



Water Conservation Strategies

Conservation of potable water costs less and is more sustainable than treating non-potable water and delivering it to your tap. Plus, most water conservation strategies are relatively easy to accomplish. Most water utilities encourage customers to conserve water through public education and incentives for equipment upgrades. Water-efficient technologies and lifestyle modifications can work together to drastically reduce water use.

Green Building Benefits

Water conservation offers a number of benefits to you, society, and the environment:

- Helps you reduce your water bill.
- Saves energy associated with delivering water from distant reservoirs and treating it to drinking water standards. Reduced energy consumption translates into reduced air pollution from power plants.
- Reduces the need for imported water from the Sierras, the Delta, underground aquifers, and other sources. This conserves water for fisheries, wildlife, agriculture, and essential human needs and reduces the need for additional water storage projects.
- Water conservation in the landscape reduces runoff into streams from landscaped areas, which improves watershed water quality.

Outdoor Water Conservation

Irrigation:

1. Don't overwater. Provide plants only the water they need.
2. Ensure that irrigation equipment is installed correctly and functioning properly.
3. Use water-conserving devices such as rain a shut-off, soil moisture sensors and check valves.
4. Select timers with "cycle and soak" capabilities. A first shorter cycle allows water to break through any crusty, dry layer; allowing a later, longer cycle to soak into the soil, reducing runoff.

5. Use low-volume and/or sub-surface irrigation in confined areas or narrow strips of turf.
6. Evaluate the use of drip irrigation for bed areas.
7. Consider strong prevailing wind patterns when selecting sprinkler heads; low-angle heads can reduce wind-blown overspray.
8. Avoid watering in the heat of the day. Early morning watering is preferred.
9. Use rainbarrels or cisterns to harvest rainwater.¹
10. Use "smart" controllers and evapo-transpiration (ET) calculations for programming water efficiency into the irrigation cycle.

"It struck me ... that all you had to do is take the water out of the ground and then sell it for more than the price of wine, milk, or for that matter, oil."

Perrier executive

Landscape

1. Select plants from locally developed lists of native and/or well-adapted plants, such as the East Bay Municipal Utility District's, *Plants and Landscapes for Summer Dry Climates*.
2. Landscape plan should group together plants with similar water requirements.
3. Consider reducing turf areas; turf generally requires more water than beds of well-adapted plants.
4. Replenish mulch around plants and trees in the Spring and Fall. Three to Four inches is preferred.

Other

Use commercial car washes, where water is cleaned and recycled back into the system.

¹ See Green Affordable Housing Coalition fact sheet 29, "Rainwater Harvesting"

Indoor Water Conservation

Toilets, Lavatories, and Sinks

1. Repair dripping fixtures, as a one drop per second leak will amount to over 2500 gallons of water waste per year.
2. Use faucet aerators to reduce water use in sinks and lavatories.
3. Take short, 5 minute showers. Use low-flow showerhead and turn off the water while lathering.
4. When shaving, fill the lavatory with warm water, instead of using a running faucet.
5. When brushing your teeth, turn off the water until finished brushing.
6. When washing vegetables, fill a bowl instead of rinsing with running water. When you are finished, use the water on your house plants.
7. Replace old toilets with dual-flush or other High Efficiency Toilet (HET) using no more than 1.3 gallons per flush.
8. Make sure any exposed hot water pipes are insulated.
9. Use hot water recirculation pump to avoid sending cold water down the drain while waiting for hot water.

Clothes Washing Machines

1. Switch to a horizontal-axis washer or other High Efficiency Clothes Washer with a water factor less than 9.5.
2. Run only full loads.

“When the well is dry we know the value of water.”

Benjamin Franklin

Dishwashers

1. Avoid pre-rinsing dishes as new dishwashers will handle most dried on foods
2. When washing dishes by hand, use a soapy wash side and a hot, rinse side of the sink. Do not leave the hot rinse water running.

3. Run only full loads and avoid “rinse and hold” cycles.
4. Select an ENERGY STAR dishwasher.

“Water is elemental, life giving and sustaining. It is ours to drink, ours to play in, to grow with, to build on. Water is more fundamental than any other substance on Earth: you can live three weeks without food, but without water you’ll be dead in three days.”

Anita Roddick

For more information

Washing Machines and Dishwashers

- **California Urban Water Conservation Council** list of qualifying equipment and rebates from participating Bay Area water districts http://www.cuwcc.org/Efficient_Clothes_Washers.lasso
- **ENERGY STAR** qualifying dishwashers. http://www.energystar.gov/index.cfm?c=dishwash_pr_dishwashers

Water-efficient Fixtures and Dual-flush Toilets

- **California Urban Water Conservation Council** http://www.cuwcc.org/products_tech.lasso List of Water Districts with toilet programs. <http://www.cuwcc.org/Uploads/product/HET-Progr-Calif-10-10-05.pdf>
- **East Bay Municipal Utility District:** list of water-conserving toilets http://www.ebmud.com/conserving_&_recycling/residential/toilet_replacement_rebate/het&eduinfo100105.pdf
- **Caroma** <http://www.caromatoilets.com>
- **Sloan** <http://www.sloanvalve.com/wc2.htm>
- **Toto** <http://www.totousa.com>

Irrigation and Landscaping

- **East Bay Municipal Utility District:** *Plants and Landscapes for Summer Dry Climates.* http://www.ebmud.com/conserving_&_recycling/plant_book/default.htm

- **California Urban Water Conservation Council**
http://www.cuwcc.org/Irrigation_Controller.lasso
- **The Irrigation Association.** Irrigation Best Management Practices.
<http://www.irrigation.org/gov/default.aspx?pg=BMPs.htm&id=104>
Smart Water Application Technologies (SWAT):
http://www.irrigation.org/gov/default.aspx?pg=swat_intro.htm&id=105

Hot Water Recirculation Systems

- **Partnership for Advancing Technology in Housing**
<http://www.toolbase.org/techinv/techDetails.aspx?technologyID=142>

- **Environmental Building News**
<http://www.buildinggreen.com/auth/article.cfm?fileName=040208a.xml>

General

- **Water Saver Home:** Virtual encyclopedia of water saving tips. <http://www.h2ouse.org/>
- **American Water Works Association**
<http://www.awwa.org/advocacy/learn/conserve/>
- **Water Wiser:** Premier water efficiency and water conservation information resource.
<http://www.waterwiser.org/>
- **United States Environmental Protection Agency.** <http://www.epa.gov/owm/water-efficiency>
- For more information about the Coalition, visit our website at www.greenaffordablehousing.org or call Bruce Mast at 510-271-4785.

Disclaimer

Development of this fact sheet was funded by California ratepayers under the auspices of the California Public Utilities Commission (Commission). It does not necessarily represent the view of the Commission, its employees, or the State of California. The Green Affordable Housing Coalition, the Commission, the State of California, its employees, contractors, and subcontractors make no warranty, express or implied, and assume no legal liability for the information in this report, nor does any party represent that the use of this information will not infringe upon privately owned rights. This report has not been approved or disapproved by the Commission, nor has the Commission passed upon the accuracy or adequacy of the information in this report. Contents are provided for general education and informational purposes only. The actual suitability and applicability of this information for a given use depends upon a host of project-specific considerations. The Green Affordable Housing Coalition strongly encourages the reader to consult with a construction professional and/or product supplier before applying any of this information to a specific use or purpose.