The Natural Landscaping at EPA's Laboratory

NATURAL LANDSCAPING AT EPA'S LABORATORY

A GREEN APPROACH TO LANDSCAPING

The EPA New England Regional Laboratory landscaping design and maintenance program follows water conservation and environmental protection principles. **The Laboratory's landscaping is a natural system with mostly native grasses, wild flowers, and shrubs.** The landscaping is adapted to the local climate, with little additional water, minimal cutting, and no synthetic fertilizer or pesticides.

The lawn area at the Regional Lab is allowed to grow tall, and, to an untrained eye, may look untended. However, it is managed to mimic a meadow and its natural growing conditions. Once a year, it is cut after many of the grasses and wildflowers have gone to seed. The cut vegetation is left in place to create a thatch layer which releases seeds and stored nutrients back to the soil. The tall grass and wildflowers with deep roots protect the soil from erosion, sustain the lawn during droughts, and create a biologically diverse habitat for insects, birds, and mammals.

The Laboratory's landscaping is a beautiful natural ecosystem utilizing mostly native plants.

While the Northeast is endowed with an abundance of fresh water, people and their lawns place increasing demands on available supplies. For example, an estimated 30 percent of water used along the East Coast was for watering lawns. Because of the Regional Lab's commitment to natural landscaping and water conservation, watering is a rare event.

Red-tailed Hawk

The native shrubs used in the landscaping are well adapted to the local climate and support biodiversity by providing food for native insects, birds, and other animals. The native shrubs include: bayberry, bearberry, highbush blueberry, highbush cranberry, red-osier dogwood, juneberry, sweet fern, and winterberry. It is not uncommon to see many species of butterflies and pollinators; a red-tailed hawk soaring above the grounds looking for meadow voles or field mice; a kestrel perched on a fence; flocks of birds feeding on grass seed and insects; a stealthy fox or coyote hunting; or a preening wild turkey. When visiting the EPA Lab, look for the many species that have made our grounds their home!

Wild Lupine

continued

EPA United States Environmental Protection Agency New England

901-F-10-019
June 2010
www.epa.gov/ne/lab

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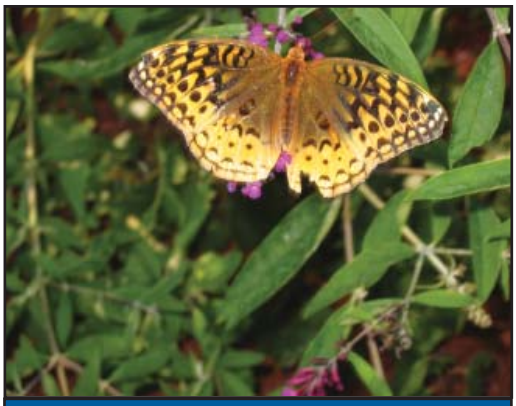
Conventional Lawns

In contrast to EPA's natural lawn, a typical conventional lawn has little diversity of species, resembling a green carpet. A conventional lawn can require heavy watering, fertilizing, toxic herbicides, pesticides and petrochemicals to maintain it. This can lead to a range of negative environmental and human health impacts.



Great Spangled Fritillary

Purple Cone Flower and Partridge Pea

• Annually, lawn care is a $30 billion industry in America. One acre of lawn costs an estimated $400-700 each year to maintain — more per acre than to raise corn, rice, or sugarcane.

• About 70 million pounds of pesticides (active ingredient) continue to be applied to U.S. lawns every year; 1.2 to 3.6 times more pesticide applications per acre than agriculture. The 2001 EPA Pesticide Industry Sales Report, estimates home and garden sales accounts for 19% of the total US pesticide market. The total US pesticide expenditures account for 35% of world market.

• Some 40-60% of the nitrogen fertilizer applied to lawns end up in surface and groundwater, contaminating these waters with excess nutrients. These excess nutrients lead to algal blooms, low dissolved oxygen, and impaired ecological health in our rivers, lakes, ponds, and coastal waters.

• Conventional lawns contribute to rapid runoff of rainfall compared to natural habitats, causing flooding and erosion. A conventional lawn needs about 1" of water every 7-10 days to stay green.

• Small gas-powered nonroad engines, including those used in lawn equipment, have been required to meet EPA emission standards since 1997. Engine manufacturers have reduced smog-forming emissions by over 70 percent to meet EPA's current standards. Even with these emission reductions, small gas-powered nonroad engines produce around 6 percent of the smog-forming pollutants from all mobile sources.

• The total area of lawn in America is about 28 million acres (an area the size of Pennsylvania) with three-quarters or 21 million acres in home lawns (with the average size of one third of an acre).

• Each year, EPA estimates that Americans spend more than 3 billion hours using lawn mowing equipment, including both homeowners and commercial landscapers. The average homeowner spends 25 hours per year mowing their lawn.

What can you do at home?

To create your own natural landscaping, slowly transition your own yard to a more natural and environmentally friendly landscape. Plant some native grasses and wildflowers in part of your lawn and let this area grow tall. Minimize and eliminate lawn chemicals, use compost or natural organic based fertilizers. Leave your grass clippings on the lawn to naturally fertilize and help retain moisture. Avoid watering and let your lawn go dormant (brown) during dry periods. Visit your local garden center and request information on natural lawn care, organic fertilizers, non-toxic pesticides, and native plants.

For additional information and references visit this web page:

http://www.epa.gov/ne/lab/greenbuilding/landscaping.html

Produced by the EPA New England Regional Laboratory Green Committee

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