

WATER CONSERVATION TIPS

Suggested ways to save water that may be included in public information about drought response measures.

1. Bathroom

- a. Take a shower instead of filling the tub and taking a bath. Showers usually use less water than tub baths.
- b. Install a low-flow shower head which restricts the quantity of flow at 60 psi to no more than 3.0 gallons per minute.
- c. Take short showers and install a cutoff valve or turn the water off while soaping and back on again only to rinse.
- d. Do not use hot water when cold will do. Water and energy can be saved by washing hands with soap and cold water; hot water should only be added when hands are especially dirty.
- e. Reduce the level of the water being used in a bath tub by one or two inches if a shower is not available.
- f. Turn water off when brushing teeth until it is time to rinse.
- g. Do not let water run when washing hands. Instead, hands should be wet, and water should be turned off while soaping and scrubbing and turned on again to rinse. A cutoff valve may also be installed on the faucet.
- h. Shampoo hair in the shower. Shampooing in the shower takes only a little more water than is used to shampoo hair during a bath and much less than shampooing and bathing separately.
- i. Hold hot water in the basin when shaving instead of letting the faucet continue to run.
- j. Test toilets for leaks. To test for a leak, a few drops of food coloring can be added to the water in the tank. The toilet should not be flushed. The customer can then watch to see if the coloring appears in the bowl within a few minutes. If it does, the fixture needs adjustment or repair.
- k. Use a toilet tank displacement device. A one-gallon plastic milk bottle can be filled with stones or with water, recapped, and placed in the toilet tank. This will reduce the amount of water in the tank but still provide enough for flushing. (Bricks, which some people use for this purpose, are not recommended, since they crumble eventually and could damage the working mechanism.
- l. Displacement devices should never be used with new low-volume flush toilets. l. Install faucet aerators to reduce water consumption.
- m. Never use the toilet to dispose of cleaning tissues, cigarette butts, or other trash. This can waste a great deal of water and also places an unnecessary load on the wastewater treatment plant.
- n. Install a new low-volume toilet that uses 1.6 gallons or less per flush when building a new home or remodeling a bathroom.

2. Kitchen

- a. Use a pan of water (or place a stopper in the sink) for rinsing pots and pans and cooking implements when cooking rather than turning on the water faucet each time a rinse is needed.
- b. Never run the dishwasher without a full load. In addition to saving water, expensive detergent will last longer and a significant energy saving will appear on the utility bill.
- c. Use the sink disposal sparingly, and never use it for just a few scraps.
- d. Keep a container of drinking water in the refrigerator. Running water from the tap until it is cool is wasteful. Better still, both water and energy can be saved by keeping cold water in a picnic jug on a kitchen counter to avoid opening the refrigerator door frequently.

- e. Use a small pan of cold water when cleaning vegetables rather than letting the faucet run.
- f. Use only a little water in the pot and put a lid on it for cooking most food. Not only does this method save water, but food is more nutritious since vitamins and minerals are not poured down the drain with the extra cooking water.
- g. Use a pan of water for rinsing when hand-washing dishes rather than running the faucet.
- h. Always keep water conservation in mind, and think of other ways to save in the kitchen. Small kitchen savings from not making too much coffee or letting ice cubes melt in a sink can add up over a year's time.

3. Laundry

- a. Wash only a full load when using an automatic washing machine (32 to 59 gallons are required per load).
- b. Use the lowest water level setting on the washing machine for light loads whenever possible.
- c. Use cold water as often as possible to save energy and to conserve the hot water for uses which cold water cannot serve. (This is also better for clothing made of today's synthetic fabrics.)

4. Appliances and Plumbing

- a. Check water requirements of various models and brands when considering purchasing any new appliance that uses water. Some use less water than others.
- b. Check all water connections and faucets for leaks. A slow drip can waste as much as 170 gallons of water EACH DAY, and can add as much as \$10.00 per month to the water bill.
- c. Learn to replace washers so that drips can be corrected promptly. It is easy to do, costs very little, and can represent a substantial amount saved in plumbing and water bills.
- d. Check for water leakage you may be unaware of, such as a leak between the water meter and the house. To check, all indoor and outdoor faucets should be turned off, and the water meter should be checked. It continues to run or turn, a leak probably exists and needs to be located.
- e. Insulate all hot water pipes to avoid the delays (and wasted water) experienced while waiting for the water to turn hot.
- f. Be sure the hot water heater thermostat is not set too high. Extremely hot settings waste water and energy because the water often has to be cooled with cold water before it can be used.
- g. Use a moisture meter to determine when house plants need water. More plants die from over-watering than from being on the dry side.



**Stage 1 Drought – MILD Water Shortage Conditions*
Responses and Termination**

Goal: Achieve a voluntary 10% reduction in total daily water consumption, based on previous 7 days

Responses and Terminating Criteria

<u>Community Outreach</u>	<u>System Measures</u>	<u>Supply Management Measures</u>	<u>Demand Management Measures (VOLUNTARY)</u>
<ul style="list-style-type: none"> • Advise public of condition and publicize availability of information from established information center and person of contact • Notify public by means of: <ul style="list-style-type: none"> ○ Public service announcement ○ Announcement in newspaper or other 	<ul style="list-style-type: none"> • Visually inspect lines and repair leaks on a daily basis • Flushing hydrants or valves shall be limited to maintaining public health, safety, and welfare • Notify the TCEQ and GCWA of implementation of this drought stage. 	<ul style="list-style-type: none"> • Implement system oversight to be able to make adjustments as required to meet changing conditions • Reduce or discontinue flushing of water mains • Reduce all operations of the city/district to adhere to water use 	<ul style="list-style-type: none"> • Contact high-use customers and request voluntary water conservation measures to reduce usage by at least 10% • Encourage more efficient water usage through conservation measures such as those in Appendix A • Discourage waste of water, which is defined as excessive pooling and/or runoff from a property that forms a stream of water in a street for a distance of 50 feet or greater, or pools in a street or parking lot to a depth greater than ¼ inch. • Publicize a voluntary lawn watering schedule that: <ul style="list-style-type: none"> ○ Limits the irrigation of landscaped areas with automatic sprinkler systems or hose-end sprinklers to designated watering days: <ul style="list-style-type: none"> ▪ Monday and Thursday (OR Tuesday and Friday) between the hours of 12:01 am and 5:00 am and 10:00 pm and 11:59 pm for customers with even numbered addresses ▪ Tuesday and Friday (OR Monday and Thursday) between the hours of 12:01 am and 5:00 am and 10:00 pm and 11:59 pm for customers with odd

<p>local publication</p> <ul style="list-style-type: none"> ○ Direct mail ○ Signs posted in public places <ul style="list-style-type: none"> ● Explain necessity for initiation of strict conservation methods 		<p>restrictions prescribed for Stage 2</p> <ul style="list-style-type: none"> ● Where feasible, substitute reclaimed, non-potable water for city/district irrigation 	<p>numbered addresses</p> <ul style="list-style-type: none"> ○ Allows irrigation of landscaped areas by the following means at any time: <ul style="list-style-type: none"> ▪ Faucet-filled bucket or watering can of five (5) gallons or less. ▪ Soaker hose that does not produce a spray of water above the ground ▪ Drip irrigation system that does not produce a spray of water above the ground ▪ Hand-held hose equipped with a positive shutoff nozzle ● Publicize the need to minimize or discontinue water use for non-essential purposes, which are defined as the use of water for: <ul style="list-style-type: none"> ○ Washing the following: <ul style="list-style-type: none"> ▪ Motor or recreational vehicles <ul style="list-style-type: none"> ➤ Washing is allowed during designated times and days for applicable residential addresses ➤ Such washing, when allowed, shall be done with a hand-held bucket and/or hand-held hose equipped with a positive shutoff nozzle ▪ Sidewalks, walkways, driveways, parking lots, tennis courts or other hard-surfaced areas ▪ Buildings or structures for purposes other than immediate fire protection ○ Filling, refilling, or replenishing any recreational pool, pond for aesthetic or scenic purposes, or ornamental water fountains, fixtures, etc., except on designated watering days and where such pool, ponds or fountains are equipped with a recirculation system and are necessary to protect aquatic life ○ Irrigating the following: <ul style="list-style-type: none"> ▪ Parks or greenbelts
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			<ul style="list-style-type: none"> ▪ Golf course greens, tees, and fairways except on designated watering days. ▪ If a golf course uses a water source other than potable water provided by the water system, then the facility shall not be subject to these regulations. ○ Stabilizing foundations through the use of water, except on designated watering days between the hours of 10am and 2pm. <ul style="list-style-type: none"> ▪ Watering is permitted by means of: <ul style="list-style-type: none"> ➢ Handheld hose equipped with a positive shutoff nozzle ➢ Soaker hose or drip irrigation system placed within 24 inches of foundation that does not produce a spray of water above the ground ▪ When daily surface water demand exceeds 85% of supply for 3 consecutive days, foundation watering shall cease ○ Controlling dust ○ Flushing gutters or permitting water to run or accumulate in any gutter or street ○ Failing to repair a leak(s) within a reasonable time after having been given notice directing the repair of such leak(s) ● During winter months, request water users to insulate pipes rather than running water to prevent freezing
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Terminate	Upon termination of Stage 1
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* Assumes 4 drought stages:
Stage 1 Mild
Stage 2 Moderate
Stage 3 Severe
Stage 4 Emergency

Stage 1 Drought – MILD Water Shortage Conditions*
Triggers and Termination

Triggering and Terminating Criteria			
Initiate	WATER DEMAND for 4 Consecutive Days:	OR WATER SYSTEM for 3 consecutive days experiences:	OR WATER SUPPLY is:
	<ul style="list-style-type: none"> • Equals or exceeds 80% of available contracted surface water supply 	<ul style="list-style-type: none"> • System wells operating at 80% of maximum pumping capacity to augment an inadequate supply of contracted surface water 	<ul style="list-style-type: none"> • Insufficient to meet demand
Terminate	When all conditions listed as triggering events have ceased to exist for 7 consecutive days. Authorizing authority shall have discretion to terminate or continue voluntarily.		

* Assumes 4 drought stages:

Stage 1 Mild

Stage 2 Moderate

Stage 3 Severe

Stage 4 Emergency



Stage 2 Drought – MODERATE Water Shortage Conditions*

Responses and Termination

Goal: Achieve a 20% reduction in daily water consumption, based on previous 14 days.

Responses and Terminating Criteria

<u>Community Outreach</u>	<u>System Measures</u>	<u>Supply Management Measures</u>	<u>Demand Management Measures (MANDATORY, under threat of penalty)</u>
<ul style="list-style-type: none"> Continue implementation of all relevant actions in preceding phase 	<ul style="list-style-type: none"> Continue implementation of all relevant actions in preceding phase 	<ul style="list-style-type: none"> Continue implementation of all relevant actions in preceding phase 	<ul style="list-style-type: none"> Continue implementation of all relevant actions in preceding phase Contact commercial and industrial users and advise of mandatory water use restrictions to reduce usage by at least 20% Contact high-use customers and advise of mandatory water use restrictions to reduce usage by at least 20% Prohibit waste of water, which is defined as excessive pooling and/or runoff from a property that forms a stream of water in a street for a distance of 50 feet or greater, or pools in a street or parking lot to a depth greater than ¼ inch Publicize a mandatory lawn watering schedule that: <ul style="list-style-type: none"> Limits the irrigation of landscaped areas with automatic sprinkler systems or hose-end sprinklers to designated watering days: <ul style="list-style-type: none"> Monday and Thursday (OR Tuesday and Friday) between the hours of 12:01 am and 5:00 am and 10:00 pm and 11:59 pm for customers with even numbered addresses Tuesday and Friday (OR Monday and Thursday) between the hours of 12:01 am and 5:00 am and 10:00 pm and 11:59 pm for customers with odd numbered addresses Allows irrigation of landscaped areas by the following means at any time: <ul style="list-style-type: none"> Faucet-filled bucket or watering can of five (5) gallons or less Soaker hose that does not produce a spray of water

			<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> above the ground ▪ Drip irrigation system that does not produce a spray of water above the ground ▪ Hand-held hose equipped with a positive shutoff nozzle ▪ When daily surface water demand exceeds 80% of supply for 3 consecutive days, hand-held hose usage shall cease • Prohibit the use of water for non-essential purposes, except as specified, with non-essential purposes defined as the use of water for: <ul style="list-style-type: none"> ○ Washing the following: <ul style="list-style-type: none"> ▪ Motor or recreational vehicles <ul style="list-style-type: none"> ➤ Washing is allowed during designated times and days for applicable residential addresses ➤ Such washing may be exempted from these regulations if the health, safety or welfare or the public is contingent, i.e. garbage trucks and other vehicles used to transport food and perishables ➤ Such washing, when allowed, shall be done with a hand-held bucket and hand-held hose equipped with a positive shutoff nozzle ▪ Sidewalks, walkways, driveways, parking lots, tennis courts or other hard-surfaced areas ▪ Buildings or structures for purposes other than immediate fire protection ○ Filling, refilling, or replenishing any recreational pool, pond for aesthetic or scenic purposes, or ornamental water fountains, fixtures, etc., except on designated watering days and where such pool, ponds or fountains are equipped with a recirculation system and where necessary to protect aquatic life ○ Irrigating the following: <ul style="list-style-type: none"> ▪ Parks or greenbelts ▪ Golf course greens, tees, and fairways except on designated watering days <ul style="list-style-type: none"> ➤ If a golf course uses a water source other than potable water provided by the water system, then the facility shall not be subject to these regulations ○ Stabilizing foundations through the use of water, except on designated watering days between the hours of 10am and 2pm <ul style="list-style-type: none"> ▪ Watering is permitted by means of: <ul style="list-style-type: none"> ➤ Handheld hose equipped with a positive
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			<ul style="list-style-type: none"> shutoff nozzle ➤ Soaker hose or drip irrigation system placed within 24 inches of foundation that does not produce a spray of water above the ground ➤ When daily surface water demand exceeds 85% for 3 consecutive days, foundation watering shall cease ○ Controlling dust ○ Flushing gutters or permitting water to run or accumulate in any gutter or street ○ Failing to repair a leak(s) within a reasonable time after having been given notice directing the repair of such leak(s) • Use of water from hydrants shall be limited to firefighting or related activities, except that use of water from designated fire hydrants for construction purposes may be allowed under special permit from the water system • Use of treated effluent, recycled by water system's wastewater treatment plant, is permissible
Terminate	Upon termination of Stage 2		

*** Assumes 4 drought stages:**

Stage 1 Mild

Stage 2 Moderate

Stage 3 Severe

Stage 4 Emergency



Stage 2 Drought – MODERATE Water Shortage Conditions*
Triggers and Termination

Triggering and Terminating Criteria				
Initiate	WATER DEMAND for 4 Consecutive Days:	OR WATER SYSTEM for 3 consecutive days experiences:	OR WATER SUPPLY is:	AND GCWA requires municipal customers to reduce GCWA water by 10% or more of current usage
	<ul style="list-style-type: none"> • Equals or exceeds 85% of available contracted surface water supply 	<ul style="list-style-type: none"> • System wells operating at 85% of capacity to augment an inadequate supply of contracted surface water 	<ul style="list-style-type: none"> • Insufficient to meet demand 	
Terminate	When all conditions listed as triggering events have ceased to exist for 7 consecutive days. Authorizing authority shall have discretion to terminate or continue voluntarily.			

* Assumes 4 drought stages:
Stage 1 Mild
Stage 2 Moderate
Stage 3 Severe
Stage 4 Emergency



Stage 3 Drought – SEVERE Water Shortage Conditions*
Responses and Termination

Goal: Achieve a mandatory 30% reduction in total daily water consumption, based on previous 21 days

Responses and Terminating Criteria			
<p><u>Community Outreach</u></p> <ul style="list-style-type: none"> Continue implementation of all relevant actions in preceding phase 	<p><u>System Measures</u></p> <ul style="list-style-type: none"> Continue implementation of all relevant actions in preceding phase 	<p><u>Supply Management Measures</u></p> <ul style="list-style-type: none"> Continue implementation of all relevant actions in preceding phase Conservation incentives Implement viable alternative water supply strategies (may require approval of the TCEQ) 	<p><u>Demand Management Measures (MANDATORY, under threat of penalty)</u></p> <ul style="list-style-type: none"> Continue implementation of all relevant actions in preceding phase Use of automatic sprinkler systems is prohibited Watering of golf courses with potable water is prohibited unless the golf course utilizes a water source other than that provided by city/provider Use of water for construction purposes from designated fire hydrants by special permit is allowed No application for new, additional, expanded or increased-in-size water service connections, meters, service lines, pipeline extensions, mains or water service facilities of any kind shall be approved, and time limits for approval of such applications are hereby suspended for such time as this drought response stage or a higher-numbered stage shall be in effect
<p>Terminate</p>		<p>Upon termination of Stage 3</p>	

*Assumes 4 drought stages:

- Stage 1 Mild
- Stage 2 Moderate
- Stage 3 Severe
- Stage 4 Critical/Emergency



Stage 3 Drought – SEVERE Water Shortage Conditions*

Triggers and Termination

Triggering and Terminating Criteria				
Initiate	WATER DEMAND for 3 Consecutive Days:	OR WATER SYSTEM for 1 day experiences:	OR WATER SUPPLY is:	AND GCWA requires municipal customers to reduce GCWA water by 20% or more of current usage
	<ul style="list-style-type: none"> • Equals or exceeds 90% of available contracted surface water supply 	<ul style="list-style-type: none"> • Inability to process and supply water due to main breaks or systemic failure • Failure of system from “acts of God” (tornados, hurricanes) or man • System wells operating at 90% of capacity to augment an inadequate supply of contracted surface water 	<ul style="list-style-type: none"> • Insufficient to meet demand • Storage levels cannot be maintained due to daily consumption 	
Terminate	When all conditions listed as triggering events have ceased to exist for 7 consecutive days. Authorizing authority shall have discretion to terminate or move to a lower stage.			

- * Assumes 4 drought stages:
Stage 1 Mild
Stage 2 Moderate
Stage 3 Severe
Stage 4 Emergency



Stage 4 Drought – EMERGENCY Water Shortage Conditions*
Responses and Termination

Goal: Achieve a mandatory **40%** reduction of that use which would have occurred in the absence of the emergency

Responses and Terminating Criteria

<u>Community Outreach</u>	<u>System Measures</u>	<u>Supply Management Measures</u>	<u>Demand Management Measures (Mandatory, under threat of penalty)</u>
<ul style="list-style-type: none"> Continue implementation of all relevant actions in preceding phase. 	<ul style="list-style-type: none"> Continue implementation of all relevant actions in preceding phase. 	<ul style="list-style-type: none"> Continue implementation of all relevant actions in preceding phase. 	<ul style="list-style-type: none"> Continue implementation of all relevant actions in preceding phase. Publicize ways to limit indoor water usage – see Appendix A No external use of water except for protection of health, safety, welfare and fire protection
Terminate	Upon termination of Stage 4		

***Assumes 4 drought stages:**

- Stage 1 Mild
- Stage 2 Moderate
- Stage 3 Severe
- Stage 4 Emergency



Stage 4 Drought – EMERGENCY Water Shortage Conditions*
Triggers and Termination

Triggering and Terminating Criteria				
Initiate	WATER DEMAND for 1 Day:	OR WATER SYSTEM for 1 day experiences:	OR WATER SUPPLY is:	AND GCWA requires municipal customers to reduce GCWA water by 50% or more of current usage
	<ul style="list-style-type: none"> • Equals or exceeds 95% of available contracted surface water supply 	<ul style="list-style-type: none"> • Inability to process and supply water due to main breaks or systemic failure • Failure from “acts of God” (tornados, hurricanes) or man • Failure due to terrorist activity. • Inability to obtain water-treating chemicals due to unforeseen conditions. • System wells operating at 95% of capacity to augment an inadequate supply of contracted surface water 	<ul style="list-style-type: none"> • Insufficient to meet demand • Unable to maintain storage levels due to daily consumption • Contaminated, naturally or man-made 	
Terminate	When all conditions listed as triggering events have ceased to exist. Authorizing authority shall have discretion to terminate or move to a lower stage.			

* Assumes 4 drought stages:

Stage 1 Mild

Stage 2 Moderate

Stage 3 Severe

Stage 4 Emergency