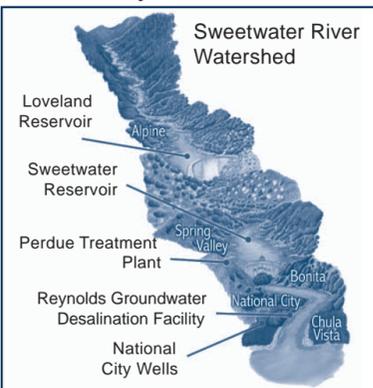


well fields. Surface water is treated and disinfected at the Perdue Plant. Potable groundwater is disinfected. Brackish groundwater is treated with reverse osmosis and disinfected. (To learn more, visit www.sweetwater.org, click on Our Water.)

Informational Statements: The Authority vigilantly safeguards its water supplies and has met all state and federal health standards. The following information describes potential health effects of drinking water that contain contaminants above federal maximum levels.

About Radon: Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water through showering, washing dishes, and other household activities. In most cases, the amount of radon entering a home from tap water will be much less than the amount of radon entering the home through soil. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call the State Radon Program (1-800-745-7236), the EPA Safe Drinking Water Act Hotline (1-800-426-4791), or the National Safety Council Radon Hotline (1-800-SOS-RADON).

About Lead: If present, elevated levels of



How to Reach Us	
Customer Service	619-420-1413
After Hours Emergency	619-420-1413
Water Quality Lab	619-409-6801
Conservation Helpline	619-409-6779
Employment	619-409-6775
Fluoride Info Line	619-409-6780
Recreation/Fishing.....	
Sweetwater Reservoir	619-409-6777
Loveland Reservoir	619-409-6776
Construction Information	619-409-6850
School Programs	619-409-6722
Community Presentations	619-409-6723
Board Secretary	619-409-6703
Website	www.sweetwater.org

lead can cause serious health problems, especially for pregnant women, infants, and young children. Lead in drinking water is primarily from materials and components associated with service lines and household plumbing. The Authority is responsible for providing high quality drinking water, but cannot control the variety of materials used in household 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 at 1-800-426-4791, or at <http://www.epa.gov/safewater/lead>.

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. In the past year, our monitoring has not detected these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing a life-threatening illness, and should contact their physicians regarding appropriate precautions.

Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Fluoride is found naturally in water delivered to Sweetwater Authority customers in levels below the amount recommended for preventing tooth decay. While Sweetwater Authority does not add fluoride to the water, the Authority did purchase treated (fluoridated) water from SDCWA from January through June of 2011 while infrastructure upgrades were performed at the Robert A. Perdue Water Treatment Plant. Customers concerned about fluoride use are urged to contact a doctor or dentist to discuss fluoride supplements. For more information about fluoridation, oral health, and current issues, visit the CDPH website at www.cdph.ca.gov/certlic/drinking-water/pages/fluoridation.aspx.

Trihalomethanes: High levels of trihalomethanes (THMs) may lead to an increased risk for miscarriage during the first trimester of pregnancy. THM levels vary throughout the year and are most likely to be highest during the summer. To obtain information about current THM levels, customers may contact the Authority's Laboratory Supervisor Mark Hatcher at 619-409-6813, or Chemist Laura Homsey at 619-409-6826. Pregnant women concerned about this risk should seek advice from their health care providers.

Consumer questions and answers about water quality, taste, color and odor, can be found at www.sweetwater.org, click on "Our Water," then "Water Quality."

The Source Water Assessment identifies activities to which water sources are considered "most vulnerable." In 2002, source water assessments were completed for the Authority's water supplies. There were NO contaminants from the "possible contaminating activities" found in the Authority's water supplies. To request a summary of the assessments, contact Water Quality Secretary/Watershed Technician Dorothy Ryan at 619-409-6801, or dryan@sweetwater.org.

Public Participation: Public participation is welcome at all Sweetwater Authority Board meetings. Meetings are held at 505 Garrett Avenue, Chula Vista, the second and fourth Wednesday of each month, at 6:00 p.m. and 3:30 p.m., respectively. Agendas are posted at 505 Garrett Avenue, Chula Vista. Also, meeting agendas and minutes are published on the Authority's website at www.sweetwater.org.

SWEETWATER AUTHORITY'S 2012 Annual Drinking Water Quality Report

Last year the water delivered by Sweetwater Authority met all USEPA and CA Department of Public Health drinking water health standards



Sweetwater Authority, a public agency, is proud to serve safe, reliable drinking water to our customers in Chula Vista, National City and Bonita, California. This report, required by law, provides important consumer information about water for the 2011 calendar year and other helpful information. Spanish language translation is available at www.sweetwater.org. Este informe contiene información muy importante sobre su agua potable. Tagalog: Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

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WHAT IS SAFE DRINKING WATER?

The U. S. Environmental Protection Agency (USEPA) and the State Department of Public Health (Department) regulate California's tap water. These agencies establish standards that define our current understanding of safe drinking water. Last year the water delivered by Sweetwater Authority (Authority) met all USEPA and Department drinking water health standards.

This report provides information about the ways that the Authority vigilantly safeguards and treats your drinking water supplies. In accordance with state and federal laws, it also provides a detailed listing of constituents found in your drinking water, and compares those levels to the maximum levels considered safe for the general public by the USEPA and the Department. If you have questions about Authority operations or the contents of this report, please visit www.sweetwater.org or call Laboratory Supervisor Mark Hatcher at 619-409-6813, or Chemist Laura Homsey at 619-409-6826.

This report also includes information about the Authority's water sources and how those sources are protected, as well as people to contact for more details, and ways you can become more involved in protecting your water.

ABOUT SWEETWATER AUTHORITY

The Authority is a publicly-owned, joint-powers water agency, with policies and procedures established by a seven-member Board of Directors. Five directors are elected by the citizens of the South Bay Irrigation District. Two directors are appointed by the Mayor of National City, subject to City Council confirmation.

The Authority provides safe, reliable water service to approximately 184,000 people in National City, Bonita, and western portions of Chula Vista. Its customers include residential, business, government, industrial, and agricultural water users, in an area covering more than 20,480 acres in the South Bay region of San Diego County.

Wondering about the water we drink?

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline

at 800-426-4791, or visiting USEPA's website at www.epa.gov/safewater.

Note to special populations: Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. To obtain USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants, please call the Safe Drinking Water Hotline at 800-426-4791.

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 materials, and can pick up substances resulting from the presence of animals or from human activity.

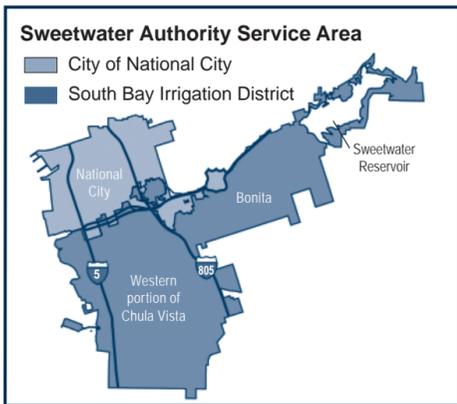
Before water is treated, raw water may contain contaminants including: **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides 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 that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

Radioactive contaminants can be naturally occurring or the result of oil and gas production and mining activities. To learn more about contaminants and health effects, call the USEPA Safe Drinking Water Hotline at 800-



426-4791. Further information is available at www.sweetwater.org or www.mwdh2o.com.

In order to ensure that tap water is safe to drink, the USEPA and the 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 provide the same protection for public health.

Water Sources: Authority customers receive water from four sources: the Sweetwater River (drawn at Sweetwater Reservoir in Spring Valley), deep freshwater wells in National City, brackish water wells in Chula Vista and National City, and the region's imported supply, which is drawn from the Colorado River or the State Water Project in Northern California. Source water assessments are available for each of these sources.

How is your water protected from contamination? The local water used by the Authority can be affected by activities within its watershed, a 230-square mile area leading into the streams that feed the Sweetwater River. The Authority uses a multiple-barrier approach to ensure water quality. Education, stakeholder involvement, and comments to local planners are part of Authority efforts, in addition to the "hardware" solutions described here.

An innovative diversion system captures urban runoff before it enters Sweetwater Reservoir and transports the runoff below Sweetwater Dam, reducing the buildup of mineral salts in the reservoir. The diversion system can also capture and hold runoff from a chemical spill or sewage failure, allowing the contaminants to be removed and trucked away for proper disposal. Well sites are closely monitored to assure that contaminants have not entered the

PRIMARY STANDARDS For the 2011 calendar year				National City Wells (Disinfected with chloramine)	Treated at Reynolds Goundwater Desal Facility	Treated at Robert A. Perdue Water Treatment Plant			Treated ¹ Sweetwater Authority Drinking Water	If you do not see a contaminant listed here, it was not detected in 2011	
Inorganic Contaminants	MCL [MRDL]	PHG (MCLG) [MRDLG]	Range and Average	— BEFORE TREATMENT —					Sweetwater Reservoir	Typical Source of Contaminant:	
				National City Well #3	National City Well #4	SD Formation Wells 1- 6	Lake Skinner Outlet (Aqueduct)				
Fluoride (ppm)	2.0	1	Range Average	0.4 - 0.4 0.4	0.4 - 0.4 0.4	0.1 - 0.3 ² 0.2	0.2 0.2	0.3 - 0.3 0.3	ND - 0.7 0.3	Erosion of natural deposits; discharge from fertilizer and aluminum factories	
Aluminum (ppb)	1000	600	Range Average	ND ND	ND ND	ND ND	ND ND	ND - 140 ² 83	ND ND	Erosion of natural deposits; residue from some surface water treatment processes	
Arsenic (ppb)	10	0.004	Range Average	ND ND	ND ND	ND - 1.8 ² ND	2.2 ² 2.2	ND - 1.8 ² ND	ND ND	Erosion of natural deposits, glass and electronics production wastes	
Barium (ppm)	1	2	Range Average	ND ND	0.06 - 0.06 0.06	ND - 0.13 ² 0.08	ND ND	0.05 - 0.07 0.06	ND - 0.07 ND	Erosion of natural deposits; discharges of oil drilling wastes and from metal refineries	
Radionuclides (a)											
Gross Alpha (pCi/L)	15	(0)	Range Average	ND ND	ND	ND - 11.7 ^{2,3} 5.4	ND - 3.0 ^{2,3} ND	2.9 ^{2,3} 2.9		Erosion of natural deposits	
Combined Radium - 226/228 (pCi/L)	5	(0)	Range Average	ND ND	ND	ND - 2.9 ^{2,3} ND	ND ND	ND ND		Erosion of natural deposits	
Radium - 228 (pCi/L)	NA	0.019	Range Average	ND ND	ND	ND - 2.9 ^{2,3} ND	ND ND	ND ND		Erosion of natural deposits	
Uranium (pCi/L)	20	0.43	Range Average	1.4 1.4	1.2 1.2	0.8 - 5.8 ^{2,3} 2.7	ND - 2.0 ^{2,3} 1.0	2.4 ^{2,3} 2.4		Erosion of natural deposits	
Turbidity (b)											
Combined Filter Effluent Turbidity (NTU)	TT	NA	Highest single measurement						0.34	Soil runoff	
									Lowest monthly percent of samples meeting MCL		100.0%
Unregulated Contaminants⁴											
Boron (ppb)	NA	NL = 1,000	Range Average	210 - 230 220	170 - 170 170	120 - 320 253	130 130	140 - 150 145	130 - 260 188	Runoff/leaching from natural deposits; industrial wastes	
Vanadium (ppb)	NA	NL = 50	Range Average	ND ND	12 - 12 12	ND ND	ND ND	4.1 - 5.3 ² 4.7	ND ND	Naturally occurring; industrial waste discharge	
Unregulated Contaminant Monitoring Rule (UCMR2) (c)											
N-nitroso-dimethylamine (ppt)	NA	NL = 10	Combined distribution system range						ND - 5.8	Byproduct of drinking water chloramination; industrial processes	
									Combined distribution system average		1.1
Disinfection and Byproduct Contaminants											
Total Trihalomethanes (TTHMs) (ppb)	80	NA	Highest running annual average						26.7	By-product of drinking water chlorination	
									Range of all distribution sample points		2.6 - 73.8 ⁵
Haloacetic Acids (HAAs) (ppb)	60	NA	Highest running annual average						12.2	By-product of drinking water chlorination	
									Range of all distribution sample points		ND - 35.7 ⁵
Chloramines (ppm)	[4.0]	[4]	Highest running annual average						2.2	Drinking water disinfectant added for treatment	
									Combined distribution system range		0.1 - 3.0 ⁵
Chlorine Dioxide (ppb)	[800]	[800]	Perdue Plant Clearwell effluent range						ND - 240 ⁵	Drinking water disinfectant added for treatment	
									Perdue Plant Clearwell effluent average		7
Chlorite (ppm)	1.0	0.05	Combined distribution system range						0.11 - 0.63 ⁵	By-product of drinking water disinfection when using chlorine dioxide	
									Combined distribution system average		0.40
Chlorate (ppm)	NA	NL=0.8	Combined distribution system range						0.17 - 0.35	By-product of drinking water disinfection when using chlorine dioxide	
									Combined distribution system average		0.28
Lead and Copper Rule				Number of sites found above AL				90 percent of samples below			
Lead (ppb)	AL=15	0.2	1 site above AL out of 55 sites sampled						7.5 ³	Corrosion of household plumbing systems	
Copper (ppb)	AL=1300	300	0 sites above AL out of 55 sites sampled						260 ³		
Microbiological (d)											
Highest monthly percentage											
Total Coliform Bacteria	5.0%	(0)	Number of positive samples taken this year = 3						1.3%	Naturally present in the environment	
Fecal Coliform Bacteria	(d)	(0)	Number of positive samples taken this year = 0						0%	Human and animal fecal waste	
Cryptosporidium (Oocysts/10L)	TT	(0)	Range					ND	ND ⁶	Naturally present in the environment	
									Average		ND

SECONDARY STANDARDS

Inorganic Contaminants				— BEFORE TREATMENT —					Treated Sweetwater Authority Drinking Water ¹	If you do not see a contaminant listed here, it was not detected in 2011.
				National City Wells (Disinfected with chloramine)		Treated at Reynolds Groundwater Desal Facility	Treated at Robert A. Perdue Water Treatment Plant			
	MCL [MRDL]	PHG (MCLG) [MRDLG]	Range and Avg	National City Well #3	National City Well #4	SD Formation Wells 1- 6	Lake Skinner Outlet (Aqueduct)	Sweetwater Reservoir		
Aluminum ⁷ (ppb)	200	600	Range Average	ND ND	ND ND	ND ND	ND ND	ND - 140 ² 83	ND ND	Residue from water treatment process; natural deposits erosion
Iron (ppb)	300	NA	Range Average	68 - 81 75	ND ND	ND - 100 ² ND	ND ND	ND - 290 ² 162	ND ND	Leaching from natural deposits; industrial wastes
Manganese (ppb)	50	NL = 500	Range Average	ND ND	ND ND	75 - 2800 ² 718	ND ND	38 - 100 ² 69	ND ND	Leaching from natural deposits
Specific Conductance (microseimens/centimeter)	1600	NA	Range Average	1132 - 1200 1166	977 - 1000 989	2032 - 4930 ² 3120	540 - 740 640	1255 - 1300 1278	680 - 1310 854	Substances that form ions when in water; seawater influence
Total Dissolved Solids (ppm)	1000	NA	Range Average	638 - 700 669	540 - 610 575	1185 - 3000 ² 1883	310 - 440 370	768 - 790 779	355 - 784 497	Runoff/leaching from natural deposits; seawater influence
Chloride (ppm)	500	NA	Range Average	201 - 210 206	160 - 170 165	440 - 1400 ² 804	58 - 76 67	196 - 200 198	88 - 215 158	Runoff/leaching from natural deposits; seawater influence
Sulfate (ppm)	500	NA	Range Average	60 - 62 61	41 - 42 42	121 - 292 ² 198	83 - 140 110	158 - 187 173	24 - 159 83	Runoff/leaching from natural deposits; industrial wastes
Color (units)	15	NA	Range Average	1 - 1 1	1 - 1 1	1 - 1 1	5 - 7 ² 6	15 - 25 ² 20	1 - 1 1	Naturally occurring organic materials; iron and manganese
Turbidity ⁷ (NTU)	5	NA	Range Average	0.20 - 0.22 0.21	0.15 - 0.17 0.16	0.08 - 0.39 0.18	0.37 - 0.41 ² 0.39	2.4 - 5.2 ² 3.8	0.07 - 0.32 0.19	Soil runoff
Other Parameters										
Sodium (ppm)	NA	NA	Range Average	160 - 160 160	130 - 140 135	280 - 790 ² 438	52 - 70 61	130 - 130 130	73 - 140 99	Runoff/leaching from natural deposits; seawater influence
Hardness (Total Hardness as CaCO ₃) (ppm)	NA	NA	Range Average	200 - 209 205	186 - 190 188	354 - 909 ² 596	140 - 200 170	352 - 360 356	87 - 347 177	Leaching from natural deposits
Radon (pCi/L) ⁸	NA	NA	Range Average	270 270	374 374	190 - 300 ² 240				Decay of natural deposits
pH (Standard Units)	NA	NA	Range Average	7.7 - 7.9 7.8	7.7 - 7.9 7.8	7.2 - 7.8 7.6	8.1 - 8.4 8.3	8.1 - 8.3 8.2	7.9 - 8.7 8.4	Soil geology, water hardness, and alkalinity
Total Organic Carbon (ppm)	TT	NA	Range Average				2.4 - 3.1 2.9	7.6 - 10.2 8.5	2.0 - 7.5 5.0	Various natural and man-made sources

4 FOOTNOTES

- Sweetwater Authority drinking water data is representative of water which has been processed through the Robert A. Perdue Water Treatment Plant (conventional treatment), the Richard A. Reynolds Desalination Facility (reverse osmosis treatment), and treated (fluoridated) water purchased from the San Diego County Water Authority during January-June of 2011.
- The contaminants listed are in the untreated waters. The water is processed through either a reverse osmosis filtration plant (Reynolds Desalination Facility) or through a conventional water treatment plant (Perdue Water Treatment Plant). These water treatment applications typically remove these contaminants to concentrations below detectable levels.
- The State allows us to monitor for some con-

- taminants less than once per year because the concentrations of the contaminants do not change frequently. Radiological data on untreated source waters was collected in 2006, 2007, 2008, 2010, and 2011. Lead and Copper data was collected in August 2011. Compliance with the lead and copper action levels is determined at the 90th percentile.
- Unregulated contaminant monitoring helps EPA and the California Department of Public Health to determine where certain contaminants occur and whether the contaminants need to be regulated.
 - MCL (or MRDL) compliance for TTHM, HAA5, and chloramines is determined on a system-wide basis by calculating a running annual average of all distribution sampling point

- averages. MCL compliance for chlorine dioxide is based on consecutive daily samples. MCL compliance for chlorite is based on an arithmetic average of each monthly distribution system three-sample set.
- Cryptosporidium (Crypto) monitoring was conducted bi-weekly on Sweetwater Reservoir from October 2002 - September 2008, and quarterly in 2009 - 2011. The nine year average was 0.003 Crypto oocysts per liter. The last detection for Crypto occurred in August of 2005 (1.0 oocyst in 10 liters). Crypto was not detected in Sweetwater Reservoir in 2011.
 - Aluminum and turbidity have both a primary and a secondary MCL.
 - Radon was sampled in 2000 for San Diego

- Formation Wells #1 - #5, in 2001 for the National City Wells #2 and #3, and in 2008 for San Diego Formation Well #6 and National City Well #4.
- Compliance with the radiological MCLs is typically based upon samples collected every three to nine years (depending on upon previous monitoring results), unless waived by CDPH. Compliance with the gross alpha MCL is determined by excluding the values for radon and uranium.
 - The turbidity level of the filtered water shall be less than or equal to 0.3 NTU (Nephelometric Turbidity Units) in 95% of the measurements taken each month and shall not exceed 1.0 NTU for more than eight consecutive hours or 1.49 NTU for more than one hour and none of the 4-hour interval readings shall exceed 1.49 NTU. Turbidity is a measure of the cloudiness of the water. We

3 TABLE DEFINITIONS

- TT = Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.
- AL = Regulatory Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow (AL now applies only to lead and copper).
- NL = Regulatory Notification Level** (previously known as Action Level). The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- ND = Not Detected**
- NA = Not Applicable** (No standard specified)
- ppb: Parts per billion** or micrograms per liter.
- ppm: Parts per million** or milligrams per liter.
- ppt: Parts per trillion** or nanograms per liter.
- pCi/l: picoCuries** per liter (a measure of radiation).

- 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. 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 Environmental Protection Agency (CA-EPA).
- PDWS: Primary Drinking Water Standard:** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
- 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 o control microbial contaminants.

- Quarterly UCMR2 monitoring was conducted in 2009 - 2010. UCMR2 monitoring consisted of a total of 25 List 1 and List 2 chemicals. Of these, only N-nitroso-dimethylamine was detected.
- Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform positive. Fecal coliform MCLs: A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or E. coli positive. The Sweetwater Authority did not violate either MCL in 2011. Results are based on the distribution system's highest monthly percent positives. Compliance is based on the combined distribution system sampling from all treatment plants. 1,872 samples were analyzed in 2011.