

THE COMPLETE GUIDE TO High Desert Water Conservation



How to protect our quality of life and enjoy personal savings all at once!



Dear Neighbors,

We all know how important water is to our everyday lives. Without it, none of us could survive. But our local water supply in the High Desert is struggling to keep up with population growth. We're pumping water out of the ground faster than it is being replaced, creating a dangerous condition called overdraft.

The good news is that we all have a part in protecting this precious resource. By practicing water conservation indoors and outdoors, you can help ensure that there is a stable water supply for generations to come. We hope you will look through these pages to learn some of the simple and effective ways you can do your part to conserve water.

Sincerely,

Alliance for Water Awareness and Conservation

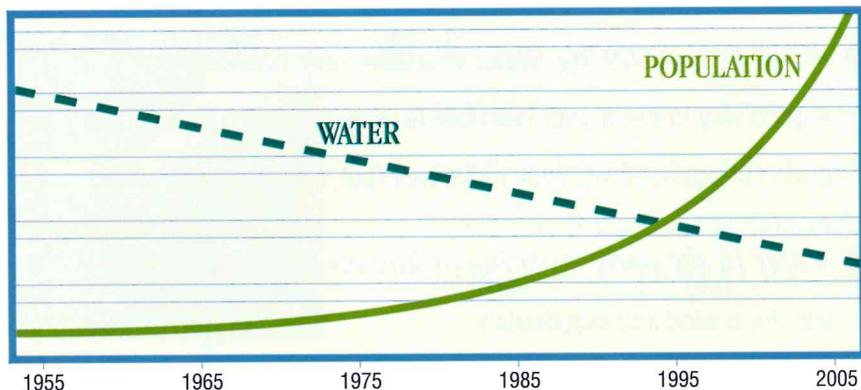
www.hdawac.org

The Alliance for Water Awareness and Conservation (AWAC) is a coalition of more than 25 regional organizations whose mission is to promote the efficient use of water and increase awareness of conservation as an important tool to help ensure an adequate water supply. AWAC is asking each one of us in the High Desert to do our part to help meet the important goals of the regional water management plan to reduce regional water use by 10% by the year 2010 and 15% by 2015. For more information about AWAC, please visit our website at www.hdawac.org or contact any of our member organizations (listed on the back of this booklet).





A GROWING POPULATION EQUALS Less Water to Go Around for Each of Us



Population growth in the High Desert is draining our local water supply

The High Desert's water supply has traditionally come exclusively from local aquifers. As our population has grown over the past 50 years, we have pumped more water out of the basin than has been naturally replenished. The pace of this growth has quickened in recent years. As a result, average groundwater levels are dropping more than a foot each year. We must take action now to conserve.

Our Quality of Life is at Stake – *If we fail to conserve:*

Water Rates May Rise – Insufficient groundwater supplies could force water agencies to purchase increasing amounts of imported water, resulting in significant increases in water rates.

Forced Water Rationing May Be Imposed – If water supplies are allowed to reach dangerously low levels, strict rationing may have to be implemented.

The Local Economy May Suffer – Lack of adequate water supplies may limit new residential or commercial developments (SB 221, a state law approved in 2001, requires local governments to ensure an adequate water supply before a large development project can be approved). This impact on development may have a dramatic negative effect on our local economy as building supplies are not purchased, jobs are lost, and revenues to our local governments are reduced. In addition, many businesses that rely on heavy water usage may be unable to keep their doors open, further damaging our local economy.

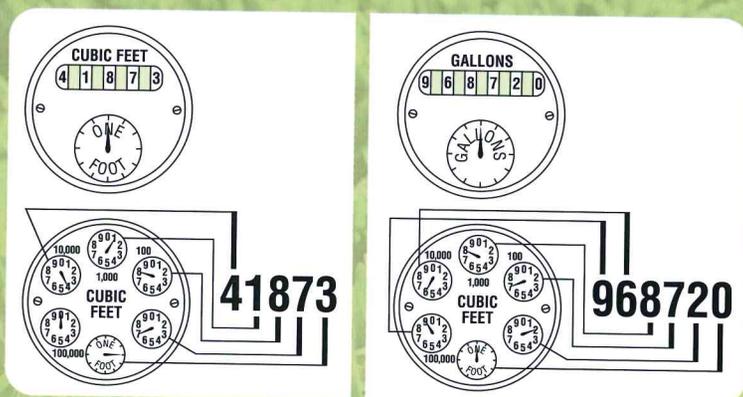
Property Values May Fall – Higher water rates, rationing or the potential of rationing and a struggling local economy may make our communities less desirable, resulting in falling property values for all of us.

Conserving water means preserving our way of life!

Meet Your Meter

Your water meter is the best detective in the home. It can tell whether you have sizable leaks, as well as how much water various appliances are using.

Most meters record gallons just as your car's odometer records mileage. However, some show cubic feet of water used. For these, you can multiply the figure shown by 7.5, the approximate number of gallons in one cubic foot.



The cubic-foot meter shown here illustrates that 41,873 cubic feet of water was delivered to the home—or about 314,047 gallons (multiplying 41,873 by 7.5). The gallon meter shows 968,720 gallons delivered.

For leak detection, turn off everything in and around your house that uses water. Then check the position of the meter dial for about 15 minutes. If it hasn't moved, you have a relatively water-tight home. But if it has, start checking hose connections, faucets and toilets to determine what is leaking.

HOW TO CONSERVE WATER OUTDOORS With a Traditional Landscape

Up to 70% of our residential water use takes place outdoors.

HERE ARE 10 THINGS YOU CAN DO TO SAVE WATER OUTSIDE:

1 *Avoid over watering.* Water your lawn only when it needs it. A good way to see if your lawn needs water is to step on it. If the grass springs back when you move your foot, it doesn't need water.

2 *Water in the early morning or late evening* to prevent loss from wind and evaporation.

3 *Adjust watering times for seasonal changes.*



4 *Avoid runoff.* If water is running off your lawn during watering, adjust your sprinkler heads and break up watering times into shorter periods to allow the water to sink into the soil.

5 *Don't water paved surfaces.* Position your sprinklers so that water does not land on sidewalks, driveways or other hardscape areas. Also, sweep paved surfaces with a broom instead of hosing them down.

6 *Install drip irrigation wherever possible.* Drip irrigation is the most efficient method of watering for non-turf areas such as bedded plants, trees or shrubs.

7 *Fix leaks right away.* Check your irrigation system and every faucet, hose, pipe and coupling around your house for leaks.



8 *Place mulch around trees and plants.* A 2-inch layer of mulch will slow the evaporation of moisture, reduce runoff, moderate soil temperatures, reduce erosion, slow weed growth, prevent soil compaction, make shrubs and young trees more tolerant to heat and beautify your landscape.

9 *Check for broken irrigation lines.* Turn your irrigation system on periodically to check for broken sprinkler heads. If you come across an extra soft area while walking through your lawn, you may have a broken irrigation pipe.



10 *Don't run the hose.* Make sure your hose has a shut-off nozzle so that you can easily turn the flow of water on and off as needed instead of simply letting the hose run non-stop. Also, remember that the hose and sprinklers are not toys for children.

How and when to water your lawn

Depending upon the type of grass you have in your yard, some lawns require more or less water than others. Strive to minimize your water use while maintaining healthy turf.

- Use the "cycle and soak" system - For each day that you water, irrigate your lawn 3 times a day for 4 minutes, scheduling start times at least 1 hour apart. This allows your lawn to absorb the water more effectively than running the sprinklers for 12 consecutive minutes.
- Using the "cycle and soak" system, begin watering no later than 3:00 a.m. from May to October to minimize water lost to evaporation. Water during the warmer part of the day from November to April to prevent water from freezing on your landscape.
- Shoot for "head to head" coverage in your sprinkler system, meaning the spray of one sprinkler should reach the head of the nearest sprinkler.
- Make sure you direct your sprinkler heads so that they don't spray walls, driveways or sidewalks.
- Check your sprinkler system weekly and immediately replace broken or missing parts.
- Avoid watering when it's windy or rainy. Shutting off the sprinklers when it's raining can save hundreds of gallons of water a day.

Did you know?

- Warm season grasses, such as Bermuda, require about one-third less water.
- Shaded areas of your lawn require about 30 percent less water.
- Watering shrubs, trees and flowers with bubblers or drip irrigation instead of with lawn sprinklers saves water and encourages healthy plant growth.

Conserving water is easy and inexpensive!

HOW TO CONSERVE WATER OUTDOORS

With a Water-Smart Landscape

Installing a water-smart landscape is the best way to conserve water where we use it most, leading to quick water and money savings.

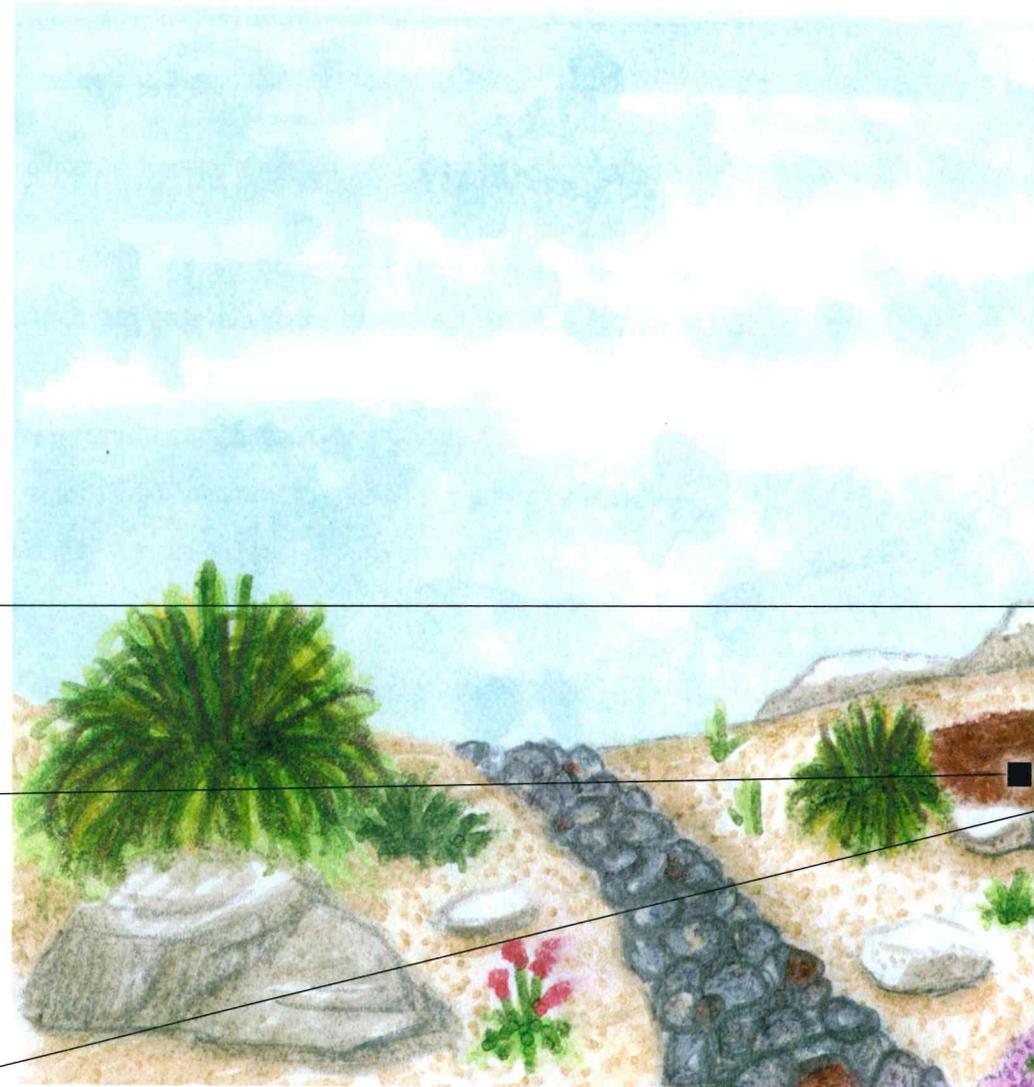
A good water-smart landscape will increase your property value by as much as 15% and reduce water and maintenance costs by up to 60%.

Place trees and shrubs for summer shade and winter sun

Use mulch, mulch and more mulch in order to seal in moisture and prevent weeds

Replace thirsty lawns with native plant material and drip irrigation

Develop plant zones, grouping plants according to irrigation needs





Limit turf areas to meet functional needs

Replace labor-intensive plants with low-water-use shrubs and groundcover

Install hardscapes such as driveways and paths for practical and recreational uses

Have a beautiful yard and conserve all at once!

Quick Facts

- *Nearly 97% of the world's water is salty, making it undrinkable. Another 2% is locked in ice caps and glaciers. That leaves 1% for all of our needs.*
- *Every glass of water brought to your table in a restaurant requires another two glasses of water to wash and rinse the glass.*
- *If everyone in the United States flushed the toilet just 1 less time per day, we could save a lakeful of water about a mile long, a mile wide and 4 feet deep every day.*

HOW TO CONSERVE WATER INDOORS



Bathroom

The best place to save water indoors is in the bathroom where up to two-thirds of indoor water use occurs.

- 1 **Install ultra-low-flush toilets.** If your toilets were installed before 1994, consider replacing them with ultra-low-flush units, which can save a huge amount of water each month. They can cut your family's total indoor water use by as much as 24 gallons per day or over 700 gallons per month. That's a lot of water and a lot of savings!
- 2 **Check for toilet leaks.** Place a few drops of food coloring in the tank of your toilet. Check the bowl in 15 minutes. If colored water appears in the bowl, you have a leak. The problem can usually be fixed by adjusting the float or replacing the flapper. This only takes a few minutes but can save many gallons of water each day.
- 3 **Install low-flow showerheads.** New models provide a vigorous spray yet save water and the energy to heat it. You could save up to 6 gallons each day. That's 180 gallons of savings each month! Not only that, but you'll save even more because you won't have to heat as much water.
- 4 **Check for leaking faucets throughout the house.** Even little leaks add up in a hurry. A drip that totals only 2 tablespoons a minute comes to 15 gallons a day. That's 105 gallons a week and 5,460 wasted gallons a year. Just think of all the money you could save by fixing that leak!

Leaks waste water and cost money.



Kitchen

Kitchen faucets and dishwashers can use significant amounts of water.

- 1 Use low-flow faucet aerators.
- 2 Do not leave the water running while you clean dishes.
- 3 Fix faucet leaks right away.
- 4 Use the short cycle on your dishwasher.
- 5 Only wash full loads of dishes.



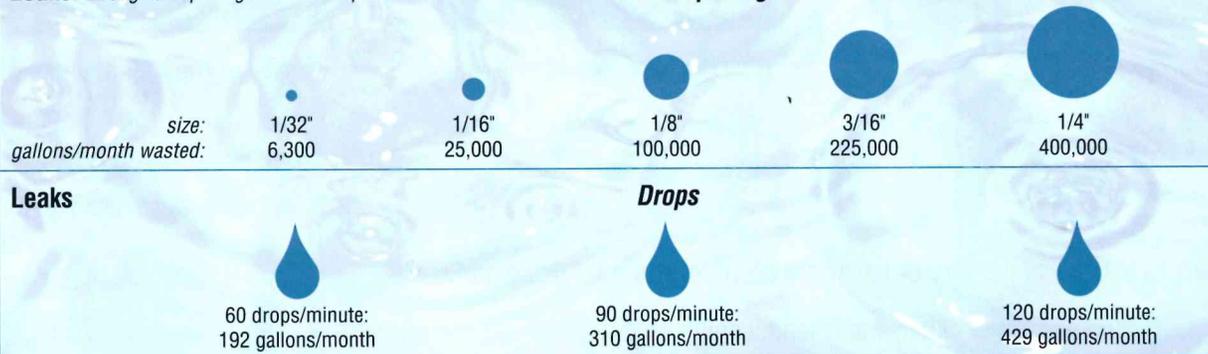
Laundry

- 1 Purchase a high-efficiency clothes washer.
- 2 Always wash full loads of clothes.
- 3 Use the shorter cycles when possible.

LEAKS: WASTE WATER and MONEY

Leaks: through an opening at 60 lbs. of pressure

Size of the Opening



Quick Facts

- *Water is a precious commodity, and there is a limited supply in our community. Remember to use only the amount you actually need. Encourage your family to keep looking for new ways to conserve water in and around your home.*
- *There's as much water in the world today as there was thousands of years ago. Actually, it's the same water. The water from your faucet could contain molecules that dinosaurs drank. Perhaps Columbus sailed across it.*
- *If everyone in the United States could manage to use just 1 less gallon of water per shower every day, we could save 85 billion gallons per year. You can accomplish this by making your shower just a few seconds shorter.*

Quick Facts

- *If you have a lawn, chances are it's your biggest water expense. Typically, 50-70% of water consumed by households is used outdoors.*
- *We drink very little of our drinking water. Generally speaking, less than 1% of the treated water produced by water utilities is actually consumed. The rest goes on lawns, in washing machines and down toilets and drains.*
- *Running a garden hose for 5 minutes will use about 25 gallons of water.*

Water-Smart Landscaping

These are just a few of the water-saving items that can be used to make your yard beautiful, water-smart and cost efficient:



Coreopsis



Mexican Evening Primrose



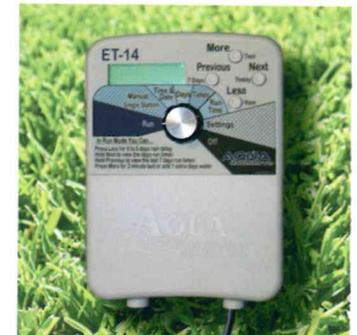
Drip Irrigation System



Verbena



Blue Fescue



Irrigation Timer

Talk to your local nursery or hardware store for more information about these and other water-smart landscaping options.

Water-Saving Fixtures & Appliances

Water-saving fixtures and appliances can be found at your local hardware and appliance stores. Here are a few examples:



Faucet Aerator



High-efficiency Washer



Low-flow Toilet



Low-flow Showerhead

Where to find more information about water conservation:

www.hdawac.org

www.h2ouse.net

www.flexyourpower.com

www.bewaterwise.com

CONSERVATION = SAVINGS

At this point you may be wondering how much water you can really save by conserving. By following the steps recommended in this guide, you can enjoy substantial savings over time.

Landscaping: Savings: 17,566 gallons/year

Taking important conservation steps such as installing a weather-sensitive controller, avoiding overwatering, installing drip systems, not running the hose and fixing leaks right away can save as much as 17,566 per year.

Bathroom: Savings: 14,600 gallons/year

Using ultra-low-flush toilets and low-flow showerheads and fixing toilet and faucet leaks can save up to 14,600 per year.

Kitchen: Savings: 5,475 gallons/year

Installing faucet aerators, not letting the water run while cleaning dishes, fixing leaks right away, using the short cycle on your dishwasher and only washing full loads of dishes can save as much as 5,475 per year.

Laundry: Savings: 8,030 gallons/year

Using a high-efficiency clothes washer, using the shorter cycles when possible and only washing full loads can save up to 8,030 per year.

Total Savings = up to 45,671 gallons per year!



*Conserving
water is a
crucial part of
everyday life in
the High Desert.
By following the
steps laid out in
this guide, we can
all do our part
to protect our
quality of life.*

AWAC Member Organizations:

Apple Valley Ranchos Water Company	www.avrwater.com
Apple Valley Country Club	www.avcc.cc
Apple Valley Heights County Water District	
Baldy Mesa Water District	www.bmwd.net
Bar-Len Mutual Water Company	
Barstow Community College	www.barstow.cc.ca.us
Bighorn-Desert View Water Agency	
Bureau of Land Management	www.blm.gov
Bureau of Reclamation	www.usbr.gov
City of Adelanto	www.ci.adelanto.ca.us
City of Barstow	www.barstowca.org
City of Hesperia	www.cityofhesperia.us
City of Victorville	www.ci.victorville.ca.us
Copper Mountain College	www.cmccd.cc.ca.us
Golden State Water Company	www.gswater.com
Hi-Desert Water District	www.hdwd.com
Joshua Basin Water District	www.joshuatreevillage.com
Mariana Ranchos County Water District	
Mojave Desert & Mountain Integrated Waste Management JPA	
Mojave Desert Resource Conservation District	www.mdrcd.ca.gov
Mojave Water Agency	www.mojavewater.org
Mojave Weed Management Area	www.mojavewma.org
San Bernardino County Service Area	www.specialdistricts.org
Town of Apple Valley	www.applevalley.org
Town of Yucca Valley	www.yucca-valley.org
University of California, Cooperative Extension	
Victor Valley College, Department of Agriculture & Natural Resources	www.vvc.edu
Victor Valley Wastewater Reclamation Authority	www.vvwwra.com
Victor Valley Water District	www.vvwater.org

For answers to questions about this guide or for more information about water conservation in the High Desert, contact Mojave Water Agency at (760) 946-7000.

