Group 2, Census Tract 3560.02, Contra Costa County, California		0
Block 2005, Block Group 2, Census Tract 3560.02, Contra Costa County, California	5	5
Block 2006, Block Group 2, Census Tract 3560.02, Contra Costa County, California	10	10
Block 2007, Block Group 2, Census Tract 3560.02, Contra Costa County, California	5	5
Block 2008, Block Group 2, Census Tract 3560.02, Contra Costa County, California		0
Block 2009, Block Group 2, Census Tract 3560.02, Contra Costa County, California	10	10
Block 2010, Block Group 2, Census Tract 3560.02, Contra Costa County, California	3	3
Block 2011, Block Group 2, Census Tract 3560.02, Contra Costa County, California	5	5
Block 2012, Block Group 2, Census Tract 3560.02, Contra Costa County, California		0
Block 2013, Block Group 2, Census Tract 3560.02, Contra Costa County, California	4	4
Block 2014, Block Group 2, Census Tract 3560.02, Contra Costa County, California	25	25
Block 2015, Block Group 2, Census Tract 3560.02, Contra Costa County, California	28	28
Block 2016, Block Group 2, Census Tract 3560.02, Contra Costa County, California	13	13
Block 2019, Block Group 2, Census Tract 3560.02, Contra Costa County, California	39	39
Block 2020, Block Group 2, Census Tract 3560.02, Contra Costa County, California	381	381
Block 2040, Block Group 2, Census Tract 3560.02, Contra Costa County, California	27	27
Block 2041, Block Group 2, Census Tract 3560.02, Contra Costa County, California	18	18
Block 2042, Block Group 2, Census Tract 3560.02, Contra Costa County, California	14	14
Block 2043, Block Group 2, Census Tract 3560.02, Contra Costa County, California	10	10
Block 2044, Block Group 2, Census Tract 3560.02, Contra Costa County, California	4	4
Block 2045, Block Group 2, Census Tract 3560.02, Contra Costa County, California	18	18
TOTAL:		-6326

Note: Positive populations are populations outside City boundary and inside water service area.
Negative populations are populations inside City boundary and outside water service area.

City of Martinez
2000 Water Service Area Population Summary

City Population	WSA Population added to City	WSA Population	WSA Percent of City Population
35,866	-6,326	29,540	82.36%

WSA = Water Service Area

City Population from Department of Finance

WSA Population added to City determined by Census data for blocks between City and WSA borders.

Active Water Meters from 2000 UWMP.

City of Martinez
2010 Water Service Area Population

Areas Between City and Water Service Area

	Est. No. Units	Multiplier*	Est. Population
NE Side	952	2.407	2291.464
East Side	-4281	2.407	-10304.367
SE Side	234	2.407	563.238
SW Side	406	2.407	977.242
		Total:	-6472.423

*No. of units equal to estimated no. of dwelling units served.

*Multiplier equal to Department of Finance estimated average persons per household in Martinez in 2010.

Year	City Population*	Service Area Population*	Percent
2010	36663	30191	82.35%

*City Population estimate from Department of Finance.

*Service area population is equal to the City population plus the estimated population between the City and service area.

APPENDIX C

CITY METERING AND WATER CONSUMPTION CLASSIFICATIONS



APPENDIX C

CITY METER AND CONSUMPTION CLASSIFICATIONS

The City meter and consumption classification are listed below. The UWMP includes six defined water use that are pertinent to the City water use classifications.

Meter	UWMP Classification
C Commercial	Commercial
F Fire Service	Industrial
H Industrial/Hydrant	Industrial
I Irrigation – Other than City Uses	Landscape
M Residential Multi-Unit	Multi-Family
P Public Uses Except City	Institutional and Government
Q City of Martinez Irrigation	Landscape
R Residential	Single Family
Z City of Martinez - Domestic	Institutional and Government

APPENDIX D

WATER RATIONING DOCUMENTS
FROM PAST DROUGHTS



RESOLUTION NO. 47-91
ESTABLISHING WATER CONSERVATION MEASURES
AND REDUCING THE USE OF WATER FURNISHED BY THE
MARTINEZ WATER SYSTEM DURING THE WATER SHORTAGE EMERGENCY

The CITY COUNCIL RESOLVES AS FOLLOWS:

Section 1. Authority and Purpose.

(a) This Resolution is enacted pursuant to the emergency powers of the City Council.

(b) The Contra Costa Water District has allocated the City of Martinez Water System 1300 million gallons of water for 1991 which is 75% of the water sold to the City in 1990.

(c) The purpose of this Resolution is to assure that during the water shortage emergency condition that exists in the Contra Costa Water District the water supply to the City is conserved for the greatest public benefit with particular regard to the requirements of water for public health, fire protection and domestic use; to prevent waste; to prohibit non-essential uses of water; and ration the water supplies of the Martinez Water System fairly and equitably.

Section 2. Effect of Resolution.

This Resolution shall take effect May 1, 1991, and shall remain in effect until the City Council declares that the water shortage emergency has ended.

Section 3. Restrictions on New Service Connections.

During the period this Resolution is in effect, no new services will be connected to the water distribution system of the City unless the land to be served by the new connection is within the Martinez Water Service Area.

Section 4. Waste of Water Prohibited.

No water furnished by the Martinez Water System shall be wasted. All water withdrawn from the Martinez Water System facilities shall be put to reasonable beneficial use. Waste of water includes, but is not limited to: permitting water to flow on a sidewalk, driveway or street, or to escape in a gutter, ditch or other surface drain; or the failure to repair a controllable leak of water.

Section 5. Prohibition of Non-Essential Use of Water.

No water furnished by the Martinez Water System shall be used for any purpose declared to be non-essential by this Resolution. The following uses of water are declared to be non-essential:

(a) Washing a sidewalk, driveway, parking area, tennis court, patio or other exterior paving area, except for public safety or sanitary purposes.

(b) Using water in a decorative fountain;

(c) Irrigating any turf or ground cover planted after adoption of this Resolution;

(d) Non-commercial washing of any motor vehicle, trailer or boat with a hose except when using a shut-off nozzle.

(e) Filling any swimming pool constructed under a building permit issued after adoption of this Resolution, except with water from a source acceptable to the Martinez Water System;

(f) Completely refilling an existing swimming pool, except a publicly owned pool refilled for reasons of public health or except where the water is recycled;

(g) Any use of water from a fire hydrant, except to fight fire and except such specified uses from specific hydrants which the Martinez Water System from time to time determines to be necessary in the public interest.

Section 6. Enforcement of Sections 4 and 5.

(a) If and when the Martinez Water System becomes aware of any violation of any provisions of Sections 4 or 5 of this Resolution, a written notice shall be delivered to the premises where the violation occurs and shall be mailed to the person who is regularly billed for the service. Notice may also be given to any other person known to the Martinez Water System who is responsible for the violation or its correction. Said notice shall describe the violation and order that it be corrected, cured or abated immediately or within such specified time as the Martinez Water System determines is reasonable under the circumstances. If said order is not complied with, the Martinez Water System may thereupon disconnect the service or place flow restrictors where the violation occurs without further notice. Flow restrictors will be in place a minimum of three days and the charge for removal will be Fifty Dollars (\$50.00).

(b) Upon the second such violation and each subsequent violation, a similar notice as described in (a) of this Section 6 shall be delivered and the water to that connection shall be disconnected, or restricted for a minimum of seven (7) days. The charge shall be One Hundred Dollars (\$100.00) to have the service restored to normal.

Section 7. Rationing of Water Furnished by the Martinez Water System.

(a) The minimum quantity of water which may be used by each service connection to the water distribution system of the Martinez Water System after April 3, 1991, or such later date as the City Council shall establish, and during the period this Resolution is in effect shall be determined as provided in this Section 7 and is hereinafter referred to as the "water ration".

(b) Each bill for water service shall state the water ration for the service applicable to the following billing period.

(c) Water banking. If customer use is under the allotment in any given billing, water can be "banked" for future use. This would be carried for customers through 12/31/91.

(d) The water ration for each separately metered residence for each billing period shall be three hundred (300) gallons per day for up to four (4) permanent residents; an increase of fifty (50) gallons per day for each additional permanent resident will be allocated upon written request and verification by City that the household exceeds four (4) persons.

(e) The water ration for each service connection shall be based on its 1990 usage during the same billing period as follows:

Multi-family Residential	80%
Industrial	85%
Commercial	75%
Public Buildings	75%
Irrigation	50%

(f) If any connection did not receive full service throughout 1990, the assumed average daily use shall be computed by the Martinez Water System on the basis of its records of use by similar connections.

Section 8. Penalties for Exceeding Martinez Water System Ration.

(a) Commencing with the first full billing period after adoption of this Resolution, an extra charge shall be made for water withdrawn from the Martinez Water System by any service connection in excess of its water ration.

(b) The extra water charge for the billing period that the water ration is exceeded shall be as follows:

Single-family Residential Quantity [Above Ration Amount]
Per Hundred Cubic Feet (hcf)

first 5 hcf	2 times rate
next 5 hcf	3 times rate
add'l hcf	4 times rate

Other Users

first 10% excess	2 times rate
next 10% excess	3 times rate
additional excess	4 times rate

A service may have a flow restrictor installed if the quantity of water withdrawn exceeds the water ration by 20 percent and 20 hundred cubic feet for the service during two (2) consecutive billing periods.

Flow restrictors will be in place a minimum of seven (7) days the first time installed and fourteen (14) days each consecutive time thereafter. The fee for removal will be one hundred dollars (\$100.00) for each time installed. Fee must be paid before the flow restrictor can be removed.

Section 9. Exceptions/Appeals Procedure.

If the City of Martinez Water System finds that unusual circumstances exist which make it fair, equitable and in the public interest to increase the maximum quantity of water which may be used by a particular service, under the guidelines listed in 9.3., an increase may be granted. Any customer may apply to the Martinez Water System for an increase in the maximum quantity of water which may be used by a particular service.

Application appeal procedure for exceptions:

1. Written applications for exceptions shall be accepted, and may be granted by the City Manager's designee with approval of the Administrative Services Director and the City Manager.
2. Denials of applications may be appealed in writing to the City Council or a Subcommittee thereof.
3. Grounds for granting such applications are:
 - a. mandated allocation would cause an unnecessary and undue hardship to the applicant, including, but not limited to: adverse economic impacts such as loss of production or jobs
 - b. mandated allocation would cause an emergency condition affecting the health, sanitation, fire protection or safety of the applicant or the public
 - c. medical requirements with written verification by physician (if requirements are limited by household size)
 - d. household size - single family residence - presence of more than four permanent residents (must reside in residence more than 4 months per year)
 - e. care of livestock (if requirements are limited by household size)
 - f. small multi-family dwelling units with a lower allocation than an equivalent single family dwelling unit (based on total number of occupants)
 - g. other reasons may be considered through the appeal process

Section 10. Implementing Rules and Regulations.

The City Council may from time to time adopt rules and regulations establishing procedures for implementing and enforcing this Resolution.

* * * * *

I HEREBY CERTIFY that the foregoing is true and correct copy of a resolution duly adopted by the City Council of the City of Martinez at a regular meeting of said Council held on the 3rd day of April, 1991 by the following vote:

AYES: Councilmembers Farley, Smith, Woodburn, Vice Mayor McDowell and Mayor Menesini

NOES: None

ABSENT: None

GUS S. KRAMER, CITY CLERK

By Sherry M. Kelly
Sherry M. Kelly, Deputy City Clerk

D R A F T

City of Martinez Water System

1990 Water Usage vs Allocation by CCWD

Customer class	Customer number	1990 Water usage*	CCWD allocation	Water available*
Single family	7,867	894	280**	804
Multifamily	436	188	85%	160
Commercial	357	142	75%	106
Public	189	189	75%	142
Industrial	17	125	85%	106
Irrigation	54	91	25%	23
Temporary, Fire Services, misc.	101	109	0	0
total	9021	1728		1341

* million gallons

** gallons per dwelling unit per day

CITY OF MARTINEZ

M E M O R A N D U M

DATE: July 8, 1991

TO: JIM JAKEL, CITY MANAGER

FROM: RICHARD CULLEN, PUBLIC SERVICES DIRECTOR *RRC*

SUBJECT: MONTHLY 1991 WATER USAGE REPORT

FILE: 15.10.6

Listed below are water usage comparisons for 1990 and 1991. Water usage figures are in million gallons (m.g.).

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>April</u>	<u>May</u>	<u>June</u>	
1990 (actual)	97	94	108	137	156	179	
1991 (actual)	97	83	80	93	102	124	
% 1991 Monthly Reduction vs 1990	- -	11.7%	25.9%	32.1%	34.6%	30.7%	

	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
1990 (actual)	200	198	174	159	119	107	1728
1991 (actual)							*
% 1991 Monthly Reduction vs 1990							

1. Cumulative reduction thru June, 1991 vs. same period 1990: 24.9%
2. Percent of total annual allocation used thru June, 1990: 44.6%
3. Percent of total annual allocation used thru June, 1991: 39.4%
4. *City raw water allocation from CCWD 1991: 1469 m.g.
(allocation for 1991 amended 7/1/91; based on
85% of 1990 consumption)

WP/RRC/lf.224

c: Ron Peterson



CONTRA COSTA
WATER DISTRICT

1331 Concord Avenue
P.O. Box H20
Concord, CA 94524
(415) 674-8000 FAX (415) 674-8122

(415) 439-9169 Toll Free from
Eastern Contra Costa County

Directors
Bette Boatman
President

Ronald E. Butler
Vice President

Donald P. Freitas
Daniel L. Pellegrini
Paul F. Hughey

Ed Seegmiller
General Manager

July 2, 1991

Mr. Walter Pease
Plant Superintendent
City of Martinez
525 Henrietta Street
Martinez, CA 94553

Dear Walter:

At their June 26th meeting, the Board of Directors of the Contra Costa Water District amended the District's Emergency Water Rationing Program. The revised program provides for a voluntary 15 percent water reduction by all of the District's customers. The Board was able to ease the rationing restrictions due to the purchase of additional water from the State Water Bank and the excellent conservation efforts by our customers during the past several months. The 15 percent reduction applies to the period from June 26 through December 31.

Although the water rationing restrictions are voluntary, it must be emphasized that the drought emergency is not over. We are relying on all of our customers to meet the 15 percent reduction goal. We will be closely monitoring consumption to ensure that the voluntary program is working.

Your continued cooperation in this drought situation will be greatly appreciated. Should you have any questions, please contact me at 674-8042.

Very truly yours,


William J. Zenoni
Director of Finance

WJZ/df



CITY OF MARTINEZ

M E M O R A N D U M

COUNCIL AGENDA - 7/17/91

DATE: JULY 9, 1991

TO: CITY MANAGER AND CITY COUNCIL

FILE: 15.10.6

FROM: PUBLIC SERVICES DIRECTOR *RF*

PREPARED BY: WATER SUPERINTENDENT

SUBJECT: WATER RATIONING PROGRAM

RECOMMENDATION:

Adopt the Resolution Rescinding Resolution No. 47-91 and Establishing Voluntary Water Conservation Measures for Water Furnished by the Martinez Water System During the Water Shortage.

DISCUSSION:

On March 6, 1991 the Contra Costa Water District Board of Directors (CCWD) passed a resolution rationing water which included a reduction of approximately 25% of raw water for calendar year 1991 to the Martinez Water System. This was a result of the reduction by 50% of CCWD's raw water supply from the United States Bureau of Reclamation.

Because of the reduction of raw water, the City Council adopted Resolution No. 47-91 on April 3, 1991. This Resolution established mandatory reductions commencing on May 1, 1991, varying by customer classification, for all customers of the Martinez Water System.

On June 26, 1991 CCWD amended the District's Emergency Water Rationing Plan. The revised program provides for a voluntary 15% water reduction by all of the District's raw water customers.

This change in allocation was made possible by the reduction in use by Contra Costa water users, by the ability of CCWD to obtain water from the State of California Water Bank and by the reduction in use by Gaylord Paper in Antioch.

The City of Martinez is proposing to change from the mandatory water rationing program that it had implemented to a voluntary water conservation program. The voluntary water conservation program addresses restriction and penalties for wasting water. Limitations in water use, such as planting of new groundcover, are removed.

Attached is a copy of CCWD's letter of July 2, 1991, formally notifying the City of CCWD's change to a voluntary 15% reduction plan. Also attached is the monthly water usage report through June, 1991.

RRC/WP/lf.169

22.

RESOLUTION NO. _____

RESCINDING RESOLUTION NO. 47-91
"ESTABLISHING WATER CONSERVATION MEASURES AND
REDUCING THE USE OF WATER FURNISHED BY THE
MARTINEZ WATER SYSTEM DURING THE WATER SHORTAGE EMERGENCY"
AND ESTABLISHING VOLUNTARY WATER CONSERVATION MEASURES FOR WATER
FURNISHED BY THE MARTINEZ WATER SYSTEM DURING THE WATER SHORTAGE

WHEREAS, the City Council of the City of Martinez did adopt Resolution No. 47-91, "Establishing Water Conservation Measures and Reducing the Use of Water Furnished by the Martinez Water System During the Water Shortage Emergency", on April 3, 1991.

WHEREAS, said Resolution was adopted pursuant to a reduction of 25% by Contra Costa Water District of City's raw water allocation for calendar year 1991; and

WHEREAS, on June 26, 1991, the Contra Costa Water District Board of Directors has modified the allocation to the City of Martinez Water System to a voluntary 15% reduction which would reduce the need for mandatory rationing by the customers of the Martinez Water System and would enable the System to meet its goals by a voluntary water conservation program by its customers.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Martinez that in consideration of the above, Resolution No. 47-91 is hereby rescinded; and

BE IT FURTHER RESOLVED voluntary water conservation measures are adopted as follows:

SECTION 1. Authority and Purpose.

(a) This Resolution is enacted pursuant to the emergency powers of the City Council.

(b) The Contra Costa Water District has requested the City of Martinez Water System to use an amount equal to 85% of the water sold to the City in 1990 for 1991.

(c) The purpose of this Resolution is to rescind Resolution 47-91 and to assure that during the water shortage that exists in the Contra Costa Water District the water supply to the City is conserved for the greatest public benefit with particular regard to the requirements of water for public health, fire protection and domestic use; to prevent waste; to prohibit non-essential uses of water; and use the water supplies of the Martinez Water System fairly and equitably.

SECTION 2. Effect of Resolution.

This Resolution shall take effect July 17, 1991, and shall remain in effect until the City Council declares that the water shortage emergency has ended.

SECTION 3. Restrictions on New Service Connections.

During the period this Resolution is in effect, no new services will be connected to the water distribution system of the City unless the land to be served by the new connection is within the Martinez Water Service Area.

SECTION 4. Waste of Water Prohibited.

No water furnished by the Martinez Water System shall be wasted. All water withdrawn from the Martinez Water System facilities shall be put to reasonable beneficial use. Waste of water includes, but is not limited to: permitting water to flow on a sidewalk, driveway or street, or to escape in a gutter, ditch or other surface drain; or the failure to repair a controllable leak of water.

SECTION 5. Prohibition of Non-Essential Use of Water.

No water furnished by the Martinez Water System shall be used for any purpose declared to be non-essential by this Resolution. The following uses of water are declared to be non-essential:

- (a) Washing a sidewalk, driveway, parking area, tennis court, patio or other exterior paving area, except for public safety or sanitary purposes.
- (b) Using water in a decorative fountain;
- (c) Non-commercial washing of any motor vehicle, trailer or boat with a hose except when using a shut-off nozzle.

SECTION 6. Enforcement of Sections 4 and 5.

(a) If and when the Martinez Water System becomes aware of any violation of any provisions of Sections 4 or 5 of this Resolution, a written notice shall be delivered to the premises where the violation occurs and shall be mailed to the person who is regularly billed for the service. Notice may also be given to any other person known to the Martinez Water System who is responsible for the violation or its correction. Said notice shall describe the violation and order that it be corrected, cured or abated immediately or within such specified time as the Martinez Water System determines is reasonable under the circumstances. If said order is not complied with, the Martinez Water System may thereupon disconnect the service, or may place flow restrictors where the violation occurs without further notice. Flow restrictors, if installed, will be in place a minimum of three days. A fine of Twenty-Five Dollars (\$25.00) shall be charged to the account.

(b) Upon the second such violation and each subsequent violation, a similar notice as described in (a) of this Section 6 shall be delivered and the water to that connection may be disconnected, or may be restricted for a minimum of seven (7) days. A fine of Twenty-Five Dollars (\$25.00) shall be charged to the account.

SECTION 7. Implementing Rules and Regulations.

The City Council may from time to time adopt rules and regulations establishing procedures for implementing and enforcing this Resolution.

* * * * *

I HEREBY CERTIFY that the foregoing is true and correct copy of a resolution duly adopted by the City Council of the City of Martinez at a regular meeting of said Council held on the 17th day of July, 1991 by the following vote:

AYES:

NOES:

ABSENT:

GUS S. KRAMER
CITY CLERK

By: _____
Sherry M. Kelly
Deputy City Clerk

lf/245.170

CERTIFIED A TRUE COPY OF THE ORIGINAL
Janice B. Booker, District Secretary
Contra Costa Water District

RESOLUTION NO. 77-4

A RESOLUTION OF THE BOARD OF DIRECTORS OF CONTRA COSTA
COUNTY WATER DISTRICT DECLARING THE EXISTENCE OF A
WATER SHORTAGE EMERGENCY CONDITION IN THE DISTRICT

BE IT RESOLVED by the Board of Directors of Contra Costa County Water District that this Board of Directors does hereby find and declare as follows:

1. On March 9, 1977, this Board held a public hearing on the matter of declaring the existence of a water shortage emergency condition at which hearing all persons present and desiring to be heard were heard. No protest was made to said declaration.

2. Said hearing was noticed and held in all respects as required by law.

3. As a result of drought, a water shortage emergency condition exists in the District such that the ordinary demands and requirements of the water consumers of the District cannot be satisfied without depleting the water supply available to the District to the extent that there would be insufficient water for human consumption, sanitation and fire protection.

* * * * *

I hereby certify that the foregoing is a true and complete copy of a resolution duly and regularly adopted by the Board of Directors of Contra Costa County Water District at a regular meeting thereof held on March 9, 1977, by the following vote:

AYES: Directors Randall, Lasell, Stitt, Weir and Boatman

NOES: None

ABSENT: None

John L. Potts
Secretary to Board of Directors of
Contra Costa County Water District

RESOLUTION NO. 044-09

**ESTABLISHING WATER CONSERVATION MEASURES
AND REDUCING THE USE OF WATER FURNISHED BY THE
MARTINEZ WATER SYSTEM DURING THE WATER SHORTAGE EMERGENCY**

The CITY COUNCIL RESOLVES AS FOLLOWS:

Section 1. Authority and Purpose.

(a) This Resolution is enacted pursuant the emergency powers of the City Council.

(b) The Contra Costa Water District has allocated the City of Martinez Water System eighty-five percent (85%) of the historical average used in 2005, 2006, and 2007.

(c) The Purpose of this resolution is to assure that during the water shortage emergency condition that exists in Contra Costa Water District the water supply to the City is conserved for the greatest public benefit with particular regard to the requirements of water for public health, fire protection, and domestic use; to prevent waste; to prohibit non-essential uses of water; and ration the water supplies of the Martinez Water System fairly and equitably.

Section 2. Effect of Resolution.

This resolution shall take effect June 1, 2009 and shall remain in effect until the City Council declares that the water shortage emergency has ended.

Section 3. Restrictions on new service connections.

During the period this resolution is in effect, no new services will be connected to the water distribution system unless the land to be served by the new connection is within the Martinez Water Service Area.

Section 4. Waste of Water Prohibited.

No water furnished by the Martinez Water System shall be wasted. All water withdrawn from the Martinez Water System facilities shall be put to reasonable beneficial use. Waste of water includes, but is not limited to: permitting water to flow on a sidewalk, driveway, or street, or to escape in a gutter, ditch, or other surface drain; or failure to repair a controllable leak of water.

Section 5. Prohibition of Non-Essential use of water.

No water furnished by the Martinez Water System shall be used for any purpose declared to be non-essential by this resolution. The following uses of water are declared to be non-essential.

(a) Washing a sidewalk, driveway, parking area, tennis court, patio, or other exterior paving area, except for public safety or sanitary purposes.

(b) Using water in a decorative fountain unless filled with water from a source acceptable to the Martinez Water System;

(c) Irrigating any turf or ground cover planted after the adoption of this resolution;

(d) Non-commercial washing of any motor vehicle, trailer, or boat with a hose except when using a shut off nozzle.

(e) Filling any swimming pool constructed under a building permit issued after the adoption of this Resolution, except with water from a source acceptable to the Martinez Water System;

(f) Completely refilling an existing swimming pool, except a publicly owned pool refilled for reasons of public health or except where the water recycled;

(g) Any use of water from a fire hydrant, except to fight fire and except such specified uses from specific hydrants which the Martinez Water System from time to time determines to be necessary in the public interest.

This Section shall not apply to public parks, golf courses, cemeteries, and school and recreation areas.

Section 6. Enforcement of Sections 4 and 5.

(a) If and when the Martinez Water System becomes aware of any violation of any provisions of Sections 4 or 5 of this Resolution, a written notice shall be delivered to the premises where the violation occurs and shall be mailed to the person who is regularly billed for the service. Notice may also be given to any other person known to the Martinez Water System who is responsible for the violation or its correction. Said notice shall describe the violation and order that it be corrected, cured, or abated immediately or within such specified time as the Martinez Water System determines is reasonable under the circumstances. If said order is not complied with, the Martinez Water System may thereupon disconnect the service or place a flow restrictor where the violation occurs without further

notice. Flow restrictors will be in place a minimum of three days. The customer will be charged for restoring full service.

(b) Upon the second violation and each subsequent violation, a similar notice as described in (a) of this section 6 shall be delivered and water to that connection shall be disconnected, or restricted for minimum of (7) seven days. The customer will be charged for restoring full service.

Section 7. Rationing of Water Furnished by the Martinez Water System.

(a) The maximum quantity of water which may be used by each service connection to the water distribution system of the Martinez Water System after May 1, 2009, or such later date as the City Council shall establish, and during the period this resolution is in effect shall be determined as provided in this section 7 and is hereinafter referred to as the "water reduction goal".

(b) Each bill for water service shall state the water reduction goal for the service applicable to the billing period.

(c) The water reduction goal for each service connection shall be based on its (2005, 2006, and 2007) average usage (Historic Water Usage) during the same billing period as follows:

Single Family Residential	15%
Multi-Family Residential	15%
Industrial	5%
Commercial	15%
Public Buildings	15%
Irrigation	15% (mandatory)

(d) If any connection did not receive full service throughout (2005, 2006, and 2007), the assumed average daily use shall be computed by the Martinez Water System on the basis of its records of use under similar conditions, or minimum 300 gallons per day per connection.

Section 8. Penalties for exceeding Martinez Water System Historical Water Usage Average for calendar years 2005, 2006 and 2007 or portion thereof.

(a) Commencing with the first billing period after adoption of this resolution, an extra charge shall be made for water withdrawn from the Martinez Water System by any service connection in excess of its Historic water usage excepting for metered irrigation areas shall be in excess of 85% of its

Historic water use. For bills with usage outside the rationing period average daily use will be used to determine the extra charge, or actual metered use if available.

(b) The extra charge for the billing shall be as follows:

All water usage above Historical Water Usage Average, excepting for metered irrigation areas shall be usage above 85% of its Historic use, per billing cycle: 4 times rate

A service may have a flow restrictor installed if the quantity of water withdrawn exceeds the water reduction goals by 20 percent and/or 20 hcf for the service during two consecutive billing periods.

Section 9. Exceptions / Appeals Procedure

If the City of Martinez Water System finds that unusual circumstances exist which make it fair, equitable and in the public interest to increase the maximum quantity of water which may be used by a particular service, under the guidelines listed in 9.3. , an increase may be granted. Any customer may apply to the Martinez Water System for an increase in the maximum quantity of water which may be used by a particular service.

Application appeal procedure for exceptions:

1. Written application for exceptions shall be accepted, and may be granted by the City Manager's designee with approval of the Administrative Services Director and the City Manager.
2. Denials of applications may be appealed in writing to the City Council Water Subcommittee.
3. Grounds for granting such application are:
 - a. Mandated allocation would cause an unnecessary and undue hardship to the applicant, including, but not limited to: adverse economic impacts such as loss of production or jobs.
 - b. Laundromat or carwash provided that exterior water use has irrigation best management practices implemented.
 - c. Mandated allocation would cause an emergency condition affecting health, sanitation, fire protection or safety of the applicant or the public.

- d. Medical requirements with written verification by (if requirements are limited by household size).
- e. Household size - single family residence - additional allocation of 75 gallons per day per additional person residing in dwelling compared to historic period. (must reside in residence more than 4 months per year).
- f. Care of livestock (if requirements are limited by household size).
- g. Small multi-family dwelling units with a lower allocation than an equivalent single family dwelling unit (based on total number of occupants).
- h. Other reasons may be considered through the appeal process.

Section 10. Implementing Rules and Regulations

The City Council may from time to time adopt rules and regulations establishing procedures for implementing and enforcing this resolution.

* * * * *

I HEREBY CERTIFY that the foregoing is a true and correct copy of a resolution duly adopted by the City Council of the City of Martinez at a Regular Meeting of said Council held on the 20th day of May, 2009, by the following vote:

AYES: Councilmembers Lara DeLaney, Janet Kennedy, Mark Ross, Vice Mayor Michael Menesini, and Mayor Rob Schroder

NOES: None

ABSENT: None



RICHARD G. HERNANDEZ, CITY CLERK
CITY OF MARTINEZ

RESOLUTION NO. 010-10

AMENDING SECTION 8 OF RESOLUTION NO. 044-09 EXEMPTING PENALTIES
APPLIED FOR WATER USE LESS THAN OR EQUAL TO 300 GALLONS PER DAY
PER SINGLE FAMILY OR MULTI-FAMILY RESIDENTIAL ACCOUNT

NOW, THEREFORE, BE IT RESOLVED that the City Council amends
SECTION 8 OF RESOLUTION NO. 044-09 as follows:

Section 8. Penalties for exceeding Martinez Water System
Historical Water Usage Average for calendar years 2005, 2006 and
2007 or portion thereof.

(a) Commencing with the first billing period after adoption of
this resolution, an extra charge shall be made for water
withdrawn from the Martinez Water System by any service
connection in excess of its Historic water usage excepting for
metered irrigation areas shall be in excess of 85% of its
Historic water use. For bills with usage outside the rationing
period average daily use will be used to determine the extra
charge, or actual metered use if available.

(b) The extra charge for the billing shall be as follows:

All water usage above Historical Water Usage Average, excepting
for metered irrigation areas shall be usage above 85% of its
Historic use, per billing cycle: 4 times rate

***(C) Excepting from "(b)" above, no penalty shall be applied for
water use less than or equal to; 300 gallons per day per single
family or 300 gallons per day per unit of multi-family
residential account.***

A service may have a flow restrictor installed if the quantity
of water withdrawn exceeds the water reduction goals by 20
percent and/or 20 hcf for the service during two consecutive
billing periods.

* * * * *

I HEREBY CERTIFY that foregoing is true and correct copy of a resolution duly adopted by the City Council of the City of Martinez at a Regular Meeting of said of said Council held on the 20th day of January, 2010 by the following vote:

AYES: Councilmembers Janet Kennedy, Michael Menesini, Mark Ross, Vice Mayor Lara DeLaney, and Mayor Rob Schroder

NOES: None

ABSENT: None



RICHARD G. HERNANDEZ, CITY CLERK
CITY OF MARTINEZ

RESOLUTION NO. 032-10

**PROMOTING VOLUNTARY WATER CONSERVATION AND RESCINDING
MANDATORY WATER CONSERVATION RESOLUTIONS 044-09 AND 010-10**

WHEREAS, the City Council of the City of Martinez did adopt Resolution No. 044-09, "Establishing Water Conservation Measures and Reducing the Use of Water Furnished by the Martinez Water System During the Water Shortage Emergency", on May 20, 2009; and

WHEREAS, the City Council of the City of Martinez did adopt Resolution No. 010-10, "Amending Section 8 of Resolution No. 044-09 Exempting Penalties applied for Water Use Less than or Equal to 300 Gallons Per Day Per Single Family of Multi-Family Residential Account", on January 20, 2010; and

WHEREAS, said Resolutions were adopted pursuant to the mandatory reduction of 15% by Contra Costa Water District of the City's raw water allocation enforceable through severe monetary penalties; and

WHEREAS, it is anticipated that the Contra Costa Water District Board of Directors will modify the allocation to the City of Martinez Water System to a voluntary 10% reduction goal on or about March 31, 2010.

NOW THEREFORE, IT BE RESOLVED by the City Council of the City of Martinez, that Martinez Water System customers shall not be subject to mandatory water conservation penalties starting with their first full billing cycle following March 31, 2010.

BE IT FURTHER RESOLVED by the City Council of the City of Martinez that in consideration of the above, Resolutions Nos.044-09 and 010-10 are hereby rescinded at the conclusion of the penalty billing cycles described above and subject to Contra Costa Water District terminating mandatory rationing penalties for raw water to the City of Martinez; and

BE IT FURTHER RESOLVED, the City Council supports and promotes voluntary water conservation.

* * * * *

I HEREBY CERTIFY that the foregoing is a true and correct copy of a resolution duly adopted by the City Council of the City of Martinez at a Regular Meeting of said Council held on the 17th day of March, 2010 by the following vote:

AYES: Councilmembers Janet Kennedy, Michael Menesini, Mark Ross and Vice Mayor Lara DeLaney, and Mayor Rob Schroder

NOES: None

ABSENT: None



RICHARD G. HERNANDEZ, CITY CLERK
CITY OF MARTINEZ

APPENDIX E

1992 URBAN WATER SHORTAGE
CONTINGENCY PLAN



Urban Water Shortage Contingency Plan

Introduction

Supply

Reduction Stages

Stage I Voluntary Conservation

Stage II Voluntary Conservation

Stage III Mandatory Rationing

Stage IV Mandatory Rationing

Revenue Analysis

Resolution 47-91 "Establishing Water Conservation Measures and Reducing the Use of Water Furnished by the Martinez Water System During the Water Shortage Emergency."

Resolution 105-91 "Rescinding Resolution No. 47-91 ... and Establishing Voluntary Water Conservation Measures for Water Furnished by the Martinez Water System During the Water Shortage."

Assembly Bill No. 11

Urban Water Shortage Contingency Plan

INTRODUCTION

The State of California has required, by AB 11, that urban water suppliers providing municipal water directly to more than 3,000 customers, must prepare and adopt, and send an Urban Water Shortage Contingency Plan (Plan) to the California Department of Water Resources. An urban water supplier that does not submit an amendment to its urban water management plan is ineligible to receive drought assistance from the state until the plan is submitted (see AB 11).

Refer to the 1991 City of Martinez Urban Water Management Plan for a discussion of water use characteristics.

The City of Martinez has incorporated "no-waste" and penalties for waste of water as part of Resolution No. 105-91, adopted July 17, 1991.

SUPPLY

The City of Martinez Water System is supplied with water from the Sacramento-San Joaquin River Delta through a canal operated by Contra Costa Water District (CCWD). CCWD is a customer of the United State Bureau of Reclamation (USBR). Our supply is therefore dependent upon the supply that CCWD obtains from USBR or from supplemental sources.

When there is a water supply deficiency, CCWD sets the limits for their wholesale customers, under a staged process. The stages go from Stage I to Stage IV shortages, which is up to a 50% reduction in the water supply. The City of Martinez Water System would use the CCWD stages as a reference would probably adopt a water conservation that is coordinated with and similar to the plan that is adopted by CCWD.

The worse case for supply would be an allocation of 25% of normal usage (75% reduction). This is based on a number of factors, including an extremely dry year following a period of drought, such as we have had in 1986-91.

Refer to the CCWD Urban Water Shortage Contingency Plan (January 1992) for a more comprehensive discussion of water supply.

METERING

The City of Martinez Water system serves approximately 9,100 service connections (customers). All of these customers are metered. Meters are generally read bi-monthly.

REDUCTION STAGES

Stage I - Voluntary Conservation (up to 15% reduction)

A Stage I reduction would be similar to what has occurred in 1987 to 1990. Through public information, coming from many sources, customers have been made aware of the need to reduce water consumption. Martinez Water System customers, upon being made aware of a need to reduce usage have always responded with a concerted effort. The City of Martinez Water System has only had to resort to using penalties on about ten bills, only in 1977, to meet water conservation goals.

A Stage I program would be similar to what was in effect in the second half of 1991. A stage II program would be similar to was adopted in 1977 and the first part of 1991.

Stage II - Voluntary Conservation (up to 30% reduction)

The City of Martinez is submitting the mandatory water conservation plan that was implemented in 1991 to meet a 25% reduction in use. It was changed to a voluntary 15% conservation program in July 1991. Our water consumption reduction for 1991 vs. 1990 was 24% with the voluntary water conservation program. The City of Martinez feels that up to a 30% consumption reduction (vs. 1990) through increased public information efforts can be obtained with the existing water conservation regulations (attached).

This Stage II allocation shows a total amount that is higher than the 70% reduction goal. This is because many customers, primarily residential, exceed their rationing goals in a voluntary program. The 60 million gallons in miscellaneous are for water losses through unauthorized usage and water leaks, primarily water main breaks.

A reduction of more than 30% would require mandatory rationing and penalties for exceeding allocations.

Stage II
1990 Water Usage vs Allocation - up to 30% reduction

Customer class	Customer number	1990 Water usage*	Allocation	Water available*
Single family	7,867	894	280**	804
Multifamily	436	188	85%	160
Commercial	357	142	75%	106
Public	189	189	75%	142
Industrial	17	125	85%	106
Irrigation	54	91	25%	23
Temporary, Fire Services, misc.	101	109	0	60
total	9021	1738		1423
			goal	1217

* million gallons

** gallons per dwelling unit per day

Stage III - Mandatory Rationing (40% Reduction)

Rationing amounts are based on 22,000 people in 7867 single family dwellings and 6,000 people in 2850 multifamily dwellings. There is some duplication in the multifamily dwelling unit (mfdu) allocations. The extra 20 gpcpd for the first person in a mfdu is for irrigation uses. Some mfdu have separate irrigation meters and would be allocated water separately. These units would get 50 gpcpd only for inside usage.

Penalties could be similar to those adopted in the 1991 water rationing plan, Resolution 47-91 (attached).

**Stage III
1990 Water Usage vs Allocation - 30 to 40% reduction**

Customer class	Customer number	1990 Water usage*	Allocation	Water available*
Single family	7,867	894	90 (first)** 50	546
Multifamily	436	188	70 (first) 50	131
Commercial	357	142	70%	99
Public	189	189	70%	132
Industrial	17	125	75%	94
Irrigation	54	91	25%	23
Temporary, Fire Services, misc.	101	109	0	60
total	9021	1738		1057
			goal	1043

* million gallons

** gallons per capita per day

(first amount for first person per dwelling unit,
50 for each additional person per dwelling unit)

Stage IV - Mandatory Rationing (50% Reduction)

Rationing amounts are based on 22,000 people in 7867 single family dwellings and 6,000 people in 2850 multifamily dwellings.

Penalties could be more severe than those adopted in Stage III.

Stage IV
1990 Water Usage vs Allocation - 40 to 50% reduction

Customer class	Customer number	1990 Water usage*	Allocation	Water available*
Single family	7,867	894	50**	402
Multifamily	436	188	50**	110
Commercial	357	142	60%	85
Public	189	189	60%	113
Industrial	17	125	70%	94
Irrigation (Parks only)	54	91	5%	5
Temporary, Fire Services, misc.	101	109	0	60
	<hr/>	<hr/>		<hr/>
total	9021	1738		869
			goal	869

* million gallons

** gallons per capita per day

Revenue Analysis
(3/6/92)

The City of Martinez Water System budget is based in 1991-92 and probably in 1992-93 on 80% of normal water usage. This would be about 1400 million gallons into the system. Revenue reduction caused by a reduction in water usage could be taken out of reserves, or could be made up with a drought surcharge as was done in 1991. The table below lists possible revenue changes that could occur with different water use possibilities.

Cost of producing water - \$1,600 per million gallons (mg).
 raw water \$1,282 / mg
 power 250 / mg
 chemicals 68 / mg

Cost received for water - \$1,965 per million gallons
 \$1.47 per hundred cubic feet (hcf)

Water sold (million gallons)	% of normal	Revenue reduction	Drought surcharge (per hcf)
1216 mg	70%	67,160	\$0.07
1043 mg	60%	\$130,305	\$0.17
700 mg	50%	\$255,500	\$0.48

APPENDIX F

CITY OF MARTINEZ EMERGENCY
RESPONSE PLAN (ERP) SUMMARY



CITY OF MARTINEZ EMERGENCY RESPONSE PLAN SUMMARY

The ERP is broken into sections to provide quick access to the desired information. The following paragraphs summarize the contents in each of the sections.

Water System Information

Included in the Water System Information section is quick access to general information about the City of Martinez Water system. The following can be found in this section:

- ◆ A map of the water system boundaries, pump station and tank locations is;
- ◆ A table of reservoir capacities and pump station descriptions;
- ◆ A list of Interconnections with outside water systems;
- ◆ Lists of treatment chemicals and other inventory;
- ◆ A general description of the water system.

The information in this section should be updated as the water system changes.

ERP Activation/Mobilization

This section describes the various levels of emergencies that the water system may encounter. This section also covers the chain of command and basic levels of management of the water system during an emergency.

Concept of Operations

This section outlines the procedures that should be followed by water system personnel and City staff in the event of an emergency. It is broken down into various subsections as follows:

- ◆ Initial Response: Briefly outlines the actions staff should take in the event of an emergency
- ◆ Preliminary Damage Inspection List: A list of items that should be inspected after a threatened or actual emergency.
- ◆ Emergency Operations Procedures, General: A general description of the emergency operations procedures, scope, priorities, and goals.
- ◆ Emergency Operations Procedures, Phase A: Describes the initial measures that should be taken at the onset of an emergency.
- ◆ Emergency Operations Procedures, Phase B: Describes the operating procedures that should be followed under a continuing or major emergency.
- ◆ Emergency Operations Procedures, Phase C: Describes the administrative decisions and implementation procedures.
- ◆ Water Utility - Task Assignments: Describes individual tasks that should be undertaken by water utility personnel.

Communication Procedures and Contact Information

This section includes documents that describe the various communication procedures and contact information that will be utilized in the event of an emergency. These sheets are updated frequently to ensure that the information remains up to date. Also in this section are examples of “Do not drink” and “Do not use” water orders, and a CADHS water quality emergency notification plan document.

SEMS/ICS Integration

This section provides a general description and summary of the state of California Standardized Emergency Management System (SEMS) and the Incident Command System (ICS). These systems are common emergency response systems that will be utilized by various agencies and departments in the event of multi-jurisdiction emergencies in the state of California. This information is provided to give City of Martinez Water System personnel a basic understanding of how they may be called upon to interact with outside agencies, in the event of a large scale emergency.

Water Quality Sampling

This section describes methods and procedures that should be followed in the event of water system contamination. The California DHS provides equipment and resources to assist the water system with water quality sampling.

Damage Assessment and Restoration Schedule

This section outlines the restoration process that should be utilized after an emergency event. Also included in this section are documents that provide information regarding disinfection of the water system, and procedures that should be followed in the event of a chemical spill.

Emergency Response Training

This section summarizes the current safety and emergency training for the City of Martinez Water System staff.

Personnel Safety Procedures

This section provides information regarding safety procedures for water system staff and personnel. Included are documents that cover what individuals should do to protect themselves and others during an emergency event or situation. Also included in this section is a description of the water treatment plant evacuation procedure, and copies of evacuation routes. Also in this section is a copy of the accident/near miss report that should be filled out by employees after an accident or emergency. This information is reviewed with staff during initial safety training and is made available to staff at all times.

Action Plans

This section includes documents that summarize the emergency response and recovery procedures specific to certain acts. These sheets can easily be copied and dispersed or taken to an emergency site for reference.

APPENDIX G

URBAN WATER MANAGEMENT
PLANNING ACT



CALIFORNIA WATER CODE DIVISION 6

PART 2.6. URBAN WATER MANAGEMENT PLANNING

All California Codes have been updated to include the 2010 Statutes.

CHAPTER 1.	GENERAL DECLARATION AND POLICY	10610-10610.4
CHAPTER 2.	DEFINITIONS	10611-10617
CHAPTER 3.	URBAN WATER MANAGEMENT PLANS	
Article 1.	General Provisions	10620-10621
Article 2.	Contents of Plans	10630-10634
Article 2.5.	Water Service Reliability	10635
Article 3.	Adoption and Implementation of Plans	10640-10645
CHAPTER 4.	MISCELLANEOUS PROVISIONS	10650-10656

WATER CODE

SECTION 10610-10610.4

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

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

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.
- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
- (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
- (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
- (8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
- (9) The quality of source supplies can have a significant impact

on water management strategies and supply reliability.

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

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

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

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

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

WATER CODE

SECTION 10611-10617

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

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

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

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

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

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

10616. "Public agency" means any board, commission, county, city

and county, city, regional agency, district, or other public entity.

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

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

WATER CODE

SECTION 10620-10621

10620. (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

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

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

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

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

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

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

10621. (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero.

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water

supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

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

WATER CODE

SECTION 10630-10634

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

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

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

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

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

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

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

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

(c) (1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

- (A) An average water year.
- (B) A single dry water year.
- (C) Multiple dry water years.

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

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

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

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

(I) Agricultural.

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

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

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

- (A) Water survey programs for single-family residential and multifamily residential customers.
- (B) Residential plumbing retrofit.
- (C) System water audits, leak detection, and repair.
- (D) Metering with commodity rates for all new connections and retrofit of existing connections.
- (E) Large landscape conservation programs and incentives.
- (F) High-efficiency washing machine rebate programs.
- (G) Public information programs.
- (H) School education programs.
- (I) Conservation programs for commercial, industrial, and institutional accounts.

- (J) Wholesale agency programs.
- (K) Conservation pricing.
- (L) Water conservation coordinator.
- (M) Water waste prohibition.
- (N) Residential ultra-low-flush toilet replacement programs.
- (2) A schedule of implementation for all water demand management measures proposed or described in the plan.
- (3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.
- (4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.
- (g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:
 - (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.
 - (2) Include a cost-benefit analysis, identifying total benefits and total costs.
 - (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.
 - (4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.
- (h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.
 - (i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.
 - (j) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivisions (f) and (g) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California,"

dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

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

10631.1. (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

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

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

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

(4) (A) Notwithstanding paragraph (1), the department shall

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

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

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

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

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

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

(i) Compliance on an individual basis.

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

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

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

the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

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

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

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

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

10631.7. The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's recommendations and comments regarding the panel process and the panel's recommendations.

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

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

(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.

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

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

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

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

(7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

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

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

(b) Commencing with the urban water management plan update due December 31, 2015, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

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

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

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

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

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

(e) The projected use of recycled water within the supplier's

service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

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

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

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

WATER CODE

SECTION 10635

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

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

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

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

WATER CODE

SECTION 10640-10645

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

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

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

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

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

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

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

(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report those water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section

10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

(2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).

(3) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

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

WATER CODE

SECTION 10650-10656

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

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

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

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

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

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

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the

"Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

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

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

APPENDIX H

CONTRA COSTA WATER DISTRICT
(CCWD) PROJECTED WATER SUPPLY



TABLE 1. PROJECTED WATER SUPPLY

Condition ^(a)	CVP ^(b)	Industrial Diversions	Mallard Slough ^(c)	Antioch Diversions ^(d)	Groundwater ^(e)	ECCID Purchases	Los Vaqueros Supply ^(f)	Recycled Water	Conservation Savings ^(g)	Total Firm Supply
	(af/yr)	(af/yr)	(af/yr)	(af/yr)	(af/yr)	(af/yr)	(af/yr)	(af/yr)	(af/yr)	(af/yr)
Near-Term										
Normal	170,000	10,000	3,100	6,400	3,000	6,000	-	8,500	11,900	218,900
Single-Year Drought	127,500	0	0	0	3,000	10,000	10,000	8,500	11,900	170,900
Multi-Year Drought (yr 1)	144,500	0	0	0	3,000	10,000	10,000	8,500	11,900	187,900
Multi-Year Drought (yr 2)	127,500	0	0	0	3,000	10,000	10,000	8,500	11,900	170,900
Multi-Year Drought (yr 3)	110,500	0	0	0	3,000	10,000	10,000	8,500	11,900	153,900
2015										
Normal	183,000	10,000	3,100	6,400	3,000	7,100	-	10,500	14,500	237,600
Single-Year Drought	137,250	0	0	0	3,000	11,100	10,000	10,500	14,500	186,400
Multi-Year Drought (yr 1)	155,550	0	0	0	3,000	11,100	10,000	10,500	14,500	204,700
Multi-Year Drought (yr 2)	137,250	0	0	0	3,000	11,100	10,000	10,500	14,500	186,400
Multi-Year Drought (yr 3)	118,950	0	0	0	3,000	11,100	10,000	10,500	14,500	168,100
2020										
Normal	195,000	10,000	3,100	6,400	3,000	8,200	-	12,500	17,200	255,400
Single-Year Drought	146,250	0	0	0	3,000	12,200	10,000	12,500	17,200	201,200
Multi-Year Drought (yr 1)	165,750	0	0	0	3,000	12,200	10,000	12,500	17,200	220,700
Multi-Year Drought (yr 2)	146,250	0	0	0	3,000	12,200	10,000	12,500	17,200	201,200
Multi-Year Drought (yr 3)	126,750	0	0	0	3,000	12,200	10,000	12,500	17,200	181,700
2025										
Normal	195,000	10,000	3,100	6,400	3,000	8,200	-	13,300	19,500	258,500
Single-Year Drought	146,250	0	0	0	3,000	12,200	10,000	13,300	19,500	204,300
Multi-Year Drought (yr 1)	165,750	0	0	0	3,000	12,200	10,000	13,300	19,500	223,800
Multi-Year Drought (yr 2)	146,250	0	0	0	3,000	12,200	10,000	13,300	19,500	204,300
Multi-Year Drought (yr 3)	126,750	0	0	0	3,000	12,200	10,000	13,300	19,500	184,800
2030										
Normal	195,000	10,000	3,100	6,400	3,000	8,200	-	14,100	21,700	261,500
Single-Year Drought	146,250	0	0	0	3,000	12,200	10,000	14,100	21,700	207,300
Multi-Year Drought (yr 1)	165,750	0	0	0	3,000	12,200	10,000	14,100	21,700	226,800
Multi-Year Drought (yr 2)	146,250	0	0	0	3,000	12,200	10,000	14,100	21,700	207,300
Multi-Year Drought (yr 3)	126,750	0	0	0	3,000	12,200	10,000	14,100	21,700	187,800
2035										
Normal	195,000	10,000	3,100	6,400	3,000	8,200	-	14,800	23,700	264,200
Single-Year Drought	146,250	0	0	0	3,000	12,200	10,000	14,800	23,700	210,000
Multi-Year Drought (yr 1)	165,750	0	0	0	3,000	12,200	10,000	14,800	23,700	229,500
Multi-Year Drought (yr 2)	146,250	0	0	0	3,000	12,200	10,000	14,800	23,700	210,000
Multi-Year Drought (yr 3)	126,750	0	0	0	3,000	12,200	10,000	14,800	23,700	190,500

- a) Basis of water year data is as follows: Normal (Average) represents a below normal or wetter year on the Sacramento River Hydrologic Region 40-30-30 Water Supply Index. Single-Year drought represents 1977 conditions. Multiple-Year drought sequence represents 1987-1992 conditions.
- b) The CVP conditions used for supply planning are defined as follows: Normal is Adjusted Historical Use. Single Year Drought supply is 75 percent of Historical Use. Multi-year drought (year 1) supply is 85 percent of Historical Use. Multi-Year Drought (year 2) is 75 percent of Historical Use. Multi-Year Drought (year 3) is 65 percent of Historical Use.
- c) Mallard Slough average annual diversion over 15 year period (1995 - 2009).
- d) Antioch Diversions is average annual diversion over 11 year period since pumping plant improvements (1999-2009).
- e) Groundwater represents production from Mallard Wells, municipal customer owned wells, and miscellaneous other wells in the District's service area.
- f) Anticipated water supply reliability benefit resulting from expansion of Los Vaqueros Reservoir.
- g) Anticipated conservation savings, including both active and passive conservation.

TABLE 2. PROJECTED SUPPLY AND DEMAND COMPARISON						
Condition	TOTAL CCWD Demand	NET CCWD Demand^(a)	Adjusted Available Supply^(a)	Planned Purchases^(b)	Supply Deficit	% of Demand^(c)
	(af/yr)	(af/yr)	(af/yr)	(af/yr)	(af/yr)	
Near-Term						
Normal	166,460	146,060	198,500	-	-	0%
Single-Year Drought	166,460	146,060	150,500	-	-	0%
Multi-Year Drought (yr 1)	166,460	146,060	167,500	-	-	0%
Multi-Year Drought (yr 2)	166,460	146,060	150,500	-	-	0%
Multi-Year Drought (yr 3)	166,460	146,060	133,500	-	12,560	9%
2015						
Normal	180,610	155,610	212,600	-	-	0%
Single-Year Drought	180,610	155,610	161,350	-	-	0%
Multi-Year Drought (yr 1)	180,610	155,610	179,650	-	-	0%
Multi-Year Drought (yr 2)	180,610	155,610	161,350	-	-	0%
Multi-Year Drought (yr 3)	180,610	155,610	143,050	-	12,560	8%
2020						
Normal	194,550	164,850	225,700	-	-	0%
Single-Year Drought	194,550	164,850	171,450	-	-	0%
Multi-Year Drought (yr 1)	194,550	164,850	190,950	-	-	0%
Multi-Year Drought (yr 2)	194,550	164,850	171,450	-	-	0%
Multi-Year Drought (yr 3)	194,550	164,850	151,950	-	12,900	8%
2025						
Normal	206,010	173,210	225,700	-	-	0%
Single-Year Drought	206,010	173,210	171,450	-	1,760	1%
Multi-Year Drought (yr 1)	206,010	173,210	190,950	-	-	0%
Multi-Year Drought (yr 2)	206,010	173,210	171,450	-	1,760	1%
Multi-Year Drought (yr 3)	206,010	173,210	151,950	-	21,260	12%
2030						
Normal	218,160	182,360	225,700	3,100	-	0%
Single-Year Drought	218,160	182,360	171,450	3,100	7,810	4%
Multi-Year Drought (yr 1)	218,160	182,360	190,950	3,100	-	0%
Multi-Year Drought (yr 2)	218,160	182,360	171,450	3,100	7,810	4%
Multi-Year Drought (yr 3)	218,160	182,360	151,950	3,100	27,310	15%
2035						
Normal	225,890	187,390	225,700	7,300	-	0%
Single-Year Drought	225,890	187,390	171,450	7,300	8,640	5%
Multi-Year Drought (yr 1)	225,890	187,390	190,950	7,300	-	0%
Multi-Year Drought (yr 2)	225,890	187,390	171,450	7,300	8,640	5%
Multi-Year Drought (yr 3)	225,890	187,390	151,950	7,300	28,140	15%

a) Net CCWD demand and Adjusted Available Supply excludes recycled water and conservation savings.
 b) Planned purchases consistent with the District's Future Water Supply Implementation Program. The water supply reliability goal adopted by the Board of Directors is to meet at least 85 percent of demand during drought conditions and 100 percent of demand in normal years. The remaining 15 percent would be met by a combination of short-term water purchases and a voluntary short-term conservation program.

APPENDIX I

2009 ANNUAL WATER
QUALITY REPORT



Your Drinking Water

Annual Water Quality Report for 2009

2009

A REPORT ON THE QUALITY OF YOUR TAP WATER

From the Contra Costa Water District, the Cities of Antioch, Martinez and Pittsburg and the Diablo Water District (Oakley).

To Our Customers:

This report answers questions you may have about your tap water. It is prepared with water quality data collected over the year 2009. It contains information about the quality of water delivered by the Contra Costa Water District (CCWD), the cities of Antioch, Martinez and Pittsburg, and the Diablo Water District (DWD) in Oakley.

Your tap water is clean and safe to drink because your water provider protects its water sources and uses state-of-the-art treatment technology. In 2009, the treated drinking water delivered to your home met all drinking water standards set by the state and federal governments. For testing results, see the Treated Water Table and Untreated Water Tables on pages 3-5.

For more information about the tap water in your community, please call:

CCWD (Central Contra Costa): Jean Zacher – (925) 688-8156

City of Antioch: Lori Sarti – (925) 779-7024

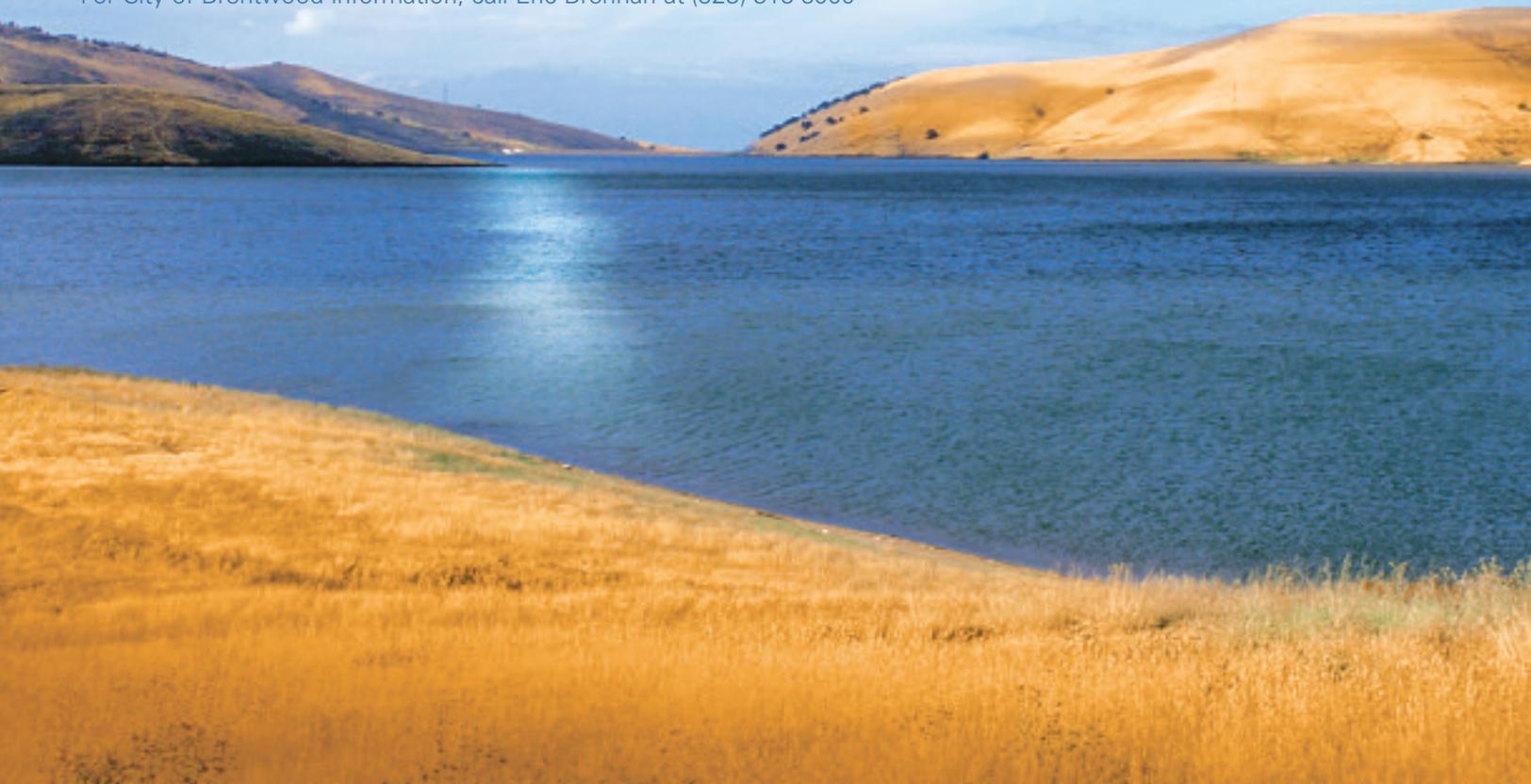
City of Martinez: Alan Pellegrini – (925) 372-3587

City of Pittsburg: Ana Corti – (925) 252-6916.

Diablo Water District (Oakley): Paul Urenda – (925) 625-2112

For Golden State Water Company (Bay Point) information, call (925) 458-3112

For City of Brentwood information, call Eric Brennan at (925) 516-6000





All Drinking Water Systems are required by the California Department of Public Health to provide consumers with the following information:

All drinking water, including bottled water, in all communities may be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and, in some cases, radioactive material. It can also pick up substances resulting from animal or human activity. Contaminants that may be present in source water before it is treated include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides, which may come from a variety of sources, such as agriculture, urban stormwater runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are byproducts of industrial processes and can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems.
- Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) and the California Department of Public Health prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Limits are also established by the U.S. Food and Drug Administration for contaminants in bottled water that must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. People with compromised immune systems, such as cancer patients undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune systems disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

For more information about contaminants and potential health effects, or for EPA and Centers for Disease Control guidelines on ways to lessen the risk of infection, call the EPA's Safe Drinking Water Hotline at:

1-800-426-4791

www.epa.gov/safewater/lead



The Source *of Your Water*



The primary source of water for 550,000 residents in Central and Eastern Contra Costa County is the Sacramento-San Joaquin Delta. In Oakley and Pittsburg, residents also receive groundwater that is pumped from wells and blended with water from the Delta.

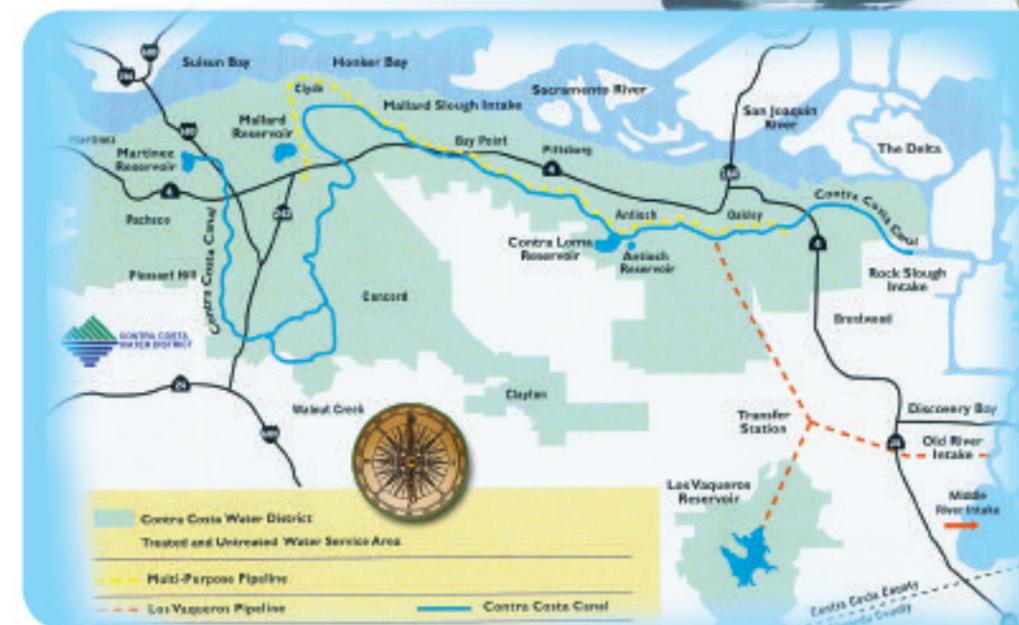
Delta water starts its journey to homes and businesses when the Contra Costa Water District (CCWD) pumps it from three locations: Rock Slough near Oakley, Old River near Discovery Bay, and Mallard Slough in Bay Point. This untreated water is pumped into the Contra Costa Canal and the Los Vaqueros Pipeline and conveyed to treatment plants and reservoirs located throughout eastern and central Contra Costa County. The City of Antioch also pumps Delta water from the San Joaquin River.

About half of the water pumped by CCWD is treated and delivered to homes and businesses in Clayton, Clyde, Concord, Pacheco, Port Costa, and parts of Pleasant Hill, Martinez and Walnut Creek. CCWD also sells treated water to the Golden State Water Company in Bay Point and the cities of Antioch and Brentwood.

The rest of the water pumped by CCWD is sold as untreated water to the following agencies: the cities of Antioch, Martinez and Pittsburg and the Diablo Water District (Oakley). These four agencies treat, distribute and bill for the water themselves.

Sanitary Surveys of the watershed that provides your water are conducted every five years. CCWD and the City of Antioch have both conducted sanitary surveys, with updates in 2006 and 2007. These surveys identified that the Delta could be affected by contamination from industrial and municipal wastewater discharges, urban runoff, highway runoff, agricultural runoff, pesticides, grazing animals, concentrated animal facilities, wild animals, mine runoff, recreational activities, traffic accidents/spills, saltwater intrusion, geologic hazards, and solid and hazardous waste disposal facilities.

The survey concluded that potential contamination is regularly mitigated by the natural flushing of the Delta, controls at the contamination sources, or existing water treatment practices. The Los Vaqueros Reservoir provides another means of mitigation because it can be used as an emergency source of water.



Primary Drinking Water Standards	PHG	MCLG or [MRDLG]	MCL or MRDL	Contra Costa Water District		Diablo Water District		Randall-Bold WTP*		CCWD/Brentwood WTP		City of Martinez		City of Pittsburg		City of Antioch		Major Sources in Drinking Water	
				RANGE	AVERAGE		RANGE												
Aluminum (mg/L)	0.6	n/a	1	ND	n/a	ND	n/a	ND	n/a	ND	n/a	ND	ND	ND-0.11	0.059	ND	ND	Residue from surface water treatment processes; erosion of natural deposits	
Fluoride (mg/L)	1	n/a	2	0.71-0.83	0.77	0.62-0.92	0.78	0.61-0.91	0.76	n/a	n/a	0.62-1.0	0.83	0.63-1.11	0.80	0.74-1.21	0.91	Water additive that promotes strong teeth; erosion of natural deposits	
Nitrate as NO3 (mg/L)	45	n/a	45	ND	ND	ND-4.8	2.3	ND-5.0	ND	ND-2.4	ND	ND-2.2	ND	ND	ND	ND	ND	Runoff and leaching from fertilizer use; erosion of natural deposits; leaching from septic tanks and sewage	
Nitrite as N (mg/L)	1	n/a	1	ND	n/a	ND	n/a	ND	n/a	ND	n/a	ND-0.50	ND	ND	ND	ND	ND	Runoff and leaching from fertilizer use; erosion of natural deposits; leaching from septic tanks and sewage	
Total organic carbon (mg/L)	n/a	n/a	TT	1.2-2.4	1.8	n/a	n/a	0.6-3.0	1.7	0.7-2.7	1.6	1.1-3.2	1.85	1.4-3.6	2.2	1.1-3.1	1.3	Naturally present in the environment	
				MAXIMUM VALUE	LOWEST MONTHLY % OF SAMPLES THAT MEETS REQUIREMENTS	MAXIMUM VALUE	LOWEST MONTHLY % OF SAMPLES THAT MEETS REQUIREMENTS	MAXIMUM VALUE	LOWEST MONTHLY % OF SAMPLES THAT MEETS REQUIREMENTS	MAXIMUM VALUE	LOWEST MONTHLY % OF SAMPLES THAT MEETS REQUIREMENTS	MAXIMUM VALUE	LOWEST MONTHLY % OF SAMPLES THAT MEETS REQUIREMENTS	MAXIMUM VALUE	LOWEST MONTHLY % OF SAMPLES THAT MEETS REQUIREMENTS	MAXIMUM VALUE	LOWEST MONTHLY % OF SAMPLES THAT MEETS REQUIREMENTS		
Turbidity (NTU) (treatment plant)	n/a	0	TT	0.13	100%	n/a	n/a	0.54	98%	0.09	98%	0.1	100%	0.18	100%	0.10	100%	Soil runoff	
				RANGE OF ALL SITES TESTED	HIGHEST QUARTERLY RAA	RANGE OF ALL SITES TESTED	HIGHEST QUARTERLY RAA	RANGE OF ALL SITES TESTED	HIGHEST QUARTERLY RAA	RANGE OF ALL SITES TESTED	HIGHEST QUARTERLY RAA	RANGE OF ALL SITES TESTED	HIGHEST QUARTERLY RAA	RANGE OF ALL SITES TESTED	HIGHEST QUARTERLY RAA	RANGE OF ALL SITES TESTED	HIGHEST QUARTERLY RAA		
Bromate (ug/L)	0.1	n/a	10	ND-19	ND	n/a	n/a	ND	ND	ND	ND	ND-13	ND	NR	NR	n/a	n/a	By-product of drinking water disinfection	
Chloramines (mg/L)		[4]	[4]	ND-3.5	1.7	0.55-3.4	2.3	n/a	n/a	n/a	n/a	ND-1.8	1.0	ND-2.7	1.5	0.1-2.9	1.68	Drinking water disinfectant added for treatment	
Haloacetic acids (ug/L)	n/a	n/a	60	ND-17.6	7.6	ND-12.1	5.5	n/a	n/a	n/a	n/a	ND-8.6	8.7	ND-29	7.1	1.8-12.0	6.4	By-product of drinking water disinfection	
Total trihalomethanes (ug/L)	n/a	n/a	80	3.0-38.8	30.4	13.6-37.3	27.2	n/a	n/a	n/a	n/a	ND-48	15.7	2.8-120	23	46-89	60.4	By-product of drinking water disinfection	
Microbiological Standards	PHG	MCLG	MCL	RANGE	AVERAGE	Various natural and man made sources													
Total coliform	n/a	0	>5% of monthly samples	ND-0.52%	0.13%	ND	ND	n/a	n/a	n/a	n/a	ND	ND	ND	ND	0-0.93%	0.08%	Naturally present in the environment	
Lead/Copper Study	PHG	MCLG	Action limit	# of sites tested/# exceeding action limit	90% Percentile	# of sites tested/# exceeding action limit	90% Percentile	# of sites tested/# exceeding action limit	90% Percentile	# of sites tested/# exceeding action limit	90% Percentile	# of sites tested/# exceeding action limit	90% Percentile	# of sites tested/# exceeding action limit	90% Percentile	# of sites tested/# exceeding action limit	90% Percentile		
EPA Lead Study (ug/L)	0.2	n/a	15	62/0	6	38/0	ND	n/a	n/a	n/a	n/a	64/0	ND	32/0	ND	57/1	ND	Internal corrosion of household plumbing systems	
EPA Copper Study (mg/L)	0.3	n/a	1.3	62/0	0.21	38/0	0.23	n/a	n/a	n/a	n/a	64/0	0.09	32/0	ND	57/0	0.06	Internal corrosion of household plumbing systems	
Date of Study				July 2007		July 2007		n/a		n/a		June 2009		August 2009		September 2009			
UCMR2 (2008-2010 Monitoring)	PHG	MCLG	Notification Level	RANGE	AVERAGE														
N-nitroso-dimethylamine (NDMA) (ng/L)	3.0		10	ND-5.3	3.3	NR	NR	ND-14	6.6	NR	NR								
Secondary Drinking Water Standards	PHG	MCLG	MCL	RANGE	AVERAGE														
Aluminum (ug/L)	n/a	n/a	200	ND	n/a	ND	n/a	ND	n/a	ND	n/a	ND	ND	ND-110	59	ND	n/a	Residue from surface water treatment processes; erosion of natural deposits	
Chloride (mg/L)	n/a	n/a	500	39-101	80	48-108	80	34-104	73	30-113	78	26-97	62	49-140	100	39-132	92	Saltwater influence; runoff and leaching from natural deposits	
Odor-threshold (units)	n/a	n/a	3 units	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1.0-2.0	1.5	1.6-2.0	1.9	ND-2	1	Naturally occurring organic materials	
Specific conductance (uS/cm)	n/a	n/a	1600	330-625	522	469-704	608	301-623	488	310-681	525	290-640	465	399-639	539	400-650	525	Saltwater influence; Substances that form ions when in water	
Sulfate (mg/L)	n/a	n/a	500	40-75	60	42-87	69	33-62	49	40-101	58	37-55	46	NR	NR	40-43	42	Runoff and leaching from natural deposits	
Total dissolved solids (mg/L)	n/a	n/a	1000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	160-300	230	200-450	320	240-290	265	Runoff and leaching from natural deposits	
Turbidity (NTU) (distribution system)	n/a	n/a	5	0.07-0.52	0.13	0.06-0.27	0.11	n/a	n/a	n/a	n/a	0.05-0.22	0.1	0.01-1.94	0.13	0.05-0.19	0.08	Soil runoff	
General Water Quality Parameters	PHG	MCLG	MCL	RANGE	AVERAGE														
Alkalinity (mg/L)	n/a	n/a	n/a	47-91	69	78-122	98	49-95	71	49-92	72	52-107	80	70-135	100	52-101	77		
Ammonia (mg/L)	n/a	n/a	n/a	0.45	n/a	0.28	n/a	0.29	n/a	0.44	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
Bromide (mg/L)	n/a	n/a	n/a	0.03-0.29	0.17	ND-0.28	0.13	ND-0.30	0.12	ND-0.29	0.12	0.07-0.33	0.23	n/a	n/a	n/a	n/a		
Calcium (mg/L)	n/a	n/a	n/a	15-25	21	23-38	28	12-29	20	13-27	20	14-24	19	n/a	n/a	18-27	19		
Corrosivity (SI)	n/a	n/a	non-corrosive	+0.04-+0.63	+0.33	-0.31-+1.0	+0.35	-0.71-+0.79	+0.31	-0.16-+0.54	+0.17	+0.06-+0.72	+0.36	n/a	n/a	+0.54	n/a		
Hardness (mg/L)	n/a	n/a	n/a	84-140	108	82-164	140	88-148	113	94-138	118	62-134	99	80-178	125	60-134	97		
Magnesium (mg/L)	n/a	n/a	n/a	9.6-14.8	12.7	11.6-20.1	16.3	7.7-14.2	12.0	8.0-17.6	12.9	9.4-16	13	n/a	n/a	11	n/a		
pH	n/a	n/a	n/a	8.3-8.7	8.5	8.0-9.1	8.3	8.1-8.7	8.4	8.1-8.6	8.4	8.7-9.3	8.9	7.3-8.8	8.5	8.0-9.1	8.5		
Potassium (mg/L)	n/a	n/a	n/a	1.8-4.2	3.3	2.0-4.3	3.2	1.8-4.5	3.2	1.8-4.3	3.2	1.9-3.6	2.8	n/a	n/a	2.7	n/a		
Sodium (mg/L)	n/a	n/a	n/a	41-77	63	52-81	68	37-76	58	35-79	62	34-77	56	32-106	65	26-88	60		

NR = Not Required
AL = Action Limit
NTU = Nephelometric Turbidity Units
n/a = Not Analyzed; Not Applicable
ND = Not Detected

RAA = Running Annual Average
mg/L = Milligrams per Liter (parts per million)
µg/L = Micrograms per Liter (parts per billion)
ng/L = Nanograms per Liter (parts per trillion)

SI = Saturation Index (a measure of corrosivity)
µS/cm = Microsiemens per Centimeter (a measure of conductivity)
pCi/L = PicoCuries per Liter (a measure of radioactivity)
CCWD = Contra Costa Water District
DWD = Diablo Water District

* Randall-Bold Water Treatment Plant is a regular source of water for CCWD, DWD and the Golden State Water Company in Bay Point. It is also an as-needed source of water for Antioch and Brentwood, and an emergency water source for Pittsburg.

Understanding the Tables:

In the following tables, you will find detailed information about the water that comes from your tap after it is treated (Treated Water) and before it is treated (Untreated Water). Your water is regularly tested for more than 120 chemicals and other substances, as well as radioactivity. **The tables list only the substances that were detected.**

DEFINITIONS

Public Health Goal (PHG):
 The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Contaminant Level Goal (MCLG):

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

Maximum Residual Disinfectant Level Goal (MRDLG):

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

PHGs, MCLGs and MRDLGs are non-mandatory goals based solely on public health considerations using the most recent scientific research available. When these goals are

set, the technological and economic feasibility of reaching these goals is not considered.

Maximum Contaminant Level (MCL):

The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically or technologically feasible.

Maximum Residual Disinfectant Level (MRDL):

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

Primary Drinking Water Standard:

MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards: Secondary MCLs are set for contaminants that affect the odor, taste or appearance of water.

Treatment Technique (TT):

A required process intended to reduce the level of a contaminant in drinking water.

Treated Water:

Water that has been filtered and treated.

Regulatory Action Level (AL):

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Untreated Water:

Water before it has been filtered and treated.

Unregulated Contaminant Monitoring Rule (UCMR):

A federal rule that requires monitoring for contaminants that are "unregulated." Unregulated contaminants are those that don't yet have a drinking water standard set by the U.S. Environmental Protection Agency. The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should have a standard.

Untreated Water Test Results

RADIOCHEMISTRY	PHG	MCLG	MCL	DIABLO WATER DISTRICT GLEN PARK WELL		COMMENTS
				Range	Average	
Radon 222 (pCi/L)	n/a	n/a	n/a	490-580*	530*	Erosion/leaching of natural deposits
Total Alpha (pCi/L)	n/a	0	15	ND-4.1*	ND*	Erosion of natural deposits
Uranium (pCi/L)	0.5	n/a	20	2.7-3.9*	3.2*	Erosion of natural deposits

* = Analyzed in 2007 This radiochemistry chart lists detections only.

Water Quality Notifications

Radon in Untreated Water:

The Diablo Water District, which serves the Oakley area, has detected radon in its wells at levels far below the proposed EPA limit of 4,000 pCi/L. Test results are listed in the radiochemistry table above. Radon is a naturally occurring radioactive gas. Radon can move up through the ground and into a home through cracks in the foundation. Radon gas can also get into indoor air when released from tap water used during showering and other household activities. Compared to radon entering the home through the soil, radon entering the home through tap water is a small source. Radon is a known human carcinogen. If you are concerned about radon in your home or water, call the California radon program at 1-800-745-7236, the EPA Safe Drinking Water Hotline at 1-800-426-4791, or the National Safe Council Radon Hotline at 1-800-SOS-RADON. For more information about Diablo Water District water call (925) 625-2112.

Cryptosporidium:

In a few instances, cryptosporidium was detected in untreated water before it entered a treatment plant. Cryptosporidium is a common microbial pathogen found in surface water throughout the United States. Although filtration removes cryptosporidium, the most commonly used filtration methods can not guarantee 100 percent removal. To address cryptosporidium, your drinking water is treated to the requirements of the State of California's Cryptosporidium Action Plan. In addition, the City of Martinez, Diablo Water District and Contra Costa Water District are treating water with ozone, potentially the most effective disinfectant available. Ingestion of cryptosporidium may cause an abdominal infection with nausea, diarrhea and abdominal cramps. Most healthy people can overcome the disease in a few weeks. People with compromised immune systems could develop a life-threatening illness if they ingest cryptosporidium, and they should talk to their doctors about avoiding infection. Cryptosporidium must be ingested to cause illness, and it can be spread through means other than drinking water.

Lead:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Your drinking water provider is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or www.epa.gov/safewater/lead.

Fluoride:

To prevent tooth decay, fluoride is added to your drinking water. This is a long-standing practice that has improved dental health over many years. The California Department of Public Health is a good source of information about fluoridation. Information can be found at www.cdph.ca.gov/certlic/drinkingwater/Pages/Fluoridation.aspx.

Source Water Assessments are one-time studies conducted to determine how susceptible a water supply is to contamination. Source Water Assessment information is listed below.

Source Water Assessments

Contra Costa Water District

In June 2002 and May 2003, source water assessments were conducted for the CCWD's water sources. These sources include the Delta intakes on Old River, Rock Slough and Mallard Slough, as well as the Los Vaqueros, Contra Loma, Mallard and Martinez reservoirs and the Contra Costa Canal (sampled at Clyde).

The assessments were based on a review of data collected from 1996 through 2001, as well as a review of the activities and facilities located at or near each source.

In summary:

- The District's Delta sources were found to be most vulnerable to the effects of saltwater intrusion, agricultural drainage, recreational boating, and regulated point discharges.
- The District's reservoirs were found to be most vulnerable to the effects of associated recreation, roads and parking lots, and watershed runoff.
- The Contra Costa Canal traverses rural, municipal and industrial areas. It was found to be most vulnerable to gas stations, chemical/petroleum processing/storage, septic systems, historic landfills and military institutions.

For CCWD's report or more information, contact Jean Zacher at (925) 688-8183.

City of Antioch

In April 2003, a source water assessment was conducted for the Antioch Municipal Reservoir and the San Joaquin River of the City of Antioch water system.

The following water sources were found to be most vulnerable to the following activities NOT associated with contaminants in the water supply:

- Antioch Municipal Reservoir:** Sewer collection systems
- San Joaquin River:** Chemical/petroleum processing storage, wastewater treatment plants and disposal facilities.

The following water sources were found to be most vulnerable to the following activities associated with contaminants in the water supply:

San Joaquin River: Saltwater intrusion.

Water from the San Joaquin River is not always acceptable due to saltwater intrusion. Historically, as major diversions began and the freshwater flows into the Delta decreased, saline bay waters have moved further upstream, replacing the fresh water. When chloride levels in the river exceed 250 milligrams per liter, the City stops pumping until chloride levels decrease.

You may request a summary of the assessment by contacting Betty Graham, California Department of Public Health, (510) 620-3454.

City of Pittsburg

In November 2001, a source water assessment was conducted for the City of Pittsburg's Ballpark and Rossmoor wells.

The following water sources were found to be most vulnerable to the following activities NOT associated with contaminants in the water supply:

- Ballpark Well:** Historic gas stations
- Rossmoor Well:** Grazing, sewer collection systems, utility stations, maintenance areas

You may request a summary of the assessment by contacting Betty Graham, California Department of Public Health, (510) 620-3454.

Diablo Water District (Oakley)

In September 2004, a source water assessment was conducted for the Diablo Water District's Glen Park Well. You may request a summary of the source water assessment by contacting Paul Urenda at (925) 625-2112.





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How to Get Involved in the Quality of Your Water:

Contra Costa Water District: The Board of Directors meets in regular session at 6:30 p.m. on the first and third Wednesday of each month. Meetings are held in the Board Room at the Contra Costa Water District Center, 1331 Concord Ave., Concord. For meeting agendas, contact the District Secretary at (925) 688-8024 or log on to www.ccwater.com.

City of Martinez: The Martinez City Council meets in regular session at 7 p.m. on the first and third Wednesday of each month. Meetings are held in Council Chambers at 525 Henrietta Street, Martinez. For meeting agendas, contact the Deputy City Clerk at (925) 372-3512 or log on to www.cityofmartinez.org.

City of Pittsburg: The Pittsburg City Council meets in regular session at 7 p.m. on the first and third Monday of each month. Meetings are held in Council Chambers at 65 Civic Drive, Pittsburg. For meeting agendas, call (925) 252-4850 or log on to www.ci.pittsburg.ca.us.

City of Antioch: The Antioch City Council meets in regular session at 7 p.m. on the second and fourth Tuesday of each month. Meetings are held in Council Chambers at Third and H streets, Antioch. For meeting agendas, contact the City Clerk at (925) 779-7009 or log on to www.ci.antioch.ca.us.

Diablo Water District (Oakley): The Board of Directors meets in regular session at 7:30 p.m. on the fourth Wednesday of each month. Meetings are held at 2107 Main Street, Oakley. For meeting agendas, contact DWD at (925) 625-3798 or log on to www.diablowater.org.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

此份有关你的食水报告,内有重要资料和讯息,请找
他人为你翻译及解释清楚。

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

این اطلاعیه شامل اطلاعات مهمی را جمع به آب آشامیدنی است. اگر نمی‌توانید این اطلاعیه را از زبان انگلیسی
بخوانید لطفاً از کسی که می‌تواند برای شما این مطالب را به فارسی ترجمه کند.

This report contains important information about your drinking water. If you know someone who is not proficient in reading English, please help them translate and understand it.

APPENDIX J

CITY OF MARTINEZ MODEL
LANDSCAPE ORDINANCE



ORDINANCE NO. 1195 C.S.

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MARTINEZ
AMENDING SECTION 22.34.045, SUBSECTION "H" AND ADDING
CHAPTER 22.35 TO THE MARTINEZ MUNICIPAL CODE TO PROVIDE FOR
WATER CONSERVATION IN LANDSCAPING FOR NEW DEVELOPMENTS

THE CITY COUNCIL of the City of Martinez hereby finds as follows:

WHEREAS, water is a limited resource, particularly in dry years, and must be managed and used efficiently; and

WHEREAS, precipitation in California fluctuates annually causing yearly variations in the water supply as demonstrated by water supply shortages experienced in the Contra Costa Water District service area in six of the last fourteen years; and

WHEREAS, state and local standards for water use have been established in regard to other water uses, including indoor plumbing fixtures; and

WHEREAS, in addition to such other water-conserving efforts, landscapes should be designed based on the functional use of the landscape and appropriate horticulture, by including plants best suited for the climate; and

WHEREAS, such landscape requirements do not increase the cost of landscaping when computed over the life of the development and do not diminish the aesthetic quality of the landscaping; and

WHEREAS, outdoor landscaping consumes approximately 30 percent of water used in the Contra Costa Water District service area, and the frequent overwatering of landscaping can be avoided through appropriate use of plant materials, efficient irrigation systems and sound landscape management practices.

NOW, THEREFORE, the City Council of the City of Martinez does ordain as follows:

Section 1. Section 22.34.045, Subsection "H" of the Martinez Municipal Code is hereby amended to read as follows:

H. Designing the type and location of planting with respect to the preservation of specimen and landmark trees, water conservation as set forth in Chapter 22.35, and maintenance of all planting;

Section 2. Chapter 22.35, entitled "Water Conservation in Landscaping," is hereby added to the Martinez Municipal Code to read as follows:

WATER CONSERVATION IN LANDSCAPING

CHAPTER 22.35

Sections:

22.35.010	Purpose
22.35.020	Application
22.35.030	Requirements
22.35.040	Plant Selection
22.35.050	Turf Selection and Limitations
22.35.060	Soil Conditioning and Mulching
22.35.070	Irrigation
22.35.080	Certification
22.35.090	Definitions
22.35.100	Formula

22.35.010 Purpose.

The purpose of this Chapter is to promote and encourage water conservation in landscaping and irrigation for new development projects.

22.35.020 Application.

The requirements of this Chapter shall apply to all applications for architectural and site design review as set forth in Chapter 22.34. Notwithstanding the foregoing, the requirements of this Chapter shall not apply to applications for one (1) single family residence or to that portion of a site used for the irrigation of edible crops, or to that portion of a site on which reclaimed water is exclusively used. A variance from the requirements of this Chapter may be granted pursuant to Chapter 22.44.

22.35.030 Alternative Water Sources.

All uses of water in the common open space of a new development project for ornamental purposes, such as ponds, lakes, or fountains, shall be supplied, operated, and maintained with reclaimed water or other alternative sources of water, to the extent available.

22.35.040 Plant Selection.

No less than 90 percent of the plants selected in non-turf areas shall be suited to the climate of the region and require minimal water once established. No more than 10 percent of the plants may be of a non-drought tolerant variety as long as such

plants are planted in close proximity to each other and can be irrigated separately from the drought-tolerant plants.

22.35.050 Turf Selection and Limitations.

A. The combined turf and/or water area (such as pools, ponds and fountains) shall be limited to 25 percent of the landscaped areas.

B. No turf shall be allowed in median strips, in areas less than 8 feet wide, or on slopes greater than 4:1.

C. This Section shall not apply to public parks, golf courses, cemeteries, and school and recreation areas.

22.35.060 Soil Conditioning and Mulching.

A. A soils report shall be submitted with landscape plans, showing soil type, soil composition and pH. The soil shall be modified to comport with the recommendation of the soils report.

B. A minimum of 2 inches of mulch shall be added in non-turf areas to the soil surface after planting. Non-porous material shall not be placed under the mulch.

22.35.070 Irrigation.

A. Sprinklers and sprays shall not be used in areas less than 8 feet wide. Drip and bubblers that exceed 1.5 gallons per minute per device shall not be used.

B. To minimize runoff, no sprinkler head shall be used on slopes exceeding 15 percent or exceeding 10 percent within 10 feet of hardscape, unless such sprinkler head has a precipitation rate of .85" per hour or less.

C. Valves and circuits shall be separated based on hydrozones.

D. Newly installed trees shall have drip or bubbler irrigation systems.

E. Sprinkler heads shall have matched precipitation rates within each control valve circuit.

F. Serviceable check valves shall be required where elevation differential may cause low head drainage.

G. Sprinkler head spacing shall be designed for head-to-head coverage. The system shall be designed for minimum runoff and overspray onto non-irrigated areas.

H. All irrigation systems shall be equipped with an automatic controller capable of dual or multiple programming. Controllers shall have multiple cycle start capacity and flexible calendar program.

I. Pop-up sprinklers in lawn areas shall have at least a 4" pop-up height.

J. All irrigation systems shall be equipped with automatic rain shutoff devices.

K. Irrigation plans shall include:

1. Irrigated turf area (in square feet).
2. Irrigated non-turf area (in square feet).
3. Flow rate in gallons per minute per valve.
4. Estimated water use per hydrozone in gallons. The formula for determining the estimated water use per hydrozone is set forth at Section 22.35.100.
5. Estimated total water use in gallons (sum of hydrozones). The formula for determining the estimated total water use is set forth at Section 22.35.100.

L. Upon completing the installation of the landscaping and irrigation system, a landscape irrigation audit shall be performed by a certified landscape irrigation auditor during the maintenance period. The results of the audit shall be used to produce an irrigation schedule.

22.35.080 Certification.

The applicant shall provide a certificate of substantial completion to the City, signed by (1) a licensed contractor and (2) a licensed landscape architect, certified irrigation designer, or other licensed or certified professional in a related field. Each of the signatories to the certificate of substantial completion shall certify that they conducted a final field observation prior to signing the certificate.

22.35.090 Definitions.

The following terms as used in this Chapter shall have the meanings set forth below:

A. "Automatic controller" means a mechanical or solid state timer, capable of operating valve stations to set the days and length of time of a water application.

B. "Check valve" means a valve located under a sprinkler head to hold water in the system so as to minimize drainage from the lower elevation sprinkler heads.

C. "Conversion factor" means a number that converts the estimated total water use from acre-inches per acre per year to gallons per square foot per year. The conversion factor is calculated as follows:

$$\begin{aligned} (325,829 \text{ gallons}/43,560 \text{ square feet}) / 12 \text{ inches} &= (0.62) \\ 325,829 \text{ gallons} &= \text{one acre foot} \\ 43,560 \text{ square feet} &= \text{one acre} \\ 12 \text{ inches} &= \text{one foot} \end{aligned}$$

Gallons per year may be converted to 100-cubic-feet per year (another common billing unit for water) by dividing gallons per year by 748 (748 gallons = 100 cubic feet.)

D. "Estimated total water use" means the annual total amount of water estimated to be necessary to keep the plants in the landscaped area healthy, as determined by the formula set forth at Section 22.35.100.

E. "Evapotranspiration" means the quantity of water evaporated from adjacent soil surfaces and transpired by plants during a specific time.

F. "Flow rate" means the rate at which water flows through pipes and valves (gallons per minute or cubic feet per second).

G. "Hydrozone" means a portion of the landscape area having plants with similar water needs that are served by a valve or set of valves with the same schedule. A hydrozone may be irrigated or non-irrigated. For example, a naturalized area planted with native vegetation that will not need supplemental irrigation once established is a non-irrigated hydrozone.

H. "Irrigation efficiency" or "IE" means the measure of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. For the purposes of this Chapter the following factors shall be used:

Spray heads (pop-up or riser) 0.60

Rotor or impact heads	0.70
Bubbler	0.70
Drip	0.76

I. "Landscape irrigation audit" means a process to perform site inspections, evaluate irrigation systems, and develop efficient irrigation schedules.

J. "Landscaped area" means the entire parcel other than the area occupied by the building footprint, driveways, non-irrigated portions of parking lots, and hardscapes, such as decks and patios, and other non-porous areas. Water features are included in the calculation of the landscaped area. Areas dedicated to edible plants, such as orchards or vegetable gardens are not included.

K. "Mulch" means any material such as leaves, bark, straw or other materials left loose and applied to the soil surface to reduce evaporation.

L. "Overspray" means the water which is delivered beyond the landscaped area, which wets pavements, walks, structures, or other non-landscaped areas.

M. "Plant factor" or "PF" means a factor that when multiplied by reference evapotranspiration, estimates the amount of water used by plants. For purposes of this ordinance, the following plant factors shall apply:

Low water using:	0.1-0.3
Medium water using:	0.4-0.6
High water using:	0.7-0.9

These plant factors are based on the Water Use Classification of Landscape Species project (WUCOLS). The project list is intended solely as a guide to help landscape professionals identify irrigation water needs of landscape species. It is not intended to be used as a required, mandatory, approved or master list. The WUCOLS Project is available from the California Department of Water Resources or from the Contra Costa Water District.

N. "Reclaimed water" means treated or recycled waste water of a quality suitable for nonpotable uses such as landscape irrigation.

O. "Reference evapotranspiration" or "ETo" means a standard measurement of environmental parameters which affect the water use of plants. ETo is given in inches per day, month or year and is an estimate of the evapotranspiration of a large field of four- to seven-inch tall, cool-season grasses that is well watered. ETo is used as the basis of determining the estimated total water use so that regional differences in climate can be accommodated. ETo for Martinez based on historical averages is 41.8" per year.

P. "Runoff" means water which is not absorbed by the soil or landscape to which it is applied and flows from the area. For example, runoff may result from water that is applied at too great a rate (i.e., the application rate exceeds the infiltration rate) or when water is applied to a severe slope.

Q. "Soil composition" means the classification of soil based on the percentage of sand, silt, and clay in the soil.

R. "Sprinkler" means a device which sprays water through a nozzle.

S. "Station" means an area served by one valve or by a set of valves that operate simultaneously.

T. "Turf" means a surface layer of earth containing mowed grass with its roots. This can be either a cool season or warm season grass.

U. "Valve" means a device used to control the flow of water in the irrigation system.

22.35.100 Formula.

The formula for determining estimated water use and estimated total water use shall be as follows:

EWU (hydrozone)	=	$\frac{(ET_o)(PF)(HA)(.62)}{IE}$
EWU		Estimated water use (gallons per year)
ET _o		Reference evapotranspiration (inches per year) (historical average = 41.8)
PF		Plant factor (see Section 22.35.090)
HA		Hydrozone area (square feet)
(.62)		Conversion factor to gallons (see Section 22.35.090)
IE		Irrigation efficiency (see Section 22.35.090)

EXAMPLE: Martinez site with 2,500 square feet of turf, irrigated with pop-up spray heads, and 7,500 square feet of low water using shrubs and groundcovers irrigated by a drip system

EWU (turf) $= \frac{(41.8)(.8)(2,500)(.62)}{0.60}$
= 86,386 gallons per year

EWU (shrubs and groundcover) $= \frac{(41.8)(.3)(7,500)(.62)}{0.76}$
= 76,725 gallons per year

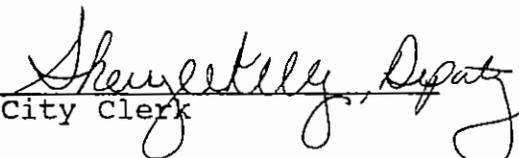
EWU (total) = 86,386 + 76,725 = 163,111 gallons per year

SECTION 3. Severability - If any section, subsection, sentence, clause, phrase, or portion of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions thereof.

SECTION 4. The City Clerk is hereby directed to cause this ordinance to be published in the Martinez News Gazette, a local newspaper of general circulation.

SECTION 5. This ordinance shall take effect thirty (30) days after its adoption, provided it has been published in the manner required by law for the adoption of ordinances.

APPROVED: 
Michael M. Menesini, Mayor

ATTEST: 
City Clerk

* * * * *

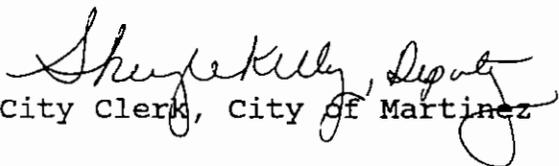
I HEREBY CERTIFY that the foregoing ordinance was duly and regularly introduced at a Regular Meeting of the City Council of the City of Martinez, held on the 21st day of December, 1992, and duly passed and adopted at an Adjourned Regular Meeting of said City Council held on the 11th day of January, 1993, by the following vote:

AYES: Councilmembers Burt, Farley, Frazer,
Vice Mayor Woodburn and Mayor Menesini

NOES: None

ABSENT: None

ABSTAIN: None


City Clerk, City of Martinez

SAMPLE CERTIFICATE OF SUBSTANTIAL COMPLETION

Project Name: _____ Inspection Date: _____

Project Address: _____

POST INSTALLATION INSPECTION: (Initial indicating substantial completion)

- _____

- A. Plants installed as specified
 - B. Irrigation system installed as designed
_____ dual distribution system for recycled water
_____ minimal runoff or overspray
 - C. Landscape Irrigation Audit performed

COMMENTS:

I/We certify that work has been installed in accordance with the contract documents.

Contractor Signature Date State License No.

I/We certify that based upon periodic site observations, the work has been substantially completed in accordance with the Water Conservation in Landscaping Ordinance and that the landscape planting and irrigation installation conform with the approved plans and specifications.

Landscape Architect Signature Date State License No.

Irrigation Designer Signature Date State License No.

Licensed or Certified Professional in a Related Field Signature Date State License No.

I/We certify that I/we have received all of the contract documents and that the installation conforms with the Water Conservation in Landscaping Ordinance.

Owner Signature Date

APPENDIX K

**2009 AND 2010 DEMAND
MANAGEMENT MEASURES
AND REBATES**



BMP Data Report: FY09	Martinez (RWSA)
July 1, 2008 to June 30, 2009	
Residential	
Number of SF Residential Surveys conducted (assume Indoor and Landscape included)	28
Number of MF Residential INDOOR Surveys conducted	12
Number of SF Showerheads provided	467
Number of SF Aerators provided	252
Number of MF Showerheads provided	137
Number of MF Aerators provided	37
Number of Residential Washer Rebates (tier 3)	244
Number of Residential Washer Rebates (tier 2)	15
Number of MF Washer Rebates (common laundry facility) (tier 3)	0
Number of SF HET Rebates	231
Number of MF HET Rebates	21
New Development Standards (# of new SF accounts)	0
New Development Standards (# of new MF dwellings)	0
Landscape	0
Number of Mixed use CII or MF landscape audits conducted	0
Number of dedicated irrigation account landscape audits conducted	4
Number of Accounts with Water Budgets who received 2 or more Budget Site Reports during year	0
Annual Total Water Budget for accounts with Water Budgets	0
Annual Total Water Use for accounts with Water Budgets	0
Number of SF SMART Controller Rebates (# of stations)	27
Number of SF SMART Controller Rebates (# of controllers)	2
Number of CII/ MF SMART Controller Rebates (# of stations)	0
Number of CII/ MF SMART Controller Rebates (# of controllers)	0
Total Smart Timer REBATE DOLLARS Provided	\$ 675
Number of CII/ MF Drip Retrofits (# OF STATIONS)	0
Number of CII/MF Sprinkler Rebates (# of HEADS)	0
Number of CII/ MF MP Rotator Rebates (# of nozzles)	0
Number of Large Rotors	0
Number of None Drip Pressure Regulators	0
Total Landscape REBATE DOLLARS provided for Irrigation upgrades other than Smart timers	\$ -
Number of SF Cash for Grass Rebates	0
Total SF Cash for Grass Rebate Dollars Provided in Year	0
Number of CII/ MF Cash for Grass Rebates	0
Total CII/ MF Cash for Grass Rebate Dollars Provided in Year	\$ -
Fall Back Watering Campaign	0
Commercial	0
Number of CII audits completed	6
Number of CII Washer Rebates (Laundrymat)	0
Number of CII HET Rebates	6
Number of CII Urinal Rebates	0
Number of CII Pre-Rinse Spray Nozzles provided	0
Number of Water Brooms Rebated	0
Car Wash Recycling Rebate	0
Number of CII Conductivity Meters	0
Number of CII Restaurant Food Steamer Retrofits	0
Number of CII Restaurant Dishwasher Retrofits	0
New Development Standards (# of new CII accounts)	0

BMP Data Report: FY10	Martinez (RWSA)
July 1, 2009 to June 30, 2010	
Residential	
Number of SF Residential Surveys conducted (assume Indoor and Landscape included)	3
Number of MF Residential INDOOR Surveys conducted	14
Number of SF Showerheads provided	104
Number of SF Aerators provided	217
Number of MF Showerheads provided	0
Number of MF Aerators provided	24
Number of Residential Washer Rebates (tier 3)	302
Number of Residential Washer Rebates (tier 2)	21
Number of SF HET Rebates	208
Number of MF HET Rebates	79
New Development Standards (# of new SF accounts)	0
New Development Standards (# of new MF dwellings)	0
Landscape	
Number of Mixed use CII or MF landscape audits conducted	0
Number of dedicated irrigation account landscape audits conducted	0
Number of Accounts with Water Budgets who received 2 or more Budget Site Reports during year	0
Annual Total Water Budget for accounts with Water Budgets	0
Annual Total Water Use for accounts with Water Budgets	0
Number of SF SMART Controller Rebates (# of stations)	28
Number of SF SMART Controller Rebates (# of clocks)	3
Number of CII/ MF SMART Controller Rebates (# of stations)	45
Number of CII/ MF SMART Controller Rebates (# of controllers)	2
Total Smart Timer REBATE DOLLARS Provided	\$ 1,731.74
Number of CII/ MF Drip Retrofits (# OF STATIONS)	0
Number of CII/MF Sprinkler Rebates (# of HEADS)	409
Number of CII/ MF MP Rotator Rebates (# of nozzles)	228
Number of CII/MF Master Valves	0
Number of CII/MF Sub Meters	0
Number of CII/MF Flow Meters	0
Number of CII/ MF Rain sensors	0
Number of CII/MF Pressure Compensating Screens	0
Number of CII/MF Check Valves	94
Total Landscape REBATE DOLLARS provided for Irrigation upgrades other than Smart timers	\$ 2,246.92
Number of SF Cash for Grass Rebates	7
Total SF Cash for Grass Rebate Dollars Provided in Year	\$ 2,770.00
Number of CII/ MF Cash for Grass Rebates	0
Total CII/ MF Cash for Grass Rebate Dollars Provided in Year	0
Fall Back Watering Campaign	0
Commercial	
Number of CII audits completed	0
Number of Commercial Washer Rebates (Laundromat or Common Laundry Facility)	0
Number of CII HET Rebates	5
Number of CII Urinal Rebates	0
Number of CII Pre-Rinse Spray Nozzles provided	0
Number of CII Conductivity Meters	0
Number of CII Restaurant Food Steamer Retrofits	0

Number of CII Restaurant Dishwasher Retrofits	0
New Development Standards (# of new CII accounts)	0

APPENDIX L

DEPARTMENT OF WATER RESOURCES
UWMP CHECKLIST



Table I-2 Urban Water Management Plan checklist, organized by subject

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
PLAN PREPARATION				
4	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	10620(d)(2)		Section 1
6	Notify, at least 60 days prior to the public hearing on the plan required by Section 10642, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Any city or county receiving the notice may be consulted and provide comments.	10621(b)	Notification letter mailed March 29, 2011 to City of Pleasant Hill and Contra Costa County.	Section 1
7	Provide supporting documentation that the UWMP or any amendments to, or changes in, have been adopted as described in Section 10640 et seq.	10621(c)		Appendix A
54	Provide supporting documentation that the urban water management plan has been or will be provided to any city or county within which it provides water, no later than 60 days after the submission of this urban water management plan.	10635(b)		Section 1
55	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	10642		Appendix A
56	Provide supporting documentation that the urban water supplier made the plan available for public inspection and held a public hearing about the plan. For public agencies, the hearing notice is to be provided pursuant to Section 6066 of the Government Code. The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water. Privately-owned water suppliers shall provide an equivalent notice within its service area.	10642		Appendix A
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642		Appendix A
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		Section 1

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
59	Provide supporting documentation that, in addition to submittal to DWR, the urban water supplier has submitted this UWMP to the California State Library and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. This also includes amendments or changes.	10644(a)		Appendix A
60	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the urban water supplier has or will make the plan available for public review during normal business hours	10645		Section 1
SYSTEM DESCRIPTION				
8	Describe the water supplier service area.	10631(a)		Section 2
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		Section 2
10	Indicate the current population of the service area	10631(a)	Provide the most recent population data possible. Use the method described in "Baseline Daily Per Capita Water Use." See Section M.	Section 2.6
11	Provide population projections for 2015, 2020, 2025, and 2030, based on data from State, regional, or local service area population projections.	10631(a)	2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Section 2.6
12	Describe other demographic factors affecting the supplier's water management planning.	10631(a)		Section 2
SYSTEM DEMANDS				
1	Provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	10608.20(e)		Section 3.3
2	<i>Wholesalers:</i> Include an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions. <i>Retailers:</i> Conduct at least one public hearing that includes general discussion of the urban retail water supplier's implementation plan for complying with the Water Conservation Bill of 2009.	10608.36 10608.26(a)	Retailers and wholesalers have slightly different requirements	Appendix A

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
3	Report progress in meeting urban water use targets using the standardized form.	10608.40		Section 3
25	Quantify past, current, and projected water use, identifying the uses among water use sectors, for the following: (A) single-family residential, (B) multifamily, (C) commercial, (D) industrial, (E) institutional and governmental, (F) landscape, (G) sales to other agencies, (H) saline water intrusion barriers, groundwater recharge, conjunctive use, and (I) agriculture.	10631(e)(1)	Consider 'past' to be 2005, present to be 2010, and projected to be 2015, 2020, 2025, and 2030. Provide numbers for each category for each of these years.	Section 3
33	Provide documentation that either the retail agency provided the wholesale agency with water use projections for at least 20 years, if the UWMP agency is a retail agency, OR, if a wholesale agency, it provided its urban retail customers with future planned and existing water source available to it from the wholesale agency during the required water-year types	10631(k)	Average year, single dry year, multiple dry years for 2015, 2020, 2025, and 2030.	Appendix H
34	Include projected water use for single-family and multifamily residential housing needed for lower income households, as identified in the housing element of any city, county, or city and county in the service area of the supplier.	10631.1(a)		Section 3.6
SYSTEM SUPPLIES				
13	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	10631(b)	The 'existing' water sources should be for the same year as the "current population" in line 10. 2035 and 2040 can also be provided.	Section 4
14	Indicate whether groundwater is an existing or planned source of water available to the supplier. If yes, then complete 15 through 21 of the UWMP Checklist. If no, then indicate "not applicable" in lines 15 through 21 under the UWMP location column.	10631(b)	Source classifications are: surface water, groundwater, recycled water, storm water, desalinated sea water, desalinated brackish groundwater, and other.	Section 4.2
15	Indicate whether a groundwater management plan been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	10631(b)(1)		Not Applicable
16	Describe the groundwater basin.	10631(b)(2)		Not Applicable
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		Not Applicable

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
18	Describe the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. If the basin is not adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Not Applicable
19	For groundwater basins that are not adjudicated, provide information as to whether DWR has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition. If the basin is adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Not Applicable
20	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	10631(b)(3)		Not Applicable
21	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	10631(b)(4)	Provide projections for 2015, 2020, 2025, and 2030.	Not Applicable
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		Section 4.3
30	Include a detailed description of all water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years, excluding demand management programs addressed in (f)(1). Include specific projects, describe water supply impacts, and provide a timeline for each project.	10631(h)		Section 4.5 and Section 5
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		Section 4.4
44	Provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier. Coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	10633		Section 4.5
45	Describe the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	10633(a)		Section 4.5

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
46	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	10633(b)		Section 4.5
47	Describe the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.	10633(c)		Section 4.5
48	Describe and quantify the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.	10633(d)		Section 4.5
49	The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	10633(e)		Section 4.5
50	Describe the actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.	10633(f)		Section 4.6
51	Provide a plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.	10633(g)		Section 4.5
WATER SHORTAGE RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING^b				
5	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	10620(f)		Section 6
22	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage and provide data for (A) an average water year, (B) a single dry water year, and (C) multiple dry water years.	10631(c)(1)		Section 5.1
23	For any water source that may not be available at a consistent level of use - given specific legal, environmental, water quality, or climatic factors - describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.	10631(c)(2)		Section 5.4
35	Provide an urban water shortage contingency analysis that specifies stages of action, including up to a 50-percent water supply reduction, and an outline of specific water supply conditions at each stage	10632(a)		Section 5.5.3

No.	UWMP requirement ^a	Calif. Water		UWMP location
		Code reference	Additional clarification	
36	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.	10632(b)		Section 5.5.1
37	Identify actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.	10632(c)		Section 5.5.2
38	Identify additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.	10632(d)		Section 5.5.5
39	Specify consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.	10632(e)		Section 5.5
40	Indicated penalties or charges for excessive use, where applicable.	10632(f)		Section 5.5.6
41	Provide an analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.	10632(g)		Appendix E
42	Provide a draft water shortage contingency resolution or ordinance.	10632(h)		Appendix E
43	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)		Section 5.5.7
52	Provide information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments, and the manner in which water quality affects water management strategies and supply reliability	10634	For years 2010, 2015, 2020, 2025, and 2030	Section 5.3

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
53	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. Base the assessment on the information compiled under Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.	10635(a)		Section 5.2
DEMAND MANAGEMENT MEASURES				
26	Describe how each water demand management measure is being implemented or scheduled for implementation. Use the list provided.	10631(f)(1)	Discuss each DMM, even if it is not currently or planned for implementation. Provide any appropriate schedules.	Section 6
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f)(3)		Section 6
28	Provide an estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the ability to further reduce demand.	10631(f)(4)		Not Available
29	Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water suppliers' legal authority to implement the work.	10631(g)	See 10631(g) for additional wording.	Not applicable. All DMMs implemented
32	Include the annual reports submitted to meet the Section 6.2 requirements, if a member of the CUWCC and signer of the December 10, 2008 MOU.	10631(j)	Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29.	Not a member of CUWCC.

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

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

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