

Appendix C-2

QHWD Consumer Confidence Report

Quality First Quality

Once again we are proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2010. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us to continue providing you and your family with high-quality drinking water.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions or concerns, we are always available to assist you.

From the General Manager

The Quartz Hill Water District has historically relied upon two sources of water to supply all of our customers. The first source comes from the Antelope Valley Ground Water Basin and is commonly referred to as ground water. During the 2010 year, 35 percent of the total amount of water used by the District came from one of the nine district-owned wells. These wells vary in depth from 500 to 600 feet and are monitored daily to ensure that only the highest quality of water is distributed through our system. The second source of water that supplies the Quartz Hill Water District comes from Antelope Valley East Kern Water Agency's Quartz Hill Treatment Plant. This source provides 65 percent of the total water used during the 2010 year. This water is supplied to the district through two interconnections that are both located south of M-8.

Monthly general physical samples are tested on the distribution system as well as weekly bacteriological samples throughout the system to ensure that only the highest quality of water is delivered to our customers. Additional parameters, not shown in this pamphlet, were tested but not reported because the tests found no contaminants. All water quality analyses were conducted by a state certified laboratory in compliance with California Department of Public Health Drinking Water Standards.

Respectfully,

Chad J. Reed, General Manager

Impact of Zebra Mussels

The zebra mussel is a small mussel native to Russia. In 1988, it reached North America by a transatlantic freighter. Since then, they have continued to spread throughout the country. Zebra mussels are very successful invaders because they live and feed in many different aquatic habitats and breed prolifically (each female produces 1 million eggs per year) for their entire five-year lifespan.

Adult zebra mussels colonize on living and nonliving surfaces, including boats, buoys, piers, plants, and dams. They are a great concern to drinking water utilities because they can attach themselves to water intake pipes, severely restricting the flow of fresh water. They can also impact water quality by increasing taste-and-odor problems in the water supply.

Zebra mussels are almost impossible to eradicate once they become established. Water utilities have had to retrofit their water intake systems to prevent zebra-mussel-related problems, costing millions of dollars a year. Utilities rely on a variety of methods to remove mussels from intake pipes; since there is no single, ideal removal solution, new methods are constantly under investigation.

While complete removal may be impossible, preventing zebra mussel spread is not. Human activities have spread them into many inland lakes and streams, usually through recreational boating, fishing, and diving practices. Simple steps such as draining live wells, cleaning vegetation off boat trailers, removing attached zebra mussels from boat hulls, and not dumping bait into lakes or rivers can prevent the spread of zebra mussels into noninfested waters.

Lead and Drinking Water

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. We are responsible for providing high-quality drinking water, but we 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 2 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 or at www.epa.gov/safewater/lead.

Community Participation

We welcome input from our rate payers. The Board of Directors meets in our Conference Room on the second Wednesday of each month at 7:00 p.m. The public is always welcome to attend Board Meetings.

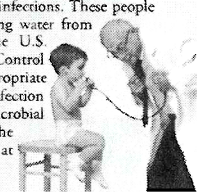
Source Water Assessment

A Source Water Assessment Plan (SWAP) is available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources.

According to the Source Water Assessment Plan, our water system had a susceptibility rating of "medium." If you would like to review the Source Water Assessment Plan, please feel free to contact our office during regular business hours.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

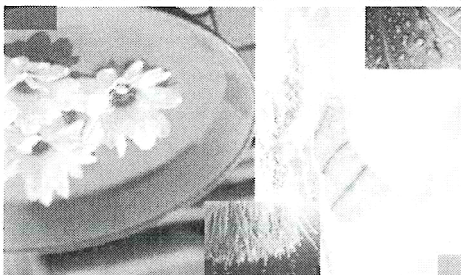


Questions?

For more information about this report, or for any questions relating to your drinking water, please call Chad J. Reed, General Manager, at (661) 943-3170. The Antelope Valley East Kern Water Agency (AVEK) 2010 Water Quality Report is available on request.

PWS ID# 1910130

Presented by
Quartz Hill Water District



Water testing performed in 2010
Annual
Water Quality
Report

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Quartz Hill Water District
42141 N. 30th Street West
Quartz Hill, CA 95536

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, 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 and can pick up substances resulting from the presence of animals or from human activity. In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably 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. Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and drilling;

Pesticides and Herbicides, that 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, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL (MRDL)	PHG (MCLG) (MRDLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2010	10	0.004	3.26	ND-5.5	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2010	1	2	0.022	ND-0.11	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chlorine (ppm)	2010	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	38	14-56	No	Drinking water disinfectant added for treatment
Gross Alpha Particle Activity (pCi/L)	2007	15	(0)	1.95	ND-4.2	No	Erosion of natural deposits
Gross Beta Particle Activity (pCi/L)	2003	50	(0)	3.65	3.1-4.2	No	Decay of natural and man-made deposits
Haloacetic Acids [HAAs] ¹ (ppb)	2010	60	NA	3.5	ND-16.2	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2010	45	45	13.58	3-28	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] ² (ppb)	2010	80	NA	16.7	ND-69.2	No	By-product of drinking water disinfection
Turbidity (NTU)	2010	TT	NA	0.4	ND-0.4	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2010	1.3	0.3	0.280	0/32	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2010	15	0.2	9	0/32	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Corrosivity (Units)	2010	Noncorrosive	NS	11.65	11.54-11.81	No	Natural or industrially influenced balance of hydrogen, carbon, and oxygen in the water; affected by temperature and other factors
Odor-Threshold (Units)	2008	3	NS	1	1-1	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2010	1,600	NS	520	360-650	No	Substances that form ions when in water seawater influence
Sulfate (ppm)	2010	500	NS	57.6	32-93	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2010	1,000	NS	371.6	220-390	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2010	5	NS	0.3	0.2-0.5	No	Soil runoff

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Boron (ppb)	2010	94	ND-120
Chromium VI [Hexavalent Chromium] (ppb)	2003	9.15	4.3-14
Sodium (ppm)	2010	66	60-77
Vanadium (ppb)	2010	17.8	15-22

¹Effective 6/11/2006, the gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. 50 pCi/L is used as a screening level.
²We were required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products (e.g. HAAs and TTHMs) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.

Definitions

AL (Regulatory Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

MCL (Maximum Contaminant Level): 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 and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): 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. EPA.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

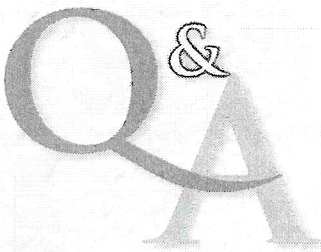
PDWS (Primary Drinking Water Standard): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

PHG (Public Health Goal): 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 EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.



Why do I get this report each year?

Community water system operators are required by Federal law to provide their customers an annual water quality report. The report helps people make informed choices about the water they drink. It lets people know what contaminants, if any, are in their drinking water and how these contaminants may affect their health. It also gives the system operators a chance to tell customers what it takes to deliver safe drinking water.

Why does my water sometimes look "milky"?

The "milky" look is caused by tiny air bubbles in the water. The water in the pipes coming into your home or business might be under a bit of pressure, and gasses (the air) are dissolved and trapped in the pressurized water as it flows into your glass. As the air bubbles rise in the glass, they break free at the surface, thus clearing up the water. Although the milky appearance might be disconcerting, the air bubbles won't affect the quality or taste of the water.

How can I keep my pet's water bowl germ free?

Veterinarians generally recommend that water bowls be washed daily with warm, soapy water — normally when you change the water. Scour the corners, nooks, and crannies of the water dish using a small scrub brush. In addition, once a week put water bowls into the dishwasher to sanitize them with hot water. In most situations, disinfectants like bleach are not needed; warm, soapy water is all you need to keep your pet's water clean and safe.

How much water is used during a typical shower?

The Federal Energy Policy Act set a nationwide regulation that limits showerheads to a maximum flow of 2.5 gallons per minute (GPM). Showerheads made before 1980 are rated at 5 GPM. Since the average shower is estimated to last 8.2 minutes, the old showerheads use 41 gallons of water while the newer, low-flow showerheads use only about 21 gallons.

How many contaminants are regulated in drinking water?

The U.S. EPA regulates over 80 contaminants in drinking water. Some states may choose to regulate additional contaminants or to set stricter standards, but all states must have standards at least as stringent as the U.S. EPA's.

Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks (if you are allowed access). Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Appendix C-3

AVEK Consumer Confidence Report

Antelope Valley-East Kern Water Agency
2010 Annual Water Quality Report - Kern County System

The Antelope Valley-East Kern Water Agency provides treated surface water as a source of drinking water.

Treatment technique: Conventional

EPA Turbidity Performance Standards: Turbidity of the filtered water must:

1. Be less than or equal to 0.30 NTU in 95% of measurements in a month.
2. Not exceed 1 NTU at any time.

Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1: 100%

Highest single turbidity measurement during the year: 0.19 NTU

Percentage of samples < 0.30 NTU: 100%

The number of violations of any surface water treatment requirements: NONE

Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance.

Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

MICROBIOLOGICAL CONTAMINANTS

Type of Sample(s)	Parameter	Sampling Frequency	MCL	No. of Months in Violation	System Results	
					Range	Average
Distribution & Effluent	Total Coliform Bacteria	76 - 91 / mo	5% positive	None	0%	0%
	Fecal Coliform and E. coli	76 - 91 / mo	1 pos. with 2 TC pos.	None	0%	0%

INORGANIC CONTAMINANTS

Parameter	Units	MCL	DLR	PHG	RESULTS			
					Plant Effluent (CWR)		Raw Influent (Source)	
					Range	Average	Range	Average
Aluminum	mg/L	1	0.05	0.6	ND	ND		ND
Antimony	µg/L	6	6.0	20		ND		ND
Arsenic	µg/L	10	2.0	0.004		ND		ND
Barium	mg/L	1	0.1	2		ND		ND
Beryllium	µg/L	4	1.0	1		ND		ND
Cadmium	µg/L	5	1.0	0.04		ND		ND
Chromium (Total)	µg/L	50	10			ND		ND
Cyanide	µg/L	150	100	150		ND		ND
Fluoride	mg/L	2	0.1	1		ND		ND
Lead	µg/L		5.0	0.2		ND		ND
Mercury	µg/L	2	1.0	1.2		ND		ND
Nickel	µg/L	100	10	12		ND		ND
Nitrate (as NO ₃)	mg/L	45	2.0	45	2.5		ND-3.1	2.1
Nitrite (as N)	mg/L	1	0.4	1		ND		ND
Nitrate+Nitrite (as N)	mg/L	10	0.4	10	1.0			1.0
Perchlorate	µg/L	6	4.0	6		ND		ND
Selenium	µg/L	50	5.0	30		ND		ND
Thallium	µg/L	2	1.0	0.1		ND		ND

RADIOLOGICAL CONTAMINANTS

Parameter	Units	MCL	DLR	PHG	RESULTS
					Raw Influent (Source)
Uranium	pCi/L	20	1.0	0.43	1.1

SYNTHETIC ORGANIC CHEMICALS

Parameter	Units	MCL	DLR	RESULTS
				Raw Influent (Source)
Silvex	µg/L	50	1.0	ND
2,4-D	µg/L	70	10	ND
Alachlor	µg/L	2	1.0	ND
Atrazine	µg/L	1	0.5	ND
Bentazon	µg/L	18	2.0	ND
Benzo(a)pyrene	µg/L	0.2	0.1	ND
Carbofuran	µg/L	18	5.0	ND
Chlordane	µg/L	0.1	0.1	ND
Dalapon	µg/L	200	10	ND
Di(2-ethylhexyl)adipate	µg/L	400	5.0	ND
Di(2-ethylhexyl)phthalate	µg/L	4	3.0	ND
Dibromochloropropane (DBCP)	µg/L	0.2	0.01	ND
Dinoseb	µg/L	7	2.0	ND
Endrin	µg/L	2	0.1	ND
Ethylene Dibromide (EDB)	µg/L	0.05	0.02	ND
Glyphosate	µg/L	700	25	ND
Heptachlor	µg/L	0.01	0.01	ND
Heptachlor Epoxide	µg/L	0.01	0.01	ND

**Antelope Valley-East Kern Water Agency
2010 Annual Water Quality Report - Kern County System**

Hexachlorobenzene	µg/L	1	0.5	ND
Hexachlorocyclopentadiene	µg/L	50	1.0	ND
Lindane	µg/L	2	0.2	ND
Methoxychlor	µg/L	30	10	ND
Molinate	µg/L	20	2.0	ND
Oxamyl	µg/L	50	20	ND
Pentachlorophenol	µg/L	1	0.2	ND
Picloram	µg/L	500	1.0	ND
Polychlorinated Biphenyls	µg/L	0.5	0.5	ND
Simazine	µg/L	4	1.0	ND
Thiobencarb (Bolero)	µg/L	70	1.0	ND
Toxaphene	µg/L	3	1.0	ND

VOLATILE ORGANIC CONTAMINANTS

Parameter	Units	MCL	DLR	PHG	RESULTS
					Raw Influent (Source)
1,1,1-Trichloroethane (1,1,1-TCA)	µg/L	200	0.5	100	ND
1,1,2,2-Tetrachloroethane	µg/L	1	0.5	0.1	ND
1,1,2-Trichloroethane (1,1,2-TCA)	µg/L	5	0.5	0.3	ND
1,1-Dichloroethane (1,1-DCA)	µg/L	5	0.5	3	ND
1,1-Dichloroethylene (1,1-DCE)	µg/L	6	0.5	10	ND
1,2,4-Trichlorobenzene	µg/L	5	0.5	5	ND
1,2-Dichlorobenzene (o-DCB)	µg/L	600	0.5	600	ND
1,2-Dichloroethane (1,2-DCA)	µg/L	0.5	0.5	0.4	ND
1,2-Dichloropropane	µg/L	5	0.5	0.5	ND
1,3-Dichloropropene (Total)	µg/L	0.5	0.5	0.2	ND
1,4-Dichlorobenzene (p-DCB)	µg/L	5	0.5	6	ND
Benzene	µg/L	1	0.5	0.15	ND
Carbon tetrachloride	µg/L	0.5	0.5	0.1	ND
cis-1,2-Dichloroethylene (c-1,2-DCE)	µg/L	6	0.5	100	ND
Dichloromethane (Methylene Chloride)	µg/L	5	0.5	4	ND
Ethylbenzene	µg/L	300	0.5	300	ND
Methyl-tert-butyl ether (MTBE)	µg/L	5	3.0	13	ND
Monochlorobenzene (Chlorobenzene)	µg/L	70	0.5	200	ND
Styrene	µg/L	100	0.5	0.5	ND
Tetrachloroethylene (PCE)	µg/L	5	0.5	0.06	ND
Toluene	µg/L	150	0.5	150	ND
trans-1,2-Dichloroethylene (t-1,2-DCE)	µg/L	10	0.5	60	ND
Trichloroethylene (TCE)	µg/L	5	0.5	1.7	ND
Trichlorofluoromethane (Freon11)	µg/L	150	5.0	700	ND
Trichlorotrifluoroethane (Freon 113)	µg/L	1200	10	4000	ND
Vinyl Chloride (VC)	µg/L	0.5	0.5	0.05	ND
Xylenes (Total)	µg/L	1750	0.5	1800	<0.50

GENERAL PHYSICAL AND SECONDARY STANDARDS

Parameter	Units	MCL	DLR	RESULTS			
				Plant Effluent (CWR) Range	Average	Raw Influent (Source) Range	Average
Aluminum	µg/L	200	50	ND	ND	ND	ND
Calcium	mg/L	no standard			18		20
Chloride	mg/L	250			89		82
Color	Units	15		<5	<5		
Copper	µg/L	1000	50		ND		ND
Foaming Agents (MBAS)	mg/L	0.5			<0.050		<0.050
Hardness (Total) as CaCO3	mg/L	no standard			97		100
Iron	µg/L	300	100		ND		ND
Magnesium	mg/L	no standard			13		13
Manganese	µg/L	50	20		ND		ND
Odor @ 60 C	Units	3	1	<1	<1		
pH	Units	no standard		6.4-7.1	6.8	6.8-9.0	7.8
Potassium	mg/L	no standard			2.8		2.9
Silver	µg/L	100	10		ND		ND
Sodium	mg/L	no standard			58		59
Specific Conductance	µmhos	900			490		460
Sulfate	mg/L	250	0.5		48		29
Thiobencarb (Bolero)	µg/L	1	1.0		ND		ND
Total Dissolved Solids	mg/L	500			260		350
Turbidity	Units	5		0.01-0.19	0.04		

**Antelope Valley-East Kern Water Agency
2010 Annual Water Quality Report - Kern County System**

Zinc	mg/L	5.0	0.05	0.990		ND
Total Alkalinity (as CaCO3)	mg/L	no standard		60	61-83	70
Bicarbonate Alkalinity(HCO3)	mg/L	no standard		73		
Carbonate Alkalinity	mg/L	no standard		<1.8		
Hydroxide Alkalinity	mg/L	no standard		<1.0		

DISINFECTION RESIDUAL, PRECURSORS, and BYPRODUCTS

Type of Sample(s)	Parameter	Units	MCL/MRDL	DLR	MRDLG	RESULTS	
						Range	Average
Distribution	Chlorine (as total Cl2)	mg/L	4.0**		4	0.03-1.55	0.81
Treated Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement		DLR=0.3	0.6-2.8	1.6
Source Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement		DLR=0.3	0.7-4.2	2.5
Distribution	Total Trihalomethanes	µg/L	80**	0.5	none	35-53	41 #
Distribution	Total Haloacetic Acids (5)	µg/L	60**	2		13-15	15 #

** Running Annual Average of distribution system samples. The MCLs are based upon Running Annual Averages.

This average is a system-wide value, please see the attached summaries for site specific averages.

DEFINITIONS and FOOTNOTES:

Plant Effluent, CWR, is finished, treated drinking water

Raw Water is the Source Water, the California Aqueduct, prior to treatment.

Units: mg/L = milligrams per liter, parts per million (ppm)

µg/L = micrograms per liter, parts per billion (ppb)

µmhos = micromhos, a measure of specific conductance

MFL = million fibers per liter

pCi/L = pico Curies per liter

< = less than

> = greater than

ND = none detected above the DLR

NTU = nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

MCL. Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCLs are set by the US Environmental Protection Agency or the California Department of Public Health as close to the PHGs and MCLGs as is economically or technologically feasible.

MRDL. Maximum Residual Disinfectant Level. The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

DLR: Detection Limit for purposes of Reporting.

(DL): Detection limit determined by the Laboratory when no DLR has been established.

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.

MRDLG: Maximum Residual Disinfectant Level Goal. The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the US Environmental Protection Agency.

PHG: Public Health Goal: 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 Office of Environmental Health Hazard Assessment.

Primary Drinking Water Standard: Primary MCLs, specific treatment techniques adopted in lieu of primary MCLs, and monitoring and reporting requirements for MCLs that are specified in regulations.

Secondary Standards: Aesthetic standards established by the California Department of Public Health.

AL. Action Level. There is no MCL, if this level is exceeded, action is required by the California Department of Public Health.

This average is a system-wide value, please see the attached summary for site specific averages.

** Total Trihalomethanes and Haloacetic Acids(5) MCLs an annual running average of distribution system samples.

*** A corrosion inhibitor is added to the treated water before entry into the distribution system

All analyses performed by the ELAP certified laboratories: AVEK Water Agency, BSK Analytical Laboratories, or BSK subcontract lab.

**Antelope Valley-East Kern Water Agency
2010 Annual Water Quality Report - Los Angeles County System**

The Antelope Valley-East Kern Water Agency provides treated surface water as a source of drinking water.

Treatment technique: Conventional

EPA Turbidity Performance Standards. Turbidity of the filtered water must

- 1 Be less than or equal to 0.30 NTU in 95% of measurements in a month.
- 2 Not exceed 1 NTU at any time

Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1: 100%

Highest single turbidity measurement during the year: 0.20 NTU

Percentage of samples < 0.30 NTU: 100%

The number of violations of any surface water treatment requirements: NONE

Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

MICROBIOLOGICAL CONTAMINANTS

Type of Sample(s)	Parameter	Sampling Frequency	MCL	No. of Months in Violation	System Results Range	System Results Average
Distribution	Total Coliform Bacteria	116 153 / mo	5% positive	None	0.0-0.6%	0%
Distribution	Fecal Coliform/E. coli	116 153 / mo	1 pos. with 2 TC pos.	None	0%	0%

INORGANIC CONTAMINANTS

Parameter	Units	MCL	DLR	PHG or (MCLG)	Acton Plant Effluent (CWR)		Eastside Plant Effluent (CWR)		Quartz Hill Plant Effluent (CWR)		Raw Influent (Source)	
					Range	Average	Range	Average	Range	Average	Range	Average
Aluminum	mg/L	1	0.05	0.6	ND	ND	ND	ND	ND	ND	ND	ND
Antimony	µg/L	6	6.0	20	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	µg/L	10	2.0	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Barium	mg/L	1	0.1	2	ND	ND	ND	ND	ND	ND	ND	ND
Beryllium	µg/L	4	1.0	1	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	µg/L	5	1.0	0.04	ND	ND	ND	ND	ND	ND	ND	ND
Chromium (Total)	µg/L	50	10	10	ND	ND	ND	ND	ND	ND	ND	ND
Cyanide	µg/L	150	100	150	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	mg/L	2	0.1	1	0.12	ND	ND	0.12	ND	ND	ND	ND
Lead	µg/L	5.0	0.2	0.2	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	µg/L	2	1.0	1.2	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	µg/L	100	10	12	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate (as NO3)	mg/L	45	2.0	45	ND	2.2	2.2	2.5	ND-3.1	2.1	ND	2.1
Nitrite (as N)	mg/L	1	0.4	1	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate+Nitrite (as N)	mg/L	10	0.4	10	ND	1.0	1.0	1.0	ND	1.0	ND	1.0
Perchlorate	µg/L	6	4.0	6	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	µg/L	50	5.0	30	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	µg/L	2	1.0	0.1	ND	ND	ND	ND	ND	ND	ND	ND

RADIOLOGICAL CONTAMINANTS

Parameter	Units	MCL	DLR	PHG	RESULTS Raw Influent (Source)
Uranium	µCi/L	20	1.0	0.43	1.1

SYNTHETIC ORGANIC CHEMICALS

Parameter	Units	MCL	DLR	RESULTS Raw Influent (Source)
Silvex	µg/L	50	1.0	ND
2,4-D	µg/L	70	10	ND
Alachlor	µg/L	2	1.0	ND
Atrazine	µg/L	1	0.5	ND
Bentazon	µg/L	18	2.0	ND
Benzo(a)pyrene	µg/L	0.2	0.1	ND
Carbofuran	µg/L	18	5.0	ND
Chlordane	µg/L	0.1	0.1	ND
Dalapon	µg/L	200	10	ND
Di(2-ethylhexyl)adipate	µg/L	400	5.0	ND
Di(2-ethylhexyl)phthalate	µg/L	4	3.0	ND
Dibromochloropropane (DBCP)	µg/L	0.2	0.01	ND
Dinoseb	µg/L	7	2.0	ND
Endrin	µg/L	2	0.1	ND
Ethylene Dibromide (EDB)	µg/L	0.05	0.02	ND
Glyphosate	µg/L	700	25	ND
Heptachlor	µg/L	0.01	0.01	ND
Heptachlor Epoxide	µg/L	0.01	0.01	ND
Hexachlorobenzene	µg/L	1	0.5	ND
Hexachlorocyclopentadiene	µg/L	50	1.0	ND
Lindane	µg/L	2	0.2	ND
Methoxychlor	µg/L	30	10	ND
Molinate	µg/L	20	2.0	ND
Oxamyl	µg/L	50	20	ND
Penlathlorophenol	µg/L	1	0.2	ND
Picloram	µg/L	500	1.0	ND
Polychlorinated Biphenyls	µg/L	0.5	0.5	ND
Simazine	µg/L	4	1.0	ND
Thiobencarb (Bolero)	µg/L	70	1.0	ND
Toxaphene	µg/L	3	1.0	ND

VOLATILE ORGANIC CONTAMINANTS

Parameter	Units	MCL	DLR	PHG	RESULTS Raw Influent (Source)
1,1,1-Trichloroethane (1,1,1-TCA)	µg/L	200	0.5	100	ND
1,1,2,2-Tetrachloroethane	µg/L	1	0.5	0.1	ND
1,1,2-Trichloroethane (1,1,2-TCA)	µg/L	5	0.5	0.3	ND
1,1-Dichloroethane (1,1-DCA)	µg/L	5	0.5	3	ND
1,1-Dichloroethylene (1,1-DCE)	µg/L	6	0.5	10	ND
1,2,4-Trichlorobenzene	µg/L	5	0.5	5	ND
1,2-Dichlorobenzene (o-DCB)	µg/L	600	0.5	600	ND
1,2-Dichloroethane (1,2-DCA)	µg/L	0.5	0.5	0.4	ND

Antelope Valley-East Kern Water Agency
2010 Annual Water Quality Report - Los Angeles County System

1,2-Dichloropropane	µg/L	5	0.5	0.5	ND
1,3-Dichloropropane (Total)	µg/L	0.5	0.5	0.2	ND
1,4-Dichlorobenzene (p-DCB)	µg/L	5	0.5	6	ND
Benzene	µg/L	1	0.5	0.15	ND
Carbon tetrachloride	µg/L	0.5	0.5	0.1	ND
cis-1,2-Dichloroethylene (c-1,2-DCE)	µg/L	6	0.5	100	ND
Dichloromethane (Methylene Chloride)	µg/L	5	0.5	4	ND
Ethylbenzene	µg/L	300	0.5	300	ND
Methyl-tert-butyl ether (MTBE)	µg/L	5	3.0	13	ND
Monochlorobenzene (Chlorobenzene)	µg/L	70	0.5	200	ND
Styrene	µg/L	100	0.5	0.5	ND
Tetrachloroethylene (PCE)	µg/L	5	0.5	0.06	ND
Toluene	µg/L	150	0.5	150	ND
trans-1,2-Dichloroethylene (t-1,2-DCE)	µg/L	10	0.5	60	ND
Trichloroethylene (TCE)	µg/L	5	0.5	1.7	ND
Trichlorofluoromethane (Freon11)	µg/L	150	5.0	700	ND
Trichlorotrifluoroethane (Freon 113)	µg/L	1200	10	4000	ND
Vinyl Chloride (VC)	µg/L	0.5	0.5	0.05	ND
Xylenes (Total)	µg/L	1750	0.5	1800	<0.50

GENERAL PHYSICAL AND SECONDARY STANDARDS

Parameter	Units	MCL	DLR	Action Plant Effluent (CWR)		Eastside Plant Effluent (CWR)		Quartz Hill Plant Effluent (CWR)		Raw Influent (Source)	
				Range	Average	Range	Average	Range	Average	Range	Average
Aluminum	µg/L	200	50	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	mg/L	no standard			18		18		18		20
Chloride	mg/L	250			91		89		86		82
Color	Units	15		<1-<5	<5	<1-<5	<5	<1-<5	<5		
Copper	µg/L	1000	50		ND		ND		ND		ND
Foaming Agents (MBAS)	mg/L	0.5			<0.050		<0.050		<0.050		<0.050
Hardness (Total) as CaCO3	mg/L	no standard			98		98		96		100
Iron	µg/L	300	100		ND		ND		ND		ND
Magnesium	mg/L	no standard			13		13		12		13
Manganese	µg/L	50	20		ND		ND		ND		ND
Odor @ 50 C	Units	3	1	<1	<1	<1	<1	<1	<1		
pH	Units	no standard		6.1-7.5	6.7	6.3-7.2	6.7	6.5-7.2	6.8	6.8-9.4	7.9
Potassium	mg/L	no standard			2.9		2.6		2.7		2.9
Silver	µg/L	100	10		ND		ND		ND		ND
Sodium	mg/L	no standard			60		58		57		59
Specific Conductance	µmhos	900			500		490	330 - 644	455		460
Sulfate	mg/L	250	0.5		47		50		48		29
Thiocarb (Boiero)	µg/L	1	1.0		ND		ND		ND		ND
Total Dissolved Solids	mg/L	500			260		250		260		350
Turbidity	Units	5		0.01-0.20	0.05	0.01-0.08	0.04	0.01-0.18	0.04		
Zinc	mg/L	5.0	0.05		0.100		0.590		0.440		ND
Total Alkalinity (as CaCO3)	mg/L	no standard			61		57		60	55-84	69
Bicarbonate Alkalinity(HCO3)	mg/L	no standard			75		70		74		
Carbonate Alkalinity	mg/L	no standard			<1.8		<1.8		<1.8		
Hydroxide Alkalinity	mg/L	no standard			<1.0		<1.0		<1.0		

DISINFECTION RESIDUAL, PRECURSORS, and BYPRODUCTS

Type of Sample(s)	Parameter	Units	MCL/MRDL	RESULTS	
				DLR	MRDLG
Disinfection	Chlorine (as total Cl2)	mg/L	4.0**		4
Treated Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement	0.3	0.10 - 1.60
Source Water	Total Organic Carbon (TOC)	mg/L	Treatment Requirement	0.3	0.6 - 2.7
Distribution	Total Trihalomethanes	µg/L	80**	0.5	0.8 - 4.3
Distribution	Total Haloacetic Acids (5)	µg/L	60**	2	18 - 24
					21 #
					7.0 - 9.3
					8.5 #

** Running Annual Average of distribution system samples. The MCLs are based upon Running Annual Averages
 # This average is a system-wide value, please see the attached summaries for site specific averages.

DEFINITIONS and FOOTNOTES:

Plant Effluent, CWR, is finished, treated drinking water.
 Raw Water is the Source Water, the California Aqueduct, prior to treatment.
Units mg/L = milligrams per liter, parts per million (ppm)
 µg/L = micrograms per liter, parts per billion (ppb)
 µmhos = micromhos, a measure of specific conductance
 MFL = million fibers per liter
 pCi/L = pico Curies per liter
 < = less than
 > = greater than
 ND = none detected above the DLR
 NTU = nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
MCL - Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCLs are set by the U.S. Environmental Protection Agency or the California Department of Public Health as close to the PHGs and MCLGs as is economically or technologically feasible
MRDL - Maximum Residual Disinfectant Level. The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.
DLR - Detection Limit for purposes of Reporting.
(DL) - Detection limit determined by the Laboratory when no DLR has been established.
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
MRDLG - Maximum Residual Disinfectant Level Goal. The level of a disinfectant added for water treatment below which there is no known or expected risk to health.
MRDLGs are set by the U.S. Environmental Protection Agency.
PHG - Public Health Goal: 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 Office of Environmental Health Hazard Assessment.
Primary Drinking Water Standard. Primary MCLs, specific treatment techniques adopted in lieu of primary MCLs, and monitoring and reporting requirements for MCLs that are specified in regulations
Secondary Standards: Aesthetic standards established by the California Department of Public Health
AL - Action Level. There is no MCL, if this level is exceeded, action is required by the California Department of Public Health.
 # This average is a system-wide value, please see the attached summary for site specific averages
 ** Total Trihalomethanes and Haloacetic Acids(5) MCLs an annual running average of distribution system samples
 *** A corrosion inhibitor is added to the treated water before entry into the distribution system
 All analyses performed by the ELAP certified laboratories: AVEK Water Agency, BSK Analytical Laboratories, or BSK subcontract lab

Appendix D

District No. 40 BMPs/DMMs



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Agency: Retail

Los Angeles County Waterworks Districts

District Name: Los Angeles County Waterworks Districts 40 - Antelope Valley

CUWCC Unit: 5029

Primary Contact: Virginia Maloles-Fowler

Telephone: 626-300-3362

Email: vmfowler@dpw.lacounty.gov

Compliance Option Chosen By Reporting Agency: Traditional

Foundational BMPs BMP 1.1 Operational Practices

Conservation Coordinator provided with necessary resources to implement BMPs?

1. Conservation Coordinator provided with necessary resources to implement BMPs?

2009
Virginia Maloles-Fowler
Water Conservation Coordinator
On Track

Virginia Maloles-Fowler
Water Conservation Coordinator
vmfowler@dpw.la

2010
Virginia Maloles-Fowler
Water Conservation Coordinator
vmfowler@dpw.la

2. Water waste prevention documentation Descriptive File

Descriptive File 2010

URL
URL 2010

Describe Ordinance Terms
Describe Ordinance Terms 2010

0
L.A. County, Title 11 - Health and Safety of the L.A. County Code, Ordinance No.

L.A. County, Title 11 - Health and Safety of the L.A. County Code, Ordinance No.

On Track

0
http://search.municode.com/html/16274/00DATA/TITLE11/38/WATER/ANI provided

L.A. County, Title 11 - Health and Safety of the L.A. County Code, Ordinance No. 91-0046J

On Track

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



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

BMP 1.2 Water Loss Control

	2009	2010
Complete a prescreening Audit	Yes	On Track
Metered Sales	47,866	
Verifiable Other Uses	0	
Total Supply	48,842	
(Metered Sales <input type="checkbox"/> System uses) <input type="checkbox"/>		
Total Supply \div 0.89	0.98	On Track
If ratio is less than 0.9, complete a full scale Audit in 2009?	Yes	On Track
Verify Data with Records on File?	Yes	On Track
Operate a system Leak Detection Program?	Yes	On Track

On Track if Yes

On Track if .89, Not on Track if No

On Track if Yes

On Track if Yes

On Track if Yes

On Track if Yes, Not on Track if No

On Track if Yes, Not on Track if No

Info only until 2012

Info only until 2012

Info only until 2012

On Track if Yes, Not on Track if No

On Track if Yes, Not on Track if No

Info only until 2012

Info only until 2012

	2010	2010	2010	2010	2010	2010
Compile Standard Water Audit using AWWA Software?	Yes	On Track				
AWWA file provided to CUWCC?		On Track				
AWWA Water Audit Validity Score?	70					
Completed Training in AWWA Audit Method?	no					
Completed Training in Component Analysis Process?	No					
Complete Component Analysis?	No					
Repaired all leaks and breaks to the extent cost effective?	Yes	On Track				
Locate and repair unreported leaks to the extent cost effective.	Yes	On Track				
Maintain a record-keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair.						
Provided 7 types of Water Loss Control Info						
Leaks Repaired	0					
Value Real Losses	-					
Value Apparent Losses	-					
Miles Surveyed	0					
Press Reduction	Off					
Cost of Interventions						
Water Saved	0					



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

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

If signed MOU prior to 31 Dec 1997, On Track; if all connections metered; if signed after 31 Dec 1997, complete meter installations by 1 July 2012 or within 6 yrs of signing and 20% biannual reduction of unmetered connections.

	2009	2010
Exemption or 'At least as Effective As' accepted by CUWCC	0	0
Numbered Unmetered Accounts	On Track	On Track
Metered Accounts billed by volume of use	Yes	Yes
Number of CII accounts with Mixed Use meters	451	467
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No	No
Feasibility Study provided to CUWCC?	Yes	No
Completed a written plan, policy or program to test, repair and replace meters	Yes	Yes
	On Track	On Track
	On Track	On Track
		On Track if no unmetered accounts
		Volumetric billing required for all connections on same schedule as metering
		Info only
		Info only until 2012
		On Track if Yes, Not on Track if No
		On Track if Yes, Not on Track if No



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Agency: Retail

Los Angeles County Waterworks Districts

District Name: Los Angeles County Waterworks District 40 - Antelope Valley

CUWCC Unit: 5029

Primary Contact

Virginia Maloles-Fowler

Email:

vmfowler@dpw.lacounty.gov

Coverage Report Date:

June 9, 2011

1.4 Retail Conservation Pricing Metered Water Rate Structure

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

Date 2009 data received June 1, 2011
Date 2010 data received June 1, 2011

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

Year Volumetric Rates began for Agencies with some Unmetered Accounts

Info only

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



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

BMP 2. EDUCATION PROGRAMS

BMP 2.1 Public Outreach Actions Implemented and Reported to CUWCC

Does a wholesale agency implement Public Outreach Programs for this utility's benefit?

- 1) Contacts with the public (minimum 4 times per year)
- 2) Water supplier contacts with media (minimum 4 times per year, i.e., at least quarterly).
- 3) An actively maintained website that is updated regularly (minimum 4 times per year, i.e., at least quarterly).
- 4) Description of materials used to meet minimum requirement.

5) Annual budget for public outreach program.

6) Description of all other outreach programs

	2009	2010	Yes/No
	No	No	
	6	11	
	22	22	
	Yes	Yes	
	All 6 action types implemented and reported to CUWCC to be On Track)		
Newsletter articles on conservation General water conservation information Articles or stories resulting from outreach News releases Newspaper contacts Radio contacts	Newsletter articles on conservation General water conservation information Articles or stories resulting from outreach News releases Newspaper contacts Radio contacts	Newsletter articles on conservation General water conservation information Articles or stories resulting from outreach News releases Newspaper contacts Radio contacts	
	<input type="checkbox"/> 255,825	<input type="checkbox"/> 205,825	
Description is too large for text area. Data will be stored in the BMP Reporting database when online.	Description is too large for text area. Data will be stored in the BMP Reporting database when online.	Description is too large for text area. Data will be stored in the BMP Reporting database when online.	
	OnTrack for 5 Actions	OnTrack for 5 Actions	



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010 Foundation Best Management Practices for Urban Water Efficiency

2.2 School Education Programs Implemented and Reported to CUWCC

	2009	2010
Does a wholesale agency implement School Education Programs for this utility's benefit? Name of Wholesale Supplier?	Yes LA Department of Public Works	Yes LA Department of Public Works
1) Curriculum materials developed and/or provided by agency	Water Conservation is included in the Countywide Environmental Defender and Generation Earth Program which provides Integrated State teaching standard based education to all students K-12 throughout the County of Los Angeles. These programs are implemented and paid for by the Department of Public Works.	Water Conservation is included in the Countywide Environmental Defender and Generation Earth Program which provides Integrated State teaching standard based education to all students K-12 throughout the County of Los Angeles. These programs are implemented and paid for by the Department of Public Works. Water Coi
2) Materials meet state education framework requirements and are grade-level appropriate?	Yes Yes	Yes Yes
3) Materials Distributed to K-6? Describe K-6 Materials	Water Conservation is included in the Countywide Environmental Defender and Generation Earth Program which provides Integrated State teaching standard based education to all students K-12 throughout the County of Los Angeles. These programs are implemented and paid for by the Department of Public Works.	Water Conservation is included in the Countywide Environmental Defender and Generation Earth Program which provides Integrated State teaching standard based education to all students K-12 throughout the County of Los Angeles. These programs are implemented and paid for by the Department of Public Works. All 5 actions types implemented and reported to CUWCC to be
Materials distributed to 7-12 students?	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>
4) Annual budget for school education program.	-	-
5) Description of all other water supplier education programs		Describe materials to meet minimum requirements Info Only
	See Wholesale Report Not on Track	See Wholesale Report Not On Track



CUWCC BMP COVERAGE REPORT BMP 3 RESIDENTIAL

Agency: Los Angeles County Waterworks District Name: District 40 - Antelope Valley CUWCC Unit #: 5029

Primary Contact: Virginia Mables-Fowler Date: June 30, 2011

Compliance Option Chosen By Reporting Agency: Traditional Email: vmfowler@cpw@lacounty.gov

BMP 3 C (1) Residential Assistance Date 2009 Data Downloaded from PDF: June 1, 2011

Date 2010 Data Downloaded from PDF: June 1, 2011

Total Number of Customers

Total Participants during Reporting Period
Number of Leak Detection Surveys or Assistance on Customer Property

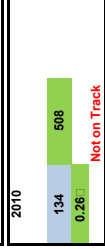
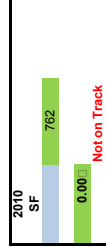
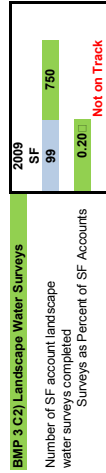
Number of Faucet Aerators Distributed

Number of WSS Showers/Distributors

	2009	2009 SF Target	2009 Multi Family Units	2009 MF Targets
2009 Single Family Accounts	50,001		940	
	342		0	
	99	750	0	14
	558		0	
	400	Not on Track	0	Not on Track

	2010	2010 SF Target	2010 Multi Family Units	2010 MF Targets
2010 Single Family Accounts	50,781		947	
	667		1	
	115	762	1	14
	989		11	
	754	Not on Track	18	Not on Track

On Track If annual number of surveys/assistance is 1.5x or SF accounts and MF units



BMP 3 C4) Water Sense Specification Toilets

Retrofit 'On Resale' Ordinance exists

2009: No

2010: No

2009: Not on Track

2010: Not on Track

75. Market Penetration Achieved if 'Yes' is documentation provided?

2009: No

2010: No

Five year average Resale Rate

Number Toilets per Household

Number WSS Toilets Installed

Ave Resale Rate X Toilets residence

Year	SF	MF Units
2009	199	1,041
2010	200	1,435

2009: Not on Track

2010: Not on Track

"On Track" if annual number of landscape surveys ≥ 1.5 of SF accounts

"On Track" if number of incentives for HECW (WF, .50) ≥ 0.9 / SF accounts in 2009 and 1.0 in 2010

Ordinance must require replacement of toilets ≥ 3.5 gpf when property is sold

On Track if ordinance exists

On Track if 75% penetration achieved and documentation provided

On Track if number of toilets installed average resale rate X number toilets per residence (from Base Year Data)

Agency: Los Angeles County Waterworks

District Name: District 40 - Antelope Valley

CUWCC Unit : 5029

BMP 3 G5) WSS for New Residential Development

2009 SF

No

No

No

No

No

No

No

No

On Track if ordinance exists requiring WSS in new residential units and documentation is provided

Incentives

Number of new SF MF units built

If no ordinance, to be On Track, provide incentives and describe, including:

2009 New Residential Development Incentives and Results						
Types of Incentives	Incentive Value SF	Number WSS Fixtures Installed	Number SF Participants	Number MF Participants	Measured SF Water Savings AF	Measured MF Water Savings AF
HE Toilet	150	1,240	130	4		
HE Clothes Washers	150	121	121	0		

On Track

But missing the of new SF and MF units built

List Incentive Types, amounts, number of WSS fixtures installed; and number of participating SF MF homes

2010 New Residential Development Incentives and Results						
Types of Incentives	Incentive Value SF	Number WSS Fixtures Installed	Number SF Participants	Number MF Participants	Measured SF Water Savings AF	Measured MF Water Savings AF
HE Toilet	150	1,605	115	6		
HE Clothes Washers	150	134	134	0		



CUWCC BMP COVERAGE REPORT

Traditional BMP 4 - Commercial Industrial Institutional

Agency: **LA County Antelope** District Name: [Redacted] CUWCC Unit #: **5029**
 Primary Contact [Redacted] Email: [Redacted] Report Date: [Redacted]
 Compliance Option Chosen By Reporting Agency: **Trad** Trad Flex
 Date Agency Signed MOU: [Redacted] Initial 10 year period completed: **yes** If "Yes", 50% credit for past BMP 9 Implementation? **yes**
 Water Savings Credit (AF) **41.2**

CII Baseline Water Use (AF) 4027 Target CII Water Use Reduction (AF) 402.7
 Target 2010 Reduction (AF) 20.135

Target Reduction is 10% of Baseline CII water use over 10 years.

Water Efficiency Measures

	2009		2010	
	Quantity Installed	Water Savings AF	Quantity Installed	Water Savings AF
1 High Efficiency Toilets (1.2 GPF or less)	31	1	0	0
2 High Efficiency Urinals (0.5 GPF or less)	0	0	0	0
3 Ultra Low Flow Urinals	0	0	0	0
4 Zero Consumption Urinals	4	0	0	0
5 Commercial High Efficiency Single Load Clothes Washers	0	0	0	0
6 Cooling Tower Conductivity Controllers	0	0	0	0
7 Cooling Tower pH Controllers	0	0	0	0
8 Connectionless Food Steamers	0	0	0	0
9 Medical Equipment Steam Sterilizers	0	0	0	0
10 Water Efficient Ice Machines	0	0	0	0
11 Pressurized Water Brooms	0	0	0	0
12 Dry Vacuum Pumps	0	0	0	0
Total Water Savings		1.7		0

Guideline: 'On Track' if estimated savings as percent of baseline: 0.5% by the end of first reporting period, 2.4% by end of yr 4, 6.4% by end of year 8

9% by end of yr 10

CII List of Efficiency Measures from MOU Compliance Policies Tier 3, page 5, dated 10-06-09

ON TRACK



CUWCC BMP COVERAGE REPORT

Traditional BMP 5 - Landscape

Agency: **LACW** District Name: **Antelope** CUWCC Unit **5029**
 Primary Contact: [Redacted] Email: [Redacted] Report Date: **June 27, 2011**
 Compliance Option Chosen By Reporting Agency: [Redacted]
 Date Agency Signed MOU: [Redacted] Initial 10 year period completed: **Y N** If "Yes", 50 credit for past BMP 9 Implementation? **y/n**

Required Documentation

Number of dedicated irrigation meter accounts

Number of dedicated irrigation meter accounts with water budgets.

Percent of dedicated irrigation meters with water budgets

Not On Track

Aggregate water use for dedicated non-recreational landscape accounts with budgets

Aggregate acreage assigned water budgets and average ET for dedicated non-recreational landscape accounts with budgets.

2009

811

0

0

9

Target Rate for Year 1

2009 Acres 2009 Average ET

2010

824

0

0

18

Target Rate for Year 2

2010 Acres 2010 Average ET

ETo-based water use budgets developed for 90 of CII accounts with dedicated irrigation meters at an average rate of 9 per year over 10 years

Offer site-specific technical assistance annually to all accounts that are 20 over budget within six years of the date implementation was to commence.

2009 Accounts over-budget Number of Accounts Offered Technical Assistance 0 0 0

2009 Acres 2009 Average ET

2010 Accounts over-budget Number of Accounts Offered Technical Assistance

2010 Acres 2010 Average ET

Aggregate acreage of recreational areas assigned water budgets and average ET for dedicated recreational landscape accounts with budgets.

CII Accounts without Meters or with Mixed-Use Meters

Number of mixed use and un-metered accounts.

2009

2010

451

467

Incentive Type

2009 Incentives and Responses

Incentive Value	Number of Customers	Number accepted by Customers
3680	920	
3450	23	
1781.1	5937	
200	4	

Nozzles	920
Controllers	23
Synthetic turf	5937
Drip irrigation	4
Type 5 rebates	
loans	

Incentive Value	Number of Customers	Number accepted by Customers
3180	795	
1050	7	
1757.1	5857	
50	1	

Agency will implement and maintain a customer incentive program(s) for irrigation equipment retrofits.

2009 Surveys

Number offered. 811

Number accepted 24

Landscape Irrigation Surveys

Complete irrigation water use surveys for not less than 15% of CII accounts with mixed-use meters and un-metered accounts within 10 years of the date implementation is to commence. (Note: CII surveys that include both indoor and outdoor components can be credited against coverage requirements for both the Landscape and CII BMPs.)

2010 Surveys

Number offered. 824

Number accepted 24

Estimated annual water savings by customers receiving surveys and implementing recommendations.

On Track

2009

Savings AF

2010

Savings AF

On Track if the percent of CII accounts with mixed-use meters receiving a landscape water use survey equals or exceeds the following: 1.5% by the end of the first reporting period (year two) following the date implementation is to commence; 3.6% by the end of year four; 6.3% by the end of year six; 9.6% by the end of year

Appendix E

QHWD “No Waste” Ordinance

QHWD's WATER SHORTAGE INFORMATION

No-Waste Policy

Resolution to Declare a Water Shortage Emergency

Moratorium on New Connections During a Declared Water Shortage

Water Shortage Rationing Allocation Method (TO BE ADDED)

No Waste Policy

QUARTZ HILL WATER DISTRICT
LOS COUNTY, CALIFORNIA
Date

The Board of Directors of the Quartz Hill Water District has adopted the following Policy No. xxxxx. Waste to be prevented:

XXXXXXX Waste to be prevented. Consumers shall prevent all waste of water and for the purposed of this chapter the word "waste" shall be defined as:

- A. Where water is uable to be absorbed within the limits of the cultivated area upon which it is being used;
- B. Where water is allowed to gather, from any cause whatsoever, into a pool where it serves no useful purpose; but may act as a harbor or breeding place for mosquitoes;
- C. Where water is allowed to run into a gutter or upon land which has no need for it at the time.
(Ord. 1046 para.1 (Exh. A(part)), 2000.

Resolution To Declare A Water Shortage Emergency

QUARTZ HILL WATER DISTRICT
LOS ANGELES COUNTY, CALIFORNIA
Date

The District Board of Directors of the Quartz Hill Water District does hereby resolve as follows:

PURSUANT to California Water Code Section 350 et seq., the Board of Directors has conducted duly noticed public hearings to establish the criteria under which a water shortage emergency may be declared.

WHEREAS, the Board of Directors finds, determines and declares as follows:

- (a) The District is the water purveyor for the property owners and inhabitants of QHWD;
- (b) The demand for water service is not expected to lessen.
- (c) When the combined total amount of water supply available to the District from all sources falls at or below the Stage II triggering levels described in the 2002 Urban Water Management Plan, the Board of Directors will declare a water shortage emergency. The water supply would not be adequate to meet the ordinary demands and requirements of water consumers without depleting the District's water supply to the extent that there may be insufficient water for human consumption, sanitation, fire protection, and environmental requirements. This condition is likely to exist until precipitation and inflow dramatically increases or until water system damage resulting from a disaster are repaired and normal water service is restored.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Quartz Hill Water District hereby directs the General Manager to find, determine, declare and conclude that a water shortage emergency condition exists that threatens the adequacy of water supply, until the District's water supply is deemed adequate. After the declaration of a water shortage emergency, the General Manager is directed to determine the appropriate Rationing Stage and implement the District's Water Shortage Emergency Response.

FURTHERMORE, the Board of Directors shall periodically conduct proceedings to determine additional restrictions and regulations which may be necessary to safeguard the adequacy of the water supply for domestic, sanitation, fire protection, and environmental requirements.

Moratorium On New Connections During A Water Supply Reduction

QUARTZ HILL WATER DISTRICT
LOS ANGELES COUNTY, CALIFORNIA
Date

The Board of Directors of the Quartz Hill Water District does hereby resolve as follows:
The Municipal Code of the Quartz Hill Water District is hereby amended to read as follows:

XX-1 MORATORIUM ON SERVICE COMMITMENTS AND CONNECTIONS

1. When the District declares a water shortage emergency, the following regulations shall become effective immediately and shall continue in full force and effect to prohibit the following while it remains in full force and effect:
 - a. The District shall not issue oral or written commitments to provide new or expanded water service, including will-serve letters.
 - b. The District shall not sell meters for water service connections, despite the prior issuance of will-serve letters or other oral or written service commitments, unless building permits have been issued.
 - c. The District shall not provide new or expanded water service connections, despite the prior issuance of will-serve letters or other oral or written service commitments and meters, unless building permits have been issued.
 - d. The District shall not provide water for use on any new plantings installed after the declaration of a Water Shortage Emergency.
 - e. The District shall not annex territory located outside the District's service boundary.
2. The following uses are exempt from the moratorium and upon application to the District shall receive necessary water service commitments and connections to receive water from the District:
 - a. Uses, including but not limited to, commercial, industrial, single and multifamily residential, for which a building permit has been issued by the District on or before the declaration of a Water Shortage Emergency.
 - b. Uses, including but not limited to, commercial, industrial, single and multifamily residential, for which a retail meter had been purchased from the District before the declaration of a Water Shortage Emergency, as evidenced by a written receipt and for which a building permit has been issued and remains in full force and effect.
 - c. Publicly owned and operated facilities, including but not limited to schools, fire stations, police stations, and hospitals and other facilities as necessary to protect the public health, safety and welfare.

Appendix F

Water Shortage Contingency Plans

Appendix F-1

District No. 40 Water Shortage Contingency Plan

PART 5 - PHASED WATER CONSERVATION PLAN

SECTION A - STATEMENT OF POLICY AND DECLARATION OF PURPOSE

5-A-1 STATEMENT OF POLICY AND DECLARATION OF PURPOSE

Because of the water supply conditions prevailing in any or all of the County Waterworks Districts and/or in the area from which any or all of the Districts obtain all or a portion of their supply, the general welfare requires that the water resources available to any or all of the Districts be put to the maximum beneficial use to the extent to which they are capable, and that the unreasonable use, or unreasonable method of use of water be discouraged and that the conservation of such water be practiced with a view to the reasonable and beneficial use thereof in the interest of the people of any or all of the Districts and for the public welfare. The purpose of this Phased Water Conservation Plan is to minimize the effect of a shortage of water supplies on the customers of any or all of the Districts during a water shortage emergency

SECTION B - AUTHORIZATION TO IMPLEMENT WATER CONSERVATION

5-B-1 AUTHORIZATION TO IMPLEMENT WATER CONSERVATION

5-B-1a The Board of Directors of the Waterworks Districts may implement the applicable provisions of this conservation plan, following the public hearing required by Rule 5-B-1b, upon its determination that such implementation is necessary to protect the public welfare and safety

5-B-1b The Board of Directors of the Waterworks Districts shall hold a public hearing for the purpose of determining whether a shortage exists in any or all of the Districts and which measures provided by this ordinance should be implemented. Notice of the time and place of the public hearing shall be published not less than ten (10) days before the hearing in a newspaper of general circulation within the affected District or Districts.

5-B-1c The Board of Directors shall issue its determination of shortage and corrective measures by resolution published in a daily newspaper of general circulation within the affected District or Districts. Conservation surcharges assessed per Rule 5-0-1 shall become effective no sooner than the first full billing period commencing on or after the date of such publication

PART 5 - PHASED WATER CONSERVATION PLAN (CONTINUED)
SECTION C - GENERAL PROHIBITION

5-C-1 GENERAL PROHIBITION

5-C-1a No customer of the District or Districts shall make, cause, use, or permit the use of water from the District or Districts in a manner contrary to any provision of this ordinance.

5-C-1b In the area of District No. 34 Desert View Highlands known as Ritter Ranch, as defined in Agreement No. 66407 as amended between the District and Ritter Park Associates, the water use limitations contained in Agreement No. 66407 as amended shall be implemented in addition to those required by this Part of these rules.

SECTION D - PHASE I SHORTAGE

5-D-1 PHASE I SHORTAGE

5-D-1a A Phase I Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a ten percent (10%) shortage in its water supplies.

5-D-1b A customer with a meter size of one and one-half (1 1/2) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of ninety percent (90%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.

5-D-1c For meter sizes of one (1) inch or less, a base quantity shall be the average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the BOARD.

A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of ninety percent (90%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1.

PART 5 - PHASED WATER CONSERVATION PLAN (CONTINUED)

SECTION E - PHASE II SHORTAGE

5-E-1 PHASE II SHORTAGE

5-E-1a A Phase II Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between ten percent (10%) and fifteen percent (15%) in its water supplies.

5-E-1b A customer with a meter size of one and one-half (1 1/2) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of eighty-five percent (85%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.

5-E-1c For meter sizes of one (1) inch or less, a base quantity shall be the average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the BOARD.

A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of eighty-five percent (85%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1.

SECTION F - PHASE III SHORTAGE

5-F-1 PHASE III SHORTAGE

5-F-1a A Phase III Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between fifteen percent (15%) and twenty percent (20%) in its water supplies.

5-E-1c
5-F-1c

Rev. 7/24/91
Rev. 7/91, Rev. 1/09

PART 5 - PHASED WATER CONSERVATION PLAN (CONTINUED)
SECTION F – PHASE III SHORTAGE (continued)

- 5-F-1b A customer with a meter size of one and one-half (1-1/2) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of eighty percent (80%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.
- 5-F-1c For meter sizes of one (1) inch or less, a base quantity shall be the average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the BOARD
- A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of eighty percent (80%) of the base quantity. All water used in excess of the target quantity shall be subject to a surcharge per Rule 5-0-1
- 5-F-1d New meters to provide construction water service shall not be issued
- 5-F-1e Water service ("Will Serve") letters will be issued, but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage

SECTION G - PHASE IV SHORTAGE

- 5-G-1 PHASE IV SHORTAGE
- 5-G-1a A Phase IV Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between twenty percent (20%) and twenty-five percent (25%) in its water supplies.

5-F-1c Rev 7/91. Rev. 1/09

PART 5 - PHASED WATER CONSERVATION PLAN (CONTINUED)
SECTION G - PHASE IV SHORTAGE (continued)

- 5-G-1b A customer with a meter size of one and one-half (1-1/2) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of seventy-five percent (75%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.
- 5-G-1c For meter sizes of one (1) inch or less, a base quantity shall be the average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the BOARD.
- A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of seventy-five percent (75%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1.
- 5-G-1d The watering of lawn, landscape or other turf area with water supplied by the District shall be limited to not more than every other day and shall be prohibited between the hours of 10:00 a.m. and 5:00 p.m.
- 5-G-1e New meters to provide construction water service shall not be issued.
- 5-G-1f Water Service ("Will Serve") letters will be issued but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage.

5-G-1c

Rev. 7/91. Rev. 1/09

PART 5 - PHASED WATER CONSERVATION PLAN (CONTINUED)
SECTION H - PHASE V SHORTAGE

5-H-1 PHASE V SHORTAGE

5-H-1a A Phase V Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between twenty-five (25%) and thirty percent (30%) in its water supplies

5-H-1b A customer with a meter size of one and one-half (1-1/2) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of seventy percent (70%) of the base quantity All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1 The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Supervisors.

5-H-1c For meter sizes of one (1) inch or less, a base quantity shall be the average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the BOARD

A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of seventy percent (70%) of the base quantity All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1

5-H-d The watering of lawn, landscape or other turf area with water supplied by the district shall be limited to not more than every other day and shall be prohibited between the hours of 10:00 a.m. and 5:00 p.m.

5-H-1e New meters to provide construction water service shall not be issued

5-H-1f Water service ("Will Serve") letters will be issued but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage

5-H-1c Rev. 7/91 Rev.1/09

PART 5 - PHASED WATER CONSERVATION PLAN (CONTINUED)
SECTION I - PHASE VI SHORTAGE

5-I-1 PHASE VI SHORTAGE

5-I-1a A Phase VI Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between thirty (30%) and thirty-five percent (35%) in its water supplies

5-I-1b A customer with a meter size of one and one-half (1-1/2) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of sixty-five percent (65%) of the base quantity All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1 The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors

5-I-1c For meter sizes of one (1) inch or less, a base quantity shall be the average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the BOARD

A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of sixty-five percent (65%) of the base quantity All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1

5-I-1d The watering of lawn, landscape or other turf area with water supplied by the District shall be limited to not more than every third day and shall be prohibited between the hours of 10:00 a.m. and 5:00 p.m

5-I-1e New meters to provide construction water service shall not be issued

5-I-1f Water service ("Will Serve") letters will be issued but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage

PART 5 - PHASED WATER CONSERVATION PLAN (CONTINUED)
SECTION J - PHASE VII SHORTAGE

5-J-1 PHASE VII SHORTAGE

5-J-1a A Phase VII Shortage shall be declared whenever the Board of Directors determined that it is likely that the District will suffer a shortage of between thirty-five (35%) and forty percent (40%) in its water supplies.

5-J-1b A customer with a meter size of one and one-half (1 1/2) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of sixty percent (60%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.

5-J-1c For meter sizes of one (1) inch or less, a base quantity shall be computed by averaging the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Directors. A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of sixty percent (60%) of the base quantity. All water used in excess of the target quantity shall be subject to a surcharge per Rule 6-0-1.

5-J-1d The watering of lawn, landscape or other turf area with water supplied by the District shall be prohibited, except that trees and shrubs may be watered at any time by bucket.

5-J-1e All meters to provide construction water shall be removed.

5-J-1f Water service ("Will Serve") letters will be issued, but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage.

5-J-1g No new permanent meters shall be installed.

PART 5 - PHASED WATER CONSERVATION PLAN (CONTINUED)
SECTION K - PHASE VIII SHORTAGE

5-K-1 PHASE VIII SHORTAGE

5-K-1a A Phase VIII Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between forty percent (40%) and forty-five percent (45%) in its water supplies.

5-K-1b A customer with a meter size of one and one-half (1-1/2) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of fifty-five percent (55%) of the base quantity All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1 The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors

5-K-1c For meter sizes of one (1) inch or less, a base quantity shall be computed by averaging the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Directors. A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to fifty-five percent (55%) of the base quantity All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1

5-K-1d The watering of lawn, landscape or other turf area with water supplied by the District shall be prohibited except that trees and shrubs may be watered at any time by bucket.

5-K-1e All meters to provide construction water shall be removed

5-K-1f Water service ("Will Serve") letters will be issued but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage

5-K-1g No new permanent meters shall be installed

PART 5 - PHASED WATER CONSERVATION PLAN (CONTINUED)
SECTION L - PHASE IX SHORTAGE

5-L-1 PHASE IX SHORTAGE

5-L-1a A Phase IX Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between forty-five (45%) and fifty percent (50%) in its water supplies.

5-L-1b A customer with a meter size of one and one-half (1 1/2) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of fifty percent (50%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.

5-L-1c For meter sizes of one (1) inch or less, a base quantity shall be computed by averaging the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Directors. A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of fifty percent (50%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1.

5-L-1d The watering of lawn, landscape or other turf area including trees and shrubs, with water supplied by the District shall be prohibited.

5-L-1e All meters to provide construction water shall be removed.

5-L-1f Water service ("Will Serve") letters will be issued, but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage.

5-L-1g No new permanent meters shall be installed.

PART 5 - PHASED WATER CONSERVATION PLAN (CONTINUED)
SECTION M - RELIEF FROM COMPLIANCE

5-M-1 RELIEF FROM COMPLIANCE

5-M-1a A customer may file an application for relief from any provisions of this ordinance. The Director of Public Works shall develop such procedures as he or she considers necessary to resolve such applications and shall, upon the filing by a customer of an application for relief, take such steps as he or she deems reasonable to resolve the application for relief. The decision of the Director of Public Works shall be final. The Director of Public Works may delegate his or her duties and responsibilities under this Rule as appropriate.

5-M-1b The application for relief may include a request that the customer be relieved, in whole or in part, from the conservation surcharge provisions of Rules 5-D-1b, 5-D-1c, 5-E-1b, 5-E-1c, 5-F-1b, 5-F-1c, 5-G-1b, 5-G-1c, 5-H-1b, 5-H-1c, 5-I-1b, 5-I-1c, 5-J-1b, 5-J-1c, 5-K-1b, 5-K-1c, 5-L-1b, and 5-L-1c.

5-M-1c In determining whether to grant relief, and the nature of any relief, the Director of Public Works shall take into consideration all relevant factors including, but not limited to:

- 1 Whether any additional reduction in water consumption will result in unemployment;
- 2 Whether additional members have been added to the household,
- 3 Whether any additional landscaped property has been added to the property since the corresponding billing period of the base year;
- 4 Changes in vacancy factors in multi-family housing,
- 5 Increased number of employees in commercial, industrial, and governmental offices,
- 6 Increased production requiring increased process water;
- 7 Water uses during new construction,
- 8 Adjustments to water use caused by emergency health or safety hazards,
- 9 First filling of a permit-constructed swimming pool, and
10. Water use necessary for reasons related to family illness or health

PART 5 - PHASED WATER CONSERVATION PLAN (CONTINUED)
SECTION M - RELIEF FROM COMPLIANCE (continued)

- 11 Whether the basic period for billing should be adjusted due to the unique circumstances of the type of facility, such as a boat, which results in irregular, intermittent periods of consumption.

5-M-1d In order to be considered, an application for relief must be filed with the District within twenty (20) days from the date the provision from which relief is sought becomes applicable to the applicant. No relief shall be granted unless the customer shows that he or she has achieved the maximum practical reduction in water consumption other than in the specific areas in which relief is being sought. No relief shall be granted to any customer who, when requested by the Director of Public Works or designee, fails to provide any information necessary for resolution of the customer's application for relief. The decision shall be issued within twenty (20) days and provided to the customer.

SECTION N - NOTIFICATION OF CUSTOMERS

5-N-1 NOTIFICATION OF CUSTOMERS

5-N-1a Each customer will be notified on his or her bill as to what the target quantity and the base quantity will be for the applicable billing period.

SECTION O - CONSERVATION SURCHARGES

5-O-1 CONSERVATION SURCHARGES

5-O-1a Water use up to the target quantities specified in Rules 5-D-1b, 5-D-1c, 5-E-1b, 5-E-1c, 5-F-1b, 5-F-1c, 5-G-1b, 5-G-1c, 5-H-1b, 5-H-1c, 5-I-1b, 5-I-1c, 5-J-1b, 5-J-1c, 5-K-1b, 5-K-1c, 5-L-1b, and 5-L-1c shall be billed at the established QUANTITY CHARGE or NORMAL USE CHARGE. Water use in excess of the aforementioned target quantities shall be subject to the following conservation surcharges in addition to the established QUANTITY CHARGE or NORMAL USE CHARGE.

- 1 For all customers within Los Angeles County Waterworks Districts and Marina Del Rey Water System, an additional conservation surcharge of 1.0 times the established QUANTITY CHARGE or NORMAL USE CHARGE will be assessed for water use in excess of the target quantity, up to 115 percent of the target quantity.
- 2 For all customers within Los Angeles County Waterworks Districts and Marina Del Rey Water System, an additional conservation surcharge of 2.0 times the established QUANTITY CHARGE or NORMAL USE CHARGE will be assessed for water use in excess of 115 percent of the target quantity.

PART 5 PHASED WATER CONSERVATION PLAN (CONTINUED)
SECTION O - CONSERVATION SURCHARGES (continued)

3. If cost of purchased water obtained from the water wholesalers that sell water to the Los Angeles County Waterworks Districts increases beyond the amounts that can be offset and collected through the rates set in 1 and 2 of this provision, then the District Engineer is hereby authorized to revise the rates set in 1 and 2 of this provision in amounts necessary to offset the cost to purchase the water

5-O-1b Violation by any customer of the water use prohibitions of Rules 5-G-1d, 5-H-1d, 5-I-1d, 5-J-1d, 5-K-1d, and 5-L-1d shall be penalized as follows.

1. First violation The Director of Public Works or designee shall issue a written notice of the fact of a first violation to the customer
2. Second violation For a second violation during any one water shortage emergency, the Director of Public Works or designee shall issue a written notice of the fact of a second violation to the customer
3. Third and subsequent violations. For a third and each subsequent violation during any one water shortage emergency, the Director of Public Works or designee may install a flow-restricting device or the service of the customer at the premises at which the violation occurred for installing and for removing the flow-restricting devices and for restoration of normal service. The charge shall be paid before normal service can be restored.

5-O-1c All monies collected by a District pursuant to this ordinance shall be deposited in that District's General Fund as reimbursement for the District's costs and expenses of administering this conservation plan

5-O-1d The District shall give notice to customer of water conservation surcharges or of water usage violations as follows

- a. Notice of water conservation surcharges or of first and second violations of the water use prohibitions of Rules 5-G-1d, 5-H-1d, 5-I-1d, 5-J-1d, 5-K-1d, and 5-L-1d shall be given to the customer in person or by regular mail.
- b. If the customer is absent from or unavailable at the premises at which the violation occurred, by leaving a copy with some person of suitable age and discretion at the premises and sending a copy through the regular mail to the address at which the customer is normally billed, or
- c. If a person of suitable age or discretion cannot be found, then by affixing a copy in a conspicuous place at the premises at which the violation occurred and also sending a copy through the regular mail to the address at which the customer is normally billed

PART 5 PHASED WATER CONSERVATION PLAN (CONTINUED)
SECTION O · CONSERVATION SURCHARGES (continued)

- 5-O-1e The notice of a violation of the water use prohibitions of Rules 5-G-1d, 5-H-1d, 5-I-1d, 5-J-1d, 5-K-1d, and 5-L-1d shall contain a description of the facts of the violation, a statement of the possible penalties for each violation and a statement informing the customer of his right to a hearing on the merits of the violation pursuant to Rule 5-P-1
- 5-O-1f Nothing in these regulations shall prohibit any customer from either installing sub-meters or from pro-rating and collecting from the ultimate users any conservation surcharges assessed when the customer's master meter measures consumption of water for multiple tenancy facilities. However, unless the sub-meters are subsequently billed directly by the District, the customer responsible for the master meter shall continue to be responsible directly to the District for all payments including conservation surcharges.

SECTION P · HEARING REGARDING VIOLATIONS

- 5-P-1 HEARING REGARDING VIOLATIONS
- 5-P-1a Any customer receiving notice of a third or subsequent violations of the water use prohibitions of Rules 5-G-1d, 5-H-1d, 5-I-1d, 5-J-1d, 5-K-1d or 5-L-1d shall have a right to a hearing by the Director of Public Works or his designee within fifteen (15) days of a mailing or other delivery of the notice of violation
- 5-P-1b The customer's written request for a hearing must be received within ten (10) days of the issuance of the notice of violation. This request shall stay installation of a flow-restricting device on the customer's premises and the assessment of any surcharge until the Director of Public Works or designee renders his or her decision. The decision shall be issued within ten (10) days of the hearing, a copy of which shall be provided to the customer
- 5-P-1c The decision of the Director of Public Works shall be final except for judicial review

PART 5 **PHASED WATER CONSERVATION PLAN (CONTINUED)**
SECTION Q - ADDITIONAL WATER SHORTAGE MEASURES

5-Q-1 ADDITIONAL WATER SHORTAGE MEASURES

The Board of Directors may order implementation of water conservation measures in addition to those set forth in Rules 5-D-1, 5-E-1, 5-F-1, 5-G-1, 5-H-1, 5-I-1, 5-J-1, 5-K-1, and 5-L-1. Such additional water conservation measures shall be implemented in the manner provided in Rule 5-B-1

SECTION R - PUBLIC HEALTH AND SAFETY NOT TO BE AFFECTED

5-R-1 PUBLIC HEALTH AND SAFETY NOT TO BE AFFECTED

Nothing in this ordinance shall be construed to require the District to curtail the supply of water to any customer when such water is required by that customer to maintain an adequate level of public health and safety

SECTION S - SEVERABILITY

5-S-1 SEVERABILITY

If any part of this ordinance or the application thereof to any person or circumstances is for any reason held invalid or unconstitutional by a decision of any court of competent jurisdiction, the validity of the remainder of the ordinance or the application of such provision to other persons or circumstances shall not be affected. The Board of Directors of the District or Districts declares that it would have adopted this ordinance and all provisions hereof irrespective of the fact that any one or more of the provisions be declared invalid or unconstitutional

ORDINANCE NO. 91-0046U

An urgency ordinance amending Title 11 - Health and Safety of the Los Angeles County Code, relating to water conservation requirements for the Unincorporated Los Angeles County Area

The Board of Supervisors of the County of Los Angeles ordains as follows

SECTION 1. Chapter 11.38, Part 4, is hereby readopted as amended to read as follows

**Part 4. Water Conservation Requirements for the Unincorporated
Los Angeles County Area**

11.38.620 Hose watering prohibition.

No person shall hose water or wash down any sidewalks, walkways, driveways, parking areas or other paved surfaces, except as is required for the benefit of public health and safety. Willful violation hereof shall be subject to a written warning for the first violation, and shall be an infraction punishable by a fine of \$100.00 for each subsequent violation.

11.38.630 Watering of lawns and landscaping.

- A. No person shall water or cause to be watered any lawn or landscaping between the hours of 10:00 a.m. and 5:00 p.m.
- B. No person shall water or cause to be watered any lawn or landscaping more than once a day.
- C. No person shall water or cause to be watered any lawn or landscaping to such an extent that runoff into adjoining streets, parking lots or alleys

occurs due to incorrectly directed or maintained sprinklers or excessive watering.

- D It shall be the duty of all persons to inspect all hoses, faucets and sprinkling systems for leaks, and to cause all leaks to be repaired as soon as is reasonably practicable.
- E Willful violation hereof shall be subject to a written warning for the first violation, and shall be an infraction punishable by a fine of \$100 00 for each subsequent violation.

11.38.640 Indoor plumbing and fixtures.

- A. It shall be the duty of all persons to inspect all accessible indoor plumbing and faucets for leaks, and to cause all leaks to be repaired as soon as is reasonably practicable.
- B Willful violation hereof shall be subject to a written warning for the first violation, and shall be an infraction punishable by a fine of \$100 00 for each subsequent violation.

11.38.650 Washing vehicles.

No motor vehicle, boat, trailer, or other type of mobile equipment may be washed, except at a commercial carwash or with reclaimed water, unless such vehicle is washed by using a hand-held bucket or a water-hose equipped with an automatic shutoff nozzle. No person shall leave a water hose running while washing a vehicle or at any other time. Willful violation hereof shall be subject to a written warning for the first violation, and shall be an infraction punishable by a

fine of \$100 00 for each subsequent violation

11.38.660 Public eating places.

No restaurant, hotel, cafeteria, café, or other public place where food is sold or served shall serve drinking water to any customer unless specifically requested to do so by such customer. Willful violation hereof shall be subject to a written warning for the first violation, and shall be an infraction punishable by a fine of \$100.00 for each subsequent violation

11.38.670 Decorative fountains.

No person shall use water to clean, fill, or maintain levels in decorative fountains, ponds, lakes, or other similar aesthetic structures unless such water flows through a recycling system. Willful violation hereof shall be subject to a written warning for the first violation, and shall be an infraction punishable by a fine of \$100.00 for each subsequent violation

11.38.680 Procedural requirements.

The Director of Public Works, with input and concurrence from the Director of Public Health, shall periodically review the provisions of this Part and recommend necessary updates to the Board of Supervisor. The review of the provisions and preparation of resulting recommendations, if any shall be performed, at a minimum, every two years following the first review, which shall to be completed by December 31, 2010

SECTION 2. Due to the severity of the drought in the State of California, there is an immediate need to prohibit the wasting of water in the Los Angeles County unincorporated area to better utilize the available water supplies. This ordinance is urgently needed for the preservation of the public health, safety, and general welfare, and shall take effect immediately

Appendix F-2

QHWD Water Shortage Contingency Plan

IMPLEMENTATION SCHEDULE: The District will continue to implement this DMM until the District's goal is met: at least 80% of all non-conserving and low-flush model toilets in the District will be replaced with ultra-low flush models.

Year	# of ULFT Retrofits
2002	0
2003	10e
2004	20e
2005	20e
2006	20e
2007	20e
2008	20e
2009	20e
2010	20e
2011	20e
2012	20e

e = estimate

METHODS TO EVALUATE EFFECTIVENESS: The District will calculate annual ULFT replacement program water savings to confirm the savings are within 10% of calculated retrofit-on-resale water savings, using the CUWCC MOU Exhibit 6 methodology and water savings estimates. Exhibit 6 has become an industry standard for evaluation of ULFT replacement programs.

CONSERVATION SAVINGS: Projected total annual water savings from toilet retrofits at full implementation are 0.5 AFY per year.

BUDGET: Proposed annual budget: \$130,000, for materials, rebates, and administrative costs.

Agricultural Water Conservation Programs

The District has no agricultural water accounts, although it interacts with area agricultural business for information exchange.

The District may consider becoming a signatory to the Memorandum of Understanding Regarding Efficient Water Management Practices by Agricultural Water Suppliers in California in 2 to 3 years.

Water Shortage Contingency Plan

Preparation for Catastrophic Water Supply Interruption

Law

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

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

Water Shortage Emergency Response

In 2001, in accordance with the requirements of Assembly Bill 11X, the District water, fire, and emergency services departments developed a comprehensive water shortage contingency plan, which was incorporated into the District's Emergency Response Plan in early 2002. The District's plan is consistent with provisions in the County's Emergency Response Plan. Both plans contain procedures for the distribution of potable water in a disaster; these procedures are consistent with guidelines prepared by the California State Office of Emergency Services.

The District plan recommended the following: (1) the purchase of water purification equipment; (2) purchase of standby generators and auxiliary pumps; and (3) development of emergency water conveyance and supply storage facilities. Steps (1) and (2) have been or are currently being implemented. Step (3) is in the study and design phases.

In addition, specific water-critical customers (such as hospitals, nursing facilities, schools, and a few individual customers with medical conditions dependent on continuous water availability) have been identified. Likely potable water distribution sites have been identified.

Be assured that the District recognizes the importance of the DMMs in reducing water demand and would continue to implement the programs. Also, the District would increase media attention to the water supply situation during a shortage and would step up public water education programs, encourage property owners to apply for a landscape and interior water use survey and continue to advertise the importance of customers to install ULF plumbing fixtures.

During declared shortages, or when a shortage declaration appears imminent, the District General Manager, who serves as the temporary chair, activates a District water shortage response team. The Chairman of the Board of Directors assumes the responsible director's role when he/she has arrived at the operational control center. The team includes: Board of Directors, General Manager, Operations Foreman, Clerical Staff Director. During a declared water shortage, the District will accept applications for new building permits but will not issue permits until the shortage declaration is rescinded. An appeal process has been established.

Supplemental Water Supplies

To offset future potential water shortages due to drought or disaster, the District is considering the following supplemental water supplies.

Water Transfers

See the Transfer or Exchange Opportunities section.

Long Term Additional Water Supply Options

To meet future long-term water demand beyond 2020, the District has purchased land for additional wells.

The following table summarizes the actions the water district will take during a water supply catastrophe.

Examples of Actions	Check if Discussed
Determine what constitutes a proclamation of a water shortage.	✓
Stretch existing water storage.	✓
Obtain additional water supplies.	✓
Develop alternative water supplies.	✓
Determine where the funding will come from.	✓
Contact and coordinate with other agencies.	✓
Create an Emergency Response Team/Coordinator.	✓
Create a catastrophe preparedness plan.	✓
Put employees/contractors on-call.	✓
Develop methods to communicate with the public.	✓
Develop methods to prepare for water quality interruptions.	✓

Water Shortage Contingency Ordinance/Resolution

Law

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

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

Quartz Hill Water District Water Shortage Response

As mentioned earlier, the District adopted a "No-Waste" Ordinance in 1997, and based on rationing experience, the District has developed a Resolution to Declare a Water Shortage Emergency. The District adopted a policy in 1998 to implement a Moratorium on New Connections during declared water shortages see Appendix C.

Stages of Action

Law

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

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

Rationing Stages and Reduction Goals

The District has developed a four stage rationing plan (see Table 15) to invoke during declared water shortages. The rationing plan includes voluntary and mandatory rationing, depending on the causes, severity, and anticipated duration of the water supply shortage.

Shortage Condition	Stage	Customer Reduction Goal	Type of Rationing Program
Up to 15%	I	15%	Voluntary
15 - 25%	II	25%	Mandatory
25 - 35%	III	35%	Mandatory
35 - 50%	IV	50% or >	Mandatory

Priority by Use

Priorities for use of available potable water during shortages were based on input from the District Emergency Response Team, citizen groups, and legal requirements set forth in the California Water Code, Sections 350-358. Water allocations are established for all customers according to the following ranking system.

- Minimum health and safety allocations for interior residential needs (includes single family, multi-family, hospitals and convalescent facilities, retirement and mobile home communities, and student housing, and fire fighting and public safety)
- Commercial, industrial, institutional/governmental operations (where water is used for manufacturing and for minimum health and safety allocations for employees and visitors), to maintain jobs and economic base of the community (not for landscape uses)
- Permanent agriculture (orchards, vineyards, and other commercial agriculture which would require at least five years to return to production).
- Annual agriculture (floriculture, strawberries, other truck crops)
- Existing landscaping
- New customers, proposed projects without permits when shortage declared.

Health and Safety Requirements

Based on commonly accepted estimates of interior residential water use in the United States, Table 18 indicates per capita health and safety water requirements. In Stage I shortages, customers may adjust either interior or outdoor water use (or both), in order to meet the voluntary water reduction goal.

However, under Stage II, Stage III and Stage IV mandatory rationing programs, the District has established a health and safety allotment of 68 gpcd (which translates to 33 HCF per person per year), because that amount of water is sufficient for essential interior water with no habit or plumbing fixture changes. If customers wish to change water use habits or plumbing fixtures, 68 gpcd is sufficient to provide for limited non-essential (i.e. outdoor) uses.

Stage IV mandatory rationing, which is likely to be declared only as the result of a prolonged water shortage or as a result of a disaster, would require that customers make changes in their interior water use habits (for instance, not flushing toilets unless "necessary" or taking less frequent showers).

Table 16
Per Capita Health and Safety Water Quantity Calculations

	Non-Conserving Fixtures		Habit Changes 1		Conserving Fixtures 2	
Toilets	5 flushes x 5.5 gpf	27.5	3 flushes x 5.5 gpf	16.5	5 flushes x 1.6 gpf	8.0
Shower	5 min x 4.0 gpm	20.0	4 min x 3.0 gpm	12.0	5 min x 2.0	10.0
Washer	12.5 gpcd	12.5	11.5 gpcd	11.5	11.5 gpcd	11.5
Kitchen	4 gpcd	4.0	4 gpcd	4.0	4 gpcd	4.0
other	4 gpcd	4.0	4 gpcd	4.0	4 gpcd	4.0
Total (gpcd)		68.0		48.0		37.5
HCF per capita per year		33.0		23.0		18.0
1 Reduced shower use results from shorter and reduced flow Reduced washer use results from fuller loads. 2 Fixtures include ULF 1.6 gpf toilets, 2.0 gpm showerheads and efficient clothes washers.						

Water Shortage Stages and Triggering Mechanisms

As the water purveyor, the Quartz Hill Water District must provide the minimum health and safety water needs of the community at all times. The water shortage response is designed to provide a minimum of 50% of normal supply during a severe or extended water shortage. The rationing program triggering levels shown below were established to ensure that this goal is met.

Rationing stages may be triggered by a shortage in one water source or a combination of sources. Although an actual shortage may occur at any time during the year, a shortage (if one occurs) is usually forecasted by the Water Department on or about April 1 each year. If it appears that it may be a dry year, the District contacts its agricultural customers in March, so that they can minimize potential financial impacts.

The District's potable water sources are groundwater and imported surface. Rationing stages may be triggered by a supply shortage or by contamination in one source or a combination of sources. Because shortages overlap Stages, triggers automatically implement the more restrictive Stage. Specific criteria for triggering the District's rationing stages are shown in Table 19.

Table 17 Water Shortage Stages and Triggering Mechanisms				
Percent Reduction of Supply	Stage I Up to 15%	Stage II 15 - 25%	Stage III 25 - 35%	Stage IV 35 - 50% >
Water Supply Condition				
Current Supply	Total supply is 85 – 90% of "normal." And Below "normal" year is declared. Or	Total supply is 75 – 85% of "normal." Or Below "normal" year is declared Or	Total supply is 65 – 75% of "normal." Or Fourth consecutive below "normal" year is declared. Or	Total supply is less than 65% of "normal." Or Fifth consecutive below "normal" year is declared. Or
Future Supply	Projected supply insufficient to provide 80% of "normal" deliveries for the next two years. Or	Projected supply insufficient to provide 75% of "normal" deliveries for the next two years. Or	Projected supply insufficient to provide 65% of "normal" deliveries for the next two years. Or	Projected supply insufficient to provide 50% of "normal" deliveries for the next two years. Or
Groundwater	No excess groundwater pumping undertaken. Or	First year of excess groundwater pumping taken, must be "replaced" within four years. Or	Second year of excess groundwater pumping taken, must be "replaced" within four years. Or	No excess groundwater pumping available. Or Reduced groundwater pumping due to replenishment of previously pumped groundwater Or
Water Quality	Contamination of 10% of water supply (exceeds primary drinking water standards)	Contamination of 20% of water supply (exceeds primary drinking water standards)	Contamination of 30% of water supply (exceeds primary drinking water standards)	Or
Disaster Loss				Disaster Loss

Water Allotment Methods

The District has established the following allocation method for each customer type. See Appendix C for sample water shortage rationing allocation method.

Single Family	Hybrid of Per-capita and Percentage Reduction
Multifamily	Hybrid of Per-capita and Percentage Reduction
Commercial	Percentage Reduction
Industrial	Percentage Reduction
Gov't/Institutional	Percentage Reduction
Agricultural-Permanent	Percentage Reduction - vary by efficiency
Agricultural-Annual	Percentage Reduction - vary by efficiency
Recreational	Percentage Reduction - vary by efficiency
New Customers	Per-capita (no allocation for new landscaping during a declared water shortage.)

Based on current and projected customer demand, Appendix C indicates the water allocated to each customer type by priority and rationing stage during a declared water shortage.

Individual customer allotments are based on a five-year period. This gives the District a more accurate view of the usual water needs of each customer and provides additional flexibility in determining allotments and reviewing appeals. However, no allotment may be greater than the amount used in the most recent year of the five-year base period.

The Water Department Manager shall classify each customer and calculate each customer's allotment according to the Sample Water Rationing Allocation Method. The allotment shall reflect seasonal patterns. Each customer shall be notified of their classification and allotment by mail before the effective date of the Water Shortage Emergency. New customers will be notified at the time the application for service is made. In a disaster, prior notice of allotment may not be possible; notice will be provided by other means. Any customer may appeal the Water Department Manager's classification on the basis of use or the allotment on the basis of incorrect calculation.

Prohibitions, Consumption Reduction Methods and Penalties

Law

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

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

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

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

Mandatory Prohibitions on Water Wasting

The QHWD "No Waste" Ordinance (see Appendix C) includes prohibitions on various wasteful water uses such as lawn watering during mid-day hours, washing sidewalks and driveways with potable water and allowing plumbing leaks to go uncorrected more than 24 hours after customer notification.

Examples of Consumption Reduction Methods	Stage When Method Takes Effect
Demand reduction program	All stages
Reduce pressure in water lines	
Flow restriction	IV
Restrict building permits	II, III, IV
Restrict for only priority uses	
Use prohibitions	All stages
Water shortage pricing	All stages
Per capita allotment by customer type	IV
Plumbing fixture replacement	
Voluntary rationing	I
Mandatory rationing	II, III, IV
Incentives to reduce water consumption	
Education Program	All Stages
Percentage reduction by customer type	II, III, IV
Other	
Other	

See Appendix C, the "No Waste" Ordinance and Moratorium on New Connections - which details the reduction methods - regarding Table 18.

Excessive Use Penalties

Any customer violating the regulations and restrictions on water use set forth in the "No Waste" Ordinance shall receive a written warning for the first such violation. Upon a second violation, the customer shall receive a written warning and the district may cause a flow-restrictor to be installed in the service. If a flow-restrictor is placed, the violator shall pay the cost of the installation and removal. Any willful violation occurring subsequent to the issuance of the second written warning shall constitute a misdemeanor and may be referred to the Los Angeles County District Attorney's office for prosecution pursuant. If water service is disconnected, it shall be restored only upon payment of the turn-on charge fixed by the Board of Directors.

Revenue and Expenditure Impacts and Measures to Overcome Impacts

Law

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

10632 (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier..

10632 (g) [An analysis of the impacts of each of the] proposed measures to overcome those [revenue and expenditure] impacts, such as the development of reserves and rate adjustments.

All surplus revenues that the District collects are currently used to fund the Rate Stabilization Fund, conservation, recycling, and other capital improvements. The District estimated projected ranges of water sales by shortage stage to best understand the impact each level of shortage will have on projected revenues and expenditures by each shortage stage.

This analysis is undertaken first with no additional water purchases and no rate increases and then with a 25% rate increase at Stage II; 50% at Stage III, and a 100% increase at Stage IV. To cover increased expenses and decreased sales, rate increases would need to be "severe"

See Appendix D for the District's efforts to establish an Emergency Fund and a Rate Stabilization Fund.

Reduction Measuring Mechanism

Law

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

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

Mechanism to Determine Reductions in Water Use

Under normal water supply conditions, potable water production figures are recorded daily. Totals are reported weekly to the General Manager. Totals are reported monthly to the Board of Directors and incorporated into the water supply report.

During a Stage I or Stage II water shortage, daily production figures are reported to the Operations Supervisor. The Operations Supervisor compares the weekly production to the target weekly production to verify that the reduction goal is being met. Weekly reports are forwarded to the General Manager and the Water Shortage Response Team. Monthly reports are sent to the Board of Directors. If reduction goals are not met, the Manager will notify the Board of Directors so that corrective action can be taken.

During a Stage III or Stage IV water shortage, the procedure listed above will be followed, with the addition of a daily production report to the General Manager.

During emergency shortages, production figures are reported to the Operations Supervisor hourly and to the General Manager and the Water Shortage Response Team daily. Daily reports will also be provided to the Board of Directors.

Appendix G

UWMP Checklist

2010 Integrated Regional Urban Water Management Plan for the Antelope Valley

Table I-1 Urban Water Management Plan checklist, organized by legislation number

No.	UWMP requirement ^a	Calif Water		Subject ^b	Additional clarification	UWMP location
		Code reference	Code reference			
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)		System Demands		Section 8.1
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)		System Demands	Retailer and wholesalers have slightly different requirements	Appendix B
3	Report progress in meeting urban water use targets using the standardized form.	10608.40		Not applicable	Standardized form not yet available	N/A
4	Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	10620(d)(2)		Plan Preparation		Section 1 1 2; Table 1-1
5	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.	10620(f)		Water Supply Reliability		Section 1 4; Section 2; Section 3
6	Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.	10621(b)		Plan Preparation		Appendix B

No.	UWMP requirement ^a	Calif Water Code reference	Subject ^b	Additional clarification	UWMP location
7	The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).	10621(c)	Plan Preparation		Section 1 1.2
8	Describe the service area of the supplier	10631(a)	System Description		Section 1.2
9	(Describe the service area) climate	10631(a)	System Description		Section 1 3
10	(Describe the service area) current and projected population . 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 .	10631(a)	System Description	Provide the most recent population data possible Use the method described in "Baseline Daily Per Capita Water Use " See Section M.	Section 4 3
11	(population projections) shall be in five-year increments to 20 years or as far as data is available	10631(a)	System Description	2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Table 4-4, Table 1-3
12	Describe . . . other demographic factors affecting the supplier's water management planning	10631(a)	System Description		Section 1.3.2
13	Identify and quantify to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).	10631(b)	System Supplies	The 'existing' water sources should be for the same year as the "current population" in line 10. 2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Section 2; Section 3; Table 2-9

No	UWMP requirement ^a	Calif Water Code reference	Subject ^b	Additional clarification	UWMP location
14	(Is) groundwater . . . identified as an existing or planned source of water available to the supplier . . . ?	10631(b)	System Supplies	Source classifications are: surface water, groundwater, recycled water, storm water, desalinated sea water, desalinated brackish groundwater, and other	Section 2.1
15	(Provide 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. 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)	System Supplies		Section 2.1
16	(Provide a) description of any groundwater basin or basins from which the urban water supplier pumps groundwater	10631(b)(2)	System Supplies		Section 2.1.1
17	For those basins for which a court or the board has adjudicated the rights to pump groundwater, (provide) a copy of the order or decree adopted by the court or the board	10631(b)(2)	System Supplies		N/A
18	(Provide) a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree.	10631(b)(2)	System Supplies		N/A
19	For basins that have not been adjudicated, (provide) information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, 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.	10631(b)(2)	System Supplies		Section 2.1.2

Calif. Water					
No.	UWMP requirement ^a	Code reference	Subject ^b	Additional clarification	UWMP location
20	(Provide a) detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records	10631(b)(3)	System Supplies		Section 2 1; Table 2-1
21	(Provide a) detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.	10631(b)(4)	System Supplies	Provide projections for 2015, 2020, 2025, and 2030.	Section 2 1; Table 2-3
22	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following: (A) An average water year, (B) A single dry water year, (C) Multiple dry water years.	10631(c)(1)	Water Supply Reliability . . .		Section 2 2 2; Table 2-7 Table 2-8
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)	Water Supply Reliability . . .		Section 2 2 2 (The Study Area has no inconsistent sources of supply)
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)	System Supplies		Section 3. 1
25	Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: (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	10631(e)(1)	System Demands	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 4; Table 4-1 Table 4-2; Table 4-8

No.	UWMP requirement ^a	Calif. Water Code reference	Subject ^b	Additional clarification	UWMP location
26	<p>(Describe and provide a schedule of implementation for) 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;</p> <p>(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.</p>	10631(f)(1)	DMMs	<p>Discuss each DMM, even if it is not currently or planned for implementation. Provide any appropriate schedules.</p>	<p>Section 5; Appendix D</p>
27	<p>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.</p>	10631(f)(3)	DMMs		<p>Section 5; Appendix D</p>
28	<p>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.</p>	10631(f)(4)	DMMs		<p>Section 5; Appendix D</p>

No	UWMP requirement ^a	Calif Water Code reference	Subject ^b	Additional clarification	UWMP location
29	<p>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.</p>	10631(g)	DMMs	See 10631(g) for additional wording.	Section 5; Appendix D
30	<p>(Describe) all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use 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</p>	10631(h)	System Supplies		Section 3.2
31	<p>Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply</p>	10631(i)	System Supplies		Section 3.4

No.	UWMP requirement ^a	Calif Water Code reference	Subject ^b	Additional clarification	UWMP location
32	Include the annual reports submitted to meet the Section 6.2 requirement (of the MOU), if a member of the CUWCC and signer of the December 10, 2008 MOU	10631(j)	DMMs	Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29.	Section 5.2.1: Appendix D
33	Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. 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(k)	System Demands	Average year, single dry year, multiple dry years for 2015, 2020, 2025, and 2030.	Section 2.2
34	The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 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.	10631 1(a)	System Demands		Section 9.1
35	Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.	10632(a)	Water Supply Reliability		Section 10.7
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)	Water Supply Reliability		Section 10.1
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)	Water Supply Reliability		Sections 10.2 through 10.6

No.	UWMP requirement ^a	Calif Water		UWMP location
		Code reference	Subject ^b	
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)	Water Supply Reliability . . .	Section 10.7
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)	Water Supply Reliability . . .	Section 10.7
40	(Indicated) penalties or charges for excessive use, where applicable	10632(f)	Water Supply Reliability	Section 10.7
41	An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.	10632(g)	Water Supply Reliability . . .	Section 10.7
42	(Provide) a draft water shortage contingency resolution or ordinance	10632(h)	Water Supply Reliability . . .	Appendix F
43	(Indicate) a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)	Water Supply Reliability . . .	Section 10.7
44	Provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area	10633	System Supplies	Section 6.1
45	(Describe) the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	10633(a)	System Supplies	Section 6.1, Table 6-1
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)	System Supplies	Section 6.1

No.	UWMP requirement ^a	Calif Water Code reference	Subject ^b	Additional clarification	UWMP location
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)	System Supplies		Section 6.1
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)	System Supplies		Section 6.1; Table 6-4
49	(Describe) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.	10633(e)	System Supplies		Section 6.1 Table 6-3
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)	System Supplies		Section 6.1
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)	System Supplies		Section 6.1
52	The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631 and the manner in which water quality affects water management strategies and supply reliability	10634	Water Supply Reliability . . .	For years 2010, 2015, 2020, 2025, and 2030	Section 2.2 3, Section 7.2

No.	UWMP requirement ^a	Calif. Water Code reference	Subject ^b	Additional clarification	UWMP location
53	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.	10635(a)	Water Supply Reliability . . .		Section 7
54	The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.	10635(b)	Plan Preparation		Table 1-1: (Cities have participated & will receive another copy)
55	Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	10642	Plan Preparation		Table 1-1
56	Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area.	10642	Plan Preparation		Appendix B
57	After the hearing, the plan shall be adopted as prepared or as modified after the hearing.	10642	Plan Preparation		Appendix B
58	An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.	10643	Plan Preparation		Ok

No.	UWMP requirement ^a	Calif Water Code reference	Subject ^b	Additional clarification	UWMP location
59	An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.	10644(a)	Plan Preparation		Ok
60	Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.	10645	Plan Preparation		Ok; (available for public review online)

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.