

The “Take Care of Texas” Guide to Yard Care

Do your part for the environment, starting in your own yard. The “Take Care of Texas” *Guide to Yard Care* will help you maintain a healthy yard, save money, and take care of our state’s varied landscapes.

Why Take Care of Texas?

Texas is a beautiful state rich in diverse resources. While much has been done to protect the Texas environment, we continually look for ways to make sure that our state remains a beautiful and healthy place to live for all future Texans. To accomplish this goal, all Texans need to do their part. The Take Care of Texas campaign is designed to involve all Texans in lifestyle and habit changes that will help improve air and water quality, conserve water and energy, reduce waste, and save individuals a little money in the process. For more information, visit <www.takecareoftexas.org>.

Water Conservation

Lawn and garden watering make up nearly 40 percent of total household water use during the summer. Finding ways to use less water will not only help conserve this precious resource, it will also save you money on your water bill.

Irrigate Efficiently

Much of the water applied to lawns and gardens is never absorbed by plants. The greatest waste of water results from applying it too rapidly or too often. Water applied too rapidly is lost as runoff, which may carry polluting fertilizers and pesticides to streams and lakes. Some water evaporates when it’s applied to bare, unmulched soil, or in the hot afternoon.

Sprinkler systems offer an effective method for irrigation, if used properly. Make sure that sprinkler heads are adjusted so as to avoid watering

sidewalks and driveways. Also, a properly adjusted sprinkler head sprays large drops of water instead of a fine mist, which is more susceptible to evaporation and wind drift.

Drip irrigation and soaker hoses offer an efficient method for watering vegetables, ornamental and fruit trees, shrubs, vines, and container-grown plants. Drip irrigation slowly applies water to the soil by flowing, under low pressure, through emitters, bubblers, or spray heads placed at each plant. Water applied by drip irrigation is not likely to evaporate or run off.

Soaker hoses require less equipment and are easier and cheaper to install than drip irrigation. A soaker hose is a porous hose that can be connected to an outside faucet, a garden hose, or a rain barrel and laid out along the base of the plants. The hose allows water to seep out along its length.

For more information on irrigation practices, see *Landscape Irrigation: A “Take Care of Texas” Guide* (GI-409).

Avoid Overwatering

Watering too heavily or too often weakens your lawn and causes erosion and runoff pollution. Excess irrigation can also leach nutrients deep into the soil away from the plant roots, increasing the chances of polluting the groundwater. Similarly, runoff caused by excess irrigation can carry polluting fertilizers and pesticides to streams and lakes.

Most lawns receive twice as much water as they require for a healthy appearance. Water should be applied to lawns infrequently, yet thoroughly. To know when it’s time to water your lawn, simply observe your grass. Wilting and discoloration are signs of water stress. At the first sign of wilting, you have



24 to 48 hours before serious injury to your lawn occurs. A general rule is to water one inch, once a week. An easy method for watering one inch is to place an empty 6-ounce tuna can on your lawn and stop watering when it is full.

Watering infrequently but thoroughly also strengthens root systems, helping your lawn to efficiently use the water that's stored in the soil.

Water in the Morning

Watering in the morning will save water from being evaporated by the midday heat. Watering in the morning will also help your plants stay healthy, since watering late in the evening or at night keeps leaves wet for an extended period of time, which increases the chances of disease and some pests.

Practice Grasscycling

Grasscycling refers to the practice of leaving grass clippings on the lawn to decompose into soil. Grasscycling will not only cut down on your watering needs, it will make your turf greener and tougher: it will prevent common turf diseases and reduce the need for lawn fertilizer. The key to grasscycling is to mow at the proper height and disperse the grass clippings evenly, so that they can work their way down to the soil. Mowing grass too short causes stress, discourages deep

root growth, and results in rapid loss of soil moisture.

Mow often enough so that each mowing removes no more than one-third of the grass blade. For example, if you set your cutting height at 2 inches, you should cut your grass before it's more than 3 inches tall.

When the mowed grass clippings remain on the yard, they can act as a slow-release lawn fertilizer, while also helping to retain soil moisture. This reduces the need for watering and can eliminate the need for fertilizer. This, in turn, helps to keep fertilizers out of storm drains and, as a result, out of rivers, lakes, and bays.

Try Composting and Mulching

Yard trimmings make up 20 percent of the waste generated by Texans each year. Instead of throwing them out with the garbage, recycle these materials by composting or mulching them.

Mulch can consist of wood chips or shavings, leaves, or grass clippings, and serves to retain soil moisture, prevent erosion, suppress weeds, and protect plants from temperature changes. Composting is the controlled, accelerated decomposition of organic material such as yard trimmings, kitchen scraps, wood

shavings, cardboard, and paper. Compost provides valuable nutrients when mixed into the soil, and also makes good mulch.

By using mulch and compost on lawns and gardens, Texans could reduce the need for outdoor watering by 30 to 60 percent.

For more information, see *Mulching and Composting: A "Take Care of Texas" Guide* (GI-36).

Water Quality

The quality of water is improving state-wide, thanks to efforts by cities, industries, and individuals. However, we all need to do our part to help our lakes, rivers, and streams maintain and improve their quality for their intended uses—whether it's for swimming, fishing, or drinking.

Reduce Runoff

Rainfall runoff pollutes water by carrying soil, fertilizers, and pesticides to nearby streams. Composting and grasscycling are both great ways to help reduce runoff pollution, because they prevent erosion, increase your soil's ability to absorb and retain water, and reduce the need for fertilizers.

Use Fewer and Better Pesticides and Fertilizers

Perhaps assuming that more is better, residential users apply more pounds per acre of synthetic pesticides and fertilizers than farmers do. However, more is *not* better, since overwatering (or a rainstorm) can wash fertilizer away—wasting your money and contaminating nearby waterways with pollution. There are less toxic, even natural, substitutes that are just as effective.

If you do choose to use pesticides and fertilizers, however, it is very important to your health and the environment to always apply the product according to the label's directions, to use only the recommended amount, and to adjust your watering accordingly.

For more information, see the *Earth-wise Guide to Products Toxicity Ratings* (www.tceq.state.tx.us/goto/wiseguide).

Pick Up Pet Waste

Pet waste contains bacteria that can run off your lawn and contaminate our

Collect and Use Rainwater

By collecting rainwater and using it on your lawn, plants, flowers, trees, and shrubs, you can save water and money. In fact, by collecting rainwater from just 10 percent of the residential roof area in Texas, we could conserve 27 billion gallons of water annually. Using collected rainwater has three major advantages: it reduces runoff pollution, it can reduce your utility bills (the water is free!), and it is better for plants than treated water.

Systems for harvesting rainwater can be as simple as placing a barrel beneath a gutter downspout to collect a small amount of water for use on gardens and plants. Rain barrels are simple to install and can be made easily at home. For instructions on how to make your own rain barrel, see *Rainwater Harvesting with Rain Barrels: A "Take Care of Texas" Guide* (GI-383).

To collect more rainwater, consider installing a large system using cisterns, which can collect thousands of gallons of water. For information on constructing a larger rainwater-harvesting system, see *Rainwater Harvesting* (GI-404, reprinted courtesy of the Texas AgriLife Extension Service).



streams, lakes, and bays. Managing pet waste keeps our watersheds safer and cleaner. Reuse those plastic grocery bags to scoop the poop, and toss them in the garbage.

Air Quality

Texas has some of the most stringent emission standards in the United States. Despite growing populations, the air quality in Texas is improving, and ozone concentrations in Texas cities continue to fall. We all need to do our part to ensure the continued improvement of our air quality, and a great place to start is in your own yard.

Emissions from lawn mowers, chain saws, leaf blowers, and similar outdoor power equipment can contribute to air pollution. Small engines emit hydrocarbons and nitrogen oxides, pollutants that contribute to the formation of ozone. While ozone occurs naturally in the upper atmosphere and shields the earth from harmful radiation, ozone at ground level is a noxious pollutant. Ground-level ozone impairs lung function, inhibits plant growth, and is a key ingredient of smog.

Many people who use power equipment contribute to air pollution unintentionally, by handling fuel carelessly and by maintaining their equipment improperly. By adopting simple, common-sense practices, consumers can help protect the environment now and in the future.

Avoid Spilling Gasoline

Even small gasoline spills evaporate and pollute the air. To prevent spills and overfills, try the following tips:

- Use a gasoline container you can handle easily and hold securely. When you pour, do it slowly and smoothly.
- Use a funnel or spout with an automatic stop device to prevent overfilling. Keep the cap or spout and the vent hole on gasoline containers closed tightly.
- Transport and store gasoline and power equipment out of direct sunlight, in a cool, dry space.
- At the gas station, use caution when pumping gasoline into a container.

Reduce Mowing Time

Use low-maintenance turf grasses or grass-and-flower seed mixtures that grow slowly and require less mowing. Visit www.yardwise.org or check with your local Texas AgriLife Extension Service office or lawn and garden center about what is appropriate for your region.

Consider replacing turf-grass with native and adapted trees, shrubs, and flowers. Doing so reduces the energy needed to heat and cool your house, and it provides habitat for wildlife. Native wildflowers and plants require little or no maintenance after planting.

Mow Later in the Day

If you mow later in the day, you can help prevent smog. Emissions from gasoline lawn mowers and leaf blowers can contribute to air pollution and the formation of ground-level ozone, the main ingredient in urban photochemical smog. Photochemical smog is formed mainly by air pollution from motors that is emitted in the early part of the day.

Maintain Your Equipment

Follow the manufacturer's maintenance guidelines, including the following practices:

- Change the oil and clean or replace the air filters regularly. Make sure you recycle your used oil at a collection center. To locate a center near you, go to www.cleanup.org or www.recycletexasonline.org.
- Use the proper mixture of fuel and oil in equipment with two-stroke engines.
- Get periodic tune-ups, maintain the mower's blades, and keep the underside of the mower's deck clean.
- Protect your equipment from the elements when not in use.

Consider Cleaner Options

For each hour of operation, one typical gas-powered lawn mower emits 11 times more air pollution than a new car. Forty million American lawn mowers consume 200 million gallons of gasoline per year, and gas-powered garden-tool emissions account for an estimated 5 percent of the nation's air pollution.

Ask your dealer about the new, cleaner-operating gasoline equipment



entering the marketplace. Electric equipment, however, is cleaner than gasoline equipment. Electrically powered lawn and garden tools produce essentially no pollution from exhaust emissions or through fuel evaporation, and can save you 73 percent of total energy costs. (However, in most cases, generating the power to run electric equipment does produce pollution.)

Use Manual Tools

Tools without motors—electric or gasoline—are especially handy for small yards or small jobs. Hand tools—like shears, edgers, and push reel mowers—are lightweight, quiet, easy to use, and do not generate emissions.

Landscape Design

Creating a healthy, low-maintenance landscape starts with a well-planned design that benefits the environment. Sketch your yard with locations of existing structures, trees, shrubs, and grass areas. Then consider your landscaping requirements, limitations, and considerations regarding budget, appearance, function, maintenance, and irrigation.

Take note of slopes, and consider including buffer zones of turf grass or other thick vegetation to absorb runoff from buildings and patios, and to reduce runoff into driveways and streams. Lawn edging and hard surfaces between turf and other landscape features also discourage weeds, and reduce the need for trimming and herbicides.

Group together plants that have similar watering needs, to prevent overwatering and excessive plant growth.

Plant Selection and Care

Using native and well-adapted plants is one of the easiest ways to make your yard environmentally friendly. Plants that are native or well adapted to your area will:

- use less water
- reduce the need for soil modification
- require little or no fertilizer
- be less susceptible to pest problems
- be more tolerant of stressful environmental conditions

Incorporate a variety of plants to provide food and cover for a variety of living things. Diversity also minimizes damage from pests, because many of them attack only one plant species. Dense plantings can provide shade that keeps out invading weeds.

Avoid frequent or deep cultivation, which can damage plant roots, dry out the soil, disturb healthy soil organisms, and bring weed seeds to the surface where they can germinate.

Consider planting deciduous trees on the south and west sides of your house and around your air conditioner. Because deciduous trees lose their

leaves in the winter, they can save you energy by keeping your home shady and cool in the summer, yet allow the sun to shine through windows to warm your home in the winter.

Grass Selection and Care

Turf grasses require more frequent watering and maintenance than most other landscape plants. Select grass carefully according to its intended use, planting location, and maintenance requirements.

St. Augustine and Bermuda grasses are most often used for lawns in Texas. Zoysia, buffalo, and centipede grasses are used less often but are also good options.

In most landscape areas, turf grasses have the highest water demand and the highest maintenance requirements of all plants. Planting the lowest-water-use turf grass adapted to your region is an effective way to reduce the requirements for landscape irrigation. Also, mow grass at the proper height to conserve water and strengthen grass roots.

Avoid narrow strips or odd shapes of turf grass that will be difficult to irrigate without wasting time and water. Other forms of ground cover or alternative plant areas can also reduce your ongoing expenditures of time, energy, and money.



For More Information

The "Take Care of Texas" Guide to Yard Care is meant to be a general overview of environmentally friendly practices for your yard. For more detailed information, see the following other TCEQ "Take Care of Texas" guides:

- *Mulching and Composting* (GI-36)
- *Rainwater Harvesting with Rain Barrels* (GI-383)
- *Managing 10 Common Texas Yard Pests* (GI-405)
- *Managing Lawn Problems in Texas* (GI-407)
- *Landscape Irrigation* (GI-409)

Additional Resources

General Information

Texas Commission on Environmental Quality
www.tceq.state.tx.us

Texas Water Development Board
www.twdb.state.tx.us

U.S. Environmental Protection Agency
www.epa.gov

Texas AgriLife Extension Service
<http://agrilifeextension.tamu.edu>

Sustainable Yard Care

U.S. Environmental Protection Agency
www.epa.gov/epawaste/conserv/rrr/greenscapes/index.htm
www.epa.gov/greenacres

YardWise
www.yardwise.org

Texas AgriLife Extension, EarthKind
<http://earthkind.tamu.edu/>

City of Austin, Grow Green
www.ci.austin.tx.us/growgreen

Publications

Earth-wise Guide to Products Toxicity Ratings. Austin: City of Austin and the Texas Cooperative Extension, 2008. (8 pp.)
www.tceq.state.tx.us/goto/wiseguide

Natural Gardening. Portland, Ore.: Portland Metro and Oregon Department of Environmental Quality, 2007. (70 pp.)
www.oregonmetro.gov/index.cfm/go/by.web/id=645

Organic Gardening (monthly magazine).
Published by Rodale, Inc.
www.organicgardening.com

Rodale's Ultimate Encyclopedia of Organic Gardening: The Indispensable Green Resource for Every Gardener.
Edited by Fern Marshall Bradley, Ellen Phillips, and Barbara Ellis. Emmaus, Pa.: Rodale Books, 2009. (720 pp.)

For more information, contact:

Pollution Prevention and Education, MC 113
Texas Commission on Environmental Quality
PO Box 13087
Austin TX 78711-3087
512-239-3100
www.tceq.state.tx.us