



*SUSTAINABLE
ENVIRONMENT
for QUALITY of LIFE*



LAWNMOWER AND GAS CAN BUYBACK

What is it?

Lawnmower and Gas-Can Trade-Outs provide an opportunity for the community to trade in their gas powered lawn mowers and receive a rebate towards the purchase of an electric powered or reel mower and exchange conventional gas cans for environmentally friendly gas cans. Today's small engines emit high levels of carbon monoxide as well as hydrocarbons and nitrogen oxides. These pollutants contribute to the formation of ground level ozone, which impairs lung function, inhibits plant growth and is a key ingredient of smog. A conventional mower pollutes as much in one hour as driving a car up to 70 miles. Small spills while gassing up lawnmowers, boats and automobiles puts 9 million gallons of gas – the equivalent of a supertanker – into the ground each year.

Shared Impact and Benefits

- According to the EPA, engines on gas-powered mowers emit up to 10 times the hydrocarbons per hour of automobiles. Removing just 500 lawn mowers in a summer would cut volatile organic compounds (VOCs) emissions by 5 tons a year and carbon monoxide emissions by 40 tons a year.
- Traditional gas cans have vents that release VOCs, which react with nitrogen oxides from industries and vehicles to form ground-level ozone when sunlight is present. Traditional cans account for about 87 tons a day of ozone-forming pollution. That is equal to emissions from about 1 million cars. 100% CARB compliant gas cans emit 75% less Volatile Organic Compounds (VOCs) than traditional gas cans.



This Action Item can be implemented as a

- POLICY
- ORDINANCE
- PROGRAM

How long does this take to implement?

This type of event can be organized in a relatively short time frame. However, depending on what kind of event it will be (mower, gas can or both) changes the number of groups that need to be coordinated. You do want to be sure and allow enough time for the information of the event to be shared with the community in order to increase the level of participation. Many areas hold these events once or twice a year. It may take longer because you have to make sure you have a way of handling and disposing of the cans and any gas or oil mixture.

The Bottom Line

- An environmentally friendly gas can typically costs \$6-\$11 more than a standard gas can but this equates to a cost of \$250 to \$430 per ton of VOC's reduced, which is a very cost-effective strategy.
- Electric and reel mowers cost significantly less to operate and maintain. They are easy to operate, no longer use cords and the noise is drastically less.
- Scrap metal recyclers are also involved in the removal of the old mowers. In some areas the money made off the metal is then donated to help fund asthmas awareness programs (ex. Open Airways for Schools by the American Lung Association).

Interested? Read on!



Action Steps

1. Assemble a project team that can handle the various aspects of organizing the event.
2. Determine what type of event you want to have and give it a name.
3. Set a budget.
4. Set a date for the event. Keep in mind what time of year consumers typically purchase/use mowers or gas cans.
5. Assign team members to specific responsibilities (PR, corporate sponsors, mower/waste removal, mower distributor, gas-can purchase, volunteers). This should be done six months to a year prior to the event to allow enough time to get necessary funding and to allow enough time to get the information out about the event. Gas can exchanges take less time than lawn mower exchanges.
6. Try to pull in other environmental groups to help participate at the actual event with information booths, give aways, etc.
7. Meet frequently to coordinate efforts.
8. Identify a location large enough to handle the traffic flow.
9. Hold the event
10. Publicize the results of the event so the sponsors involved, the participants and local air and water quality organizations are aware of the impact of the event. If the event is to be held again then that information can also be shared.

Costs

- The cost of a trade-in event varies widely whether for lawn mowers or gas cans. Typically partnerships have been formed with electric and reel mower manufacturers and distribution centers.
- In some cases fines collected from pollution infractions have been used to offset the cost of the purchase of new gas cans.
- Marketing costs must also be considered. Frequently radio and television will air these as public service announcements at no charge.
- When conducting a lawn mower trade in, rebates are often offered towards the purchase of an electric or reel mower, the funding of this rebate must be secured. Discounts might also be offered by the manufacturer to help decrease the cost of a new electric or reel mower.
- Financial support could also be needed for the purchase of gas cans, promotional give-aways during the event, transporting mowers to recycling facility and containers for disposing of lawn mower fluids. The cans need to be handled and properly disposed of so there is a cost there.



Tracking Progress

Let Centralina Council of Governments know when you've implemented this action by contacting Carol Lewis at 704-348-2730 or clewis@centralina.org, so that we can document actions and results on a region-wide basis.



Basic Information

- Manufacturers of both electric and reel mowers are very supportive of trade-in events and typically will be willing to offer event-only incentives to their distributors to encourage the public to buy a new mower.
- Many programs require pre-registration, as there are a limited number of rebates available.
- Rebates are handled various ways. Participants turning in gasoline mowers can be given a coupon allowing them to buy lawnmowers within a certain time frame. The mower purchase receipt and the coupon would be mailed to the coordinator then the purchaser would be mailed a check. Vouchers can be mailed to those who bring in mowers to be redeemed within a certain time frame or vouchers can be handed out at the event and mowers purchased that day. If a power company is sponsoring the event they might offer credits to the customer's bill. However, this could limit the event to specific participants if there is more than one Power Company in the region.

- Some programs take place at the recycling location then a rebate coupon is given for purchasing a particular lawn mowers; others take place at the mower distributor.



- Encourage your local media outlets to promote the events through public service announcements. This will help to dramatically reduce your costs, as advertising tends to be the most expensive budget item.
- Check with your state's Air and Water Quality Divisions to determine whether any funding might be available for the event. In some states, fines collected from those violating the air or water quality regulations can be used.
- Metal recyclers typically want the mowers emptied of all fluids and various parts removed. You made may need extra volunteers to help in this process but coordinating this could result in an increase in money received by the recycler.
- Check with local air and water groups to determine what program could benefit from the money raised from the recycled metal.
- Consider what types of mowers you will accept. For example, does it have to be working? Probably so since you can't say you removed a polluting mower if it isn't working.

Intersecting Interests



ENHANCED OZONE AWARENESS

Most people are completely unaware of the impact of lawn mowing. Enhanced Ozone Awareness programs can promote trade-out programs and encourage no private mowing on code orange or higher days. The chart below is a useful education tool.



TREE PLANTING STANDARDS

A shaded natural area with hostas, ferns, etc. doesn't need to be mowed. The trees that shade it filter pollutants from stormwater, convert green house gases to O2 and reduce energy consumption for cooling. Consider shade over lawn as a "green" alternative.

- April and May were the typical months of the programs with most running for several days.
- Trade-out events are also an excellent time to promote landscaping with drought-tolerant or native plants and naturalizing areas. These landscaping techniques can reduce the size of the area to be mowed and can also reduce water use during hot summers, when water restrictions may be in place. If your trade-out venue is a lawn and garden center, they may stock such plants and help you promote this project.



Factoid: A conventional lawn mower pollutes as much in an hours as 40 late model cars (or as much air pollution as driving a car 100 miles).



Who is doing this?

- Salt River Project (SRP), Phoenix, Arizona
<https://www.srpnet.com/mowing/>
- California EPA
<http://www.arb.ca.gov/newsrel/nr052099.htm>
- Chicago Clean Air Counts
<http://www.cleanaircounts.org/gascanreplacement.shtml>
- Canada Clean Air Foundation, http://www.cleanairfoundation.org/mow_down/md_eng/html/mowdown_program.asp
- Illinois EPA, <http://www.epa.state.il.us/air/exchange/>
- City Public Service, Antonio, TX, http://www.cps-satx.com/content_list.asp?sect_id=426&elmt_id=4
- Denver, Regional Air Quality Council, <http://www.raqc.org/ozone/ozone-mowdown.htm>
- Louisville Metro Air Pollution Control District
<http://www.apcd.org/lawncare/>
- Minnesota Environmental Initiative
<http://www.mn-ei.org/air/events.html>
- Portland General Electric, http://www.portlandgeneral.com/home/news/articles/feb2003/mow_green.asp?bhcp=1
- Pennsylvania Department of Environmental Protection, <http://www.dep.state.pa.us/dep/deputate/airwaste/aq/mower/mower.htm>
- Sacramento Air Quality Management District, <http://www.airquality.org/mobile/mowdown/mowdowngeneral.shtml>
- South Carolina Department of Health and Environmental Control, <http://www.scdhec.gov/news/releases/2003/200306/nr06GasCans03.htm>
- Alamo Area Council of Governments, http://www.aacog.com/naturalresources/epa_mso/epasmo.htm#Mow_Down_Smog
- York County--Recycling Coordinator, 803-628-3181
- Communities such as Dallas, TX and Kansas City are also working with commercial landscapers on ways to retrofit or incentivize early replacement of their heavy duty equipment with cleaner units.

Who needs to be involved in implementation?

- Electric and reel mower manufactures and vendors
- Funding sources such as local power companies, local government, environmental groups
- Scrap metal recycler to take old mowers
- Hazardous waste disposal for draining of fluids from old mowers
- Local government recycling coordinators and/or solid waste division
- Local media to advertise the events

