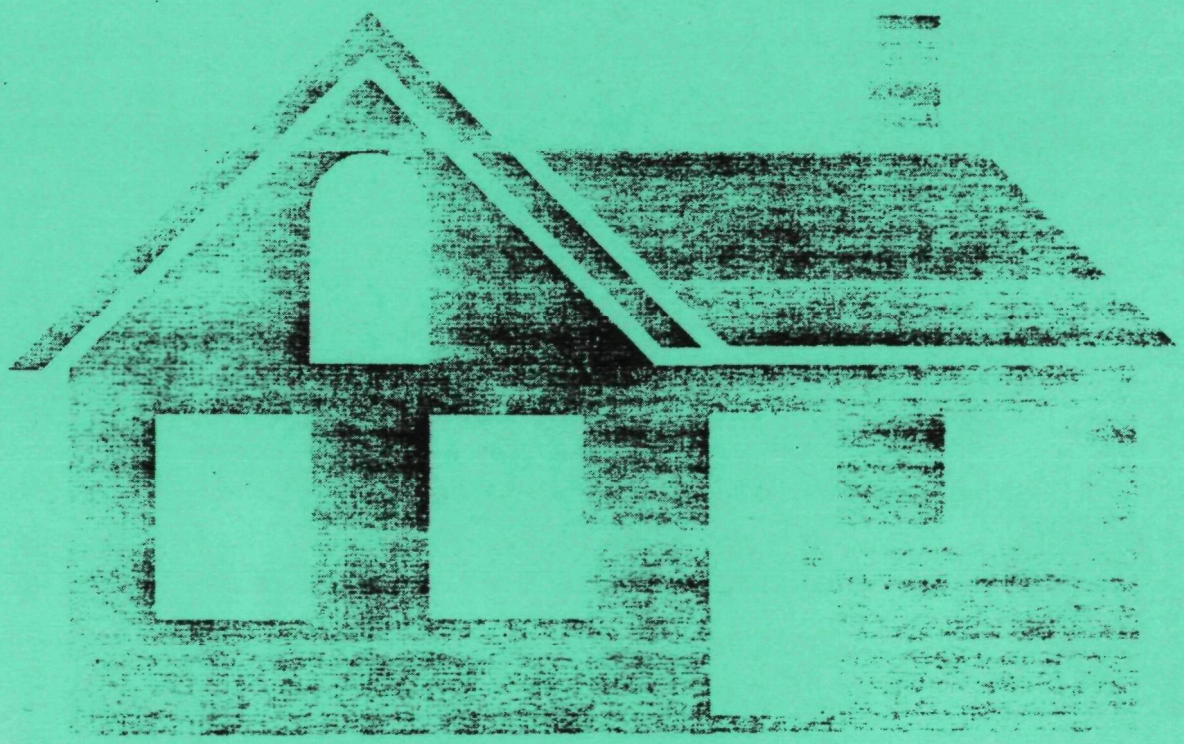
A GUIDE TO A HEALTHIER HOME ENVIRONMENT

HOW YOU CAN PREVENT POLLUTION IN YOUR HOME



U. S. ENVIRONMENTAL PROTECTION AGENCY REGION III

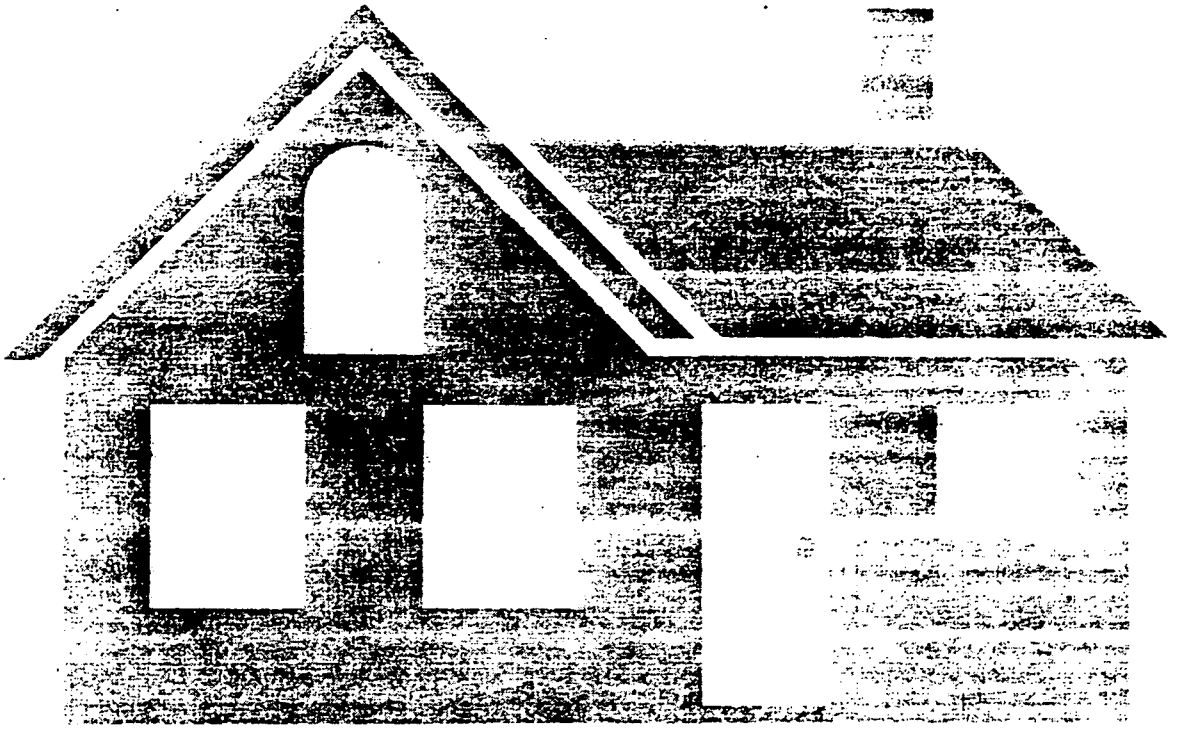
Printed on recycled paper. Text is at least 50% post-consumer.

903R96019

RA
770.5
.G85
1996

A GUIDE TO A HEALTHIER HOME ENVIRONMENT

HOW YOU CAN PREVENT POLLUTION IN YOUR HOME



U. S. ENVIRONMENTAL PROTECTION AGENCY REGION III

Printed on recycled paper. Text is at least 50% post-consumer.

U.S. EPA Region III
Regional Center for Environmental
Information
1650 Arch Street (3PM52)
Philadelphia, PA 19103

TABLE OF CONTENTS

CHAPTERS: PAGE NUMBERS:

First, Some Facts....4

Indoor Air....5

Alternative Cleaning Products....9

Solid Waste....10

Water Conservation....12

Energy Conservation....14

Heating/Cooling....15

Lighting....16

Appliances....16

Hot Water....17

Automobiles....17

Gardening....18

Play Meter Mania at Home/Save $....19

Contacts/Sources of Additional Information....20

DO YOU THINK THAT YOU'RE LIVING IN A SAFE AND HEALTHY HOME?
PLEASE READ ON ...
YOU MAY BE SURPRISED !

First, some facts. Did you know...?

☞ We waste millions of gallons of water each year through inefficient plumbing, bad habits, etc. (Running the faucet unnecessarily wastes gallons of water. Most people use water-guzzling toilets and shower heads... then there's wasteful car washing, landscape watering practices....) In addition to wasting water we might later need in times of drought, we place a burden on our treatment facilities and necessitate using additional chemicals to purify this additional water. It's been estimated that over 40% of the water we use is unnecessary.

☞ The greatest environmental risk to human health is the poor quality of much of our indoor air. Toxic levels can build up in our homes from emissions (off-gassing) from furniture, building materials, carpeting and adhesives; fumes from cleaning and deodorizing products we use; molds and mildews; incomplete combustion from furnaces, heaters, stoves and fireplaces; tobacco smoking; naturally-occurring radon; and pesticides. Tightly sealed homes, with little or no fresh air circulation, can result in unhealthy environments.

☞ The average homeowner could reap substantial savings each year by reducing their electricity consumption through the use of more efficient appliances and energy-conserving measures. The generation of electricity in many parts of the nation depends to a large degree on burning fossil fuels, a major cause of poor outdoor air quality and acid rain. The degradation of many of our lakes, rivers and estuaries is partly attributed to acid deposition.

☞ The average American generates 1,500 lbs of trash per year, more than any other country in the world. Each year additional landfills are needed to contain our waste.

Few of us want a landfill nearby, polluted air and water, unhealthy homes, ... so what can we do?

This booklet contains information on ways to lead healthier and more environmentally-friendly lives, reducing the negative impact we each have on the environment. While the constant change in products and technology may cause some of the information in this booklet to become outdated, the general practices

and principles contained should remain sound. What's important is for you to begin to think more about the implications of your actions and habits upon your family's health and that of the environment and then begin to make informed changes. The best part of this is that most of the changes will save you money! Don't be daunted by the sheer number of recommendations, work on changing your habits a few at a time starting with those easiest for you to adopt or those that will save you the most money. This brochure is intended to be a general guide to get you thinking about the consequences of your actions. More specific information on the various topics can be obtained from the sources isted throughout this booklet

INDOOR AIR

Recent scientific evidence has indicated that the air within our homes and other buildings is often more seriously polluted than the outdoor air in even our largest and most industrialized cities. Other research indicates that people spend approximately 90% of their time indoors. Thus, for many, if not for most people, the risks to their health may be greater due to exposure to air pollution indoors than outdoors.

In addition, people who may be exposed to indoor air pollutants for the longest periods of time are often those most susceptible to the effects of indoor air pollution - the young, the elderly and the chronically ill, especially those suffering from respiratory or cardiovascular disease. Fortunately, indoor air pollution is one risk you can most easily do something about.

Just what are the major causes of indoor air pollution?

*Combustion sources
*Formaldehyde/off-gassing from household products
*Biological contaminants
*Lead and asbestos
*Pesticides
*Outdoor sources (radon, pesticides and outdoor air pollution)
*Cleaning products

COMBUSTION SOURCES

Tobacco smoke is a major source of combustion pollution in many homes. While, most of us realize that tobacco smoking can be hazardous to the smoker, passive exposure to tobacco smoke causes 3,000 lung cancer deaths, over 150,000 lower respiratory tract infections, and thousands of cases of asthma each year.

Other sources of combustion pollution are unvented kerosene and gas space heaters, wood stoves, gas hot water heaters, fireplaces and gas stoves. The pollutants released are carbon monoxide, nitrogen dioxide, and particulates. Unvented kerosene heaters may also generate acid aerosols.

To reduce your exposure to combustion products in the home stop smoking tobacco products, carefully follow manufacturers' directions when operating fuel burning, unvented space heaters (especially for proper fuel and adjustments); keep gas ranges properly adjusted (a persistent yellow-tipped flame is generally an indicator of maladjustment and increased pollutant emissions; the flame tip should be blue). When shopping for a new gas stove, look for an electronic ignition. While fireplaces are great for atmosphere, they are polluting (wood burning emits particulates) and can be dangerous if not operated and maintained properly; hence, keep use to a minimum, burn only dry or aged hardwoods (never burn pressure-treated wood), have flues routinely inspected/cleaned. When not in use, make certain fireplace damper is closed to prevent heat loss.

FORMALDEHYDE/OFF-GASSING FROM HOUSEHOLD PRODUCTS

Many building materials and furnishings contain potentially harmful chemicals. Formaldehyde, frequently found in adhesives of pressed wood and other products, can present serious health problems, particularly to those with asthma. Check the formaldehyde content of pressed wood products, including building materials, cabinetry, and furniture before purchase. Exterior grade products generally contain less formaldehyde. If you purchase pressed wood products it's advisable to air them outside for a day or two to reduce the amount of off-gassing that will later take place indoors.

Carpeting and carpet adhesives may also be a problem. Ask for low-emitting adhesives, ensure that installers follow guidelines, check with manufacturers for information on emissions. Look for carpeting that has been "baked out" by the manufacturer to reduce future emissions.

Organic gases are emitted from many paints, solvents, finishes. Switch to low or no VOC (volatile organic compound) water-based products.

BIOLOGICAL CONTAMINANTS

Biological contaminants (molds, bacteria, mildew, viruses, pollen, etc.) have many sources (plant pollen, people, animals, soil, etc.) and are easily spread through our home air conditioning and heating systems, humidifiers and vacuum cleaners. Keep humidity levels in the home and basement between 30-50%; thoroughly clean and dry water-damaged carpets and building materials within 24 hours; keep the house clean through regular cleaning; use high-efficiency filters and clean or replace regularly; routinely clean evaporation trays in air conditioners, dehumidifiers, and refrigerators.

LEAD AND ASBESTOS

Lead and asbestos are other sources of significant health risk.
Asbestos, once a common insulation product and component of building materials, has not been used for some years. Leaving existing asbestos undisturbed (but sealing it with paint) or having it professionally removed are the best options. Lead-based paint and contaminated soil, dust and drinking water (the latter from lead pipes, solder) are the primary sources of lead contamination. While now largely removed from new products, precautions should be taken to avoid contamination from existing sources. Do not attempt to remove lead paint yourself unless trained, as you may only increase your family's exposure risk; you can leave undisturbed lead paint if it's in good condition.

INDOOR PLANTS/PESTICIDES

Indoor plants are more than just an attractive accent since many help to improve indoor air quality by removing toxins from the air. For example, spider plants absorb carbon monoxide; aloes and philodendrons absorb formaldehyde; and peace lilies, english ivy, and corn plants absorb benzene. Other plants that are good air purifiers include: banana trees, chinese evergreens, ficus (fig trees), and golden pothos. And, of course, all green plants absorb carbon dioxide and emit oxygen, which we need to breathe. Because indoor plants are small and produce very little pollen they are not a major source of biological contamination.

Pesticides are often used in and around the home and can be very hazardous to your health, let alone the environment. First, try picking the appropriate plants for the site, particularly, those known to be more disease-resistant. Hand picking or washing should be tried next, followed by non-toxic alternatives such as diluted dishwashing soap or insecticidal soap. If pesticides must be used, use with extreme caution following manufacturers' directions; apply outside or where there's adequate ventilation and always wear protective clothing. Buy only the quantity needed; discard excess pesticides only at designated disposal centers, never in trash, on ground or down drains.

OUTDOOR SOURCES

Outdoor sources of pollution may also cause indoor air problems. Because they may be naturally occurring (as in the case of radon) and out of the control of the homeowner/tenant, source reduction strategies may not be possible and efforts will be limited to keeping such pollutants out of the home or removing them with an air purification system once they've entered.

CLEANING PRODUCTS

Many common household products we use everyday contain hazardous ingredients. For example, many toilet cleaners contain muriatic (hydrochloric) acid, paradichlorobenzene, and calcium hypochlorite; these can potentially cause ecotoxicity and kidney and liver toxicity. Always examine the list of ingredients and follow directions carefully. Better yet, consider less toxic alternatives.

Dry cleaners commonly use perchloroethylene, some of which remains on clothing after it is brought home. Reduce your exposure to newly-dry-cleaned material to a minimum. If clothing has a strong chemical odor when you pick it up, do not accept it until it has been properly dried.

For additional information on indoor air pollution, request EPA's free publications, "The Inside Story; A Guide to Indoor Air Quality" (EPA 402-K-93-007) and "What You Should Know About Combustion Appliances and Indoor Air Pollution."

ALTERNATIVE CLEANERS: SAFER FOR YOU AND THE ENVIRONMENT*

The following are cleaning products that can, quite effectively, replace various chemical ones. While less hazardous, all are not harmless, so exert care when using.

TOILET CLEANERS: Toilet brush and baking soda or borax; white vinegar soak for tub and sinks.

DRAIN CLEANERS: Mechanical snake or plunger; flush weekly with boiling water; 1/4 cup baking soda.

OVEN CLEANERS: Wipe oven while still warm; salt spills then scrub with paste made of baking soda and water.

BLEACH: 1/2 cup white vinegar or baking soda or borax per load of laundry.

DISHWASHING DETERGENTS: 1 part borax to 1 part baking soda.

ROACH CONTROL: Powdered boric acid

ALL-PURPOSE CLEANERS/DISINFECTANTS: Undiluted white vinegar ; 1/2 cup borax mixed with boiling water.

GLASS CLEANERS: Wash windows with 1/4 to 1/2 cup white vinegar to 1 quart warm water; apply from spray bottle, rub dry with newspaper.

FABRIC SOFTENERS: 1 cup white vinegar or 1/4 cup baking soda in final rinse water.

AIR FRESHENERS: Open box of baking soda or dish of vanilla; simmer cloves; open windows and use exhaust fans.

LAUNDRY DETERGENTS: Use products with low or no phosphates.

MOTHBALLS: Cedar chips; lavender flowers, or other aromatic herbs and spices.

RUG AND UPHOLSTERY CLEANERS: Clean immediately with soda water or a paste made from baking soda, then vacuum.

FLOOR AND FURNITURE POLISH: 1 part lemon oil or juice, 2 parts olive/vegetable/linseed oil; vegetable oil soap; use toothpaste to remove water stains.

FURNITURE STRIPPERS: Equal parts of boiled linseed oil, turpentine and vinegar with steel wool; sandpaper or heatgun.

STAINS/FINISHES: Use natural earth pigment finishes or water-based products.

ENAMEL OR OIL-BASED PAINTS: Water-based paints; look for low or no VOC paint. Always use in well-ventilated areas.

* This information on alternative products provided by several non-profits including the Clean Water Fund and Pennsylvania Resources Council.

SOLID WASTE

Landfills are quickly filling up across the nation and options for new sites are shrinking; some are contaminating our groundwater. Incinerators also can be harmful to the environment, impairing the quality of our air. Since we all want fresh air and clean water and no one wants an incinerator nor landfill next door, we've got to examine our practices and lifestyles to reduce the amount of trash we generate. Otherwise, it won't be long till we're individually assessed fees for the amount or weight of our trash (some communities are already assessing a per bag fee). Here are some methods/practices that can be adopted for home use:

First, examine your trash to see what's being discarded so you can concentrate your reduction efforts on those items that form the bulk of your trash.

Packaging makes up nearly one-third of what we purchase and an even greater percentage of our trash. Smarter shopping can reduce this waste. Buying in bulk, buying concentrates, selecting products with less or no packaging, bringing reusable bags to the store are the cornerstones to reducing packaging. Where there's no choice available or your favorite brands use excess packaging, voice your concerns about reducing waste and conserving resources to both manufacturers (many have toll free numbers on their products) and store managers. While glass and aluminum containers are recycled nearly everywhere, this isn't true for cardboard, cartons and mixed paper. However, if your municipality doesn't recycle them, check around for there are often other recycling centers nearby that accept such products. Plastic bags may be returned to many grocery stores and many shipping services will accept plastic peanuts and other package fillers. Patronize grocery stores that offer instant rebates for bringing your own bags. Start asking yourself questions like - do I really need the convenience of individually packaged coffee in a filter? Couldn't I get along with a bulk can of coffee and a reusable filter? Couldn't I stop using disposable razors?

Nearly 20% of residential trash is composed of yard waste - leaves, grass clippings, plant material, etc. We're throwing away valuable nutrients that we should be using to nourish our gardens in place of chemical fertilizers! Learn to compost food scraps and yard waste. Use a mulching mower; it'll provide nutrients to your lawn and eliminate the need to dispose of clippings. Use composted or shredded leaves for mulch; it'll reduce the need for weeding and watering and eliminate the disposal problem. If you don't have the room to compost or can't utilize all that you generate, participate in collection programs that accept compostable material.

Consider durable goods and reusable products when you shop. Reduce your use of disposable products. Purchase items that are available in refillable containers. Rechargeable batteries will reduce garbage and help keep toxic metals out of waste streams. Some rechargers are even solar powered! Maintain and repair durable products. Help close the recycling loop and look for items that are made out of recycled materials.

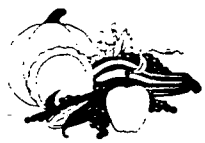
Borrow, rent or share items used infrequently.

Reduce junk mail by writing the Direct Marketing Association (Mail Preference Service, Direct Marketing Association, PO Box 9008, Farmingdale, NY 11735-9008) and ask that your name be removed from mailing lists (make certain to list all names to whom your junk mail has been addressed). You may need to repeat this process every couple years to minimize such unwanted mail.

When shopping, keep in mind that very little biodegradation occurs in landfills, so that unless you'll be composting, biodegradability is of limited environmental value.

Buy only in the amount you need or can use in a reasonable amount of time to avoid having to dispose of spoiled or outdated products.

Purchase organic food; not only are there lower health risks, but without pesticide use the production of organic food is more environmentally-friendly.



By changing to a more vegetarian diet, we'll decrease the environmental harm from raising animals and improve our health. Raising animals is much more resource intensive than raising crops. Eat lower down on the food chain!

Keep paper towels out of easy reach and, instead, have cloth towels and napkins, rags and sponges handy. Assign a different colored cloth napkin to each family member to be used until the next laundry day. When buying paper towels look for those made from 100% recycled paper, are undecorated (contain no dyes) and, if available, are unbleached.

Cancel subscriptions to magazines and newspapers you rarely read; use your local library or share subscriptions with friends.

For additional information on reducing solid waste, request EPA's free publication, "The Consumer's Handbook for Reducing Solid Waste" (EPA 530-K-92-003).

WATER CONSERVATION

Everyone knows about the necessity of water conservation in the western U.S. because of the limited availability of drinking water. In the East, it is sometimes necessary to conserve water in times of drought or when groundwater becomes contaminated by landfills, toxic waste. Reducing our water use, in addition to saving money on sewer, energy and water bills, conserves water for times of drought and allows more fresh water to flow through our rivers to our estuaries (thus preserving freshwater ecosystems and preventing adverse impacts of saltwater intrusions). By reducing our water usage we reduce the need for sewage treatment, saving our communities the need for having to expand water treatment plants. Most households could easily decrease their water consumption by 20% or more without discomfort or expense. By acquiring good water use habits and applying common sense you can make a difference.

Toilet flushing accounts for nearly 40% of water usage in the average home. While new homes generally contain low consumption toilets using as little as 1.5 gallons per flush, most homes still contain inefficient ones that use 4-6 gallons per flush. These old flush toilets can be modified to use less water merely by inserting 2 to 3 half-gallon plastic bottles filled with water in the tanks. Add more

or fewer bottles/containers depending on satisfaction with the flushing action. You may also need to place some stones inside the bottles to keep them from shifting and interfering with the flush mechanism. If you're thinking of replacing a toilet make certain to get one of the new ultra-low consumption models.

Bathing is the second most water-consuming activity in the average home. As baths generally consume much more water than showers, switch to short showers. Besides, long, hot showers expose you to more risk from inhaling, absorbing contaminants that may be present in your water. Inexpensive water-saving showerheads can reduce usage by 50% over standard heads. They're designed to slow flow rates to 2 gallons per minute while still maintaining a forceful, pleasing shower. Fit all showers with these showerheads.

Laundry use is typically the third most water-intensive home activity. Try to wash clothes only when you have a full load; if a smaller load must be done, set the water level appropriately. When shopping for a new washer, remember that front loading models generally use about 40% less water than top-loading models for comparable loads.

Check all plumbing fixtures to ensure there are no leaks (a leaking faucet or toilet can waste 20 or more gallons of water a day).

Run your dishwasher only when you have a full load; for normal use select the cycle with fewest number of washes and rinses. When hand washing dishes, use a dish tub to soak and wash dirty dishes, rather than doing so under running tap water.

Turn off your water and water heater when away from home for more than a few days.

Check your water meter when no water is being used; if the dials move you probably have a leak.

Don't run your water continuously when washing dishes in the sink, cleaning vegetables and fruit, brushing your teeth, shaving, etc.

Water your lawn and wash your car only when absolutely necessary, then use water-saving devices.

Compost your food scraps rather then putting them down the garbage disposal.

If you have a septic system, proper maintenance is crucial to keeping it working properly and preventing groundwater contamination. Know the location of the components of your system and keep heavy vehicles away; don't plant trees nor

shrubs near the drain lines (roots can clog the system); don't put chemicals down the drain (they can destroy the bacteria needed to help purify the water); don't overload your system with too much washing at one time; don't use a garbage disposal; conserve water; and have your tank monitored yearly (sludge and scum should be removed every few years).

For additional information on water quality protection and conservation, request any of the following: "Baybook, A Guide to Reducing Water Pollution at Home" (Alliance for the Chesapeake Bay/Chesapeake Bay Program publication); EPA Fact Sheet: "21 Water Conservation Measures for Everybody" (EPA 570/9-91-100); EPA's pamphlets, "Preventing Pollution Through Efficient Water Use" (20W-0002, July 1990) and "Saving Money with Home Water Conservation Devices".

ENERGY CONSERVATION

Energy is expensive and most forms are not clean. Electricity, while clean operating can be environmentally harmful to generate. The burning of coal and other fossil fuels reduces our air quality and leads to acid rain that contaminates our surface waters. Furthermore, the extraction of fossil fuels destroys wildlife habitat. Acid mine drainage and oil spills contaminate our soils and pollute our waters. With nuclear energy there is the danger of radioactive leakage, the problems associated with disposal of spent fuel, and thermal impacts to rivers and lakes from the discharge of water used to cool reactors. Renewable sources of energy like solar energy and the harnessing of wind and the oceans are environmentally-preferable, but as even they have environmental impacts, we should all attempt to conserve energy, whatever the source. There is much you as a homeowner or tenant can do to reduce your energy bills and, at the same time, contribute to a cleaner environment.

First, consider some usage facts to help you target reduction measures:

- 46% of residential energy is used to heat and cool our homes
- 24% is consumed by lighting, cooking and running appliances
- 15% is used for heating water
- 15% is used to refrigerate and freeze foods

HEATING/COOLING

Most of residential heat loss is through windows. Covering windows at night, particularly with tight-fitting thermal drapes, can reduce heating bills dramatically. Also, consider applying plastic film liners, storm windows or replacement with high-efficiency windows.

Have your furnace tuned up by a heating technician yearly; inefficient heating systems can waste 20% or more of the energy used. Turn down thermostats for heating, particularly when you're asleep or away from home. For every degree you lower the temperature you reduce your furnace's energy consumption by 2-3%. Recommended settings are 68° F when home, 55° F when away or asleep. Use timers or electronic thermostats to make for convenient and efficient heating of your home. Keep rooms infrequently used at cooler temperatures. Add extra insulation (R-30 in ceilings, R-19 for floors, R-11 for exterior walls), seal external cracks around windows and doors and ductwork, add storm doors and windows, purchase high-efficiency glass for new glazing. Plant coniferous trees on NW side of house to block winter winds and reduce heating needs. Consider a high-efficiency furnace; the initial cost may be quickly recouped from the energy savings. Clean or replace filters regularly. Turn off kitchen and bath exhaust fans promptly when they've done their job; most are capable of exhausting a houseful of warmed or cooled air in an hour. When buying a heat pump, look for a high Coefficient of Performance (COP); a good heat pump will have a COP of 2.0 or greater at 17° F and 3.0 or greater at 47° F.

In summer, use air conditioning as little as possible. Fans are preferable because they use much less electricity; consider ceiling fans in frequently used rooms. When you must purchase an air conditioner look for a model with the highest Energy Efficiency Rating (an EER of 10 is excellent), then place it in a window getting the least amount of direct sunshine or erect a sunshield for it. When in use, select the energy-saver option that shuts both the fan and compressor off when the desired temperature is reached. Plant deciduous trees on S and SW sides of home to shade and reduce cooling costs. Use awnings or other window coverings to reduce solar heating. Use light (especially white) paint and materials for external surfaces, particularly roofs, to reflect heat and light. Shade your central air conditioner with shrubbery or an awning (it'll increase efficiency by about 10%). Plant or prune trees and shrubbery to direct cooling breezes through windows.

LIGHTING

Turn off lights and appliances when not in use. Utilize timers, dimmers and light sensors to conserve electricity. Use task lighting to illuminate only the space necessary. When repainting, keep in mind that light-colored walls will make your rooms brighter with less lighting (hence savings to you and the environment) than dark colors.

Replace incandescent light bulbs with energy-efficient fluorescent ones (they're more expensive to buy, but last up to 10 times longer and use about 1/4 the electricity, thus yielding significant savings over the long run). And, amazingly, just by replacing one traditional bulb with a compact fluorescent will reduce the amount of carbon dioxide emitted into the atmosphere by half a ton over the life of the bulb! If you need to use incandescent bulbs, use them wisely. Smaller wattage bulbs aren't as efficient as higher wattage bulbs. For example, it takes two 60-watt bulbs or four 40-watt bulbs to light a space to the same brightness as one 100-watt bulb. Using the 100-watt bulb will cost 17% less than using the 60-watt bulbs and 38% less than using the 40-watt bulbs. "Energy Miser" or "Supersaver" type incandescent bulbs use 5-13% less electricity than ordinary bulbs; while a little more expensive, they'll save you money over their lifetime. "Long-life" incandescent bulbs are LESS efficient than standard bulbs; use them only where replacing bulbs is very difficult!

APPLIANCES

Select the most energy efficient appliances available; they may cost more initially but will pay for themselves through lower operating costs.

Keep use of electrical appliances to a minimum; consider using hand-operated appliances - reserve electric appliances and tools for the really big jobs. Convection ovens cook more efficiently and thus use less energy than conventional ovens; for small quantities of food, microwave ovens use even less energy. When shopping for a gas range, select one with an electronic ignition, which uses 40% less energy than one with a constant pilot light. Turn off televisions and radios when you leave a room.

Line dry your clothing wherever possible. If you're purchasing a dryer, look for a moisture sensor to avoid overdrying and damaging clothes. Also, most clothes, especially permanent press, wrinkle less if taken out damp and air dried. Remember, one full load can be dried with less energy than two half-full loads. Clean out the lint filter after every load to keep your machine running efficiently and reduce the danger of fire.

When using an automatic dishwasher, wait till you have a full load and after final rinse cycle, open the door to allow air drying rather then using 'heat dry' setting.

HEATING WATER

Set your water heater at about 120° (between medium and low) to reduce energy use and the risk of scalding. Consider wrapping an insulation jacket around the water heater and nearby water pipes. When away for extended periods, turn temperature down to lowest setting or turn it off.

Wash lightly soiled clothes on a delicate cycle; this not only saves energy, but decreases the wear and tear on your clothes and the machine.

For additional information on energy conservation, request EPA's pamphlet, "Save Energy & Save the Earth" or the U.S. Department of Energy's booklet, "Tips for Energy Savers".

AUTOMOBILES

Automobile emissions are a major source of air pollution, accounting for up to 60% of air pollution in cities. What can we do when so much is dependent upon the automobile? First, keep their use to a minimum. As studies have shown that more than 80% of auto travel is for trips of less than 3 miles, bicycle, walk or use public transportation wherever possible. When you must drive, consolidate trips and offer others a ride.

Keep vehicles well-tuned and tires properly inflated so they are most fuel-efficient and less polluting. Avoid excessive speeds and fast acceleration; most cars are most fuel-efficient at steady, moderate speeds (45-55 mph). When seeking a new or used car, purchase fuel-efficient models (EPA provides ratings for comparative use). Old models are among the most polluting and some of the biggest fuel guzzlers, so consider retiring that old junker or, at least, keep it well maintained.

If you do your own auto maintenance, avoid spills and take extra care to keep lubricants out of drains. One quart of oil can create a 2-acre oil slick! Take used oil to your neighborhood garage or recycling center. Antifreeze is toxic to people, pets, fish and wildlife; check to see if your local garage will accept it, otherwise, take it to a household hazardous waste collection center. Auto batteries contain sulfuric acid and lead, so avoid direct contact with your skin and, likewise, bring old batteries to a recycling center.

GARDENING

Planting trees, shrubs, and flowers can greatly benefit our environment in many ways (e.g., through improving air and water quality, creating additional wildlife habitat, cooling our communities, creating noise barriers), however many of our gardening practices can actually be harmful.

Pesticides pose a threat to human health, wildlife and water quality; power tools such as mowers, blowers and trimmers create air and noise pollution; poor garden layout can result in erosion of topsoil, and wasteful water usage; improper plant selection can result in biological nightmares where exotics outcompete native plants.

Eliminate or at least reduce the use of pesticides as they contain chemicals that may be hazardous to human health, wildlife and water quality. Careful selection of appropriate plant material and use of Integrated Pest Management practices can greatly reduce the need to use pesticides.

For detailed pollution prevention information on gardening, request our free companion brochure, "A Gardener's Guide to a Healthier Environment", and any of the following: "Citizen's Guide to Pesticides" (22T-1002), "Healthy Lawn Healthy Environment" (700-J-92-005), "Integrated Pest Management", and "Creating a Natural Environment" by calling EPA's Public Information Center at (215) 814-5121.

Save Money!
Conserve Our Resources!
Have Fun!
Educate Your Children!

How?

Play Meter Mania at Home

METER MANIA

Enlist your children in environmental protection, make resource conservation fun and educational, and save money. Play METER MANIA by having your kids monitor utility usage. The rules are simple and flexible.

1. Teach them how to read your water, gas and electric meters;
2. Explain which household activities rely on which resources; show them how quickly the dials advance when certain appliances or water are running;
3. Share the conservation tips contained in this booklet;
4. Establish a baseline usage for each utility (refer to bills for the same month last year);
5. Have your kids monitor usage (daily, weekly, and/or monthly);
6. Finally, offer some reward for their helping you save money through reduced utility usage.

CONTACTS

POLLUTION PREVENTION CONTACTS:

U.S. EPA Region III, Pollution Prevention Team, (215) 814-2761

Delaware: Department of Natural Resources and Environmental Control, (302) 739-3822

District of Columbia: DC Department of Health, (202) 535-2305

Maryland: Department of the Environment, (410) 631-4119

Pennsylvania: Department of Environmental Protection, (717) 783-9981

Virginia: Department of Environmental Quality, (804) 698-4344

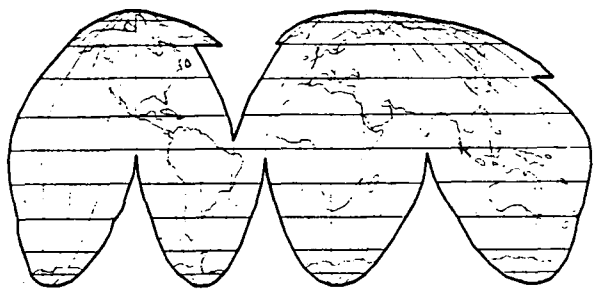
West Virginia: Department of Environmental Protection, (304) 484-6269

OTHER SOURCES OF POLLUTION PREVENTION INFORMATION:

Most of the guides/fact sheets referenced in this brochure can be obtained free by contacting EPA Region III's Public Information Center (which serves the Middle Atlantic States); call (215) 814-5121 or visit the Center in the lobby of the 1650 Arch Street Building in downtown Philadelphia (open normal business hours).

Additional information can be obtained by calling the national Pollution Prevention Information Clearinghouse at (202) 260-1023 or the Alliance for the Chesapeake Bay, 6600 York Road, Baltimore, MD 21212; call (401) 377-6270.

REMEMBER, OUR OWN ACTIVITIES AND PRACTICES CAN HAVE A SIGNIFICANT IMPACT ON THE HEALTH AND QUALITY OF OUR HOME ENVIRONMENT, WHILE THE CUMULATIVE IMPACTS OF ALL OF OUR ACTIVITIES AND PRACTICES HAVE A SIGNIFICANT IMPACT ON OUR SURROUNDING ENVIRONMENT. PLEASE DO YOUR PART TO BE MORE ENVIRONMENTALLY-FRIENDLY, THEN GO A STEP FURTHER AND ENCOURAGE YOUR FRIENDS AND NEIGHBORS TO DO THE SAME. IT WILL TAKE ALL OF US WORKING TOGETHER TO ENSURE WE HAVE A CLEAN, HEALTHY ENVIRONMENT FOR OUR CHILDREN AND FUTURE GENERATIONS. AS IT MAY NOT BE PRACTICAL OR FEASIBLE TO ADOPT ALL THE RECOMMENDATIONS PROVIDED IN THIS GUIDE, START BY MAKING SMALL CHANGES AND STRIVE TO CONTINUALLY ADOPT MORE.



Thank You

EPA gratefully acknowledges the following for information included in this booklet:

Alliance for the Chesapeake Bay
American Council for Energy-Efficient Economy
Center for Hazardous Materials Research
Clean Water Fund
Delaware Department of Natural Resources and Environmental Control
Delaware Nature Society
District of Columbia Government Regulation Administration
Maryland Department of the Environment
Massachusetts Audubon Society
Missouri Department of Natural Resources
Missouri State University
National Oceanic and Atmospheric Administration
Pennsylvania Department of Environmental Protection
Pennsylvania Resources Council
U.S. Department of Energy
Virginia Department of Environmental Quality
Virginia Department of Waste Management
West Virginia Department of Environmental Protection

PLEASE DON'T DISCARD!

Practice pollution prevention by sharing this brochure with others when you are finished.

THANK YOU

U.S. EPA, Region III, Pollution Prevention Program (3EI00)
1650 Arch Street, Philadelphia, PA 19103

11/2000