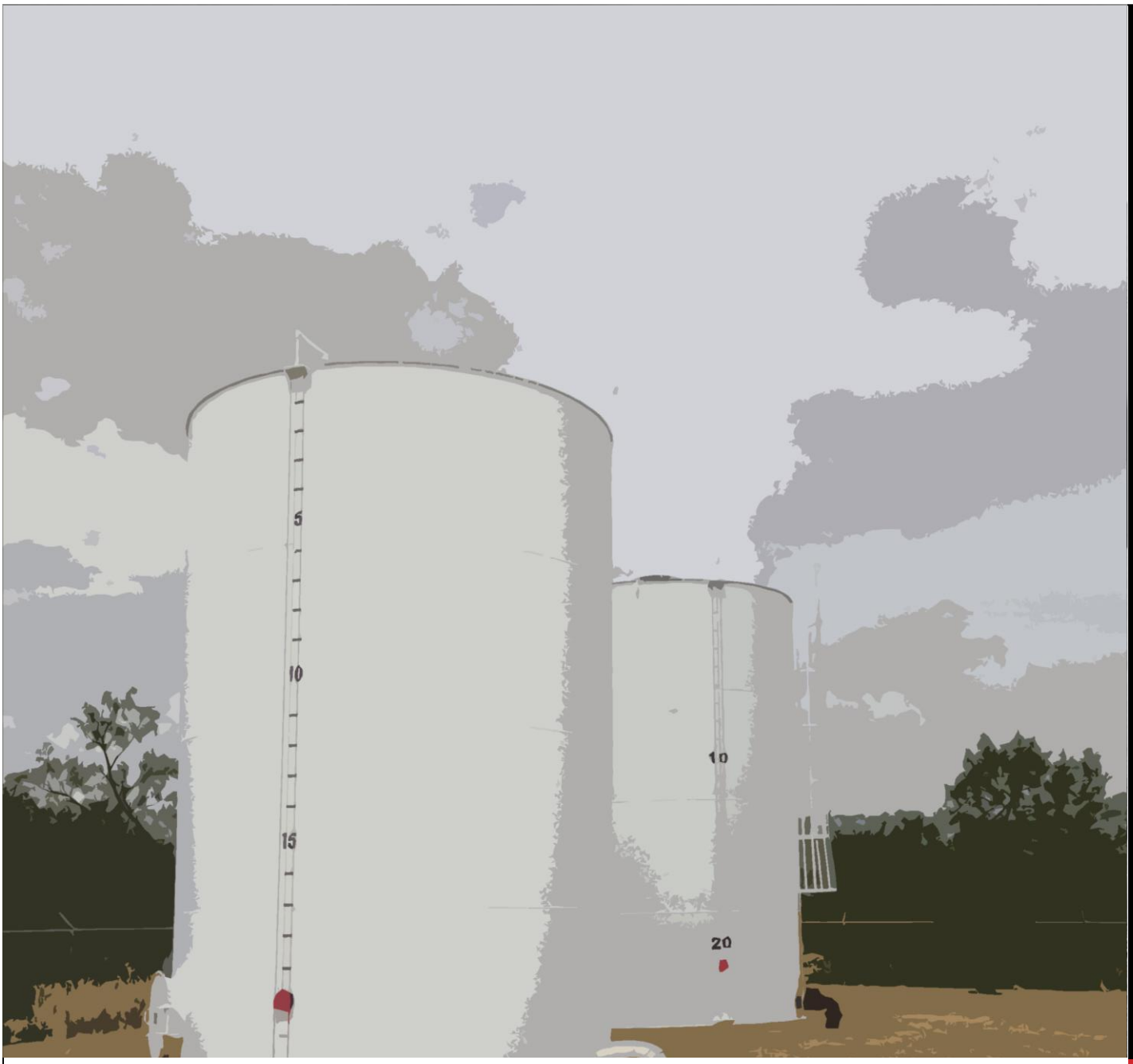

RED CREEK MUD

WATER CONSERVATION & DROUGHT CONTINGENCY PLAN

2014

Prepared by:

LaCosta
ENVIRONMENTAL LLC

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SYSTEM INFORMATION

422 E. Red Creek Rd.
San Angelo, TX 76905

(512) 658-2961

CCN# **P1203**

PWS# **2260101**

WATER CONSERVATION PLAN

INTRODUCTION

Red Creek MUD (The District) is a Municipal Utility District located in the City of San Angelo, Tom Green County, TX. The District currently serves 855 residents on 284 single family residential connections. No wastewater service is provided and all customers have septic systems.

The San Angelo area is characterized by a semi-arid climate, with an average of 20.91 inches of rainfall per year. The area is located in a region where Central Texas meets West Texas weather. The area averages 15 days over 100 degrees per year, however over 100 days of 100 degree weather was recorded in 2011.

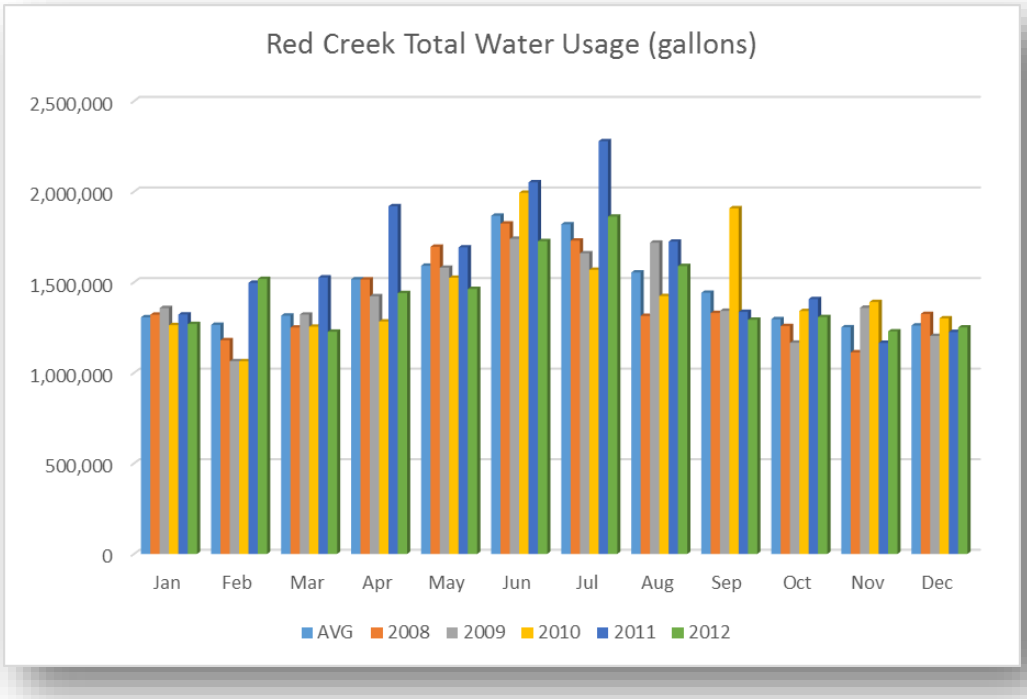
The District has historically been supplied by groundwater from Concho Rural Water Corp (CRWC). Due to declining groundwater production, the District began purchasing water from the Upper Colorado River Authority (UCRA) through and agreement between the District, UCRA, CRWC, and the City of San Angelo.

SYSTEM INFORMATION	
Name of Utility	Red Creek MUD
Address	422 E. Red Creek Rd., San Angelo TX 76905
Phone#	(512) 658-2961
CCN#	P1203
PWS#(s)	2260101
Surface WR#	N/A
Wastewater ID#	N/A
Wholesale provider(s)	CRWC, City of San Angelo, UCRA
Wholesale cusomer(s)	N/A
RWPG	Region F
GCD	Lipan-Kickapoo WCD

UTILITY PROFILE

POPULATION & SERVICE AREA DATA

		Population	Connections		Sales	GPCD		Loss
	Year	Retail	Residential	Commercial	Gallons Sold	Total	Residential	Gallons
Historic	2008	819	273		16,856,000	56	56	
	2009	810	270		16,934,500	57	57	10,000
	2010	822	274		17,317,700	58	63	
	2011	831	277		19,146,600	63	63	195,000
	2012	855	284		17,176,100	55	55	16,000
Projected	2020	920	307					
	2030	1,013	338					
	2040	1,106	369					
	2050	1,199	400					
	2060	1,292	431					



WATER CONSERVATION GOALS

Due to drought conditions in recent years and subsequent implementation of water-use restrictions, per capita usage for the District has been depressed. Because all connection are single-family residential customers, the goals for Total and Residential GPCD (gallons per customer per day) are the same. Efforts to identify and measure water loss will continue to be addressed through the next planning cycle.

Using the recommended formula of reduction of usage by 0.5% per year, the District's specific and quantified 5 and 10-year water conservation goals are as follows:

WATER CONSERVATION GOALS

	5-YEAR (2019)	10-YEAR (2023)
Total GPCD	58	56
Residential GPCD	58	56
Water Loss	<5%	<5%

PUBLIC EDUCATION

The District will conduct a program of ongoing public education that includes periodic distribution of water conservation information. Articles may be published in local newspapers to reinforce the distributed materials. Radio public service announcements and interviews will periodically be conducted to promote water conservation awareness. Additionally, new customers will receive water conservation information when applying for service.

METERING DEVICES

All water service connections are universally metered. All meters are manual read. Meters are replaced as necessary.

WATER LOSS

The District maintains an ongoing program of leak detection and repair. An annual water audit measures water loss by comparing sold vs. purchased water. Any abnormalities are investigated by District staff. Water lines found to have leaks are replaced as quickly as practical.

WATER RATES

The District has an inclining block rate that is cost based and does not encourage the excessive use of water. Specific drought rates are designed to encourage customers to limit water use during periods of time while the Drought Contingency Plan is in effect.

CROSS CONNECTION CONTROL

The District maintains cross connection control on all connections. Risk of backflow is reduced by replacing pipes before they break, taking steps to ensure that system pressures do not fall during periods of high demand, and asking for the cooperation of customers when there is a risk that system pressures could fall below safe levels. Facilities and structures determined to have a high hazard are ensured to have devices that prevent water flowing in the opposite of its intended direction, either from a loss of pressure in the supply lines or an increase in pressure on the customer's side.

PLUMBING FIXTURES

The State of Texas has recently adopted more stringent water saving performance measures for plumbing fixtures, found in the Health & Safety Code Chapter 372. The following maximum flow standards are subsequently listed in the Texas Administrative Code Title 30 Chapter 290 Subchapter G:

- Faucet or aerator 2.2 gpm
- Shower head 2.5 gpm
- Urinal and associated flush valve* 0.5 gpf
- Single and dual flush toilets* 1.28 gpf
- Pre-rinse spray valve 1.6 gpm

* Effective January 1, 2014

Customers in existing buildings that do not have water saving plumbing fixtures are encouraged through educational materials to retrofit their old plumbing fixtures.

WATER WASTE

Water waste is prohibited at all times. Water waste is defined as:

1. Failure to repair a controllable leak, including:
   - Irrigation systems
   - Plumbing fixtures
   - Pipes
2. Operating a permanently installed irrigation system with:
   - A broken or missing head
   - A head that is out of adjustment where the arc of the spray head is over a street, parking area, or other impervious surface
3. During irrigation:
   - Allowing water to run off a property such that there is a trail of water running in a street, parking area, or other impervious surface for a distance of 50 feet or greater
   - Allowing water to pond to a depth greater than ¼ of an inch in a street, parking area, or other impervious surface.

DISCRETIONARY/NON-ESSENTIAL USES

- Wash down of any sidewalks, driveways, parking lots, or other hard-surfaced areas
- Use of water to wash down buildings or structures for purposes other than immediate fire protection
- Use of water for dust control
- Residential use of water for washing vehicles
- Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

DROUGHT CONTINGENCY PLAN

DECLARATION OF POLICY, PURPOSE, AND INTENT

In order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other water supply emergency conditions, the District hereby adopts the following regulations and restrictions on the delivery and consumption of water by District Tariff.

Water uses regulated or prohibited under this Drought Contingency Plan are considered to be non-essential or discretionary and continuation of such uses during times of water shortage or other emergency water supply conditions are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in the Enforcement of Drought Contingency Plan section of this Plan.

AUTHORIZATION

The Board of Directors is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. The Board of Directors shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

APPLICATION

The provisions of this Plan shall apply to all persons, customers, and property utilizing water provided by the District. The terms “person” and “customer” as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

PUBLIC INVOLVEMENT

Opportunity for the public to provide input into the preparation and subsequent revisions of this Plan was provided by the District by means of:

1. Direct mailing
2. Phone
3. Personal correspondence

PUBLIC EDUCATION

The District will periodically provide the public with information about this Drought Contingency Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. Water conservation tips and information will also be provided.

This information will be provided by means of:

1. Posting a Notice of Drought Conditions at the District office
2. General circulation to local media
3. Direct mailing to each water account
4. The plan will be posted on the District's website

A copy of this Plan will be available at the District office during business hours. The Plan will also be available electronically.

DROUGHT & EMERGENCY TRIGGERS

STAGE 1: MILD DROUGHT
Water production or distribution system limitations
STAGE 2: MODERATE DROUGHT
UCRA Stage 1 Drought Water production or distribution system limitations
STAGE 3: SEVERE DROUGHT
UCRA Stage 2 Drought Water production or distribution system limitations
STAGE 4: EXCEPTIONAL DROUGHT
UCRA Stage 3 Dought Water production or distribution system limitations
STAGE 5: EMERGENCY CONDITION
Major water production or distribution limitations Supply source contamination System outage due to the failure or damage of major water system components

RESPONSE STAGES

RED CREEK MUD WATERING SCHEDULE				
			ADDRESS	
STAGE	COMPLIANCE	HOURS	ODD	EVEN
1	Voluntary	12-10AM/6-12PM	Wed/Sat	Thu/Sun
2	Mandatory	12-10AM/6-12PM	Wed	Thu
3	Mandatory	12-10AM/6-12PM	Wed 1st and 3rd week of Month	Thu 1st and 3rd week of Month
4	Mandatory	NONE	No watering	No watering

Stage 1 Target: Achieve a 5 percent reduction in total water use.

- Formal public notification by Utility officials of Stage 1 Drought conditions
- Customers are requested to follow the Stage 1 watering schedule
- Water customers are requested to practice water conservation and to minimize or discontinue water use for non-essential or discretionary purposes
- Initiate increased public information efforts
- Increase leak detection and repair efforts
- If coming from mandatory response, notify TCEQ Water Supply Division of no mandatory restrictions

Stage 2 Target: Achieve a 20 percent reduction in total water use.

- Formal public notification by Utility officials of Stage 2 Drought conditions
- Customers are required to follow the Stage 2 watering schedule
- Water customers are requested to continue to practice water conservation and to minimize or discontinue water use for non-essential or discretionary purposes
- Increase utility oversight of water waste
- Notify TCEQ Water Supply Division of current mandatory drought stage

Stage 3 Target: Achieve a 35 percent reduction in total water use.

- Formal public notification by Utility officials of Stage 3 Drought conditions
- Customers are required to follow the Stage 3 watering schedule
- Filling of swimming pools, ornamental fountains, and artificial water features on watering days only
- Increase utility enforcement of watering schedule and water waste
- Notify TCEQ Water Supply Division of current mandatory drought stage

Stage 4 Target: Achieve a 50 percent reduction in total water use.

- Formal public notification by Utility officials of Stage 4 Drought conditions
- Customers are required to follow the Stage 4 watering schedule
- No filling of swimming pools, ornamental fountains, and artificial water features
- Increase utility enforcement of watering schedule and water waste
- Notify TCEQ Water Supply Division of current mandatory drought stage

Stage 5 Emergency Target: Achieve 65% or more reduction in total water use.

- Formal public notification by Utility officials of Stage 5 Emergency Drought conditions
- All outdoor, non-essential, or discretionary uses of water is prohibited
- Increase utility enforcement of watering schedule and water waste
- Notify TCEQ Water Supply Division of Emergency drought stage

VARIANCES

The Board of Directors may, in writing, grant temporary variance for existing water uses otherwise prohibited under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance and if one or more of the following conditions are met:

1. Compliance with this Plan cannot be technically accomplished during the duration of the water supply shortage or other condition for which the Plan is in effect.
2. Alternative methods can be implemented which will achieve the same level of reduction in water use.

Persons requesting an exemption from the provisions of this Resolution shall file a petition for variance with the District within 5 days after the Plan or a particular drought response stage has been invoked. All petitions for variances shall be reviewed by the Board of Directors, and shall include the following:

1. Name and address of the petitioner(s).
2. Purpose of water use.
3. Specific provision(s) of the Plan from which the petitioner is requesting relief.
4. Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance.
5. Description of the relief requested.
6. Period of time for which the variance is sought.
7. Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
8. Other pertinent information.

ENFORCEMENT

First Violation

The customer will be notified by written notice of their specific violation.

Subsequent Violations

After written notice, the District may:

- Install a flow restricting device in the line to limit the amount of water which will pass through the meter in a 24-hour period. The District may charge the customer for the actual cost of installing and removing the flow restricting device, not to exceed $50.00.

- Discontinue service at the meter for a period of seven (7) days, or until the end of the calendar month, whichever is LESS. The normal reconnect fee of the District will apply for restoration of service.

COORDINATION WITH REGIONAL WATER PLANNING GROUP

The District is located within the Region F Water Planning Group. A copy of this Water Conservation & Drought Contingency Plan will be provided to the planning group chair at:

Colorado River Municipal Water District
400 E. 24th Street
Big Spring, Texas 79720
(432) 267-6341

The approved 2011 Region F Water Plan can be found on the Region F website at: http://www.regionfwater.org/ .

RESOLUTION FOR ADOPTION OF A WATER CONSERVATION & DROUGHT CONTINGENCY PLAN

RESOLUTION NO. _____

A RESOLUTION OF THE BOARD OF DIRECTORS OF RED CREEK MUNICIPAL UTILITY DISTRICT ADOPTING A WATER CONSERVATION & DROUGHT CONTINGENCY PLAN.

WHEREAS, the Board recognizes that the amount of water available to the Red Creek Municipal Utility District and its water utility customers is limited and subject to depletion during periods of extended drought;

WHEREAS, Section 11.1271 of the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require retail public water suppliers with 3,300 or more connections to develop, submit, and implement a water conservation plan, consistent with the appropriate approved regional water plan, that adopts reasonable water conservation measures as defined by Subdivision (8)(B), Section 11.002, which defines "conservation" as those practices, techniques, and technologies that will reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made available for future or alternative uses;

WHEREAS, the Board recognizes that natural limitations due to drought conditions and other acts of God cannot guarantee an uninterrupted water supply for all purposes;

WHEREAS, Section 11.1272 of the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require all public water supply systems in Texas to prepare a Water Conservation & Drought Contingency plan; and

WHEREAS, as authorized under law, and in the best interests of the customers of the Red Creek Municipal Utility District, the Board deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought and other water supply emergencies;

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF RED CREEK MUNICIPAL UTILITY DISTRICT:

SECTION 1. That the Water Conservation & Drought Contingency Plan attached hereto and made part hereof for all purposes be, and the same is hereby, adopted as the official policy of the Dean Dale Special Utility District.

SECTION 2. That the Board of Directors is hereby directed to implement, administer, and enforce the Water Conservation & Drought Contingency Plan.

SECTION 3. That this resolution shall take effect immediately upon its passage.

DULY PASSED BY THE BOARD OF DIRECTORS OF THE _____, ON THIS __ day of _____, 20__.

President, Board of Directors _____

ATTESTED TO:

Secretary, Board of Directors _____

TWDB WATER CONSERVATION TIPS

Bathroom:

- Replace your showerhead with a water-efficient model.
- Get in the shower as soon as the water becomes warm enough.
- Take short showers.
- Take a shower instead of a bath. A shower with a water-efficient showerhead often uses less water than a bath.
- Reduce the level of water used in a bathtub by 1 or 2 inches if a shower is not available.
- Turn off the water while you are shaving. Fill the sink with hot water instead of letting the water run continuously.
- Replace your old toilet with a high-efficiency toilet that uses 1.28 gallons per flush.
- Test toilets for leaks. Once in a while, take the top off of your toilet tank and watch it flush. Do you notice any leaks? Yes? Replace the flapper or rubber washer. Don't forget about those less obvious leaks. Add a few drops of food coloring or a dye tablet to the water in the tank, but do not flush the toilet. If the coloring appears in the bowl within a few minutes, the toilet has a leak that needs to be repaired.
- Never use the toilet to dispose of trash.
- Don't waste water when brushing your teeth or washing your hands. Shut off the water until it's time to rinse.

Kitchen:

- Run the dishwasher only when full. This practice will save water, energy, detergent, and money. If your dishes are not very dirty, use the short wash cycle. You can spend less money on water and energy by installing a high-efficiency dishwasher.
- Install faucet aerators. You'll never notice the difference, and you'll cut your sink water consumption in half! Also, don't ignore leaky faucets.
- Keep a container of water in the refrigerator. It will be refreshingly cool and won't waste water.
- Dry scrape dishes instead of rinsing. Your dishwasher will take care of the rest.
- Use garbage disposals sparingly. They can waste water unnecessarily.
- Soak pans rather than scrubbing them while the water is running.
- Rinse vegetables in a pan of cold water.

Laundry room:

- Conventional washing machines use 32 to 59 gallons of water per load.
- Wash only full loads.
- Use the lowest water level setting on the washing machine for light or partial loads whenever possible.
- Use cold water as often as possible to save energy and conserve hot water for uses that cold water cannot serve.

Additional tips:

- Don't ignore leaky faucets; they are usually easy and inexpensive to repair. Turn off the valve under the sink until you get around to repairing the leak. A slow drip can waste as much as 170 gallons of water each day and will add to the water bill.
- Know where your master water shut-off valve is in case a pipe bursts. Insulate hot water pipes. You won't waste water waiting for it to get hot, and you will save energy too.
- Install water-softening systems only when necessary, and if you have one, save water and salt by running the minimum amount of regenerations necessary to maintain water softness.
- Replace water-to-air heat pumps and air conditioners with air-to-air if you are purchasing new units. They are just as efficient and do not waste water.
- Find other uses for water rather than letting it go down the drain, such as watering house plants with fish tank water.