

Your Water Usage

Ahoy, Mateys!

**BEWARE OF THE
PLUMBING PIRATE
AS HE PILLAGES
OUR TREASURED
WATER SUPPLY!**



TEAMING UP TO SAVE YOU MONEY



CONSERVE & \$AVE



Table of Contents

Why Conserve Water?	4
How Much Water Do We Use?	5
Conduct Your Own Household Water Audit	6
Retrofit/Replace Fixtures & Appliances	11
Checklist for Inside the Home	12
Checklist for Outside the Home	14
Kids Pages	16

Why Conserve Water?

Water is essential to life on earth. We use it for so many things: to grow, keep clean, make power, control fires, and most important of all, to stay alive! Therefore, it's our responsibility to learn more about water conservation and how we can keep our water pure and safe for generations to come.

Our water supply is finite, which means we do not have an endless supply. While water is recycled through the earth's water cycle, people are using up the planet's fresh water faster than it can naturally be replenished. 97% of all water on earth is salt water, 2% is in the form of ice caps and glaciers, and only 3% is fresh water, of which only 1% is drinkable water.

We have the same amount of water now as there was when the earth was created so we must learn to preserve its quality. Saving water is good for the earth, your family, and your community.

Efficient use of water:

- Improves water quality
- Can help meet future needs
- Saves water to save you money
- Maintains aquatic ecosystems
- Protects drinking water
- Puts less pressure on our water and sewage infrastructure
- Uses less energy in your business or home
- Preserves the environment

A significant level of water conservation can be achieved without major changes in lifestyle. Simply watering your landscape properly and utilizing efficient plumbing fixtures and appliances in your home can reduce your water use by approximately 25-30%.

How Much Water Do We Use?



Source:
www.eps.gov and www.rpu.org

Conduct Your Own Water Audit

The benefits of conducting your own water audit include:

- Helping you save money by reducing your water and sewer bill.
- Making you aware of how you and your family use water.
- Helping to identify ways you can minimize use by implementing certain conservation measures.

To get started...

1) Learn How Your Water Charge is Calculated

Each month we read your water meter. The amount of water that flows through your water meter is measured in hundred cubic feet (CCF). One CCF is equivalent to approximately 748 gallons. One CCF is also known as one unit.

Your water charge is calculated based on the number of units (CCF) each month multiplied by the current rate. For example, if the rate is \$0.70/per unit and your meter showed seven units were used that month, your water charge would be 7 units x \$0.70 = \$4.90.

Austin, Owatonna, and Rochester use water rates to encourage conservation. Each utility has a different water conservation rate structure: seasonal or increasing block rates. Check with your utility for the correct rate structure and rate amounts.

An example of a seasonal rate:

SEASON	RATE
Summer (May – Oct.)	\$1.00 per CCF
Winter (Nov. – April)	\$0.75 per CCF

An example of an increasing block rate:

USAGE	RATE
0 – 7 CCF	\$0.692
7.01 – 12 CCF	\$0.761
12.01 CCF and more	\$0.875

2) Find Out How You Rank

The average household uses, on average, about 7 units (CCF) per month, which translates to 174 gallons per day (5,236 per month). How does your household measure up using the chart below:



GALLONS PER DAY	RANK	COMMENTS
less than 100 gallons per day (less than 4 units/month)	Excellent	Yo-ho-ho! Your household uses water wisely. Keep up the good work!
100–150 gallons per day (4–6 units/month)	Good	Aye, Matey! You are using less water than the average household. See if some of the tips included in this brochure can help you conserve even more water.
151–174 gallons per day (6–7 units/month)	Fair to Average	Ahoy! You fall within the average household. Read the tips within this brochure to learn how you can conserve some water.
more than 175 gallons per day (more than 7 units/month)	Poor	Scurvy dog! You use a lot of water. Implement some of the conservation tips within the brochure to help you conserve water and save money.

3) Stop the Plumbing Pirate!

The smallest leak in your home can add gallons of wasted water and additional dollars on your water and sewer bills. The American Water Works Association (AWWA) identifies leaking toilets and dripping faucets account for up to 14% of all indoor water loss per residential home. *Finding these leaks can save you money!*

AVAST!
These scallywag homeowners be trying to steal me treasure chest of leaks and drips!



ESTIMATED WATER LOSS THROUGH LEAKS			
Drips per Minute	Daily Waste	Monthly Waste	Yearly Waste
10	1.4 gallons	43 gallons	526 gallons
30	4.3 gallons	130 gallons	1,577 gallons
60	8.6 gallons	259 gallons	3,154 gallons
100	14.4 gallons	432 gallons	5,256 gallons
150	21.6 gallons	648 gallons	7,884 gallons
300	43.2 gallons	1,296 gallons	15,768 gallons

Source: American Water Works Association

Unfortunately, leaks aren't always easy to find and can go unnoticed for a while. The following are simple steps to determine whether or not you have a leak:

A) Turn off all fixtures and make sure that no appliances that use water are running.

B) Find your water meter and check to see if the leak indicator dial is spinning. This dial may be blue (as shown in the photo) or a red or black triangle. If yes, you have a leak somewhere in the house.

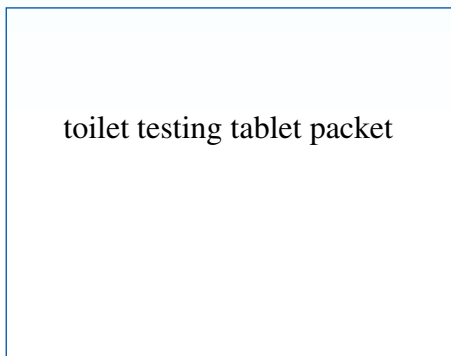


C) Check your sink and bathtub faucets. While water leaking from the spout is easily detectable, leaking from on and off handles or loose fittings is harder to detect. Tighten loose fittings about a quarter turn if you observe a leak. Leaking fittings are often caused by a rubber washer that's come loose or has deteriorated. Replacing the rubber washer is an easy fix.

D) Check the water supply lines on appliances that use water. Sometimes a leaking appliance is obvious, leaving a puddle of water on the floor in front of the appliance. Other times the leak is small and stays hidden under the appliance where you may not see it. If you find wetness, bulges or deterioration in the supply line, you know you have a leak.

E) Toilets are the most common source of leaks in a house. On average, 20% of the toilets leak per capita. If you are able to determine what components of the toilet are leaking, you can purchase the appropriate repair kit from a home improvement store.

Check your toilets by using one of the colored testing tablets from the packet attached below. Follow the directions to determine if you have a leak.



You can also put a few drops of food coloring into the tank. After ten minutes, if the food coloring shows up in the bowl, the toilet is leaking.

Other clues indicating you may have a toilet leak are:

- If you have to jiggle the handle to make the toilet stop
- You hear sounds coming from an unused toilet
- A toilet that turns the water on and runs for a bit without someone touching the handle

F) Visually inspect all pipes in your home and look for telltale signs such as watermarks on walls or ceilings. In the yard, the ground above a water line may stay wet continuously or water may actually bubble up to the surface. If a pipe is leaking, repair or replace it.

Retrofit/Replace Fixtures and Appliances

Once all of your leaks are repaired, the next step is to evaluate the efficiency of your current appliances and fixtures. The following chart lists a few examples of usage difference between older and more efficient appliances/fixtures:

WATER USAGE CHART			
APPLIANCE/FIXTURE	WATER USE IN GALLONS		
	TYPICAL USAGE	EFFICIENT USAGE	HIGH EFFICIENT USAGE
Toilet	3.5 or more per flush	1.6 or less per flush	1.28 or less per flush
Showerhead	3–10 per minute	2–2.5 per minute	1.5–1.9 per minute
Faucet Aerator	3–6 per minute	0.5–2.5 per minute	0.5–1 per minute
Clothes Washer	40–55 per load	20–25 per load	less than 20 per load
Dishwasher	15 per load	5.8 per load	5 or less per load

Keep in mind that Austin, Owatonna, and Rochester Public Utilities give you rebates on qualifying purchases of water efficient appliances and equipment. Through our **CONSERVE & \$AVE** program, you can receive rebates on items such as:

- Clothes Washers
- High-Efficiency Toilets (HET)
- Rain Barrels
- Rotating Sprinkler Nozzle

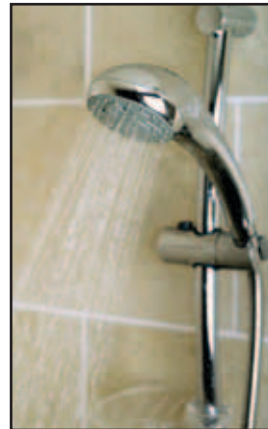
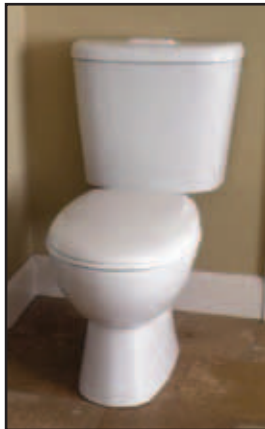
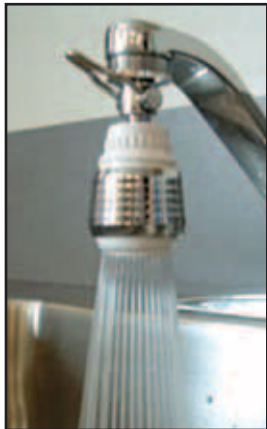
Visit our websites for a complete and current list of eligible products and rebate amounts, as well as to download a **CONSERVE & \$AVE** water rebate application. Also look for information on our electric and gas rebates.

- www.austinutilities.com
- www.owatonnautilities.com
- www.rpu.org

Checklist for Inside the Home

In the Bathroom

- ❑ Retrofit your faucets with an aerator, a small circular screen that can reduce the flow of water by half.
- ❑ Don't use your toilet as an ashtray or waste basket. Every time you flush a cigarette butt, facial tissue, or other small bits of trash you are wasting 3.5 or more gallons per flush.
- ❑ Your toilet can flush just as efficiently with less water than it uses now. Place a filled plastic bottle or bag inside the tank to reduce the amount of water needed for each flush. Better yet, replace it with a new WaterSense® low flow toilet and save up to 5,500 gallons per year.
- ❑ Shut the water off while brushing your teeth, shaving, or washing your face.
- ❑ Replace your shower heads with an ultra low-flow model and save up to 2.5 gallons per minute.
- ❑ Take shorter showers. A four minute shower uses approximately 20 to 40 gallons of water.

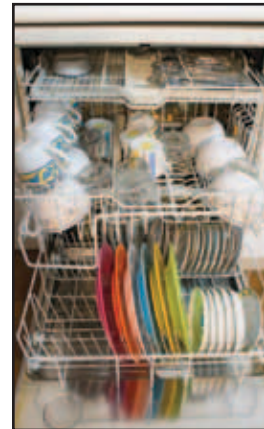


In the Kitchen

- ❑ Place a pitcher of water in the refrigerator for drinking to avoid running tap water until its cool.
- ❑ Run the dishwasher when full. Avoid pre-rinsing which is a big water savings.
- ❑ Don't let the faucet run while washing vegetables or fruit. Fill the sink.
- ❑ Minimize the use of the garbage disposal. Consider starting a compost pile.

In the Laundry

- ❑ Wash only full loads or be sure to set the machine for the correct load size.
- ❑ Consider a new ENERGY STAR® clothes washer, which uses 35–50% less water and 50% less energy per load.



Checklist for Outside the Home

For the Yard and Garden

- ❑ Water your lawn and plants in the early morning or late evening to reduce evaporation.
- ❑ Don't water sidewalks or gutters. Position your sprinklers so water lands on the lawn or garden. Avoid watering on windy days.
- ❑ Water your lawn only when it needs it. Step on the grass. If it springs back up, it doesn't need it. If it stays flat, the lawn is ready for watering.
- ❑ Allow grass to grow longer to promote water retention in the soil.
- ❑ Most lawns only need about 1" of water per week. Deep soak your lawn to the roots. A light watering can evaporate and tends to encourage a shallow root system. Place a tuna can on your lawn – once it's full you're done.
- ❑ Use mulch around plants and trees to hold moisture and reduce evaporation. Mulch also helps to reduce run-off.
- ❑ Install a rain barrel to catch rain water from gutters to water plants.



For Other Outdoor Uses

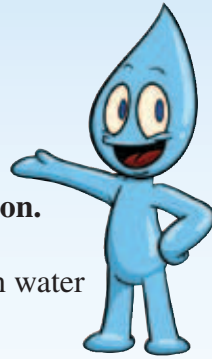
- ❑ Use a pail of soapy water to clean the car and a hose with a shut-off spray nozzle to rinse. This can save up to 150 gallons per wash.
- ❑ Take your car to a self-serve car wash, which will use half the water of a home wash.
- ❑ Use a water broom instead of a hose to clean your driveway. A standard hose and nozzle can use 8–18 gallons per minute while a water broom uses as little as 2–3.6 gallons per minute.
- ❑ Use a pool cover and windbreakers around a pool to reduce evaporation. The top inch of water evaporates every week in an uncovered pool.
- ❑ Check outdoor faucets, pipes, and hoses for leaks. Even a tiny leak can translate into thousands of gallons of wasted water over a short period of time.



What Do You Know About Water?

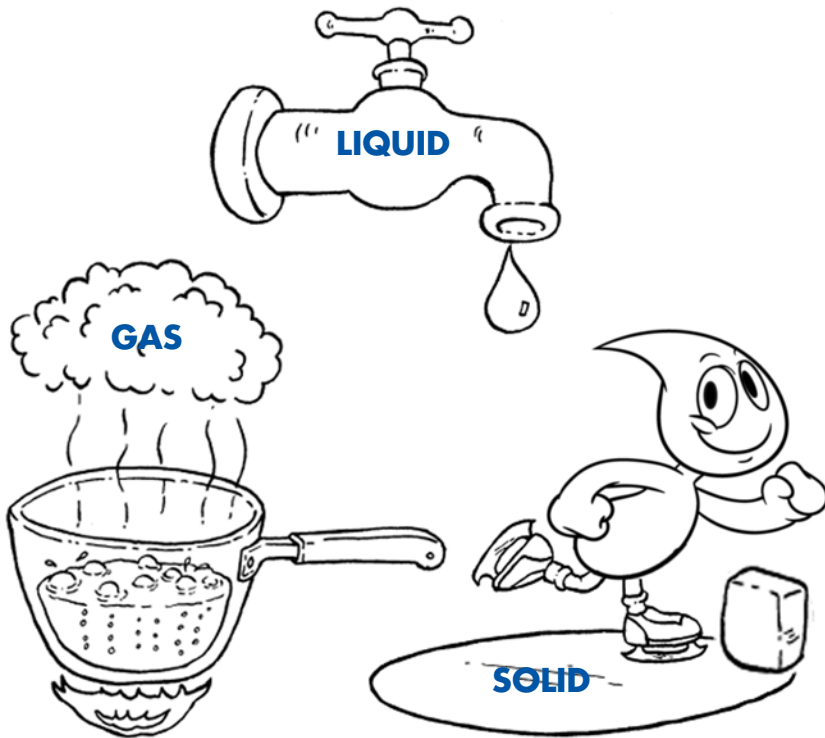
Without water, the earth would look like the moon.

- About 70% of the earth's surface is covered in water
- 97% of earth's water is salt water
- 2% of earth's water is glacier ice
- Only 1% of earth's water is fresh water



Water Comes in Three Forms

Color the picture below to learn about water's three forms:



What Do You Know About the Water Cycle?

TRUE OR FALSE?

A dinosaur could have once used your last drink of water?



TRUE! Water on earth today has been here for millions of years. How? Because of the water cycle. During the cycle, water moves from the earth to the air and to the earth again.

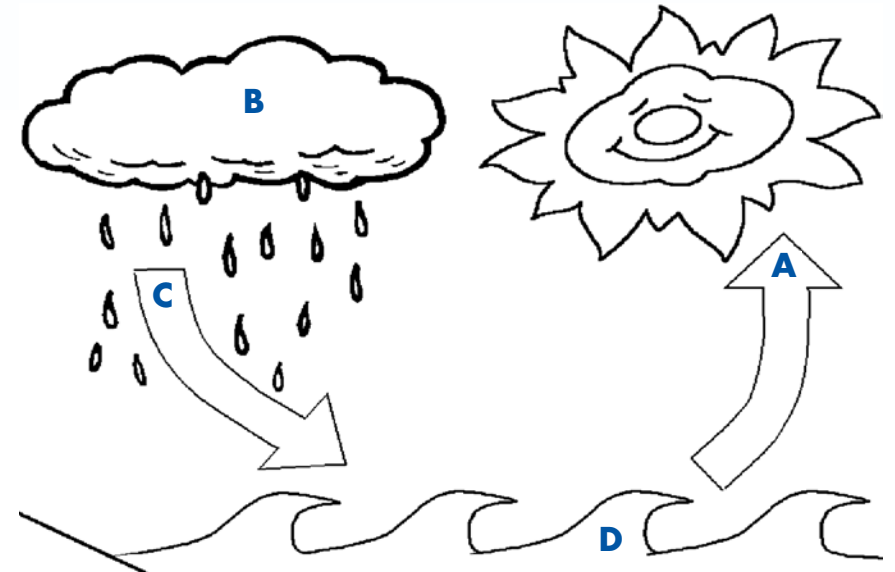
Color the picture below to learn about the water cycle:

A: Water **evaporates** into the air.

B: It **condenses** to become a cloud.

C: It then falls back down to the earth as **precipitation**.

D: Water **collects** in lakes and rivers until it is evaporated again. This cycle repeats over and over. The water cycle never stops!



Hey, Parents!

Visit these websites for more water conservation games for kids:

- www.epa.gov/watersense/kids/games.html
- pbskids.org/eekoworld/

Why Save Water?

Less than 1% of all the water on Earth can be used by people. The rest is salt water (the kind in the ocean) or is permanently frozen and we can't drink it, wash with it, or use it to water plants. As our population grows, more and more people are using up this limited resource. Therefore, it is important that we use our water wisely and not waste it.



Conservation Crossword

Find the water words!

CLEAN
CONSERVE
DRINK
EARTH
ENERGY
INSULATION
LAKE
LIQUID
OCEAN
PIPES
POWER
PROTECT
RECYCLE
REFRIGERATOR
REUSE
RIVER
SAVE
SHOWER
SUN
SUNLIGHT
VAPOR
WATER
WINDOWS
WRENCH

R	H	W	M	K	O	I	A	E	U	I	E	T	L	W
F	A	G	Z	L	Z	F	V	G	J	B	H	N	G	T
T	Z	R	G	B	P	A	W	T	S	O	B	U	G	Y
H	H	C	O	N	S	E	R	V	E	H	L	V	O	I
D	X	G	Q	T	A	R	A	G	C	C	L	E	A	N
R	I	Z	I	R	A	P	E	X	G	N	X	L	U	S
I	O	U	T	L	O	R	O	T	H	E	U	A	A	E
N	K	H	Q	R	N	K	E	W	A	R	M	P	S	Z
K	H	X	A	I	J	U	R	G	E	W	T	U	T	X
N	O	I	T	A	L	U	S	N	I	R	E	C	C	F
K	C	T	L	A	T	H	J	N	J	R	I	V	E	R
O	E	N	K	S	O	I	D	W	S	C	F	Q	T	C
Z	A	E	M	W	O	O	Y	G	R	E	N	E	O	U
A	N	N	E	X	W	A	E	L	C	Y	C	E	R	S
E	Z	R	T	S	E	C	N	D	S	E	P	I	P	N

Conservation Quiz

Think you know how to conserve water? Circle your answers then use the key at the bottom to see how many you got right!

- How much water could you save by washing your bike with a bucket and sponge rather than letting the hose run?
 - 1 gallon a minute
 - 3 gallons a minute
 - 4 gallons a minute
 - 5 gallons a minute
- How much water does a family of four use everyday?
 - 50 gallons
 - 100 gallons
 - 250 gallons
 - 400 gallons
- True or False: It isn't important to save water because there is so much of it on Earth.
 - True
 - False
- Stuck helping mom or dad wash dishes? Which uses less water?
 - Washing dishes under a running tap
 - Washing dishes in a fully loaded dishwasher
- How much water can you save each day by turning off the faucet when you brush your teeth?
 - 2 gallons
 - 4 gallons
 - 6 gallons
 - 8 gallons
- What should you do if you see or hear a leaky faucet or toilet in your house?
 - Ignore it—drips are no big deal
 - Do nothing—there is no way to fix a drippy faucet
 - Tell your parents

CONSERVE & \$AVE

What is CONSERVE & SAVE?

Austin Utilities, Owatonna Public Utilities, and Rochester Public Utilities offer dozens of rebates to customers who purchase energy efficient appliances and equipment. **Visit our web sites for a complete, up-to-date list of eligible products.**

How Does CONSERVE & SAVE Work?

- 1) Purchase appliances and equipment with the ENERGY STAR® or WaterSense® label, meet ASTM Standards, or that meet our Minimum Efficiency Requirements. *(See applications for complete terms and conditions.)*
- 2) Get a rebate application from your dealer, contractor, utility, or download them from our web sites:
 - www.austinutilities.com
 - www.owatonnautilities.com
 - www.rpu.org
- 3) Fill out the application completely, attach your sales receipt and any other required documentation, and send it to your utility.



Austin Utilities
400 - 4th Street NE
Austin, MN 55912-3495
(507) 433-8886
(507) 433-5045 fax
www.austinutilities.com

Owatonna Public Utilities
P.O. Box 800
Owatonna, MN 55060-0800
(507) 451-2480
(507) 451-4940 fax
www.owatonnautilities.com

Rochester Public Utilities
4000 East River Road NE
Rochester, MN 55906-2813
(507) 280-1500
(507) 280-1542 fax
www.rpu.org