



# Your Yard and Clean Air

## **Small Engines are Big Polluters**

Most people do not associate air pollution with mowing the lawn. Yet emissions from lawn mowers, snow blowers, chain saws, leaf vacuums, and similar outdoor power equipment are a significant source of pollution. Today's small engines emit high levels of carbon monoxide, a colorless, odorless, poisonous gas. They also 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.

Emission control for small gasoline engines has not been a crucial design consideration until now. Consequently, small engines are big polluters. And power equipment users inadvertently contribute to the problem by carelessly handling fuel and by improperly maintaining their equipment.

The U.S. Environmental Protection Agency (EPA) and the power equipment industry are working to investigate and bring to market cleaner technology for small engines.

## **Pollution Prevention in Your Own Backyard**

EPA anticipates that regulations now being developed will bring cleaner lawn and garden equipment to market within a few years. Meanwhile, consumers can make a difference by adopting practices that will help protect the environment now and in the future:

### **Avoid spilling gasoline.**

Preventing spills and overfills is an easy and effective way for power equipment owners to prevent pollution. Even small gasoline spills evaporate and pollute the air.

Use a gasoline container you can handle easily and hold securely. Pour slowly and smoothly. Use a funnel, or a spout with an automatic stop device to prevent overfilling the gas tank. 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 place. Use caution when pumping gasoline into a container at the gas station.

**Maintain your equipment.**

Follow the manufacturer's guidelines for maintenance. Change oil and clean or replace air filters regularly. Use the proper fuel/oil mixture in two-stroke equipment. Get periodic tune-ups, maintain sharp mower blades, and keep the underside of the deck clean. Take time to winterize equipment each fall.

**Consider cleaner options.**

Ask your dealer about the new, cleaner gasoline equipment entering the marketplace. Propane and solar options are also available for some types of equipment.

Electric equipment is cleaner than equipment powered by gasoline engines. Electrically-powered lawn and garden tools produce essentially no pollution from exhaust emissions or through fuel evaporation. However, generating the power to run electric equipment does produce pollution.

**Use manual tools.**

Tools that don't require electric or gasoline engines are especially handy for small yards or small jobs. Hand tools are available to meet a wide variety of lawn and garden needs, like lightweight, quiet, easy-to-use reel push mowers that generate no emissions.

**Reduce mowing time.**

Use low-maintenance turf grasses or grass/flower seed mixtures that grow slowly and require less mowing. Check with your local agricultural extension service or lawn and garden center about what is appropriate for your region.

Decrease lawn area. Plant additional trees and shrubs to reduce the energy costs of heating and cooling your house and to provide landscaping for wildlife. Native wildflowers and plants require little to no maintenance after planting.

**Recycle old equipment.**

Instead of selling or giving away your old lawn and garden power tools, take them to a recycling center where they can be converted into raw material for use in cleaner equipment and other products.

By combining these strategies, you can reduce your personal contribution to pollution. In addition, your yard equipment will last longer and you will save money.

***For More Information:***

*The Office of Mobile Sources is the national center for research and policy on air pollution from highway and off-highway motor vehicles and equipment. You can write to us at the EPA National Vehicle and Fuel Emissions Laboratory, 2565 Plymouth Road, Ann Arbor, MI 48105. Our phone number is (313) 668-4333.*