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Easy on the Environment

The routine chores involved in keeping up the homestead have a direct bearing on human health and the environment. Basic environmental lessons begin at the back door. Eco-friendly home owners can go a long way in helping their natural surroundings, as well as their pocketbooks.

Eco-friendly home and lawn care has natural advantages

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Summertime chores typically mean yard work, home improvements, and landscaping upgrades. All of these measures make the homestead more inviting, but do they come at a cost to the environment?

Not necessarily, if home owners keep in mind that outdoor tasks such as mowing, edging, painting, and fertilizing have a direct bearing on air and water quality, not to mention water conservation and solid waste capacity.

Setting the sprinkler to water the lawn--and inadvertently the driveway and street--wastes precious water during dry months. And what about those pesky insects that devour the tomato plants? Drowning them in a strong pesticide could mean those chemicals end up in the local drinking water supply the next time it rains.

More and more Texans are finding beneficial, natural ways of keeping up the home and garden. That entails using organic products, recycling yard waste, and minimizing outdoor water use. It also means taking advantage of simple measures to shade the home and reduce electric bills.

These practices save money in the long run, preserve natural resources, and produce long-lasting results, says the TCEQ's Heidi Wittenborn, a pollution prevention specialist.

"Going natural has so many benefits," she explained. "It keeps tons of yard trimmings and plant materials out of city landfills, saves millions of gallons of water, and reduces pollution from chemicals washed out of yards by rain and sprinklers.

"Not to mention giving home owners more free time because they're letting nature do their work for them."

Natural Outlook reviews some simple and, in some cases, old-fashioned home and lawn care techniques that help maintain a healthy environment.

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Air Quality

Nearly every neighborhood has an early riser who can't wait to tackle the yard before most people have plugged in the coffee pot. The shattering sound of a lawnmower throttling up serves not only as an uninvited alarm clock, but a signal that pollution is being unleashed.

The Environmental Protection Agency (EPA) estimates that gasoline-powered landscape equipment is responsible for more than 5 percent of urban air pollution. Lawnmowers emit a significant amount of nitrogen oxides, volatile organic compounds, and particulate matter. They also spew a lot of carbon dioxide. These elements combine to form air pollution, which is harmful to children and many adults.

Several cities around the state now encourage residents to switch to electric or battery-powered lawn and garden equipment. Not only are the exhaust-free devices quieter, they require little maintenance and can be relied on to



This Central Texas home was designed to conserve on resources. A large porch shades the front windows, and native plants in the garden require minimal watering./Photo by the Texas Department of Transportation

start up immediately. Electric leaf blowers, hedge clippers, trimmers, and chain saws are available, too.

San Antonio is one city that has been working to retire gas-powered mowers. Since 1998, San Antonio residents have exchanged about 4,200 gas-powered mowers for discounts on corded or cordless lawn equipment.

For the gas-powered mowers still around, the TCEQ recommends postponing use until 6 p.m. or later to avoid adding pollutants to the atmosphere when ozone is most likely to build.

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Energy Use

Lowering home energy consumption saves not only on monthly bills but on the demands placed on power plants, which produce industrial pollution. Landscaping choices and site selection can help shield a home and its cooling system from the punishing summer sun.

Placing deciduous trees along the southern or western property lines can lower air conditioning costs as much as 20 percent. In the winter, the trees lose their canopy, allowing the sun to warm the house. Also, trees planted to shade paved areas will reduce the heat-island effect that raises temperatures in the city.

The city of Fort Worth has a 71-acre tree farm where seedlings are cultivated and donated for neighborhood tree planting projects. More than 1,100 trees were distributed last year for the purpose of eventually shading city sidewalks and streets.

Anyone planning to build a home can find lasting benefits in a well-planned site. Builders often factor in exposure to the sun and wind to maximize energy conservation. Many new homes include roof overhangs, awnings, and solar screens for shade. Large porches also help block the sun. Choosing light-colored roofs, siding, and pavements helps counteract the higher temperatures in urban areas.

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Water Quantity

The desire to surround homes with a green carpet of grass has created one of the primary drains on municipal water supplies. The TCEQ estimates that landscape irrigation represents about half of municipal water demands during the summer months.



As a result, municipalities are promoting conservation practices such as composting, mulching, and xeriscaping—a term for landscaping with native plants. A low-maintenance yard is one that has a diversity of plant materials, including native trees and shrubs, evergreen ground covers, ornamental grasses, and perennials.

The first step toward a sustainable landscape is reducing the space devoted to thirsty lawn turf. Instead, home owners can plant beds with native, drought-tolerant plants, install ponds, or even create a "wildscape" to attract wildlife. The Texas Parks and Wildlife Department has publications devoted to gardening for wildlife. The habitats, even on a small scale, provide a place for birds and small mammals to feed and drink, escape from predators, and raise their young. Home owners who establish these biodiversity sites say they draw song birds, butterflies, hummingbirds, and other desirable species of wildlife.

Another proven way to reduce watering is mulching and composting to produce a healthier soil. Spreading mulch—wood chips, leaves, grass clippings, or compost—prevents erosion, suppresses weeds, retains soil moisture, and adds nutrients to the soil. Compost is a mixture of leaves, grass clippings, vegetable and fruit scraps, coffee grounds, and used tea bags that eventually break down and form humus, which can be mixed into the soil to add nutrients.

Thorough watering should be limited to every five to seven days, preferably in early morning or late evening. The most efficient system for trees and shrubs is drip irrigation or soaker hoses to minimize runoff and water evaporation.

When it comes to saving on water bills, there is nothing like free water. Rainwater harvesting is becoming a popular way of coping with drought, especially in Austin where the city water department has sold 6,000 rain barrels below cost to customers. Rainwater collected from rooftops or gutters can be stored, then used for hand watering.

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Solid Waste

Composting serves another important purpose—diverting yard waste and food scraps from landfills. This practice

offers cities and taxpayers substantial savings in disposal costs.

The TCEQ has determined that yard waste alone makes up 15 percent of the waste hauled to Texas landfills; another 20 percent comes from food scraps, clean wood material, and other easily composted materials.

Besides saving landfill space, reusing yard waste allows homeowners to skip the onerous task of bagging grass and leaves and hauling the bags to the curb.

Home and lawn upkeep often results in home owners purchasing products that have hazardous contents. Once products such as fertilizers, paints, and weed killers have been used, the leftovers should be disposed of properly and not tossed out with the garbage ([see story on hazardous waste](#)).

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Water Quality

Avid gardeners love their lawns--sometimes too much. Gardeners often overdo the use of fertilizers and pesticides. A good rain shower rinses insecticides, herbicides, and fungicides off the property and into the storm drain, which empties into a lake or river. Or these chemicals can filter into groundwater.

EPA reports that the rate of residential application of pesticides, per acre, is about 20 times that of farmers.

Fertilizer also is over applied. But choosing drought-tolerant grasses, such as buffalo and Bermuda, will minimize the need for watering and fertilizing. Mulching will discourage growth of weeds.

As for insects, there are several options before using pesticides. First, determine whether the problem is not actually one of poor soil or overwatering. And remember that the presence of insects isn't always bad news. Most are beneficial to the landscape.

To eradicate pests, try a blast of water on the ailing plants. Herbal controls or traps can be effective. When choosing chemical controls, select the least polluting. Many synthetic pesticides take a long time to break down and might remain in the soil or water. Botanical pesticides, which are derived from plants, may be preferable.

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Back to Nature

Landscapes designed to save water and attract wildlife can be green and lush, even full of color. Once established, these yards typically demand less watering and attention from the property owner. Wise landscaping decisions can benefit the home occupants in other ways, such as lower utility and water bills.

The TCEQ has publications that offer helpful advice on these matters. The most popular is *A Green Guide to Yard Care, GI-028*. Also, many cities offer workshops on beneficial landscaping practices.

The bottom line is that helping the environment produces safer surroundings. Families get to enjoy more of nature and find their homes are more comfortable when cooled sensibly and economically. Public services benefit, too, when home owners work on their own to curb pollution.

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Outdoor Tips

To each his own in the neighborhood, but in this case it is evident which side of the street practices conservation and the wise use of resources.

The home owner on the left apparently has not gotten the word on how lawn care practices can affect the environment. Overlooked is the leaky outdoor faucet. And the sprinkler is doing as good a job of watering the street as the grass. A gasoline-powered lawn mower is still the turf cutter of choice, and the portable fuel can has overturned, sending gasoline down the storm drain and into a nearby creek. (Spill-proof gas containers are sold commercially).

Across the way, neighbors have created an outdoor setting that conserves resources, creates a habitat for birds and wildlife, and saves on monthly bills. One home owner has opted for a corded electric mower (cordless models are available), and he uses a compost bin to recycle yard clippings and produce a rich blend of soil amendments. Both he and his neighbor have planted trees and added window awnings to block the harsh summer sun. A rain barrel



Lantana is a drought-tolerant plant that stands up to the Texas heat. The prolific bloomer requires little maintenance.



connected to the down spout captures chlorine-free water for the garden.

Meanwhile, the lady in the sun hat chooses spot watering to save on water consumption, not that much is needed for her drought-tolerant landscape. Thanks to organic supplements and native plants, she has created a garden that even butterflies enjoy.

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