TOXIC FREE:

A COMMUNITY-BASED APPROACH TO REDUCING HOUSEHOLD HAZARDOUS PRODUCTS

Prepared for
the Conservation Council of Ontario
by Chris Winter and Julie Nettleton

Toxic Free is an organizer's manual for a voluntary, multi-sector, and community-based approach to reducing environmental contamination and health risks associated with household products. It emphasizes a positive message, encouraging the public to purchase and use safer and more environmentally benign products.

This manual is published by the Conservation Council of Ontario for the express purpose of assisting community organizers, municipalities, community groups, and businesses develop a common, cost-effective, and rigourous approach to minimizing pollution in our homes and communities. The material in the guide may be used and reprinted free of charge with appropriate acknowledgement of the source.

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PART 1

HOUSEHOLD HAZARDOUS PRODUCTS

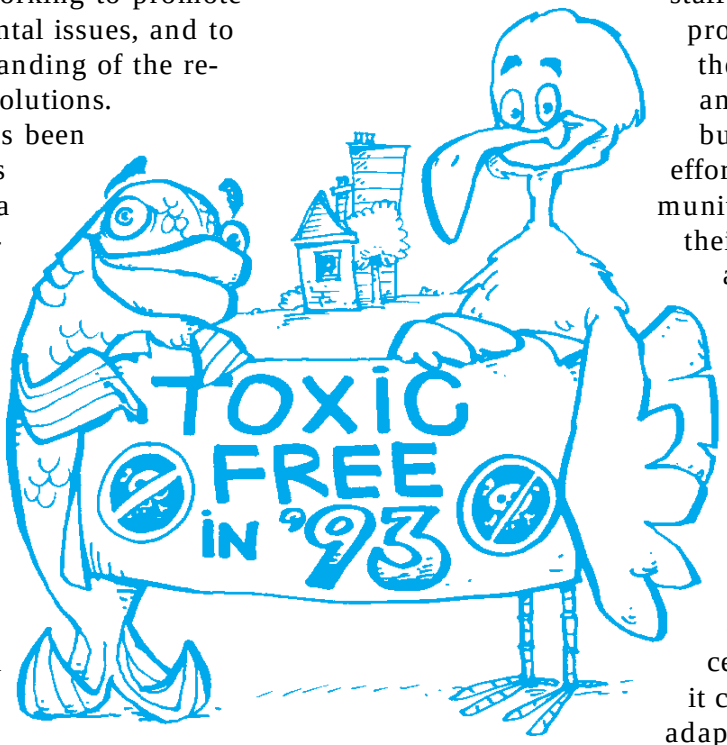
1.1 INTRODUCTION

Toxic Free is a project of the Conservation Council of Ontario. Its purpose is to support community-based campaigns and projects across Ontario that will contribute to reducing household pollution.

The Conservation Council of Ontario (CCO) is an association of provincial organizations and individuals that share a common concern about the environment. The Conservation Council has an active membership of over 100 people who donate their time and expertise to our projects and issues. Since its inception in 1951, the CCO has been working to promote cooperation on environmental issues, and to raise our common understanding of the requirements for long-term solutions.

Since 1991 the CCO has been working with communities across Ontario to develop a low-cost approach to community organizing. In 1995 we published our organizer's guide, *Community Action for the Environment*. Whether you are just starting out, or are part of an existing network (such as green communities or healthy communities), you'll find *Community Action* a useful tool for assessing how well organized your community is, and where you can improve.

Once a community is organized, the next challenge is to focus on issues. *Toxic Free* is the third in a series of project-related guide books, alongside *Yes In My Back Yard: a guide to rehabilitating urban streams* and *Greening Canada: a guide to community tree-planting*.



Artwork from a 1993 toxic free campaign in Metro Toronto

This manual is the result of several years of research and field testing. Much of our on-the-ground experience comes from the 1993 Metro Toronto Toxic Free Campaign, in which over 35 groups (representing government, business, environment, and community) came together to debate a strategy and carry out a wide range of projects, including door-to-door contact, mall displays, in-store signage, and a community newspaper.

Many communities already have waste reduction programs in place, and municipal staff and funding programs to back them up. *Toxic Free* is an opportunity to build on the existing efforts within a community and broaden their scope to include a wide range of contaminants.

In short, *Toxic Free* is a flexible approach to pollution prevention at the community level. It targets household hazardous products as the central concern, but it can be readily adapted to include other issues. It outlines a recommended approach to community organizing, but it can be adapted to reflect existing programs and opportunities within a community. It all depends on how the organizers, and the community, wish to structure the campaign.

1.2 HAZARDOUS PRODUCTS IN YOUR HOME

WHAT DO WE MEAN BY "HOUSEHOLD HAZARDOUS PRODUCTS"

Many people are familiar with the term Household Hazardous Waste (HHW), and many communities have HHW collection days or depots for the proper disposal of these products.

HHW, however, is really just one part of a larger problem: the manufacture, use, and disposal of household products that can be hazardous to human health and the environment. Canadians use a lot of hazardous products. We use them for cleaning, taking care of our homes and cars, and keeping bugs and weeds out of our gardens.

Each year the average Ontario family buys 40 or 50 different kinds of flammable, corrosive, or poisonous cleaners, pesticides, paints, and other consumer products. Some of our hobbies, such as photography, woodworking, carpentry, or painting can increase the number of hazardous products we have in our homes.

Most products that contain hazardous ingredients display one of the four hazard symbols: corrosive, flammable, poisonous, or explosive. However, some products that contain small amounts of hazardous substances are not required to display a hazard symbol. Instead, "hazard statements" are printed on their containers. Examples of hazard statements are "keep out of reach of children", "do not store near food or beverages" and "avoid contact with eyes, skin and clothes".

Anything can be toxic or hazardous if you're exposed to too much of it, or if it is used improperly.

We recognize that both the definition of a "household hazard" and the scope of products to be included in household hazardous waste programs is hotly debated.

This manual addresses the problem from a "prevention" approach. As a consequence, the Conservation Council has adopted a broad definition of household hazardous products, based on the potential impact on human health and the environment.

THREE CATEGORIES OF HOUSEHOLD HAZARDOUS PRODUCTS

While there are many areas of ongoing research and debate (such as endocrine disruptors, hypersensitivity, allergies, chronic health impacts, and general environmental contaminants), we have selected three categories of hazards to provide an indication of the far-reaching and important implications of household hazards. They are:

- priority contaminants
- household hazardous waste
- accidental poisoning

A) Priority Contaminants

Under the 1994 Canada-Ontario Agreement (COA) respecting the Great Lakes Ecosystem Basin, a number of priority contaminants have been identified in two categories (or tiers). COA makes a number of commitments, including:

i. Seek a 90% reduction in the use, generation or release of Tier I substances by the year 2000. The Tier I substances are:

- benzo(a)pyrene
- hexachlorobenzene
- octachlorostyrene
- alkyl-lead
- mercury
- PCDD (dioxins)
- PCDF (furans)

ii. Collaborate and provide support for voluntary programs for industry and others to reduce the use, generation or release of Tier II substances and establish specific time lines and targets for achieving their virtual elimination. The Tier II substances are:

- anthracene
- cadmium
- 1,4-dichlorobenzene
- 3,3'-dichlorobenzidine
- dinitropyrene
- 4,4"-methylenebis(2-aniline)
- pentachlorophenol
- tributyl tin
- PAHs

iii. Promote and encourage pollution prevention programs for other pollutants and hazardous wastes.

Environment Canada and the Ontario Ministry of Environment and Energy are currently co-operating on many pollution prevention initiatives. For example, the two senior levels of government have signed pollution prevention agreements with the automotive manufacturing, metal finishing, printing and graphics, and fabric care industries.

B) Household Hazardous Waste

Household Hazardous Waste (HHW) is the centre of attention for many municipalities and industries. The type of HHW collected will vary with each community, and will likely change over time, so we suggest you contact your local works department for an up-to-date list.

By way of example, the County of Northumberland recently circulated a brochure to all households recommending that the following materials be saved and taken to a special collection event:

- ❑ aerosol cans (with contents)
- ❑ antifreeze/coolants
- ❑ car and household batteries
- ❑ bleach
- ❑ butane cartridges
- ❑ car care products
- ❑ caulking
- ❑ chemicals
- ❑ cleaning products
- ❑ diesel fuel
- ❑ driveway sealant
- ❑ ethanol
- ❑ fertilizers
- ❑ flea powder
- ❑ floor polish and wax
- ❑ fluorescent light bulbs
- ❑ gasoline
- ❑ glue/contact cement
- ❑ herbicides/fungicides
- ❑ insecticides
- ❑ kerosene
- ❑ lighters
- ❑ medications and pharmaceuticals
- ❑ mercury (thermometers)
- ❑ metal polish
- ❑ methanol
- ❑ mineral spirits
- ❑ motor oil and oil filters
- ❑ nail polish and remover
- ❑ paints
- ❑ pesticides
- ❑ pool chemicals
- ❑ propane tanks, cylinders
- ❑ razors and blades
- ❑ rubbing alcohol
- ❑ rust remover
- ❑ solvents
- ❑ stains and varnishes
- ❑ syringes.

Not every municipality will have a list this long, but it gives an indication of the types of materials that are considered too hazardous for disposal in an ordinary landfill.

The Association of Municipal Recycling Coordinators (AMRC) conducted an extensive composition study on the material collected at household hazardous waste depots (1996). They discovered that the greatest amount of material received (by container volume) is paint, at 40%. Over 65% of the containers returned were more than half full.

The AMRC report also contains lists of all the major brand owners according to the type of material (i.e. flammables, oils, acids, bases, pesticides, pharmaceuticals, etc.) The study, "Household Composition and Cost," is available for $75 (or half price for AMRC members). Check the Resources section for information on AMRC.

C) Accidental Poisoning

Accidental poisoning is an issue of concern in particular for parents of young children. The Poison Information Centre at the Hospital for Sick Children in Toronto has listed the top ten causes of accidental poisoning in children (1990 figures, based on 66,000 calls):

1. household cleaning products
2. plants
3. children's analgesics
4. cough and cold preparation
5. bleaches
6. antihistamines
7. insecticides
8. mercury from thermometers
9. perfume
10. children's vitamins

Contact your local Poison Information Centre for more information. Look on the inside front cover of your local telephone directory for a telephone number. Be prepared for them to say they don't have much information (their mandate and budget is for treating accidental poisoning, not prevention), but you may find them to be a willing partner in a community campaign.

PRIORITY CONTAMINANTS IN HOUSEHOLD PRODUCTS

While it is often difficult to track the life cycle of a contaminant through all stages of the manufacturing process that leads up to a household product, some priority contaminants are present in household products. The following list was compiled using information from Environment Canada, Material Safety Data Sheets (MSDS), and "1001 Chemicals in Everyday Products" by Grace Ross Lewis (see the resources section for information).

TIER I

benzo(a)pyrene	found in cigarette tar
hexachlorobenzene	used as a wood preservative on outdoor furniture, fences, foundations, and landscape timbers. It is a carcinogenic, and is toxic by swallowing.
mercury	used in thermometers and dental fillings. There are several mercuric compounds that are listed as being used in specialty paints, fungicides, insecticides, antiseptics.

TIER II

cadmium	used in pigments enamels, photography, glazes, and batteries. It is flammable and a carcinogen. Cadmium plating of food and beverage containers resulted in a number of outbreaks of gastroenteritis (food poisoning).
1,4-dichlorobenzene	used as a fumigant, moth repellent, germicide, space odorant, and soil fumigant. It is a possible carcinogen and an animal teratogen (abnormal fetus development). Moderately toxic to humans when swallowed. Various effects on the body from swallowing include liver changes, respiratory effects, and constipation. It is also an eye irritant. Over 90% of 1,4-DCB use is for domestic sanitizers and insecticides / repellants.
3,3'-dichlorobenzidine	3-3'-DCB is used primarily as an intermediate in making dyes and pigments for printing inks (largest use), textiles, paints, plastics, and crayons. It is a probable carcinogen in humans (i.e. liver, breast, bladder, intestine and skin); it may possibly cause reproductive damage in humans; it has caused cancer in the offspring of humans exposed during pregnancy; it may cause skin allergy.
pentachlorophenol	used as a wood preservative, fungicide, bactericide, algicide, and herbicide. The fumes or skin contact may cause violent sneezing, fever, rapid pulse, headache, dizziness, weakness, nausea, chest pains, and shortness of breath. PCP has been linked to acne, weight loss, liver and kidney damage.

The Toxic Free campaign can be used to address specific products containing these chemicals, but in general it is intended to cover a much broader range of environmental contaminants and hazardous waste (consistent with the third COA commitment described on page 4.

1.3 WHY YOU SHOULD CARE

HAZARDOUS PRODUCTS CAN HARM YOUR HEALTH

You and your family can be exposed to hazardous products through poor indoor air quality (most of us spend more than 90% of an average day indoors), misuse of products, improper storage, or accidental spills. Effects might be felt when concentrations become high, or if someone is sensitive to a certain substance. Children, elderly adults, or those who are inside most of the time can be sensitive to smaller concentrations of hazardous substances. "Acute" or short-term effects include headaches, nausea, rashes, or allergic reactions.

There is little information about chronic or long-term effects of hazardous household products. Information on the chronic effects of some ingredients only applies to concentrations much higher than those occurring in consumer products. We also know very little about the combined health effects of two or more substances.

In addition to potential health risks, some household products are flammable, explosive, corrosive, or reactive hazards. If misused or abused, they can burn and eat through our skin. Some can readily burst into flames. When mixed together, some can form lethal gases or explosive mixtures.

HAZARDOUS PRODUCTS HARM THE ENVIRONMENT

For hazardous products to harm the environment, they need to get into it. This can happen a number of ways:

- direct dumping into stormsewers or onto lawns and driveways
- spills and leaks
- general usage
- erosion or slow release
- improper disposal into sinks, bathtubs, laundry tubs, or toilets
- releases through effluent from sewage treatment plants, or emissions from waste incinerators
- releases into groundwater through the "leachate" from landfills or dumps
- byproducts and waste from the manufacturing process.

Once in the environment, the materials can contaminate air, soil, and water, damaging wildlife habitat, the air we breathe, and the water we drink.

HAZARDOUS PRODUCTS COST MONEY

Managing household hazardous waste can be a real headache. Consider the following:

- Existing collection programs are providing proper disposal for 10 to 20% of the household hazardous waste produced in Ontario.
- Capturing the other 80% means spending many more municipal dollars on specialized equipment, shipping, and training.
- Ontario's capacity for permanent storage of hazardous waste is limited.

WOULD YOU TAKE IT CAMPING?

Most campers, canoeists, and hikers will always try to use biodegradable, environment-friendly products when in the wilderness. Should it be any different at home? The hazardous products that go down the sewer wind up in our rivers and lakes just the same.

A simple, but tough test for household products is to ask yourself "would I feel comfortable using this product in a natural environment?" If the answer is no, treat it as a hazardous product.

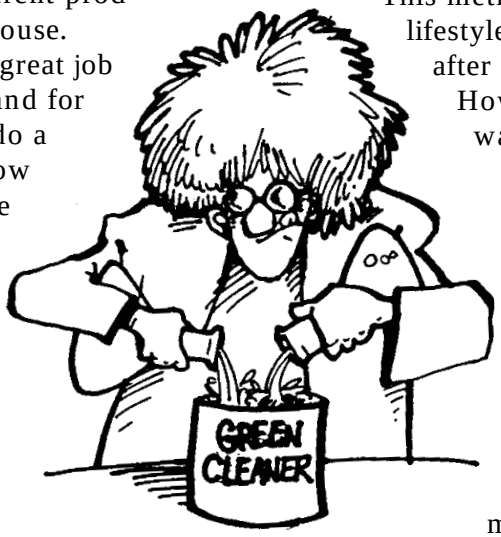
1.4 CLEANING YOUR HOME

As any campaign organizer knows, you have to have done it yourself if you are going to convince the rest of the world. So, if you've never tried cleaning your home without harsh chemicals, be prepared to spend the next few weeks trying different ways to clean your home.

COLD TURKEY, OR A CHANGE IN BUYING HABITS?

Ads for commercial cleaning products sell the image of a spotless home, often implying that for a home to be clean, safe and healthy, it must be disinfected from top to bottom on a regular basis, using a different product for each room in the house.

These ads are doing a great job of driving consumer demand for cleaning products. They do a poor job of letting you know that frequent use of a large amount of chemical cleaners COULD cause more harm than good.



Consistent use of strong chemical products in the home can result in overexposure for the people using them, especially sensitive individuals, or those who are inside the home when they are being used. Manufacturers of cleaning products are not required to list all of their ingredients, only those considered hazardous when present at a regulated level. It is possible for a product to contain an ingredient that is not considered hazardous because it is present at a level too low to be regulated.

It **is** possible to keep your home **clean, safe and healthy** using a minimum of chemical cleaners, solvents, and hazardous products. There's no need to empty your cupboards of commercial products, but you should be aware of the products you buy and how you can minimize the hazardous chemicals going into your shopping basket.

There are two ways to reduce your use of hazardous chemicals: "buy green" or use "home recipes." The simplest solution is to switch to more environmentally benign products. It may cost a bit more, and it may still require a change in cleaning habits, but it is the best approach to recommend to people who don't want to make a major lifestyle change in order to contribute to the campaign. It also has the benefit of supporting retailers who promote alternative products.

The other approach is to clean with home recipes using common sense and common ingredients such as baking soda and vinegar. This method often requires subtle changes in lifestyle, such as wiping down the bathtub after every use instead of once a month. However, it can also be a much cheaper way to keep a house clean.

Before you start your campaign, have everyone who has been involved in planning the campaign spend at least a month on a toxic-free diet. Share your experiences with each other, and trade recipes. After several weeks, you will likely find a mix of home recipes and alternative products that meet your needs, depending on your commitment, lifestyle, shopping budget, and the performance of products and home recipes.

BUYING GREEN

There are many products on the shelves of your supermarket — old and new alike — that use less hazardous ingredients while providing excellent cleaning performance. Unfortunately, many newer "green" formulations are more expensive than standard chemical cleaners, and they don't back up their claims of environmental "friendliness" with facts. If you are willing to spend a few cents more for a cleaner world, make sure that the claims of "environmentally friendly" cleaning products are backed up on the product label. (Take a look at "How to Read a Label.")

WHAT TO DISINFECT AND WHEN

Disinfectants have to be hazardous — they're used to kill harmful microorganisms. They are needed in restaurants and institutions to reduce the risk of bacterial contamination resulting from contact with a large number of food products, food sources, and food handlers. Household kitchens don't require the same level of disinfection — and often a disinfectant product contains other ingredients you don't need. Here's how to reduce both the amount of hazardous products in your home and the risk of bacteria related illness — two ways to be healthy.

REDUCING THE RISKS

The most common source of bacterial contamination in your house is raw meat. The risk of contamination can be avoided by **prompt clean-up, proper storage and handling, and adequate cooking**. Bacteria in meat grow at **room temperature and spread easily**. Always use separate utensils and dishes for raw meat, and don't wash them with your other dishes... if the bacteria can live in your dishwater, it can spread to everything else that goes in your dishwater.

- Buy fresh meat and keep it refrigerated.
- Thaw frozen meat in the fridge or the microwave and rinse off juices right away. Marinate meat in the fridge. Don't leave it out between preparation and cooking.
- Prepare raw meat and cooked meat on separate plates and cutting boards.

HOW TO DISINFECT

Knowing how to disinfect is just as important as knowing when to disinfect. The following method is recommended by health departments. Wash dishes and utensils in soap and water first (separately from regular dishes, or after everything else) and rinse off. Let them sit in a dilute solution of household bleach (**3 teaspoons per litre of water is all that is needed**) for 15 to 20 minutes. Bleach is toxic, however, so use caution. Call your local health department for more information.

USING HOME RECIPES

Why use a hazardous product if you don't need one? There are lots of tried and true methods for keeping our homes clean, safe, and healthy that don't require hazardous products. Here are some suggestions for household cleaning that are simple and effective.

A WORD ON PROPER TOOLS

You'll need proper tools whether you're cleaning with, or without, chemical products. Many chemical cleaners contain substances, such as solvents, which dissolve or weaken food, grease, or stains. You can usually get the same effect with soap and water and the proper tool. In order to have a clean home with minimal chemicals, you'll need these tools:

- Nylon scrubbers
- Cleaning brushes — Get sizes and shapes to fit your needs.
- Soft, clean cloths — Cotton are best.
- Spray bottles or squeeze bottles — Buy them or use ones you already have.
- Plumber's snake — The next time you have a clogged drain, buy a plumber's snake at your local hardware store; it will work just as well as a chemical product and will last longer.

TIPS FOR THE KITCHEN

- The least toxic way to loosen food on heavily soiled dishes and pans is to soak them in soapy water for 10 to 20 minutes or longer (long enough to have dessert!).
- Use baking soda as a scouring powder that won't scratch. Sprinkle a little on the counter or stove and rub with a damp cloth or nylon scrubber. Use it sparingly (try doing the whole counter top with two tablespoons). Using too much will require a lot of rinsing. Wipe surfaces with a soft, dry cloth to make them sparkle.

- For appliances, try soaking spots with a hot soapy cloth for a few minutes, or try scouring with baking soda on a damp sponge.
- Garbage cans and fridges won't smell if cleaned out regularly with soap and water. No chemicals required.

TIPS FOR THE BATHROOM

- The next time you dump a toxic cleanser into your bowl, ask yourself what you're killing. Then ask yourself how long your toilet will remain germ free. The minute you flush it down, it's open season once again. Soap and water and a good brush will keep your bowl looking spotless. To freshen the bowl, leave 2 cups of vinegar in it overnight.
- Both the tub and the sink can be cleaned with baking soda. It is an excellent scouring powder. Sprinkle it in the tub or sink and scour with a damp cloth. Rinse surfaces with water and wipe them with a dry cloth.
- Bathroom mirrors, along with any other windows or mirrors in the house, can be cleaned with a mixture of 5 parts water to 1 part vinegar. For outside windows or particularly dirty glass, add a teaspoon of liquid soap. Wipe surfaces dry with a clean cotton cloth.

MOULD AND MILDEW

Mould and mildew, or other airborne biological hazards, can cause serious diseases and can aggravate respiratory conditions. The best way to prevent mould and mildew is to keep your home dry and well-aired. Mould and mildew can't survive without moisture.

- Install ceiling fans in your bathrooms and other damp rooms.
- Ventilation, light, and heat are all enemies to mould and mildew. Heaters, light bulbs, an open door, or even a hair dryer can help kill them.
- Give the tub or shower a quick wipe with a towel after each use to help prevent build up. Hang the towel to dry so it doesn't foil your efforts.
- To get rid of a serious mould or mildew problem, start by washing with hot soap and water. Follow with a rinse of full strength vinegar or 1/2 cup of Borax in a gallon of water. WEAR GLOVES TO PREVENT DRYING OF SKIN for either of these methods. BORAX IS TOXIC IN VERY LARGE DOSES. STORE IT SAFELY, AND USE IT SPARINGLY.
- Keep your heating and air vents vacuumed and change standing trays of water (such as in humidifiers and air conditioners) regularly.
- For constantly damp areas, consider investing in a de-humidifier. (The demineralized water can be used in your iron for steam without calcium deposits!)

SCALE AND SOAP SCUM

- To loosen a heavy mineral deposit, spray it with undiluted vinegar and let it sit for a couple of hours (while you take the dog for a walk, or have your dinner).
- Soak your showerhead in vinegar and water to remove mineral deposits.
- Soak a cloth in vinegar and drape it over stained fixtures for about five minutes.

CONTROLLING PESTS

The germs associated with pests are often microbes found in their urine or faeces, or on their dander (skin). The best way to control pests, either animal or insect, is to remove their food source and make the environment hostile for them.

- Your first plan of attack should be to seal up holes or cracks that might be their points of entry or escape.
- Most pests need a source of water, so keep things dry.
- Specific methods for pest control vary with the pest. Check the Resources section for other pest management ideas.

MORE IDEAS

There are lots of reference books and pamphlets that list great non-toxic ideas for common household cleaning, maintenance, and repair jobs. The Resources section lists several of them. Ideas can also be found in bookstores, libraries, and the homes of family, friends, and neighbours.

HOUSEHOLD PRODUCTS

The following chart is a summary of common household products, the hazardous ingredients they may contain, the main hazards associated with the category, and some of the common alternatives. For information on individual products and ingredients, please refer to the material listed in the Resources section and always pay attention to the usage instructions on the product label.

HOUSEHOLD

It's ironic to think that a clean home would pollute the environment, or present an acute or chronic health hazard. In many cases, less-toxic products are available at your local store, and there's always the low-cost option of making your own cleaners. Experiment with home recipes and green products until you find the right mix for your lifestyle and budget.

CATEGORY	MAY CONTAIN...	ALTERNATIVES
AEROSOL SPRAYS (see below)	Propellant, or product	➤ Use a pump spray.
INSECTICIDES	ammonia, chlorinated compounds, PCP, mercury	➤ Remove the food supply. ➤ For roaches, use traps or diatomaceous earth. ➤ For ants, sprinkle red chili powder, paprika, dried peppermint leaves, or cream of tartar in the area where they are entering. ➤ For plants, spray with a mix of dishwashing soap and water.
GENERAL CLEANERS (WINDOW, BATHROOM, ETC.)	ammonia, chlorinated compounds, ethyl alcohol, isopropyl alcohol, sodium hydroxide	➤ Use vinegar and water for most surfaces and floors (vary the mix to suit the job). ➤ For tougher scrubbing, (baths, tiles, and stovetops) use baking soda and a damp cloth, or use a little dishwashing soap as a lubricant. (NOTE: do not mix baking soda and vinegar for general cleaning). ➤ Buy green cleaners as a back-up, or for convenience.
OVEN CLEANERS	lye, ammonia	➤ Clean regularly with a paste of baking soda and dishwashing soap, or buy a less-toxic commercial oven cleaner.
DRAIN OPENERS	lye, chlorine, sodium hydroxide	➤ Use a plumber's snake or a plunger. Pour 250ml of baking soda and 250 ml of salt down the drain. Follow with 125 ml of vinegar and cover with a stopper for up to 15 minutes. Flush with boiling water. ➤ Buy green: look for biodegradable, environmentally safe products.
BLEACH	ammonia, chlorine, hydrogen peroxide, sodium hypochlorite	➤ Keep surfaces clean. ➤ Use bleach only when needed as a disinfectant. ➤ For laundry, use borax or washing soda as a bleach alternative.
DETERGENTS	EDTA, NTA, bleach, ethyl alcohol, phosphates, sodium hydroxide	➤ Use vegetable-oil based soaps. ➤ Use washing soda as an alternative to bleach. ➤ Use borax to deodorize and remove stains.

CATEGORY	MAY CONTAIN...	ALTERNATIVES
BATTERIES	cadmium, mercury	➤ Buy rechargeable (preferably solar) or mercury-free batteries.
THERMOMETERS	mercury	➤ Buy mercury-free thermometers.
HOUSE AND BUILDINGS		
Why is a can of paint only considered hazardous when we throw it away? Eliminate the problem at the source buy shopping for green products wherever you can. Remember that oil-based products usually need more toxic products for cleaning, so start out thinking green.		
PAINTS AND STAINS	acetone, ethylene glycol, phenols, toluene, 3,3'-dichlorobenzidine	➤ Buy water-based paints (or milk-based paints where available).
WOOD PRESERVATIVES	hexachlorobenzene, phenols	➤ Buy untreated wood. Choose naturally weather resistant and rot-resistant woods such as cedar, cyprus. or red-wood (ask for second growth as opposed to old-growth stock). ➤ Try mineral oil as a more natural preservative.
GLUES	acetone	➤ Buy white glue or yellow carpenter's glue.
CLEANERS	acetone, hydrochloric acid, methylene chloride, naptha, sodium hydroxide, turpentine	➤ Avoid using products that require harsh cleansers.
LAWNS AND GARDENS		
The backyard can be your little piece of nature: a personal refuge, a home for wildlife, or a safe play area for children. Either way, keep it free of hazardous materials and safe for birds and people alike.		
PESTICIDES AND INSECTICIDES	2,4-D, chlorpyrifos, 1,4-dichlo-robenzene, glyphosate, diazinon, toluene, mercury	➤ Weed by hand or hoe ➤ Keep grass short ➤ Look for companion plants to ward off pests. ➤ Use a soap and water spray
FERTILIZERS	nitrogen, phosphorous, potassium	➤ Compost contains low concentrations of nitrogen and will meet most gardening needs. ➤ If you do fertilize, use low concentrations and take care not to overfertilize.
AUTOMOTIVE		
Cars are major polluters of the air and water: park it whenever you can. While being car-free is an option only for some, everyone should look at reducing car use. If you have a car, try to reduce its impact on the environment: take public transit, use self-powered transportation, and practice trip reduction and car pooling		
GASOLINE	benzene, petroleum	➤ Improve your car's mileage, or use ethanol / gasoline blends.
MOTOR OIL	petroleum	➤ Buy re-used motor oil. ➤ Return used oil for safe disposal.
ANTIFREEZE	ethylene glycol	➤ Look for recycled or long-life antifreeze.

1.5 HOW TO READ A LABEL

Everyone knows that advertising claims are not always all they appear to be. Once you've learned to read between the lines, there are important clues that can help you decipher a product's label.

Chloroflourocarbons (CFCs) are banned in Ontario, so all aerosol cans are **"CFC-free"** and **"ozone-friendly"**. However, some of the replacement propellants are flammable air pollutants.

A **CFC-free** product may contain HCFCs instead. These are much less harmful to the planet's ozone layer but still have an impact.Use hand pumps or squeeze containers.

Answer these questions.
1. What's in the can?
2. What can it do to me?
3. How do I use it?
4. What do I do with the leftovers? If the package doesn't answer your questions, look for one that does. Or contact the Canadian manufacturer, distributor or importer; their **name and address** must appear somewhere on the label.

Unfortunately, vague marketing terms like **eco, green, earth or environmentally friendly** are meaningless unless backed up with good, specific reasons why this product is better than the other choices on the shelf. If no reasons are given, look for an alternative. Determine whether the environmental claims apply to the product or the packaging. While the 100% recycled, unbleached box may be environmentally friendly, the rat poison inside definitely is not.

Follow the **disposal instructions** for handling any leftovers or residues.

The label is the first line of defence. Look for the familiar hazard symbols that warn if a product is **corrosive** (the skeletal hand), **flammable** (an open flame), **toxic** (the skull and crossbones) or **explosive** (the exploding ball).

The shape of the warning sign holds extra meaning: **Danger** — the "stop sign" octagon is reserved for the most lethal products. **Warning** — the "go slow" diamond indicates a product that could cause serious injury. **Caution** — the inverted triangle of the "**yield** sign" is used on products that could cause minor injury if misused.

Many products labelled **cruelty free** may not be. Although the product itself was **not tested on animals**, the individual ingredients may have been. Contact your local Humane Society for a complete list of true cruelty-free product lines.

While **all-natural** may imply a product is not made of synthetic or man-made chemicals, it doesn't mean it's safe or good for you. Remember, snake venom and poison ivy are both natural. So-called natural products can also contain significant amounts of artificial additives.

Disposables are designed to be used once and thrown away. Although they may be **recyclable**, opt instead for **refillables** or **returnables**.

Harsh **sanitizing** cleansers can be replaced by many home-made alternatives. A more powerful **disinfectant** kills harmful bacteria and should be saved for special clean-up jobs.

Chlorine is a highly reactive chemical found in many bleaches and disinfectants and is one of the basic building blocks of thousands of **chlorinated organics** such as pesticides, plastics, and PCBs. A **totally chlorine-free** product shouldn't contain any chlorine compounds or use them in its manufacture.

If things go wrong, look for the **first aid treatment.**

CONSUMER AND CORPORATE AFFAIRS CANADA (CCAC), a branch of Industry Canada, judges what claims advertisers can and cannot make for their products. The federal department's "Principles and Guidelines for Environmental Labelling and Advertising" (March 1994) defines a number of green terms, including "recyclable," "recycled," and "degradable."

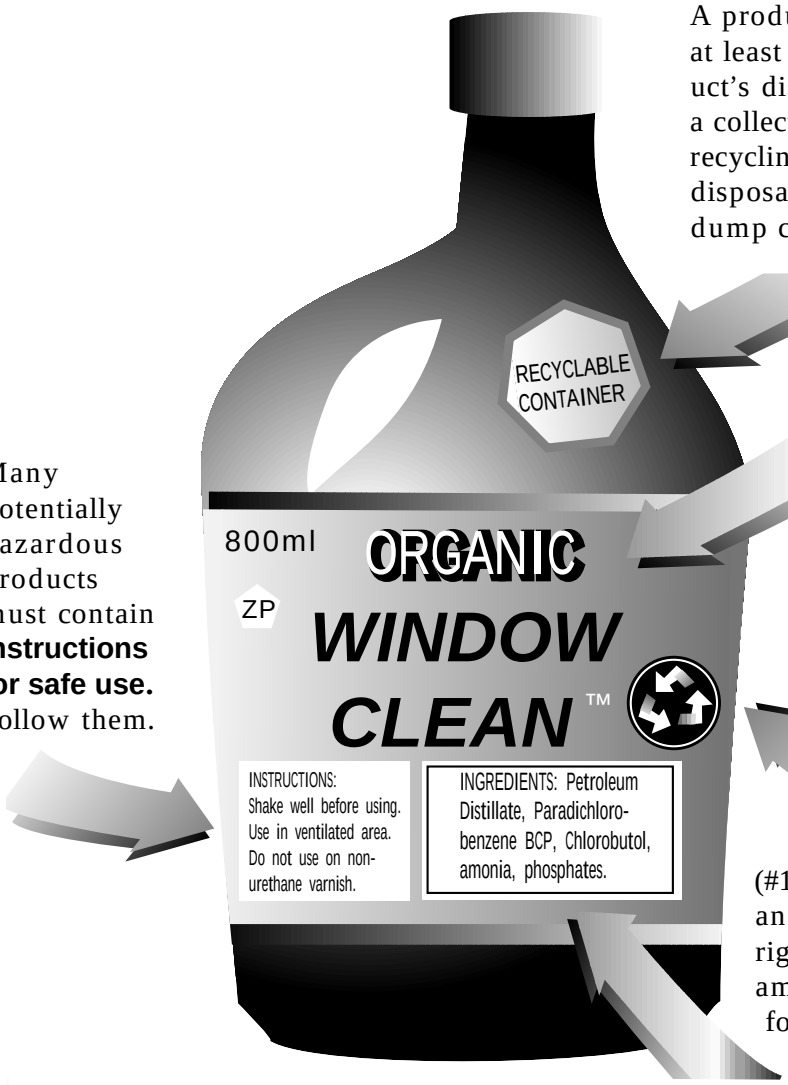
In addition, the Canadian Standards Association (CSA) has published a voluntary "Standard on Environmental Labelling" designed to ensure that the environmental claims on product labels are truthful, specific, uniform, and understandable.

The three intertwined doves of the **ECOLOGO** identify dozens of green products, such as certain recycled papers, re-refined motor oils and water-based paints. These have been certified by Environment Canada's Environmental Choice Program as being environmentally friendlier than the products of their competitors — through their formulation, production, packaging, use, recycling, and/or disposal.

A product or package is not **recyclable** unless at least one third of the population in the product's distribution area has convenient access to a collection or drop-off facility, and a full-scale recycling facility in operation. Garbage bags or disposable diapers that will likely end up in a dump cannot be labelled recyclable.

An **organic** compound is one that contains carbon atoms somewhere in its formula. Examples include everything from fresh fruit to wood pulp to crude oil. These compounds do not necessarily make a product more effective or less harmful than its competitors. On the other hand, certified **organic food** must be produced without the use of drugs, synthetic fertilizers, or pesticides.

Many potentially hazardous products must contain **instructions for safe use.** Follow them.



The different grades of **plastic** packaging may be marked with a code number in a triangular symbol. PET bottles (#1) are handled by all Blue Box programs, and many accept LDPE wrap (#4) and rigid HDPE (#2) containers. Lesser amounts of polypropylene (#5), rigid and foam polystyrene (#6), and PVC (#3) are being recycled.

Unfortunately, you don't have a legal right to know everything that's in a product. The manufacturer doesn't have to print the full list of **ingredients** and can omit many proprietary chemicals and trade secrets.

WHAT DOES THE LAW SAY ABOUT LABELLING?

According to the federal Hazardous Products Act, many consumer products must carry warning symbols, and instructions for their safe use and first aid treatment. The lengthy Consumer Chemicals and Containers Regulations, under the Act, spell out the wording, style, and format to be used, require French and English instructions, and say where the hazard information must appear. The regulations do not cover all dangerous consumer products, just the following:

- bleaches and cleansers containing chlorine
- products containing strong acids, caustics, or other corrosive chemicals
- products containing petroleum distillates, such as mineral oil, kerosene, or gasoline
- adhesives, cleaning solvents, thinning agents, and dyes containing toluene or acetone
- fire-extinguishing fluids containing any halogenated aliphatic hydrocarbons

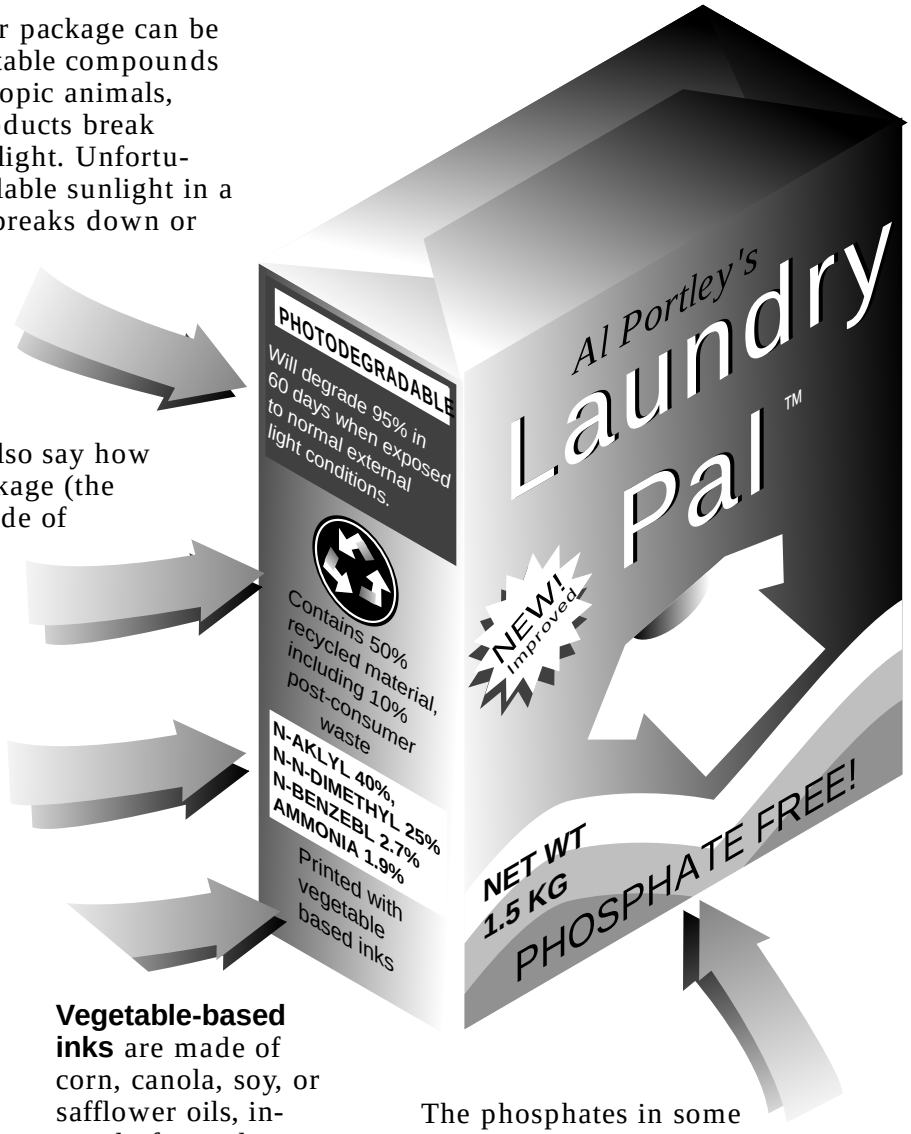
(continued next page)

A **biodegradable** product or package can be broken down into simpler stable compounds by bacteria or other microscopic animals, while **photodegradable** products break down when exposed to sunlight. Unfortunately there isn't much available sunlight in a landfill. Almost everything breaks down or rots away if you wait long enough, so this claim is meaningless unless it's backed with further details.

If it says **recycled**, it must also say how much of the product or package (the percentage by weight) is made of recycled materials. Unless otherwise stated, these should be **post-consumer** materials recovered from consumer wastes.

Too much biodegradable detergent or other product can still overload natural systems, and biodegradable solid wastes may lie undisturbed for decades in modern landfills, which allow little air and light.

Pay attention to the **concentration** of the active ingredient. Some manufacturers offer more concentrated cleaners in smaller packages. You will use less of them, but concentrated products may be more hazardous than regular strength products.



Vegetable-based inks are made of corn, canola, soy, or safflower oils, instead of petroleum. They help reduce the dangerous air pollutants created during the printing process.

The phosphates in some detergents act as plant nutrients, filling lakes and rivers with algae and weeds. When these plants decompose, they use up available oxygen, suffocating fish and other aquatic organisms. Buy **phosphate-free.**

WHAT DOES THE LAW SAY ABOUT LABELLING?

(continued from preceding page)

- antifreeze containing ethylene glycol or diethylene glycol
- turpentine
- products containing methyl alcohol
- products in aerosol cans
- alkyl cyanoacrylate adhesives
- pine oils
- polishes, cleaning agents, liquid coatings, paint and varnish removers containing 1,1,2-trichloroethane, 1,2-dichloroethane or chloroform.

Similar labelling requirements can be found in Canada's Pest Control Products Act, the Fertilizer Act, and the Food and Drugs Act.

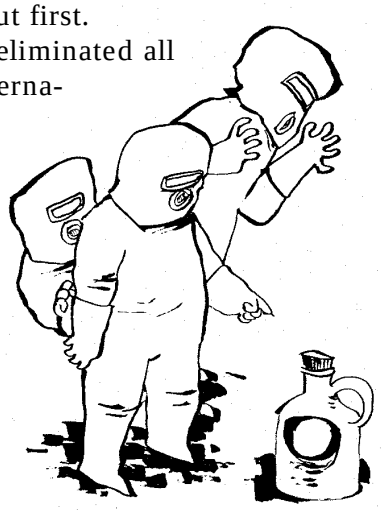
1.6 SAFE USE AND DISPOSAL

IF YOU MUST USE HAZARDOUS PRODUCTS, USE THEM SAFELY.

Before you use any chemical product, always ask yourself first, "Is there a better, safer alternative?"

If there are just a couple of dandelions in the lawn, don't spray. Pull them by hand. If you've only used your cutting board to chop up vegetables, you don't need to disinfect it; just give it a wipe with a wet cloth. Before dabbing stain remover all over that coffee stained shirt, try washing it out first.

Only after you've eliminated all the less dangerous alternatives, should you consider the heavy duty hazardous products. But if you feel you have to resort to hazardous products, make sure you use them safely. You and your family's health depend on it.



READ THE LABEL.

You might think that these products — the pesticides, cleansers and spot removers — can't be all that dangerous. "They wouldn't sell it if it could kill me" isn't necessarily true. The manufacturers and dealers of these products expect you to read ALL of the label FIRST. And then they expect you TO USE AS DIRECTED. That means EXACTLY as directed. They also provide first aid treatments in case of exposure while using products as directed.

LOOK FOR THE DANGER SIGNS.

Federal law requires that the labels of certain FLAMMABLE, TOXIC, CORROSIVE, AND EXPLOSIVE consumer products display the distinctive symbols and provide specific hazard and first aid information. For instance your bottle of chlorine bleach should warn you never to mix it with ammonia or the strong acids found in toilet cleaners. If you do, you'll be brewing up a deadly batch of poison chlorine gas.

KEEP HAZARDS UNDER LOCK AND KEY.

Store all hazardous products in a cool, dry place, where young children or pets can't get into them. And keep them in their original labelled containers, with the child proof lids. If the label is torn or missing and you aren't sure what's in a bottle or can, take it to your local household hazardous waste depot.

CLEAR THE AIR.

Winter or summer, leave a window open to dilute the strong fumes given off by many cleansers and sprays. If you can, take that do it yourself project outside where the paint fumes or thinners won't build up to dangerous levels. Don't use hazardous chemicals in a cramped, airless workshop, garage or basement.

DON'T USE ANY MORE THAN YOU NEED.

Double the dose doesn't mean double the cleaning power. There's just a lot more chemical to evaporate into the air or pour down the drain. And pay attention to how much of a super concentrated product you are using. A little goes a long way.

TAKE PRECAUTIONS.

If the label, or your common sense, says wear plastic gloves, safety goggles, a face mask, rubber boots and/or a plastic apron, then do so. Long sleeves and loose pants should protect your skin. And remember that gloves with holes are worse than no gloves at all. They'll hold the chemicals next to your skin as long as you're wearing them.

LOOK OUT FOR THE REST OF THE FAMILY.

Pregnant mothers, babies, and small children can be particularly sensitive to even low levels of contaminants in the air. Pets can get into or tip over cleaning buckets. And remember that kids home sick from school, sleeping babies, and elderly relatives are stuck inside all day and will be exposed to any products used indoors.

DON'T MAKE A MESS

If you've splashed a hazardous product on yourself, clean it up immediately. Wash any

exposed skin with lots of warm water and soap. Change your clothes and set them aside to be rinsed out separately from the rest of the dirty laundry.

HOLD LUNCH UNTIL YOU'VE FINISHED

While you're working with dangerous chemicals, don't eat or drink anything. Even chewing gum can cause problems. If you need to take a break, wash thoroughly with soap and water, and go into another room for your snack.

DON'T SMOKE

Need another reason to quit smoking? A lit cigarette can ignite flammable or explosive fumes in the air and it can increase your chances of inhaling airborne substances. The burning tip can also cause even more dangerous compounds to form in the air.

IF YOU FEEL SICK, STOP.

Put the cap back on and get outside into the fresh air. That means right away, not when you are finished. If you start to feel dizzy, light headed or congested, you are very likely reacting to some chemical ingredient.

IF THE SYMPTOMS CONTINUE, CALL YOUR DOCTOR.

Some contaminants can trigger asthma attacks, allergic reactions, or other serious health problems. You could also be more sensitive to one of the ingredients. Continued exposure could cause long lasting effects.

IN CASE OF ACCIDENTS...

Consumer products still poison thousands of Canadians each year. The label may have first aid information, in case somebody swallows, inhales, or is sprayed with a hazardous product. Have the container with you if you need to phone for help and take it with you to the hospital.

BE PREPARED FOR TROUBLE.

Keep the address and phone number of your local emergency services next to your telephone and make sure everyone in your family knows what to do in an emergency. Put up a list of emergency numbers in your workshop, kitchen, or garage (indeed, wherever you use hazardous products).

WHAT CAN I DO WITH MY HAZARDOUS WASTES?

Even the greenest of green consumers eventually is saddled with some hazardous product maybe a paint stripper, an insecticide, or a can of motor oil. You don't want to throw the leftovers out in the trash or pour them down the sewer. Municipal landfills and sewage plants aren't designed to treat toxic contaminants. So what can you do with your household hazardous wastes?

- Use it up completely — better that than throw it away. Give that wall an extra coat of paint. And never buy more than you think you need. If you have some usable product left, maybe a relative or neighbour can use it.
- Triple rinse "empty" pesticide containers — use the rinse water as you would the pesticide itself — and dispose of the container in your garbage. Never use the rinsed containers for other products. Many rural communities have programs to recycle pesticide containers.
- Check whether the store or manufacturer will take back your hazardous trash. Used motor oil can be returned to some service stations. Some retailers will take back used batteries.
- Do not mix hazardous products together — they may explode or produce poisonous gases. Keep them in their original, labelled containers.
- If the original container is damaged, transfer the product into a clean, sealable container and affix a clear readable label. Take the damaged container to a household hazardous waste collection depot.
- Store wastes in a cool dry area, safely out of the reach of children and pets, until they can be taken to your local household hazardous waste depot. But don't wait too long — some substances, such as paint thinner and fertilizer, can react with their containers, causing the containers to deteriorate.
- Many communities have set up permanent depots or sponsor regular collection days so residents can drop off their household hazardous wastes. Others operate "toxic taxi" programs and will pick up the wastes right at your door. If your community hasn't set up a special waste collection program, call your local public works department and ask when they plan to do so.

PART 2

ORGANIZING A TOXIC FREE CAMPAIGN

2.1 WHAT'S THE *GOOD* NEWS?

The good news is that it's easy to keep hazardous consumer products out of the environment. It doesn't require government legislation, or better HHW collection programs, or huge amounts of tax dollars. AND we don't have to sit around waiting for someone else to do it, because consumers can do it themselves. The easiest, cheapest way to keep hazardous products from harming either your health or the environment is **responsible shopping** (see next page).

This section offers a community-based approach to the complex issue of household hazards and responsible shopping. The underlying principle for the campaign is one of "pollution prevention".

Environment Canada's Pollution Prevention Strategy defines pollution prevention as:
the use of processes, practices, materials, products, or energy that avoid or minimize the creation of pollutants and waste, and reduce overall risk to human health or the environment.

As you have seen from the introduction, household hazards is a complex issue. The scope of a "household hazards" campaign will vary, depending on whether your group or community is looking at acute toxicity, chronic health impacts, environmental sensitivity, or environmental contaminants. There is also considerable debate about the degree of hazard associated with target chemicals. As a result, it is no easy task to apply the pollution prevention philosophy to household products.

In the face of this complexity and uncertainty, this manual advocates educating consumers about alternatives, such as home recipes or how to look for alternative products. It's a straightforward and cost-effective approach that can be applied to either a narrow or the broadest definition of household hazardous products.

The manual uses a "community action" approach, where a local coordinator or coordinating committee helps unite the resources of municipalities, health agencies, community groups, and local businesses to raise public awareness and commitment to less-hazardous alternatives. It is an approach that can be applied to any one of the above concerns, or to building an overall healthy consumer ethic.

The Conservation Council of Ontario has adopted a pollution prevention hierarchy in order to describe our preferred approach to managing hazardous materials:

PREVENTION — Avoid the creation, use, and need for disposal of pollutants by substituting more benign products and processes.

REDUCTION — When substitution or avoidance is not currently feasible, minimize the creation of pollutants through demand management, re-use and recycling, and improvements in performance efficiency.

STEWARDSHIP — When pollutants are used, adopt practices which minimize or eliminate the release of pollutants to the environment, including cradle to grave management of all products and by-products.

This hierarchy has been applied to the Toxic Free community campaign.

KEYS TO A SUCCESSFUL CAMPAIGN

This guide book is written for community organizers — whether you are a municipal staff person, a project coordinator, or a community volunteer. There is no set prescription for how to organize a campaign, but on the basis of our experience, we offer the following suggestions:

1) Adopt a pollution prevention hierarchy

You remember the 3Rs hierarchy — reduce, reuse, and recycle? It works well with solid waste, where the goal is to minimize solid waste. With hazardous products, the goal needs to be stronger since, for many chemicals, there is no safe amount.

We suggest you adopt the following hierarchy for pollution prevention:

1. PREVENTION — Avoid the creation of household hazards by replacing hazardous products with non-hazardous products or methods. This approach, in particular, should be used on the most hazardous chemicals and products.

2. REDUCTION — Where non-hazardous products aren't available, reduce the amount of hazardous waste produced by using less-hazardous products, using the right amount of a product, or passing unused product on to someone who needs it.

3. STEWARDSHIP — When using hazardous products, ensure that they are being used, stored, and disposed of correctly.

While all of these steps are important, prevention is the most cost-effective and convenient way to ensure that our homes and our environment stay clean and healthy. It is also the ultimate goal of the Toxic Free Campaign.

Prevention may not always be feasible, especially in the short term. So if the consumer feels it is important to buy a more hazardous product, we recommend reducing the amount purchased and used.

Finally, many companies are beginning to talk about "product stewardship" and have introduced programs where they will take back old containers and leftover product. These programs are worth including in your campaign because they will make a real and immediate contribution to reducing HHW.

2) Use a cooperative approach

Involve as many people and groups as you can in the community. Section 3 outlines a simple process for community organizing, and for more details you can order a copy of "Community Action for the Environment: a Guide to Helping Your Community go Green" from the CCO.

3) Do your Homework

This guide will give you some background on common questions about household hazards, such as: what's in the products we use, which chemicals are harmful, how can I avoid using them, and how can I dispose of my hazardous materials?

The answers aren't always simple, which is another reason why this is a difficult issue. Check out some of the resources listed at the back of this manual.

4) Draft an Action Plan

If the interest is high in your community, you should consider drafting an action plan on household hazardous waste. An action plan will list the participating groups and their projects. It will also show how the many projects can fit together into an effective campaign.

We've included project ideas for an action plan in Section 2.4. Again, you may also want to refer to our community organizing guide, Community Action for the Environment, for suggestions on how to involve the community in developing an action plan.

5) Focus on Consumer Education

The ultimate target for a community campaign is the area residents and consumers. All the suggested projects in this guide are aimed at helping to raise consumer awareness and commitment to a healthier environment.

RESPONSIBLE SHOPPING

EIGHT STEPS YOU CAN TAKE TO REDUCE YOUR IMPACT ON THE ENVIRONMENT

AVOID HAZARDOUS PRODUCTS

1. Ask yourself, "Can I live without this product?" If you don't need it, don't buy it.

2. Use non-hazardous alternatives. Many household cleaning, gardening, repair, and maintenance jobs CAN be done with non-toxic products or chemical free methods.

3. Buy green. Look for products that use less toxic or less hazardous ingredients, are safer to store and use, and biodegrade quickly into simple, non-toxic residues.

4. Practise prevention. Keep your home dry, clean, and airy. Clean up spills and any mess right away... and you won't have a big clean-up job to do later.

5. Read the label. If it doesn't answer your questions, leave the product on the shelf.

IF YOU *HAVE* TO USE HAZARDOUS PRODUCTS, USE THEM PROPERLY

6. Pick the right product for the job. If you need to use a hazardous product, avoid overkill. You can't kill every germ, bug, and weed, so don't try.

7. Buy only what you need. The large size may be economical, but if you aren't going to use it, you aren't saving any money.

8. Keep products in their original packaging. You'll avoid mixing residues, which can produce other dangerous compounds. Original labels list ingredients, directions, and first aid treatments. Keep them on the container.

2.2 ORGANIZING YOUR COMMUNITY

Before launching into a Toxic Free campaign, take a moment to think about your own community, your own strengths, and what "community organization" means to you. Every community is different. These differences will contribute to how you want to organize your campaign.

1. How do you define your community? Is it your town, your neighbourhood, a rural county, or the cottages on a lake?

2. Is your community well organized for environmental action? What groups and government bodies do you look to for leadership on environmental issues?

3. Have you any prior experience in community projects: cleaning up a lake or a stream, composting and recycling, conserving energy in homes, or planting trees? If so, what made it work, and where do you think it could be improved?

Here are some of the things to look for in a well-organized community:

A Community Network

Is there a contact list of groups and individuals sharing a common desire to improve the local environment, including community groups, schools, businesses, service clubs, and the municipal government?

❑ *Yes* ❑ *No*
❑ *Could be improved*
❑ *Don't know*

A Coordinating Committee

Is there a committee of representatives from all sectors of the community who have agreed to help promote and support community-based projects?

The coordinating committee can be an existing multi-stakeholder committee, such as a Local Round Table, an Environmental Advisory Committee, or the steering committee for a Remedial Action Plan or Healthy Communities project.

❑ *Yes* ❑ *No*
❑ *Could be improved*
❑ *Don't know*

A Community Coordinator

Is there a contact person who can support the coordinating committee and the community network and provide a link to provincial and federal support programs? Usually a paid position, the coordinator could be a municipal staff person, a contract position with a community group, or a consultant. Smaller communities may prefer to work with a volunteer.

❑ *Yes* ❑ *No*
❑ *Could be improved*
❑ *Don't know*

An Environmental Community Action Plan

Is there a brief document stating the environmental priorities for the community, the lead organization(s) for each issue, and some of the projects that will support the community goals? It can be a separate publication, or published through a community newspaper.

❑ *Yes* ❑ *No*
❑ *Could be improved*
❑ *Don't know*

Community Campaigns and Projects

Has the coordinating committee, or any of the participating organizations used the network to develop a community-wide campaign for an overall common environmental goal?

Does the coordinating committee encourage and support a wide range of community-based projects?

❑ *Yes* ❑ *No*
❑ *Could be improved*
❑ *Don't know*

HOW DID YOU SCORE?

Relax, very few communities in Canada can answer each question with a resounding "yes." This is why organizing communities for environmental action is so important.

Many communities will have one or more of the pieces. You can probably think of several people you'd like to see involved in organizing your community, and you should be able to make a short list of groups that would be part of a network. There may well be an environmental advisory committee, but it may not see itself as being a coordinating committee for community-based projects and campaigns. And so on.

Every community is different, and the challenge will be matching the ideas in this manual with the people and resources of your community.

NEED HELP?

Ask around. Find out what may already be happening in your community. If there is a group or municipal body working on community organizing and/or household hazardous waste, they may be well-placed to take the lead in coordinating a community campaign.

The Conservation Council has published *Community Action for the Environment* as a guide to organizing communities for voluntary action on environmental projects. If your community is just getting started, then the Community Action guide is a must! Call us for a copy.

2.3 THE CAMPAIGN

The following template can be used as a starting point for developing your own community action plan for household hazardous products. It's short and to the point, covering the campaign goals, the pollution prevention principles, and methodology. It can be used as a formal mission statement for your coordinating committee, or as part of a motion for municipal support.

TOXIC FREE

A Community Campaign to Reduce Household Hazardous Products

The Toxic Free Campaign is a community-based cooperative campaign to reduce the amount of environmental contaminants and health hazards that are purchased, used, and disposed of in our homes. The campaign will emphasize low-cost, voluntary measures to promote consumer awareness of less hazardous alternatives, and to encourage local retailers to make these alternatives available to their customers.

The campaign will contribute to the overall health of our community by promoting health and safety in the home, reducing the amount of contaminants entering lakes and groundwater via our sewers and landfills, and encouraging alternative products and services in our local economy.

AIM

to achieve a significant reduction in the amount of environmental contaminants and hazardous materials used and disposed of in the home.

GOALS

1. to promote public awareness about hazardous and toxic products, and the availability of more environmentally benign alternatives;

2. to make these alternatives more readily available to consumers;

3. to promote stewardship and safe disposal of hazardous products.

PRINCIPLES

The campaign will use the following hierarchy as its guiding principles for reducing household hazardous waste:

1. **PREVENTION** — Avoid the creation of household hazards by replacing hazardous products with non-hazardous products or methods. This approach, in particular, should be used on the most hazardous chemicals and products.

2. **REDUCTION** — Where non-hazardous products aren't available, reduce the amount of hazardous materials in the home by substituting less-hazardous products, using the right amount of a product, or passing unused product on to someone who needs it.

3. **STEWARDSHIP** — When using hazardous products, ensure that they are being used, stored, and disposed of correctly.

METHODOLOGY

Coordination The campaign will be hosted by _____ , who will provide administrative support for the coordinating committee.

Development The campaign will be developed by a coordinating committee including representatives from government, community groups, and local business.

Approach The campaign will emphasize a voluntary approach, recognizing that our efforts may be supported by regulatory measures at the municipal, provincial, and federal levels.

Participation The campaign will encourage wide community involvement, including government, community groups, local business, and schools. Each group will be encouraged to contribute in whatever way they can to educating their members or clients and the public at large.

PROJECTS

The campaign will include, but not be limited to, the following types of projects:

Media

- producing press releases, public service announcements and advertisements in the local media, posters, brochures, and other publications.

Community Group Outreach

- developing a network of community groups and working with them to develop their project ideas.

Member Education

- arranging presentations to community groups in order to secure their commitment to environmentally-responsible shopping and safe handling of hazardous materials.

Community Outreach

- arranging homeowner contact projects, education displays in shopping malls and at community events, and community workshops.

Storeowner Outreach

- contacting storeowners to solicit their participation in the campaign by installing in-store signage and by stocking less hazardous alternatives.

Hazardous Waste Collection Days

- arranging for the collection of household hazardous waste.

2.4 PROJECT IDEAS

Many types of projects can be included in a toxic free campaign. Some can be done by volunteers with little or no funding; others may require a budget, supervision, professional expertise, special equipment or supplies, and/or government approval. A good campaign will include a healthy mix of volunteer and professional activities.

Here are some project ideas, many of which are based on projects that were used in the Metro Toronto Toxic Free Campaign and in other communities.

A. MEDIA AND LITERATURE

The two main audiences for the campaign are the public and retailers. The intention is to link public awareness with action. We want to encourage people to buy products that have less impact on the environment. At the same time, we want to make it easier for people to find these products when they go shopping.

A COMMON MESSAGE

A community campaign has many groups and individuals working in their own way towards a common goal. There will no doubt be a diversity of views on the topic, and many different project ideas. All the more reason why it is important to have a common message which all participating groups can take to heart.

As part of the planning process for the campaign, make sure that everyone agrees with the message. Keep it simple and positive.

A MEDIA STRATEGY

Work with a few key groups to develop a media strategy.

1. List all the media outlets (print, radio, and newspaper) for your community. Where possible, include a contact name of the environment reporter, program host, or general contact.

2. Determine who will be the principal spokespeople for the campaign. Try to include representatives from local government, the community, and local business, as well as the campaign coordinator who will be able to provide the media with background information on the campaign.

3. Pull together a background information package, using the material in this guide and other sources. Include statistics on household hazardous waste in Canada and in your community. Where does your solid waste and sewage go for treatment and disposal? Does the hospital have statistics on accidental poisonings from household products?

4. Promote key events, such as planning workshops, campaign launch, special projects, survey results, and volunteer appreciation days.

FOUND MEDIA

Sometimes the best material is already produced and ready for you to use (or adapt). Contact the Conservation Council of Ontario, other provincial and national non-governmental groups, the provincial and federal government, and other groups listed in the resources section.

Also, don't forget to send us samples of your work. We will keep them on file for other communities.

PUBLIC SERVICE ANNOUNCEMENTS

Most radio stations will accept public service announcements and community messages. Check with the stations for their preferred format. Some want a prepared tape, but most want a short factsheet that can be used by the on-air announcers.

TV stations will also air 30-second public service announcements. These spots need to be professionally produced. A much simpler way is to find out if they do community announcements.

CABLE TV

Do any local councillors have a show on the local cable station, or is there a current issues or environmental show?

Cable stations also provide equipment to produce your own show. They may be able to help you find a volunteer crew to put together a

half-hour show that they will air regularly, and that groups can use for community presentations.

PUBLISH YOUR OWN COMMUNITY PAPER

As part of the Metro Toronto Toxic Free Campaign, we teamed up with Green Living, an environmental community newspaper, and produced 30,000 copies of a 16-page tabloid for about $15,000. The paper was distributed by participating groups and stores, as well as through liquor stores and restaurants. It's an effective way to tell the public about the effects of household hazards and the safer alternatives.

FACTSHEETS, FLYERS, AND BROCHURES

Your campaign will need a simple factsheet or brochure that can be easily printed or photocopied to meet the demand. Keep it general, so it can be used by many different groups. Include HHW facts, the health and environmental impacts, and shopping alternatives (buy green or use home-made alternatives).

POSTER

There is nothing like a well-designed poster to keep the campaign visible and to present a common message for community displays. A poster can cost between $5,000 and $20,000 depending on the amount of professional design work, the number of colours, and the print run. If the municipality is unable to produce a poster, perhaps several organizations and local businesses can get together to share the cost. Make sure it can be used widely and will have a long life (i.e. not just for a single event).

B. PUBLIC OUTREACH

Many of the projects in this section are ideal for community groups, and since almost everyone belongs to a community group of one kind or another, what better way of reaching the public than through their friends and peers? A media campaign will help make sure everyone in the community is aware of your campaign. Person-to-person contact will ensure that people participate!

Many of the projects here are related and can be combined. For example, public displays can generate interest in workshops or training to become a volunteer. Mix and match according to your interests and expertise.

A COMMUNITY GROUP NETWORK

Develop a comprehensive list of groups in your community that should be asked to participate in the campaign. Include ratepayers groups, service clubs, schools, business associations, large employers, social and health agencies, as well as the environmental groups. Make sure you have a contact name and address where possible.

As a campaign coordinator, you will find that an effective community network is essential. For example, if you are reaching 50 people on your community network, and they in turn reach an average membership of 50 people, that's 2,500 people. The more active and involved the membership of community groups becomes, the more effective our campaign becomes at the grass-roots level.

SPEAKER TRAINING

If you have a paid coordinator or outreach person, committee members with the time and inclination, or resource staff from other community groups and agencies, they will probably be your speakers. If your campaign is short on staff, another way to spread a message to a large number of people with minimal resources is to educate the educators. A training session or information meeting for educators within the community can enable them to spread the message even more widely and effectively.

Provide training to volunteers, staff at schools, interpretive centres, libraries, social service programs or skills development programs, community leaders, and students. Compile a speakers list of members of the coordinating committee or local community leaders.

PRESENTATIONS

A presentation program for community groups and organizations lets you reach a large percentage of the community. Nearly everyone belongs to a group, has a hobby, or participates in an activity. Take advantage of your community's captive audiences.

Presentations to community groups are rewarding precisely because everyone knows each other and they share a common interest.

Discussion and questions flow more freely, group members are more likely to share their experiences, and people don't have to take extra time out of their busy schedules. You'll also find that most groups include someone who has been using baking soda and vinegar to clean the house, or gardening organically for years. Have them share their experience with the rest of the group.

If you are a representative of a community group, start with your own group. Make sure all your members understand the issue and get a commitment from them to buy greener products and / or, try the home-made alternatives to the more hazardous off-the-shelf brands. If we take the time to do our homework and educate ourselves about the issue, then we will have a dedicated cadre of informed volunteers who will ask for green products when they shop, and be able to spread the word to their friends, neighbours, and the public.

Presentation Tips: Here are some good pointers for those making presentations to groups.

- Stick to what you know.
- Try to determine what issues the group will be most interested in (HHW disposal, safe use, alternatives).
- Ensure that the level of detail is appropriate for the audience.
- Have material on hand for those who want it.
- Provide references for more information. No question is too trivial.
- Suggest a variety of follow-up actions ranging from simple tips at home to volunteer opportunities. Presentations with a lot of information are strengthened by an outline of one or two simple actions that can make a real difference.
- Touch on issues related to hazardous products, including health, safety, and disposal costs.
- **Let people know that their individual actions make a difference.**

PUBLIC DISPLAYS

Demonstrate home-made cleaners in shopping malls and other public events. The Green Group ran such a project in Scarborough, using a kitchen counter-top as their display space. The booth was staffed by students through a summer employment grant. The students reported a very strong response to the display. A simple brochure of home recipes can be run off (or acquired from the campaign coordinator). You can also contact baking soda and vinegar companies for donations of product samples (either for use in the display or as samples for the public).

Displays can be big budget or shoestring. What matters is that they provide information and action options. Ask yourself these questions when developing a display.

Audience

- Who will your audience be? Primarily adults, teens, children?
- Where will the display go?
- Will you need information in more than one language?

Information

- What is important to your community? What type of information should your display focus on: water quality, air quality, health and safety, household hazardous waste disposal, non-toxic alternatives, current local initiatives or success stories, a little bit of everything?

Material

- Will you be providing material for the public at your display? The Conservation Council and other groups can provide you with brochures and posters.
- Are there community partners that can provide information for distribution? Check the resources section for more information.

Interaction

- Will the display be staffed or can it stand alone?
- Will it be interactive (with quizzes, games, pledges to sign, alternatives to try)?

Councillor Days

Local councillors often host public events and are looking for material to give the public. Develop a schedule of these days and arrange for volunteers to assist in handing out material and answering questions from the public.

PLEDGE PROGRAMS

A good way to get people to commit themselves to taking action is through a pledge program. Keep your message simple. The Toronto Environment Alliance ran an extremely successful door-to-door campaign asking people to sign a Toxic Free Pledge, and to commit themselves to not using any pesticides on their lawns and gardens. The pledge was simple. However, TEA was ready to back it up with workshops on organic lawn care for anyone who wanted more information and training. Over 2,600 people were signed up over a two-year period.

Alternatively, you could organize a "Buy Green" pledge form, where people promise to ask for and purchase environmental alternatives when they shop. You can design a simple form for people to take with them when they do their weekly shopping, then collect them and publish the results. Have a statistician or expert in survey design help with designing the form so that it is user-friendly, and the information is statistically valid.

DOOR-TO-DOOR

Community groups are also effective in contacting the public door-to-door. Be polite, and be prepared to leave a simple brochure explaining the campaign and its goals. Door-to-door is also a good way to get people to sign a pledge form.

Safety is important. Make sure your volunteers work in a buddy system or as part of a team.

PUBLIC WORKSHOPS

Once you have a good list of volunteers and committed members of the public, you can organize workshops for training or a forum to debate any issues that may have surfaced during the course of your campaign.

Use your community group network and the contact list developed through sign-up sheets at displays or through door-to-door contact to promote the event. And send out a notice to the media.

NEIGHBOURHOOD TEA PARTIES

Offer to send a volunteer to someone's home to demonstrate alternative cleaners and garden care to a group of ten or more people. This is an effective way to follow up on shopping mall displays and other education material. If people express a general interest in the campaign, an offer to send someone to their home to demonstrate alternatives can encourage them to become involved in the campaign.

YELLOW FISH ROAD

How about getting kids to paint yellow fish signs by sewer grates on the road (using non-toxic paint of course)? The Yellow Fish Road is a project of Trout Unlimited to raise awareness that everything we pour down the sewers winds up in the drink! Supervision and care is needed with this project (if not municipal approval) to ensure safety when painting on the road. Call Trout Unlimited for more information: 1-800-909-6040.

C. WORKING WITH BUSINESS

BUY GREEN

"Buy Green" is a way to involve local retailers in the campaign. Many of them will already stock recycled or recyclable products, but do they offer less polluting alternatives? We could do a "buy toxic free" campaign, but it makes more sense to try to blend pollution prevention with recycling, energy conservation, and other environmental initiatives. Hence "buy green."

What is a green product? There is no clear definition. Simply defined, "green products" are products that reduce pollution and conserve resources. To be truly "green," a product should do both. For example, watch out for products that claim to be good for the environment because they are in a recycled package, but may themselves be an environmental contaminant. For more on product claims, turn to section 3.2, "How to Read a Label."

1. Survey local stores. Conduct a low-key background study. Find out how many stores already have environmental alternatives in stock, and how many would be prepared to stock at least five environmentally preferred products in order to participate in the promotional campaign.

2. Develop criteria. We recommend that each store be allowed to select their own products within some basic criteria:

i) Ecologo

Ecologo is an environmental label given to companies meeting a minimum standard through the Environmental Choice program. The program was originally set up by Environment Canada and is now run by TerraChoice Environmental Services Inc, 2197 Riverside Drive, Suite 300, Ottawa K1H 7X3, telephone (613) 247-1900. Call them for an up-to-date list of approved products.

ii) Store logos or brands

Some major chains (such as Loblaws, Home Hardware, and Canadian Tire) have developed their own environmental program and logo. The logo could refer to an in-house line of products, or to a list of products that the store has identified as environmentally preferable.

iii) Generally accepted environmental products

Not all environmental products are registered with Ecologo or are identified by a common logo. In many cases they come from small companies that don't have the resources to go through a lengthy approval process (or don't feel it is necessary). With these products, it is a judgment call. The store can make their decision to include a product on the basis of available information and advice from community groups and others. In this instance, it is important that the community groups approve of the types of products that are to be promoted through the campaign.

This approach may result in a few dubious products sneaking onto the shelves under a green banner, but better that than no action at all. The goal is to develop market demand for environmentally preferable products. The advantage is that there is no need for the coordinating committee or any group to come up with the definitive list of "green products."

3. Monitor and Improve: Ask stores if they can monitor sales on environmental products during the campaign. The results will provide you with useful information to be compared against any surveys that may be conducted through a pledge program.

4. Develop a Promotional Campaign: You can use the "buy green" theme in a range of promotional material to increase public awareness and commitment to environmental alternatives. Be sure to tie this material into the projects for media and public outreach.

- Develop a poster.
- Advertise in local media.
- Produce a flyer for distribution by community groups.
- Provide stores with "shelf-talkers", a small sign that can be used to identify environmental alternatives on the shelves.

5. Encourage Dialogue: Organize periodic meetings between stores and community representatives to review the campaign results. Have representatives from local stores participate in public workshops and share their experiences.

BUSINESS INITIATIVES

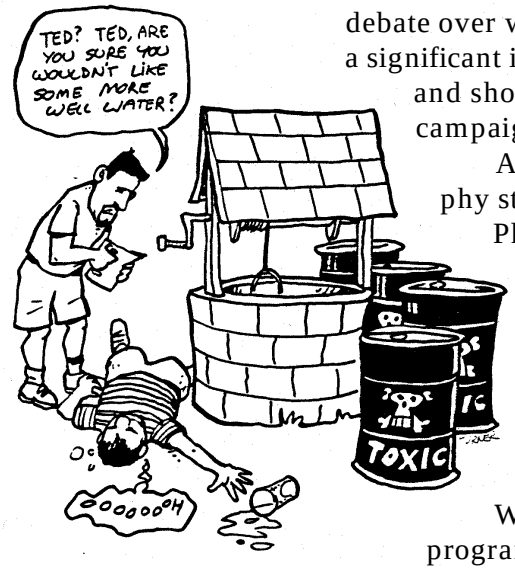
Several major projects involving businesses and business associations are already underway. Two programs that are well advanced (and would benefit from community support) are listed here. For up-to-date information, you can contact the Canadian Centre for Pollution Prevention at 1-800-667-9790.

Green Clean: an alternative to drycleaning

Conventional drycleaning uses perchloroethylene (perc), which is recognized under the Canadian Environmental Protection Act as a persistent bioaccumulative toxin. Drycleaning is the number one market for perc in Canada, consuming 5.5 million Kg per year, or 48% of the total perc used in Canada.

Dry Cleaners have two options to reduce perc use. The best option is to switch to a water-based treatment process called Green Clean. The Ontario Fabricare Association, Korean Drycleaners Association, Environment Canada, and Ontario Ministry of Environment and Energy have signed a memorandum of understanding to promote the Green Clean option.

The second option is a stewardship approach, involving improved handling of perc and more modern equipment. New machines (third, fourth and fifth generation) improve the perc "mileage" or pounds of clothing that can be cleaned with the same volume of perc. There are also other types of machines that use petroleum solvent.



Contact your local drycleaners and find out which ones offer greencleaning (or are willing to do so under a Toxic Free campaign), and which ones use newer and more efficient equipment.

Photo Developing: reducing chemical use

A photo minilab is the film processing and printing machine found in many small photography stores that offer one-hour on-site service. The effluent from most minilabs contains more than 5 milligrams per litre of silver, a priority contaminant recognized by both Ontario and Canada. Although silver is the major problem, there are other contaminants that can also wind up in sewers, including phosphorous, iron, and sulphate.

The Photo Marketing Association has developed an Environmental Code of Management Practice for minilabs, working in cooperation with the Ministry of Environment and Energy. Under the code, minilabs have three options for preventing pollution:

1. On-site silver recovery to 5 mg/L or less and a 12 point code for managing all chemicals
2. Off-site silver recovery, and an 11 point code for managing all wastes
3. Off-site treatment and disposal of all photographic chemical wastes.

The first two options will result in a significant reduction in chemicals being discharged to municipal sewers. The third option results in no chemicals being discharged to municipal sewers, although it does involve transportation and treatment off-site. While there may be some debate over which is the best option, all three are a significant improvement over the status quo and should be supported by a community campaign.

Ask your neighbourhood photography stores if they are registered under the Photo Marketing Association's Environmental Code of Management Practice.

D. HHW COLLECTION

A great way to increase the amount of Household Hazardous Waste captured in existing disposal programs is to have a collection day. However, the event usually requires careful planning, a budget to cover treatment and disposal costs, and a special permit, so they are best organized by the municipality or a government agency.

Ideally, your works department will offer to arrange the appropriate facilities. If not, go through your elected municipal representative's office. Contact the Ministry of Environment and Energy at (416) 325-5756 for additional help and information about their HHW Collection Program.

Invite community groups, retailers and distributors of less hazardous and non-toxic products to participate in the event. Set up information tables or displays with information about less hazardous products and services in your community and where to find them.

2.5 WRITING A FUNDING PROPOSAL

Is there an aspect of your Toxic Free Campaign that there just aren't enough funds for? There are many different ways to fund a program or a specific project: foundation grants, government funding programs, in-kind donations, and community fundraisers. This section is designed to help you write a letter of request or a funding proposal. It is based on standard proposal writing methods described in Program Planning and Proposal Writing, by Norton Kiritz, published by the Grantsmanship Centre.

LETTERS OF REQUEST

Letters of request are a great way to get in-kind donations or small donations of funds. Start with phone calls to organizations that provide a service you need, or a company that makes, sells, buys, distributes, or disposes of a product you need. When you call, ask for the person in charge of marketing, corporate communications, or sales. Explain who you are, who you're representing, what your request is, and what's in it for the donor. Let them know you will forward a letter of request. Try to keep letters of request short, no more than three pages. The essential elements of a letter of request are:

- a brief summary of your request
- a description of your project
- what the requested items or funds will be used for
- a brief description of your group
- what the donor will receive in return (usually recognition as a sponsor)
- copies of project material as background information.

Make a follow-up call to make sure your letter has arrived. Don't forget to thank donors for their support!

FUNDING PROPOSALS

Proposals are usually required when requesting project or program funding. For the most part funding programs have specific requirements. Some fund non-profit organizations exclusively or require an organization to have charitable status. Others fund only for staff, for specific projects, or for one aspect of a project, such as development or equipment. There are also limits to the amount of funding that a program will provide.

1) Do You Need Funding?

You don't have to have a huge project to apply for funding. If there's something that can be done, but there isn't enough money for it, you can apply for funding.

2) Where to get it

Funding programs are constantly changing, so it is worth your time to do some digging on funding sources. Environment Canada (Ontario Region) has a list of funding programs that is updated periodically, call 1-800-661-7785. One source that most communities can approach is their local Canada Trust branch. Canada Trust administers the Friends of the Environment Foundation, which focuses on community-based initiatives. Ask your local library if they have a copy of The Canadian Centre for Philanthropy's Directory of Foundations, which provides a wealth of information on foundations active in Canada.

3) Troubleshooting

Before applying to any funding program, be sure that you know the following details:

- what they fund (or their *funding guidelines*)
- deadlines for applications
- the application process (do you need to submit a letter first?)
- what attachments are allowed (can you submit supporting documents, or does the organization supply a funding application?).

4) Proposal Elements

If you need to write a funding proposal, here are the basics. They can be shortened, summarized, or expanded to suit your needs. The following sample proposal may help clarify how the elements fit together. Remember that these are only suggestions. If your project goal and how you intend to achieve it are clear, you have the basics.

SUMMARY/INTRODUCTION

This should be a brief summary of

- your group
- why your project is needed
- benefits of your project (environmental, economic, social)
- what you need funding for.

Examples of what you may be requesting funding for are: short term support staff, development of promotional material, development of display material, establishing a hotline, carrying out a door to door campaign, and so on.

GROUP SUMMARY

Describe your organization or group, your purpose (or mission statement), and the structure of your group. Are you a volunteer group, a subcommittee, or a chapter of a larger organization? If your group has produced an annual report or a newsletter you may want to include it with the proposal, as an attachment. If your group is specific to the Toxic Free Campaign, describe how it was formed.

PROBLEM STATEMENT

This section describes why your group has decided to undertake this project. What problem exists in your community that you hope to address? Is this local problem an example of a larger one (in your region, your province, or nation-wide)? Are there any facts, studies, statistics, or statements from governments that can help outline the problem? Does this particular issue have links with any other community issues (social development, health, economic development)?

PROJECT/PROPOSAL

This is the section in which you will describe how your group intends to address the problem outlined above. Give a specific name to your project. Include the following elements, where applicable.

1) Goals: State the goals of your project. What larger scale issues will your project address? (Be sure to refer to the problems outlined above.)

2) Objectives: State how you intend to achieve your goals. Numerical targets (such as a 20% reduction in HHW going to landfill), if you are using them, should be mentioned here, along with long-term timelines.

3) Strategies: Describe the methods you will use to achieve your objectives. These should refer specifically to your project.

4) Outline: Describe how your project works. Be specific. What will you actually be doing; who or what will you be targeting; what activities will take place; how will your success be measured?

5) Timeline: Outline your project from beginning to end, allowing time for set-up, implementation, and final assessments. Include launch dates, special events, deadlines for material, reports, process for staff selection, and wrap-up dates.

BENEFITS

Considering the particular funding organization and the priorities of the project, highlight the area that will be of most interest to your prospective funder.

Environmental: What are the benefits to air, water, soil, wildlife, and habitat that will result from implementation of your project?

Social: Identify social benefits such as community empowerment, fostering community stewardship, job skills to be learned, particular community members benefiting from educational programming, and the development of community partnerships.

Other: Will economic benefits result from the project? What will the long-term benefits of community education be?

MEASUREMENT

Identify what will be measured, including the number of community members involved and specific targets for amounts of waste reduced, money saved, and so on. Outline how these targets will be tracked and measured, what methods of testing will be used, and how often they will be measured.

PARTNERS

Identify partners who will participate in the project or who are providing other funds, material, or equipment.

BUDGET

Make the budget as detailed as possible and ensure that the following elements are clearly

outlined:

- Length of the project
- Requested Funds — detail the amount of money requested, and itemize (indicate) what it will be used for; include funds requested from other programs or partners and list them
- Donations — Cash (itemize confirmed cash donations from other agencies) or in-kind (identify what the item or service is and assign a dollar value to it)
- Volunteers — estimate the number of volunteer hours and assign a value (usually at minimum wage).

REFERENCES

You might also include letters of reference or support from the community, from partners, or from other organizations, to lend credibility to your proposal.

PART 3

RESOURCES

3.1 GROUPS AND PROGRAMS

The issue of household hazardous products overlaps with a number of others, creating challenges in waste management and public education. Below is a list of groups and programs in Canada and the United States that your community can draw on to strengthen your Toxic Free Campaign.

To be sure, this information will soon be out of date, but hopefully it will give you a starting-point for making contacts.

ONTARIO-BASED GROUPS

The Toronto Environmental Alliance (TEA)

The Toronto Environmental Alliance has undertaken a number of projects including a door-to-door pesticide campaign, an action plan for the phase-out of cosmetic pesticides in Metro Toronto, and a Green Grocer pollution prevention program. TEA also coordinates the Green Thumb Program (see below) for the Metro Toronto Area of Concern. TEA is a good resource for information on chemical free lawn care and facts about pesticides.

Contact:

Toronto Environmental Alliance
Urban Pesticide Caucus
122 St. Patrick St., Suite 209
Toronto, Ontario
M5T 2X8
Phone: (416) 596-0660
Fax: (416) 596-0345
E-mail: tea@web.net

The Canadian Centre for Pollution Prevention (C2P2)

C2P2 is a North American clearinghouse of pollution prevention information for individuals, communities, businesses, and industry. The Centre offers training sessions for a variety of pollution prevention topics, including the development of pollution prevention initiatives. They can provide you with information ranging from less hazardous alternatives to pollution prevention success stories in a variety of sectors.

Contact:

Canadian Centre for Pollution Prevention
265 Front St. N., Suite 112
Sarnia, Ontario
N7T 7X1
Phone toll free: 1-800-667-9790
Fax: (519) 337-3486
E-mail: C2P2@sarnia.com

Association of Municipal Recycling Coordinators (AMRC)

The AMRC has guidelines for an Alternative Cleaning Kit, including suggested recipes, ingredients, and tools for cleaning effectively with less hazardous methods. The AMRC can also put a community in touch with their municipal waste reduction coordinator, provide background information on a number of waste reduction issues, and give communities up-to-date information on Ontario-wide waste reduction initiatives. They also have a list of educational materials geared towards waste reduction.

Contact:

Association of Municipal Recycling Coordinators
25 Douglas St.
Guelph, Ontario
N1H 2S7
Phone: (519) 823-1990
Fax: (519) 823-0084
E-mail: amrc@albedo.net

Allergy and Environmental Health Association (AEHA)

The AEHA aims to promote awareness of potentially harmful environmental conditions, and to provide information and support to sufferers of environmental sensitivities or severe allergies. The AEHA provides several interesting background information sheets on sources of indoor air pollution, and can also provide product source lists for household and home maintenance products. Annual membership fees are $25.00 and include a subscription to the group's newsletter.

Contact:

The Allergy and Environmental Health Assn.
Box 40604
Burlington, Ontario
L7P 4W1
Phone: 1-800-695-9271

Pesticide Action League (PAL)

The Pesticide Action League will provide information on the health effects of pesticides, alternatives to pesticides, where to get your soil tested, identifying pests, and suggested suppliers. They also have information on Boards of Education, Parks Departments, and cities which have eliminated the use of pesticides on public lands. The Pesticide Action League is part of a loose association of other pesticide action groups around Ontario and North America, and they can let you know who else is active.

Contact:

The Pesticide Action League
31 Ballyronan Rd.
Don Mills, Ontario
M3B 1V2
Phone: (416) 445-9070
Fax: (416)445-9070

Ontario Parks Association (OPA)

The OPA's membership is primarily professional. Your municipality's parks department or your regional conservation authority is probably a member. The OPA had developed a proactive position on pesticides which includes promoting strategies for Responsible Use, Reduction, and Alternatives. They can also provide education and training in Integrated Pest Management, which employs a number of pest management techniques to reduce the need for pesticides.

Contact:

Ontario Parks Association
1185 Eglinton Ave. E, Suite 406
North York, Ontario
M3C 3C6
Phone: (416) 426-7157
Fax: (416) 426-7371

World Wildlife Fund (WWF)

WWF's Toxicology Program is focused on reducing pesticide use in agricultural and urban settings, increasing awareness of the threat posed by hormonic-disrupting chemicals, and promoting pollution prevention for industries, institutions and individual households that discharge wastes directly to municipal sewer systems. WWF operates the "Pollution Solutions" hotline for the Metro Toronto area (offering practical advice on proper disposal of household toxics, alternatives to dry cleaning chemicals, avoiding pesticides on lawns, gardens, and food, and other topics).

Contact:

World Wildlife Fund
504 - 90 Eglinton Ave. East
Toronto, Ontario
M4P 2Z7
Phone: (416) 489-8800 or
1-800 26PANDA
Fax: (416) 489-3611

The Lung Association

Your local Lung Association office should be able to provide you with information about indoor air quality. If they doesn't have any of their own, the Ontario office can provide them with some. Contact the Ontario Provincial Office for the number of the office nearest you.

Contact:

The Lung Association
Ontario Provincial Office
573 King St. E., Suite 201
Toronto, Ontario
M5A 4L3
Phone: (416) 864-9911
Fax: (416) 864-9916

Eco-Praxis Inc.

This educational research and resource centre has a broad array of information on a variety of environmental/social/political issues, and good desktop publishing capabilities. An extensive collection of information on the cosmetic use of pesticides includes a number of documents and periodicals. Information is available for the cost of photocopies and postage.

Contact:

Bruce Lofquist
Eco-Praxis Inc.
1326 Bronte Rd.
Oakville, Ontario
L6J 4Z3
Phone: (905) 847-5512
Fax: (905) 827-1202
E-mail:epi@web.net

Groundwater Education Ontario (GEO)

An initiative of the Ontario Groundwater Association, Groundwater Education Ontario (GEO) works to promote awareness about groundwater issues and to educate industry, government, students, the public, and the media about proper management and utilization of groundwater. GEO can provide information on groundwater, groundwater exhibits, and information on government policies.

Contact:

Ontario Groundwater Association
2995 Delia Crescent
Bright's Grove, Ontario
N0N 1CO
Phone: (519) 869-8933
Fax: (519) 869-8940

OTHER GROUPS ACROSS CANADA

Campaign for Pesticide Reduction

Groups in 26 municipalities across Canada are working to get by-laws enacted to ban or restrict the use of cosmetic pesticides.

Contact:

Angela Rickman
Campaign for Pesticide Reduction
Sierra Club
412 - 1 Nicholas St.
Ottawa, Ontario
K1N 7B7
Phone: 1-888-810-4204

BC's Paint Collection Program

Launched in January 1995, the program combines the establishment of a paint collection facility with a return-to-vendor program. All 105 branches of Home Hardware in B.C. will accept all brands of waste paint free of charge. Sherwin Williams will accept paint at two B.C. stores in Delta and Langley. Neither store will charge a fee for the service. The Paint Care Association, an industry association representing the remaining 47 brandowners, has been working with local governments to establish fixed or mobile collection facilities in each regional district of the province.

Contact:

The B.C. Paint Care Association
1040 West Georgia St., Suite 550
Vancouver, B.C.
V6E 4H1
Phone: (604) 482-8686
Fax: (604) 681-3164

Yellowfish Road Program

A program of Trout Unlimited Canada, Yellowfish Road provides the tools and information necessary for communities wishing to implement storm drain marking programs. Fish images are stencilled onto local storm sewers by local kids, reminding residents that motor oil, paints, and pesticides disposed of in storm drains go directly to local water courses. Yellowfish Road promotes proper disposal of hazardous products and the use of safer alternatives. By placing a call to the National Coordinator, you can find out more about the program and have materials sent to you.

Contact:

Judy McKearney
National Coordinator
Yellowfish Road Program
Trout Unlimited
P.O. Box 6270, Station D
Calgary, Alberta
T2P 2C8
Phone: 1-800-909-6040

Citizens for Alternatives to Pesticides (CAP)

CAP has published Pesticide By-Laws: Why We Need Them, and How to Get Them ($25) to assist municipalities in adopting a ban on the cosmetic use of pesticides in municipal and residential areas.

Contact:

Citizens for Alternative to Pesticides
20 Sunny Acres
Baie d'Urfe
Quebec, Ontario
H9X 3B6
Phone: (514) 457-4347
Fax: (514) 457-4840

UNITED STATES

Great Lakes United (GLU)

Great Lakes United is coordinating the Little Zeroes Program to assist communities throughout the Great Lakes Basin eliminate the use of pesticides, dry cleaning (perc) and PVC piping. GLU plays a broker role, helping communities connect and share success stories and experiences. Printed material is available, as well as an on-line newsletter.

Contact:

Great Lakes United
P.O. Box 3040
Ann Arbor, MI
48106
Phone: (313) 998-0760
Fax: (313) 998-0821
E-mail: glu@igc.apc.org

The Washington Toxics Coalition

Based in Seattle, WA, this group is a non-profit organization working to reduce society's reliance on toxic chemicals. They identify and promote alternative products and techniques which are least-toxic and environmentally sound. They have produced a number of information sources, including issue specific factsheets and an excellent guide to consumer products. For a publications list, contact them at the address below. Some of their other material is listed in the Resources Section.

Contact:

Washington Toxics Coalition
4516 University Way NE,
Seattle, WA
98105
U.S.A.
Phone: (206) 632-1545
Fax: (206) 632-8661

Lake Michigan Federation

The Lake Michigan Federation, with a number of offices around Lake Michigan, is dedicated to increasing awareness about and protecting Lake Michigan. They have developed programming and information, including media material, and curriculum material to support pollution prevention in homes and in small businesses. Some of their materials are listed in the Resources Section.

Contact:

Lake Michigan Federation
647 W. Virginia St., Suite 307
Milwaukee, Wisconsin
63204, U.S.A.
Phone: (414) 271-0332
Fax: (414) 271-0796

3.2 BOOKS & JOURNALS

GOT A QUESTION ON A TOXIC CHEMICAL? HERE'S WHERE TO LOOK

It takes a lot of digging through stacks and stacks of handbooks, dictionaries, scientific journals and trade magazines to gather accurate, up-to-date information on a toxic chemical. These titles would be a good place to start. An industry or union representative in your community might lend them out. If your local library is willing to make the investment (and be warned, some of these are quite expensive), this selection of books would comprise an excellent reference collection. Good hunting.

THE BOOKS:

(Cost: $ - under $10, $$ — $10-30, $$$ - $30-100, $$$$ - $100+, $$$$$ - $500+)

The Safe Shopper's Bible: A Consumer's Guide to Nontoxic Household Products, Cosmetics, and Food (MacMillan, New York, NY) is written by David Steinman and Samuel S. Epstein. The book rates hundreds of consumer products for acute and chronic health effects. Informative and very easy to use, the only drawback being that many of the products are only available in the U.S. (Cost :$$)

1,001 Chemicals in Everyday Products (Van Nostrand Reinhold, New York, NY), by Grace Ross Lewis, provides information on the uses and health effects of preservatives, pesticides, flavorings, fragrances, emulsifiers, colorants, pigments, antiseptics, solvents, coatings and other ingredients in common house and garden products. An excellent companion to the Safe Shopper's Bible. (Cost: $$)

Clean & Green (Ceres Press, Woodstock, NY) contains over 450 home recipes to handle just about any cleaning job. This one should be in every home! (Cost: $$)

Toxics A to Z: A Guide to Everyday Pollution Hazards (University of California Press, Berkeley, CA) — This book covers the fundamentals of chemical toxicology, environmental impacts and management issues and includes concise yet thorough profiles of specific chemicals and chemical families. Appendices introduce home testing options. (Cost: $$)

A Consumer's Dictionary of Household, Yard and Office Chemicals and *A Consumer's Dictionary of Cosmetic Ingredients* (Crown Publishers, Inc., New York, NY) are two data-packed, dictionary-styled volumes by Ruth Winter. Short entries describe the function and known health effects of the various ingredients, additives, colourants, scents and other "harmful and desirable chemicals" found in everyday consumer products. (Cost: $$)

Staying Healthy in a Risky Environment (Simon & Schuster, New York, NY) put together by the New York University Medical Center, is the first volume to systematically look at all the environmental health threats: water, air and soil pollution, food safety, noise, and chemicals in consumer products, art and hobby materials, and the workplace.The book contains some 150 pages of charts linking health effects to possible environmental causes. (Cost: $$$)

Sustaining the Earth: Choosing consumer products that are safe for you, your family, and the earth by Debra Dadd-Redalia. This handy reference book evaluates each of the current environmental claims advertisers make and then, product by product, the possible risks and available alternatives. *Nontoxic, Natural and Earthwise, The Nontoxic Home & Office* (both published by Jeremy P. Tarcher, Inc., Los Angeles, CA). (Cost: $$)

The Clinical Ecology of Consumer Products (The Williams and Wilkins Company, Baltimore, MD). Although the info is ten-years-old now, this is still the only widely-available volume that lists brand name products and the toxic ingredients that do not appear on their labels. It also contains short description of possible health effects. (Cost: $$$)

Dangerous Properties of Industrial Materials (Van Nostrand Reinhold Company, New York, NY), 8th edition, by the late N. Irving Sax, is comprehensive, up-to-date and indispensable. Keep a copy of the slimmer, Sax and Lewis' *Rapid Guide to Hazardous Chemicals in the Workplace* for quick reference. (Cost: $$$$$)

Hawley's Condensed Chemical Dictionary (Van Nostrand Reinhold, New York, NY) is a terrific chemical dictionary that provides concise descriptions of common industrial compounds (the formulation and industrial application information is particularly useful), as well as readable definitions for complex technical and chemical terms. (Cost: $$$$)

The *Handbook of Toxic and Hazardous Chemicals and Carcinogens* (Noyes Publications, Park Ridge, NJ), by Marshall Sittig, is a good basic guide to nearly 800 compounds, covering usage, exposure limits, acute and chronic health hazards, first aid, personal protective methods, and measuring protocols. Noyes' *Pesticide Fact Handbook* is also an excellent resource. (Cost: $$$$)

Patty's Industrial Hygiene and Toxicology (John Wiley & Sons, New York, NY) contains in-depth treatises on each of the major chemical families. Chapters summarize relevant physiological and pathological effects, experimental and epidemiological studies, and recommended industrial hygiene measures. Some of the authors also throw in a little chemical history. (Cost: $$$$$)

Manual for Spills of Hazardous Materials, written by the Technical Services Branch of Environment Canada (Ottawa, ON), contains emergency response, spill cleanup and fire fighting directives for the most toxic materials transported in this country. There's also some commercial information tailored to the Canadian scene, although it's a little dated by now. (Cost: $$)

The *Chemical Infograms* and *Chemical Hazard Summaries* from the Canadian Centre for Occupational Health and Safety (Hamilton, ON), and the *Data Sheets* produced by the Canada Safety Council (Ottawa, ON) contain more information than the average Material Safety Data Sheet, as well as detailed guidance on workplace handling and control protocols. (Cost: $)

JOURNALS AND MAGAZINES

American Journal of Industrial Medicine (John Wiley & Sons Inc., 605 Third Avenue, 9th Floor, New York, NY 10158) — Founded by Irving J. Selikoff, AJIM specializes in clinical occupational medicine, epidemiological studies and intervention research all aimed at uncovering and halting the largely invisible carnage caused by workplace toxics. The journal occasionally devotes its pages to revealing theme issues (topics have included the health hazards of child labour, and occupational lead poisoning).

Applied Occupational and Environmental Hygiene (Elsevier Science Publishing Company, 655 Avenue of the Americas, New York, NY 10010) This is the official journal of the American Conference of Governmental Industrial Hygienists, the people who develop the chemical exposure standards incorporated into so many provincial workplace and safety regulations. It covers sampling systems, measurement protocols, exposure indices and so on. A typical article: "Exposure to mercury in dentistry: A field comparison between diffusive and active samplers".

Archives of Environmental Health (Heldref Publications, 1319 Eighteenth Street, N.W. Washington, DC 20036-1802) The official publication of the Society for Occupational and Environmental Health, this publication addresses the effects of environmental agents (from toxic wastes to industrial off-gases) on human health. Papers tend to investigate the obscure and contentious: chemical-related neurobehavioural dysfunction, birth defects, cancer, and chronic degenerative diseases. A typical article: "Placental cadmium and birthweight in women living near a lead smelter".

British Journal of Industrial Medicine (BMJ Publishing Group, BMA House, Tavistock Square, London WC1H 9JR) — BJIM publishes latest information on occupational and environmen-

tal medicine, always digging for an overlooked angle, a complicating factor, or a new twist on the available evidence. A typical article: "The carcinogenic effect of exposure to low doses of carcinogens".

Contact Dermatitis (MUNKSGAARD International Publishers Ltd., 35 Norre Sogade, P.O. Box 2148, DK-1016, Copenhagen K, Denmark) — This is a journal for clinicians interested in allergic or irritant reactions to industrial chemicals or consumer products. Stuffed with case studies, short notes and professional communiques (with pictures!), this is the one journal that always contains some piece of info that touches your life or someone you know. One recent issue alerted readers to the dermatological implications of contact with: Shiitake mushrooms, a broken thermometer, the plastic case of a hearing aid, a jar of skin cream, an eye pencil, a brand of nail polish, and a host of pesticides, antibiotics and other drugs.

Dangerous Properties of Industrial Materials Report (Van Nostrand Reinhold, 115 5th Avenue, New York, NY 10003) — Founded by the late N. Irving Sax, DPIM eschews original scientific research in favor of lengthy monograms or review articles that "disseminate ideas and information that will foster safer living in an industrial society." For each subject chemical, DPIM presents the latest findings on its human and animal toxicity, environmental fate and impact, dangerous chemical and biological properties, storage and handling risks, and so on.

EHP, Environmental Health Perspectives (National Institute of Environmental Health Science, P.O. Box 12233, Research Triangle Park, NC 27709) — EHP's self-proclaimed role is to inform the scientific community about the potential health hazards of unfolding environmental phenomena. Special issues, workshop proceedings or toxicological info summaries on headline-hot issues, are so well-thumbed and oft-photocopied, that the pages will fall out in your lap. A recent issue contained a collection of 21 papers on the usefulness of genotoxicity in hazard evaluation, and another dozen on the assorted health implications of global warming.

ES&T, Environmental Science & Technology (American Chemical Society, 1155 16th Street, N.W., Washington, DC 20036) — while not devoted to the health implications of toxics, ES&T is the magazine to read if you are interested in the fate of the chemicals once they are outside the plant gates. A fascinating feature article is always followed by a flock of research papers describing innovations in environmental analysis, the source and transport of industrial pollutants, and their metabolism through the eco-system. A typical article: "The Hazardous Waste Trade".

International Archives of Occupational and Environmental Health (Springer-Verlag New York Inc., 44 Hartz Way, Secaucus, NJ 07094) — This publication covers topical environmental and/or occupational problems, and presents clinical or epidemiological studies of morbidity/mortality, the estimation of health risks, new clinical approaches, or developments in measurement techniques. A typical article: "Absence of blue-yellow colour vision among workers exposed to toluene or tetrachloroethylene".

JOM, Journal of Occupational Medicine (American College of Occupational and Environmental Medicine, 55 West Seegers Road, Arlington Heights, IL 60005) — a must-read, particularly if one is interested in the latest trends in medical surveillance and control, screening programs, testing protocols, and related occupational case studies. The JOM also squeezes little snippets of fascinating reading into the blank spaces between papers. A typical article: "Colon and stomach cancer mortality among automotive wood model makers".

MMWR, Morbidity and Mortality Weekly Report (Centres for Disease Control, Atlanta, GA 30333) — the best title in the business! MMWR specializes in statistical analyses of flue epidemics and the like and it sometimes publishes a case study on an occupational exposure or an environmental incident that puts all the theoretical lab experiments and toxicological guesses into perspective. A recent example: "Surveillance of children's blood lead levels, United States 1991".

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