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# working YOUR WAY TO A green OFFICE

A GUIDE TO CREATING AN ENVIRONMENTALLY FRIENDLY OFFICE

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CANADA'S GREEN PLAN

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# **working** YOUR WAY TO A **green** **OFFICE**

A GUIDE TO CREATING AN ENVIRONMENTALLY FRIENDLY OFFICE



CANADA'S GREEN PLAN



Working your way to a green office: a  
guide to creating an environmentally  
friendly workplace

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# OFFICE of the 90's

*Reducing our impact on the environment is one of the major priorities of the 1990s. Achieving sustainable development will require efforts from all Canadians, from individuals, to government and the private sector. It will entail making changes in the way we live and work, and the way we produce and deliver goods and services.*

Many Canadians have already begun to make changes at home to reduce their impact on the environment, and industry has also been making changes. But there is also much to be done in the commercial and institutional sectors, and particularly in offices.

This manual discusses ways you can help to make your own office more environmentally appropriate. Whether you work in a small company or a large organization, there are many things that you, as an individual, can do to "green" your office. There are also many improvements that you can encourage others within your organization, including procurement personnel, building managers and senior officers, to undertake. By taking a careful look at your office procedures, identifying possible improvements and implementing and communicating changes, you and your co-workers can significantly reduce your office's impact on the environment.

## THE GREEN OFFICE GOAL: ENVIRONMENTALLY RESPONSIBLE MANAGEMENT

At home, in an industrial plant or in an office, the general goals of environmentally responsible management are the same:

- *to make the most efficient use of resources - materials, energy and water;*
- *and to minimize contamination, chemical and otherwise, of the environment.*

## EFFICIENT USE OF RESOURCES

The keys to efficient resource use are the "4Rs" of waste management: Reduce, Reuse, Recycle and Recover. The 4Rs are a hierarchy, with reduction being the most desirable goal.



### REDUCE

**1** Wherever possible, it is best to reduce materials, energy and water consumption, in order to produce as little waste as possible and save energy.



### REUSE

**2** After a product or material (solid, liquid, energy, etc.) has been used once, if possible, every effort should be made to reuse it.



### RECYCLE

**3** Recycling should be considered only for materials and products that cannot be reused. Although recycling does help to conserve resources and reduce wastes, there are economic and environmental costs associated with waste collection and recycling processes.



# GETTING Started

*There are two approaches to setting up a green office, depending on the level of senior management commitment in your organization.*

Ideally, senior management should be involved from the beginning: when an effort has the blessing and backing of management, it is much easier to get things done. An effective approach is to establish a task force of managers to direct the "greening" effort. If possible, the task force should include people responsible for all aspects of office operations, including facilities management, supply and personnel. These managers are given responsibility and authority to identify environmental improvements, develop an environmental action plan and make changes against a timetable. This approach has been used successfully by the House of Commons.

In the absence of significant senior management commitment, individuals and groups of employees can still accomplish a lot by taking "grass-roots" actions on their own time. Even if you're the only one in your office who is interested at first, you can follow the same approach of identifying improvements, planning and implementing changes and informing others about what you're doing and achieving. In fact, the best way to get senior management onside is often to demonstrate that reducing waste and conserving resources produce visible benefits (including financial benefits and improved public pro-

file). If you start slowly and gain credibility by demonstrating a few "successes", it's likely that management will soon be convinced.

In most organizations, improvements are due to a combination of "top-down" and "bottom-up" activities. Whether your office's program is formal or informal, the basic process of "greening" an office is the same.

## 1. ESTABLISH RESPONSIBILITIES

Who's going to do what? Form a working committee to direct the "greening" program. Assign responsibilities (you could volunteer to be the coordinator) and arrange regular meetings.

Depending on the size of your organization and the initial level of senior management commitment, this may be formal or informal; setting up a committee can be as simple as talking to your co-workers to see who wants to help. The important thing is to have some way to coordinate efforts and share information.

## 2. REVIEW OPERATIONS, COLLECT BASELINE DATA, AND IDENTIFY IMPROVEMENT

Look at current practices and decide what should be changed.

Look at such things as the use and disposal of paper and other office products; coffee/lunch practices; the way chemical products are used and disposed of;



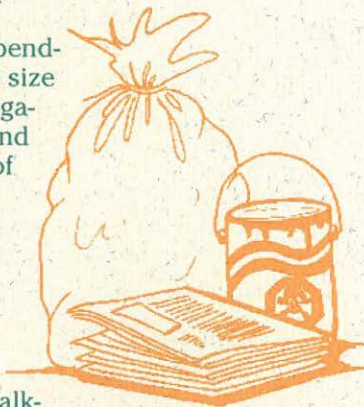


energy use in equipment, appliances and the building itself; water use; transportation; product supply and purchasing. Gather baseline data on consumption of materials, energy and water, and on waste production.

Again, depending on the size of your organization and the level of management support, data collection activities can range from a

simple "walk-through" or informal survey to a detailed audit conducted by facilities management personnel. The important thing is to establish some benchmark against which future improvements can be compared.

Look for opportunities to Reduce, Reuse and Recycle; to conserve energy and water; and to improve the management of chemicals. Some opportunities will be things that individuals can do on their own, by changing their attitudes and habits. Others will require more substantive involvement from facilities managers, procurement personnel and external agencies. Some will be simple, low-cost or no-cost changes; others will require capital investment and the development of infrastructure.



## Bell

### MAJOR DEVELOPMENTS OF THEIR PILOT PROGRAM INCLUDE:

- 1 Composting an estimated 64 kg (140 lbs) of food waste a day in nine accelerator composters placed beside their parking lot. Special small plastic receptacles for organic waste, which are emptied each day by the maintenance staff, have been placed on each floor and in the cafeteria.
- 2 Working with their food supplier to stop using styrofoam cups and dishes, plastic cutlery and individual cream, juice and milk dispensers in the cafeteria and replacing them with bulk dispensers, china mugs and dishes, and special plastic "Lug-A-Mugs". These special mugs were distributed to each employee who could then get a discount when buying coffee in the cafeteria.
- 3 Changing the perception of garbage by placing only four waste cans on each floor while placing a recycling basket at each desk. This makes the act of recycling easier and wasting harder.

**For more information on Bell's Zero Waste Program, call (416) 234-4250 or 4252**



## OFFICE WASTE AUDIT FORM

	GENERATION SITE	TYPES OF WASTE	APPROX. QUANTITY	RECYCLING POTENTIAL	COMMENTS
ex.	MAIL ROOM	MP, OP, OCC, M	25 kg./week	good for OCC/OP	
	PHOTOCOPY ROOM				
	PRINTER AREA				
	COMPUTER AREA				
	FILE ROOM				
	INDIVIDUAL WORKSTATIONS				
	GENERAL OFFICE				
	OTHER AREA(S)				
	<b>TOTALS</b>		25 kg./week		

### KEY

Computer Paper = CP  
 White Ledger Paper = WL  
 Coloured Ledger Paper = CL  
 Mixed Fine Paper = MP  
 Magazines = M

Old Newspaper = OP  
 Old Corrugated  
 Cardboard = OCC  
 Glass Bottles, Jars = G  
 Metal Cans = C

### NOTES

**Computer Paper:** 18" tab

**White ledger:** white bond, photocopy paper, laser paper, deposit slips, letter-sized computer paper

**Coloured Ledger:** coloured bond and photocopy paper, cheques, carbonless forms

**Office Mixed:** ledger plus onion skin, envelopes, manila file folders



## OFFICE WASTE AUDIT FORM

This sample form may be used as a basis for a waste audit of your own office. Detach or photocopy this page or modify it to meet your own needs (different generation sites, types of waste). Your own situation will also be governed by local market conditions and recycling initiatives (availability of brokers, curbside recycling programs).

Getting a quick check on the quantities and types of paper waste that your office produces is a useful way to begin an audit of your office. A waste audit gives you a good picture of your recycling potential. Remember to check all the floors to include:



availability of storage space, photocopy rooms, document shredder, etc. Examine a representative sample of waste containers to get a first-hand picture of the grades of paper being discarded. Remember, that even the smallest amount of low grade paper can lower the value of, or contaminate, the entire load.

This model audit also can be adapted to other areas of your office operation, such as energy, transportation, food services. Later on, you may want to conduct a full environmental audit to check for environmental excellence and sustainability (which can also include waste reduction, recycling, purchasing policy).

## THINGS TO DO



Call your local municipality for information on local recycling programs



Call your provincial Environment Ministry or territorial equivalent for information about corporate/institutional recycling program



Call your local waste material brokers for information on collected materials' value; how the materials should be prepared, and delivery details



Check with local fire department to ensure that paper waste storage meets safety standards



Arrange for any special containers required for in-house collection



Arrange special events to kick-off a recycling program



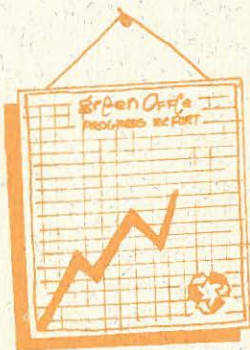
### 3. DEVELOP AN ENVIRONMENTAL ACTION PLAN AND START MAKING CHANGES

Review the possible activities and decide where to start. Assess available resources to make the changes, and set priorities. Set time lines.

If you're working "from the bottom up", be sure to obtain appropriate management approval for any changes that substantially modify office procedures or equipment, or necessitate capital expenditures or use of staff time. One of the best approaches is to start with a few no-cost and low-cost activities or "sure-fire winners" to demonstrate benefits and get both management and employees onside. Then, move on to make the changes that may require more resources. Start with some easy measures to build support, but don't stop there - more substantive changes usually produce greater environmental benefits.

### 4. COMMUNICATE

Communicate the goals and achievements of the "greening" program to everyone in the office. Coordinating the activities and changes as part of an overall "office greening program" will help everyone see that the cumulative impact of many small changes is significant and help to maintain enthusiasm. It can be more convenient to waste than to develop new habits, and people need to feel that their efforts are making a difference.



The importance of constant, clear communication cannot be overemphasized. People being asked to make changes need two kinds of information: motivational information (explaining why they are being asked to make changes, and the impact that their efforts have) and operational information (explaining how to change, how to operate equipment, separate materials for recycling, etc.). Regular, clear communication of both types of information is vital to the success of any green office effort (see chapter 10).

### 5. MAINTAIN AND IMPROVE

As with every other aspect of running an office, it is important to monitor and maintain the greening program. In a green office, concern for the environment is an everyday part of operations, not a "one-shot" affair.

Set up means of tracking progress so that you can demonstrate tangible benefits from changes made, quickly identify and resolve any operating problems, and identify further areas for improvement. Continue to press for longer term changes (e.g., changes that require modifications to procedures, processes and equipment; that require significant investment; or that necessitate involvement by other agencies, property managers, etc.). Some changes will take time, but it is important to keep up interest.

A program of environmental improvement is not a static thing. New products and processes are constantly being developed, and things that were unheard of a few years ago are commonplace today. As you start making changes, more opportunities will become apparent.



## "Greening the Hill"

In 1989, the Speaker of the House of Commons and the Members of the Standing Committee on the Environment established a Task Force of senior managers to direct a program of comprehensive environmental improvements on Parliament Hill. The Task Force contracted a firm of environmental consultants to conduct an extensive study of operations, which formed the basis of a multi-year Environmental Action Plan.



The House of Commons greening effort is a good example of a program initiated by senior management, and its accomplishments reflect the substantive management commitment. Some of the achievements are summarized below.

Inter-office mail is delivered in reusable envelopes, and staff are encouraged to make double-sided photocopies and reduce paper waste. The House's existing paper recycling program has been upgraded with new equipment and service, resulting in dramatic increases in the quantity and quality of paper collected for recycling.

Members of Parliament now use porcelain cups and dishes in caucus and committee meetings, eliminating the use of 40,000 polystyrene cups per month. Catering Services has almost completely eliminated the use of disposables, and patrons of the House of Commons cafeterias are encouraged to use reusable dishes and cutlery. "Greening the Hill" coffee mugs, equip-



The MUTUAL GROUP in Waterloo, Ontario with 2,300 employees, uses over 100 blue recycling barrels throughout the building. These barrels have helped to reduce the amount of garbage by 75% after two years. The cost of setting up and operating the program is paid for by the sale of recyclables which generates about \$14,000 annually. Their building also recycles most of the 180,000 cans and bottles used each year.

## INFORMCO INC.

INFORMCO INC., a printing company in Toronto, sets up a box near the main door every Friday for their employees to deposit the envelopes from their weekly pay checks. These envelopes are then reused for next payday.



GENERAL MOTORS OF CANADA launched an environmental program called "WE CARE" (Waste Elimination and Cost Awareness Rewards Everyone) in 1991 to further enhance waste management activities in its facilities.

## Bell

Employees at BELL CANADA submitting ideas to the Employees' Suggestion Award System (ESAS) program can also qualify for an award by thinking "green". ESAS was expanded to include environmental suggestions and by the end of 1990 some 500 were received.



## MORE NOTES ON TERMINOLOGY:

The Mobius Loop is a symbol used to designate products that are recyclable and made from recycled materials. Two different versions of the Loop have been developed to differentiate between recyclable products and recycled ones.

The first loop may be displayed on products that are recyclable and for which there exists a collection and recycling infrastructure. For example:



### WHERE FACILITIES EXIST

Even though a product may bear the recyclable loop, it is always prudent to check if your recycling program accepts this material.

Items made of waste materials which have been recycled may use the second depiction of the Mobius Loop along with a declaration of the portion of the product or package's weight that is composed of recycled materials.

For example:



THIS PRODUCT CONTAINS 100% RECYCLED FIBERS, INCLUDING 50% POST-CONSUMER MATERIAL.

Manufacturers may have specific information on the source of the recycled materials used in the new product. Post-consumer material, for example, would refer to wastes generated by households, commercial and institutional facilities - such as office buildings, schools and cafeterias.

ped with lids, are available to all Parliament Hill employees. Glass, soft drink can, and newspaper recycling are being tested.

An Environment Coordinator has been hired to ensure that all "Greening the Hill" recommendations are carried out and new initiatives developed. An environmental training program is being developed for all employees.

Three House of Commons vehicles have been converted to operate on natural gas, producing fewer emissions. Conversion of the entire House fleet is under consideration.

Energy efficient light bulbs have been installed in every Member's office, and further retrofits are planned. Environmentally appropriate products and methods are being tested in a current renovation project, and successful approaches will be incorporated during future renovations. Manufacturers and suppliers of environmentally appropriate products are favored.

The "Greening the Hill" newsletter keeps employees up-to-date.

These are only some of the many changes being made to "Green the Hill". The Task Force and new Environment Coordinator continue to identify and implement further improvements.

For more information on "Greening the Hill", call (613) 943-1564



# Paper Use:

## A Good Place to Start

*Most of the waste from offices is paper. In fact, "fine" paper, such as stationery, book paper, photocopier paper and computer paper can account for more than 50 percent of the dry solid waste produced by an office. Much of this waste can be eliminated by implementing the 3Rs (reduce, reuse and recycle), so looking at fine paper use is a good place to start your office greening effort.*



### REDUCE

There are many opportunities to reduce paper use by simple changes in individual habits and office procedures. In many cases, further improvements can be made by modifying office equipment or purchasing more paper-efficient equipment.

### PHOTOCOPYING

Use only the amount of paper you need. Post a sign at the photocopier (e.g., "Think Before You Copy" or "Do You Need This Copy?")

Photocopy documents double-sided whenever possible. It is more inconvenient to make double-sided copies on machines not designed for this purpose, but it is possible. Check to be sure there are no warranty implications for your

machines. Then, post a sign by the photocopier that explains how to make double-sided copies, and circulate a memo to staff reiterating the information. Specify double-sided copying for



all jobs sent to print shops. If your organization doesn't already have a policy to encourage double-sided copying, work with management to develop one.

Where practical, use the reduction feature on your photocopier to fit more on a piece of paper.

Ensuring that all staff using the photocopier know how to operate it properly will also help to reduce paper waste. Consider asking your photocopier supplier to provide a brief training session for all employees.

Timely addition of chemicals, such as toner, to your office photocopier can prevent ruined copies and needless waste. Coordinate with those responsible for photocopier maintenance to ensure that your copier is kept in top running order.

Design fax cover sheets to have adequate space for messages so that you don't have to attach a separate letter or note.



## **DOCUMENT CIRCULATION AND COMMUNICATIONS**

If you use a computer or word processor, edit on-screen as much as possible to avoid printing multiple drafts.

Reduce the number of copies made of standard documents, memos, etc., wherever possible. Distribute only one copy with a circulation list. Make an additional copy to post on a central notice board; these copies can be kept in a central file or binder for future reference.

Do several of your co-workers subscribe to the same publication? Suggest reducing to one subscription and circulating the copy.

Wherever practical, modify the formats of standard documents, correspondence, etc., to use less paper (e.g., by reducing margin widths).

Regularly check distribution lists for correspondence and publications, and remove the names of those who no longer need or want the information.

Avoid "memo mania". If your office has an electronic mail system, use it to send messages wherever possible instead of written memos. Substitute telephone calls for memos where practical.

## **OFFICE SUPPLIES AND EQUIPMENT**

Talk to those responsible for ordering office supplies. Encourage the purchase of bulk supplies and avoidance of over-packaging, such as note pads in cello-wrapped packages, boxes inside boxes, etc.

Switching to photocopiers with built-in "duplexing" capability will make it easier for staff to make double-sided copies. Ask those responsible for photocopier supply or leasing to find out if this is feasible. Point out that waste reduction and other environmental benefits may offset higher capital costs.

Electronic mail systems may reduce paper use in some cases. Ask those responsible for such services in your organization if they have considered electronic mail.

## **SELECTING OFFICE EQUIPMENT ... KEEPING THE ENVIRONMENT IN MIND**

Traditionally, office equipment purchase decisions have been based primarily on considerations of capital cost and performance. Environmental benefits or costs have not been explicitly con-



sidered. There is, however, a growing trend towards "life-cycle" costing of equipment. This involves looking at all the costs and benefits of proposed alternatives, not just the obvious capital costs. For example, a fax machine that uses bond paper may have a higher capital cost than one using thermal paper. However, the cost of the bond paper may be lower; the operating costs of the bond machine may also be lower because less paper and staff time



is required to photocopy incoming faxes. The amount of non-recyclable paper requiring disposal will also be lower, so waste disposal costs may be reduced. In fact, when all factors are considered, including environmental costs and benefits, the more expensive machine may just turn out to be the best buy.

Encourage your organization to consider life-cycle costs and benefits when making equipment purchase decisions. Sooner or later, costs to the environment must be paid. Considering them up-front is simply good business sense.

## REUSE

Collect scrap paper (e.g., "photocopier mistakes", superseded drafts, obsolete file copies, etc.) and use the clean sides for draft printouts, internal correspondence and fax transmission sheets. Order extra trays for word processor printers and photocopiers. Keep reusable scrap paper in these trays, and encourage your colleagues to use it: circulate a memo explaining how, and post reminder signs by photocopiers and word processors.

Use scrap paper for notes and messages, and encourage others to do the same. Investigate having waste paper bound (or cut and stapled) as note and message pads at a print shop. Use waste paper wherever possible instead of self-adhesive (sticky) notes since glued paper cannot be widely recycled.

Energy, Mines and Resources Canada has been reusing obsolete maps as message pads for years.



In Peterborough Ontario, at the QUAKER OATS COMPANY OF CANADA'S head office with 250 employees, a study aimed at finding ways of reducing the number of computer reports distributed throughout the office was conducted. The study's findings have resulted in the elimination of 500,000 pages (300 reports) a year, with a saving of \$24,000 annually in paper cost. The company also encourages double-sided photocopying which should result in an additional saving of \$8-10,000 a year. Other than waste reduction, QUAKER OATS also uses 100% recycled paper products in their offices for their photocopiers, facsimile machines and computers.



CANADIAN IMPERIAL BANK OF COMMERCE has become the first corporation in Canada to produce stationery from its own recycled paper waste. Computer paper from CIBC's record centre in Markham, Ont. is now being recycled into customer account inquiry forms for use in the branch network.





## RECYCLE

Even with a concentrated effort to reduce and reuse paper, your office will continue to produce some fine-paper waste. That's where recycling, the third "R" in the waste management hierarchy, comes in.

If your office already has a paper recycling program, make sure you're using it, and using it properly. Are others aware of and using the program? If not, do they just need a gentle reminder or does the program itself need to be improved?

Thermal paper used in conventional fax machines is generally not recyclable (check your local recycler for acceptability); in addition, because thermal paper has limited durability, most people end up photocopying faxes, which creates further paper waste. However, there are now bond paper fax machines on the market. Talk to those responsible for fax machine supply to see if it would be practical to switch to this type.



### WHAT MAKES A GOOD PAPER RECYCLING PROGRAM?

There are three basic types of office paper recycling programs. Several factors will influence the type that suits

your office, including the size of your office, and whether your organization is a tenant in a building or owns the building and has control over the property management.

### TENANT-RUN PROGRAM

Tenant-run programs are common in multi-tenanted buildings where, for whatever reason, property management is not interested in recycling and tenants are left to make their own arrangements with a hauling company or paper broker. In many cases, the paper collection company does not pay for the paper; if it does, the revenues go to the tenant organization.

While this type of program is inexpensive to set up, experience has shown that it does not effectively collect all the paper that could be recycled, and "contamination" (non-recyclable paper and garbage) frequently ends up in the central bins. Since the system is basically "anonymous" (there is no check on what employees place in the desk-side containers or hallway bins), it is very difficult to pinpoint a source of contamination. As a result, the tenant company must devote considerable time and resources to monitoring the program and reminding employees (by frequent memos, brochure, posters, etc.) to recycle and to keep contamination out of the bins.

### SHARED TENANT- AND PROPERTY MANAGEMENT-RUN PROGRAM

In this type of system, office tenants and the property management company share the responsibility for paper col-



lection. This type of program is generally initiated by tenants for environmental reasons; in most cases, property management agrees to participate in a limited way because the waste diversion savings are sufficient to provide a financial benefit to property management.

Because this type of program relies on employees to take paper to centrally located bins, it is subject to the same contamination problems and low yields that plague tenant-run programs. Once again, substantial management involvement, communications and monitoring efforts are needed to make the program work well.

### **FULL-SERVICE PROPERTY MANAGEMENT-RUN PROGRAM**

Full-service programs, which are the most advanced recycling programs, are designed to capture the maximum quantity and quality of recyclable paper. They have become more common over the last few years, as waste disposal costs have skyrocketed and property managers have come to appreciate the waste diversion benefits of property-operated recycling programs.

This type of program requires more substantial investment from property management (capital investment for equipment and salary costs for paper collection staff). These costs are recouped, however, because the program collects a cleaner paper stream, and diverts more of the paper from the waste stream. The waste disposal savings and the higher revenues from the paper more than compensate for the increased investment.

Experience has shown that full-service programs are the most efficient and sustainable way to divert the maximum amount of paper from the waste stream, and many large organizations are adopting this type of system. The federal government, for example, is converting its Papersave program in the National Capital Region to this system.



### **COMPONENTS OF AN EFFECTIVE PAPER RECYCLING PROGRAM**

- Active involvement of property management;
- Good equipment (desk-side containers, larger bins for areas of high paper generation);
- Regular service;
- Clear information provided to participant;
- Monitoring, and reporting of results back to participant

### **SETTING UP A RECYCLING PROGRAM**

The first step in setting up a recycling program, or improving an existing program, is to talk to your property manager. From an environmental point of



view, a full-service property management-run program is best, because it will divert the most paper from the waste stream.

Point out the benefits of a full-service program to your property manager.

**Financial Benefits.** Up to 50 percent of office waste is recyclable paper. Property management will gain revenues from the sale of the recycled paper and savings from reduced waste collection and disposal costs.

**Environmental Benefits.** Diverting usable paper from the waste stream helps prolong the life of our landfill sites. Recycling paper also reduces the need for virgin wood pulp (if wood waste is not used, 1 tonne of paper production requires 19 trees). Producing paper from recycled paper requires less energy and creates less air and water pollution than using virgin pulp.

**Public Profile.** Point out to your property manager that many Canadians, including yourself, are concerned about the environment and prepared to support organizations which share that concern. Implementing an effective recycling program is a tangible way for property management to demonstrate its commitment to the environment.

If property management is genuinely not interested in the benefits of operating a full-service recycling program or feels that your office is too small to make the effort worthwhile, you may have to run your own program or compromise with a shared program. But chances are that the prospect of 50 percent waste savings, combined with enough pressure from tenants, will sell them on the idea.

The following tasks are involved in setting up a paper recycling program. Depending on the size of your office, your property managers may do this work themselves or contract it out.

**1** Estimate quantities of recyclable paper produced. Look at waste disposal records (if available), and carry out a visual inspection.

**2** Calculate costs (e.g., equipment, staff time) and benefits (e.g., reduction in waste disposal costs, environmental benefits). Ask local paper collection companies and brokers about collection equipment and arrangements, minimum quantities, grading and quality requirements, etc.

**3** Discuss the program with cleaning staff. Existing cleaning staff may be trained to collect recyclable paper, or additional staff may be hired.

**4** Prepare for program launch. Negotiate final arrangements with a paper broker; order collection equipment; produce memos and flyers to explain the program to employees; and train cleaning staff. Brief staff members who produce large amounts of paper waste (e.g., photocopy and word processing staff).

**5** Launch the program. Deliver baskets/bins and disseminate information to all employees.

**6** Monitor the program and communicate results back to participants by memos, articles in organization newsletters, etc. Let people know that their efforts are making a difference. If records show a decline in yields or paper quality, address the problem promptly.

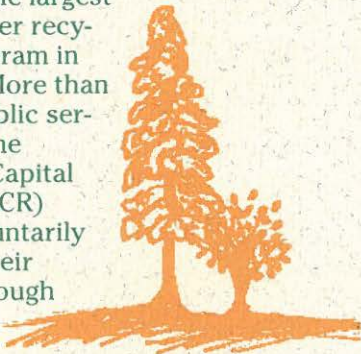


## Papersave: A Recycling Success Story

Papersave, the federal government fine paper recycling program, was established in 1976. Since then, it has become the largest office paper recycling program in Canada. More than 88,000 public servants in the National Capital Region (NCR) alone voluntarily recycle their paper through this program. In

1990, these volunteers collected more than 11,000 tonnes of used office paper, saving the equivalent of more than 200,000 trees. Papersave is administered jointly by Supply and Services Canada, Public Works Canada and Environment Canada.

For more information on Papersave and on the blue basket system, call the Papersave Hotline at (613) 235-5303.



Since the 1989 introduction of a recycling program at NORTHERN TELECOM'S plant in Brampton, Ontario, solid waste sent to landfill has been reduced by 64%. In total, more than 7,000,000 kg of fine and computer paper, corrugated cardboard, plastics, wood, pop cans, glass and newspapers have been collected. Efforts are now focused on waste elimination by partnering with customers and vendors to eliminate packaging material.

## The Gazette

Early in 1991, reporters and editors of the MONTREAL GAZETTE signed a petition in their newsroom calling on the Gazette to recycle newspapers used within the building. They set up a recycling program for their old newspapers and the amount of garbage being hauled away dropped by 20%. They then expanded the program to include office paper. Within the first month they collected 1,182 kg of this paper and their garbage output dropped another 30%.

## Bell

A BELL CANADA building in Ottawa teamed up with the Salvation Army for a unique pilot recycling project. The Salvation Army sorts and then sells paper collected from the blue boxes to recyclers to raise funds and create jobs.



# OTHER Paper Waste

*In addition to fine paper, other types of paper (newspaper, envelopes, magazines and other glossy publications, telephone directories, old corrugated cardboard and other packaging) also end up in office garbage. Although the quantities are generally lower than those of fine paper, there are still many opportunities to reduce, reuse and recycle these "wastes".*



## REDUCE

Eliminate unnecessary subscriptions to newspapers, newsletters and magazines. You can reduce the amount of "junk mail" that your office receives by asking the Canadian Direct Marketing Association to remove your name(s) from some mailing lists (see chapter 12). When subscribing to publications, include a note requesting that your name not be traded to other mailing lists. Review products and supplies you commonly order. Could packaging be reduced? Talk to personnel responsible for ordering supplies about buying office supplies in bulk to reduce waste. Write to the editors of your favorite glossy magazines to encourage them to recy-



cle their glossy paper or switch to a more readily recyclable paper.



## REUSE

Install a newspaper "filing rack" library; share newspapers and telephone books with co-workers.

Reuse cardboard boxes in the office or at home.

Reuse envelopes and file folders. Order reusable envelopes for inter-office mail. Set up office collection boxes for used envelopes and file folders in your supply area.

Set up an "office library" for your personal paperbacks, magazines and newspapers. You'll end up buying fewer "disposable" books, and you and your colleagues will be introduced to new authors.



## RECYCLE

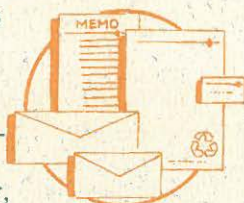
Paper other than fine paper is generally less valuable, so the feasibility of setting up recycling programs will depend on quantities, markets and individual initiative.

**1** Start by estimating the quantities of "other" paper types generated in your office. A quick look in waste baskets at the end of the day will give you a rough idea. Check with local paper brokers and buyers to determine the terms and conditions for collecting these paper types (e.g., minimum quantities, quality requirements). Calculate the costs (e.g., equipment, staff time) and benefits (e.g., reduction in waste disposal costs, environmental benefits) of collecting these papers. If a formal recycling program looks feasible, promote the idea to management.



**2** Talk to your property managers to see if they're interested in setting up a recycling program. If they're already involved in running a fine paper recycling program, adding a collection for other paper may not be too difficult. If they're not interested, let them know that you're planning to set up a system for your own office. Unless your office generates an unusually high quantity of glossy paper or newspapers, chances are you'll be able to collect most "other" paper types by setting up bins in a central area and encouraging employees to take their newspapers and magazines there. Be sure that fire regulations and other requirements are met.

**3** Once the depots have been established, circulate and post memos to explain where employees should take their "other" paper types. Be sure to stress that these papers should not be mixed in with the fine paper stream. Kept separate, glossy papers and newspapers may have value. Mixed in with fine paper, they are considered contaminants and decrease the value of the fine paper.



Depending on your offices' circumstances, the level of management interest and paper markets in your area, it may or may not be practical to set up a formal collection system for "other" paper types. If your municipality operates a "blue box" recycling program, it may be sufficient to encourage employees to take newspapers home for recycling.



The QUAKER OATS COMPANY OF CANADA blue box program uses over 250 bins to collect newspapers, magazines, corrugated cardboard and fine paper. This program is supported by a poster campaign explaining what can and cannot be recycled. The company has also eliminated the use of non-recyclable carbon paper. In total, 3R's measures have resulted in savings of about \$287,000.

## The Gazette

Recycling at the MONTREAL GAZETTE has found its way into the washrooms. In mid-1991 they switched to toilet paper made of recycled fibre. Paper towels (again made of recycled fibre) are being phased out to make way for hot-air dryers that stop when you move your hands away. This move alone is expected to save 25 tons of paper a year.

## Canada Trust

Early this year CANADA TRUST initiated the "Say Goodbye to Payment Envelopes" program by sending a notice to their credit card customers with the monthly statement stating that unless a request for continuation of receiving payment envelope is received, the envelopes will be discontinued to reduce paper waste.



# OTHER Office Products

*Paper accounts for by far the greatest proportion of waste produced in an office. However, the same principles of "reduce, reuse, recycle" can be applied as well to waste from other products and supplies. In addition, in keeping with the principles of environmentally responsible management, chemical-containing office products should be handled responsibly to minimize environmental impact.*

As with all aspects of office greening, there are many things that individuals can do to reduce waste and environmental impact. In addition, there are other changes that concerned individuals can encourage management, property management and suppliers to make.

## REDUCE

Make a conscious effort not to waste office supplies. Ask yourself, do you really need it?

Encourage those responsible for supplies to order in bulk where possible and to purchase "lasting" and durable high quality supplies (e.g. paper clips vs. staples).

Encourage avoidance of over-packaged goods, such as "blister" and bubble-wrap packages or single-serving containers

(e.g. creamers, sugar packs). These contain a small amount of product relative to packaging.

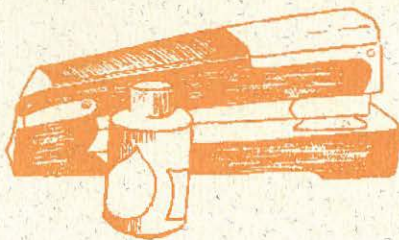
Where possible, encourage suppliers to ship goods in reusable containers.

## REUSE

Use reusable products instead of disposable ones (e.g., rechargeable batteries instead of single-use batteries).

Reorganize office supply cupboards to provide a central deposit for used "old, but still good" office supplies.

Where possible, return packaging to product manufacturers for reuse.



## RECYCLE

Investigate the feasibility of having photocopier and printer toner cartridges "re-manufactured". If this isn't feasible with the equipment you have, ask those in charge of supply to consider "recycling opportunities" when making decisions about new equipment.

Encourage the purchase and use of products bearing the Environmental Choice EcoLogo<sup>®</sup> (see chapter 9).



## CHEMICAL PRODUCTS

The handling and disposal of hazardous materials are covered by provincial and federal regulations, and are generally supervised by occupational

health and safety personnel and facilities managers.

Most office workers are not directly involved in handling hazardous materials or wastes such as

solvents, acids; if you are, you should have received training in proper procedures through the Workplace Hazardous Materials Information System (WHMIS). Wastes defined under federal and provincial regulations as hazardous must be disposed of in accordance with those regulations. If you have any questions about how hazardous materials and wastes are handled in your office, contact your health and safety officer.

Although a surprising number of products that we use every day in the office are not considered "hazardous" under existing legislation, they do contain chemicals that can be harmful to the environment if not handled and disposed of with care. For example, many pens, markers, correction fluids and office equipment cleaning products contain minute quantities of toxic substances. Although the amounts involved are small, the cumulative effect of these substances on the environment can be significant.



## Bell

BELL CANADA has initiated a program to recycle toner cartridges used in the company's laser printers. The new recyclable toner cartridges are also reusable and replace the disposable cartridges.



The HOUSE OF COMMONS has set up a collection system for dry cell batteries; to obtain dry cell batteries from the stores shop, employees must bring back the used batteries. The used batteries are stored in a special container in the stores shop and collected on a regular basis by a hazardous waste company.



In the long term, the best approach to dealing with hazardous and environmentally harmful materials is to reduce their use as much as possible. For example, water-based correction fluids, pens and markers are becoming more readily available, as are less toxic inks, adhesives and cleaning products. As an individual, there are a number of things you can do.

1. Look into the types of products you use. Through WHMIS, product



suppliers are obliged to provide Material Safety Data sheets listing any harmful ingredients in a product to

be used in a workplace. Your health and safety officer should have these sheets for the products you use. Check with your product procurement personnel; to see if less toxic alternatives may be available. For example, products intended for children, such as markers, are usually non-toxic by design.

2. Never dispose of chemical-containing products down drains or toilets, or in the regular garbage system. If in doubt about how to dispose of something, call your health and safety officer.

3. Encourage your facilities management personnel to establish a collection system for wastes and spent containers from products containing environmentally harmful materials. Ideally, these wastes should be collected separately by trained personnel (similarly, many cities now collect "household hazardous wastes" separately from regular garbage), stored in appropriate containers in a secure room, and collected by a registered hazardous waste hauler for disposal in a secure hazardous waste facility.

4. Check your local supplier for computer ribbon re-inking services or toner cartridges re-filling for photocopier or laser printer.

5. Discourage the use of products in aerosol cans. Not only do these contain a small amount of product relative to packaging, but they can also represent a safety hazard to waste management personnel because the cans may explode if heated or improperly handled.

6. Dry cell batteries contain minute quantities of heavy metals such as lithium and mercury. In a conventional landfill site, these heavy metals can leach out and contaminate groundwater, so batteries should be disposed of in secure hazardous waste facilities.

For more information on WHMIS, call (613) 953-4763.

## The Art of Greening

Graphic arts studios, drafting departments and photocopying or printing operations present special environmental challenges. Many of the products



used in producing artwork, and the chemicals used in printing and photocopying, contain hazardous and environmentally harmful ingredients. Through WHMIS, personnel in art, drafting and photocopying/printing operations



should have received training on the proper use and disposal of chemical products which they use in their work. Product containers should be clearly labelled, and work areas should be properly ventilated. Waste containers of hazardous chemicals should be stored in a controlled area, regularly collected by a licensed hazardous waste hauler, and disposed of as hazardous waste in a secure facility. If you have questions about chemical handling procedures, contact your occupational health and safety officer.

- Properly seal press-wash and fountain-solution containers and drums to prevent evaporation and toxic fumes and save on solvents.

- For camera work, use the most suitable size of film for the job (use every square millimeter of film). Point out to customers the savings from art prepared from a minimum number of shots and have work submitted on boards with minimal margins.

- Where appropriate, use silverless daylight films.

- Install silver recovery units for fixers and wash baths or use a silver recovery pick-up service. Some service companies will install and maintain a unit in your shop for free in exchange for a negotiated proportion of the silver recovered.

- Sell film and aluminum plates to a scrap dealer or recycler.

- Use reusable cotton rags, wherever possible for cleaning jobs; have them laundered by a rag cleaning service.

- In a large shop, an in-house solvent recycling unit may be practical for

cleaning press wash. Otherwise, use a solvent recycling service, which will also provide you with clean, recycled solvent.

- Encourage customers to consider recyclability when specifying print jobs: use vegetable-based inks; use consistent and recyclable (uncoated) cover and interior stock; avoid heavily coloured paper; use binding techniques that are compatible with recycling (e.g., use staples rather than plastic or glued binding); and avoid plastic "windows".



# MEALS & Coffee Breaks

*How we spend our breaks at the office also affects the environment. The same principles of environmentally responsible management can be applied, whether you have kitchen facilities in your office or dine out.*

## REDUCE

Avoid disposable dishes, single-serving creamers and sugars, etc. If you use a coffee service, inform them of your office's desire to reduce packaging; refuse individual coffee pouches. Stock milk, sugar and condiments in bulk to eliminate the need for single-serving packages.

If you bring your lunch to work, pack a "garbage-free" lunch in a reusable container (e.g., a washable rigid plastic container, a milk bag washed and slit open at one end or nylon or cloth lunch bag). Bring a drink in a thermos or reusable glass bottle instead of using single-serving juice boxes or milk cartons. Use a cloth napkin instead of a disposable paper towel or serviette.



If you eat out, urge restaurant and cafeteria managers to eliminate the use of disposable dishes and single-serving containers. Make your voice heard. Take your business to "green" establishments.

## REUSE

Use reusable coffee cups and keep extras on hand for visitors.

If your office has a kitchen, use refillable soap containers. Encourage the purchase of liquid cleaning products in concentrated form. Add water as required and store in bulk containers; to use, refill small portable containers.

Consider using reusable tea towels in your kitchen. Ask for volunteers to wash these regularly. Find out about requirements from appropriate health protection agencies.

## RECYCLE

If you and your co-workers reduce and reuse dishes and containers, your office should produce very little recyclable glass and metal waste. Most of this type of waste is generally produced in food services facilities (cafeterias, restaurants, etc.).

Depending on factors such as the size of your office, local materials markets, it may or may not be practical to set up a collection program for these wastes.

In the short term, if there is a residential recycling program in your area, the easiest approach may be to set up a central container for these wastes and volunteer to take them home for recycling.



If quantities merit, talk to property management about setting up a formal collection system for used glass and cans. In most cases, a fairly simple system can be set up if there is a local broker or waste hauler willing to accept the materials collected. The easiest method is to set up bins for glass and cans in food services areas and post signs explaining what should and should not be placed in the bins. A memo can be distributed to all employees explaining the collection system, and employees can be encouraged to take any recyclable container waste to the bins. Your property manager (landlord) should pay for any pickup service charge; costs will be offset by disposal savings that you generate through your volunteer effort.

If your office has a kitchen, collect compostable food waste in a covered container for a volunteer to take home daily.



Composting of restaurant and cafeteria food preparation wastes is not yet well established. You should, however, encourage the managers of any restaurants and cafeterias you frequent to investigate this option. Municipal authorities, local farmers or gardening enthusiasts may be willing to collect compostable wastes.

Used frying oil can be rendered for reuse in pet food and chemical products. Encourage the managers of your favorite restaurants to give their used oils to local renderers.

When renovating your office, consider adding a kitchen with a refrigerator, sink, dishwasher and microwave oven to encourage staff to bring their own "garbage-free" lunches.



Both the QUAKER OATS COMPANY OF CANADA and the HOUSE OF COMMONS have replaced styrofoam cups and plates in favor of porcelain cups and dishes. The cafeteria at QUAKER OATS has replaced individual condiment packs of cream, vinegar, ketchup, mustard, relish, stir sticks, salt and pepper with refillable bottles and spoons. These materials have resulted in a saving of \$6,000 in the first year including the cost of a new dishwasher and detergent. Bottle and can recycling are also available at the cafeteria. Patrons in the HOUSE OF COMMONS cafeterias are encouraged to use reusable dishes and cutlery. The catering services has almost completely eliminated the use of disposables. This change at the HOUSE OF COMMONS translates into the elimination of 40,000 polystyrene cups per month. "Greening the Hill" coffee mugs, equipped with lids, are available to all Parliament Hill employees.



Kitchen waste at the MUTUAL GROUP'S Waterloo cafeteria is picked up weekly by a local farmer who uses it for pig feeds.

## B.C. HYDRO

B.C. HYDRO'S 6000 employees and B.C. TEL'S 1400 workers were each issued a reusable mug to cut down on their use of disposables in their cafeterias.



# CONSERVING Energy & Water

*In a green office, all resources, including energy and water, should be prudently managed. Again, there are many actions you can take yourself, while others require the involvement of facilities management staff.*

## CONSERVING ENERGY

Encourage management to endorse a policy encouraging minimizing energy use.

Turn off desk lights and other equipment when you leave your office. Encourage others to do the same. Post signs by commonly used appliances (e.g., Please turn this off when you've finished. Last one out, turn this off).

Find out from your suppliers what are the most appropriate ways of turning off computers and similar electronic equipment. Consider the use of power bars to shut off your equipment.

Consider the new compact fluorescent lights, which provide the same light as higher wattage incandescent bulbs yet use only a fraction of the energy; although they're a bit more expensive, their life span is five to nine years of heavy use. Halogen lights are also efficient; the bulbs are similar to incan-

descent ones, but they produce a white light and last two to four times longer.

Long-life incandescent lights are useful for hard-to-reach places, where changing light bulbs can be difficult and expensive. But, while these incandescent lights last a long time (from 1,500 to 10,000 hours compared to 750 to 1,000 hours for normal bulbs), they put out up to 30 percent less light while using the same amount of energy.



If your office is equipped with blinds or curtains, shut them at the end of the day in winter to keep heat leakage down. In summer, use them to prevent your office from overheating.

If there is an opportunity, introduce the use of lighting timers or motion detectors.

Take the stairs rather than the elevator whenever possible.

## EQUIPMENT AND BUILDING MODIFICATIONS

If your office is about to buy a new appliance, make sure it's energy-efficient. Check with "Energuide" directories, a free publication from Energy, Mines and Resources.



Purchase timers for appliances (e.g., coffee machines) and office equipment (e.g., laser printers) that need to be left on before or after hours. Timers can be set up to turn off power during the night. If your office has a kitchen, consider purchasing a microwave oven to reheat lunches; it uses half the energy of a conventional oven.

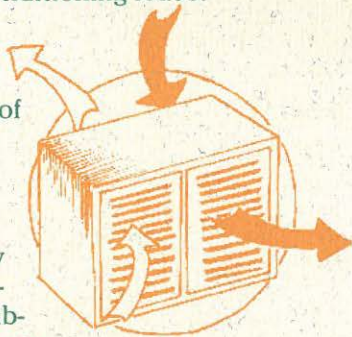
Encourage your building owner or manager to install energy-efficient lighting. Also encourage the installation of individual controls for overhead lights so that you can turn your light off when it is not needed.

Encourage property management to increase the differential between night and day thermostats (thermostat settings should be lower for night).

Encourage management to modify dress codes so that building temperatures can be set higher in summer and lower in winter without causing employee discomfort.

When redecorating or refurbishing offices, install blinds and window shades to reduce summer over-heating and lower air-conditioning loads.

When planning the renovation of office facilities, take advantage of the opportunity to incorporate more substantive energy conservation measures, such as increased insulation levels, better air-sealing and upgraded heating and



An Ontario Hydro audit was conducted at QUAKER OATS COMPANY OF CANADA in Peterborough. As a result, they are moving to more efficient fluorescent lighting. Motion sensors have been installed on lighting circuits in conference rooms and in their mainframe computer room. New disk technology has significantly reduced their power consumption. They have also lowered water temperatures, installed low flow shower heads, lights on timers and will be installing hand dryers.



CANADIAN TIRE has been conserving energy for many years by insulating the stores to a minimum of R-20, using low leak dampers, specifying power savers on the cooling units for free cooling during the cooler months for spring and fall, and using night set-back thermostats on all heating, ventilation and air conditioning (HVAC) units. More recently, Canadian Tire has switched to H.I.D. (High Intensity Discharge) energy efficient lighting in their new warehouse-type retail store.

## Bell

BELL CANADA has initiated power saving programs in their buildings. A competition has even been set up between some buildings to see who can reduce energy consumption the most during a year. One building, by installing such things as motion detectors to turn lights off, reducing the capacity of their hot water tank from 5,000 litres (1,100 gallons) to twin 364 litres (80 gallons) and other energy conservation measures, was able to cut consumption from 1,600,000 btuh to 500,000 btuh.



ventilation systems. Investigate the potential of passive solar heating and natural ventilation.

### **GROUNDS MAINTENANCE**

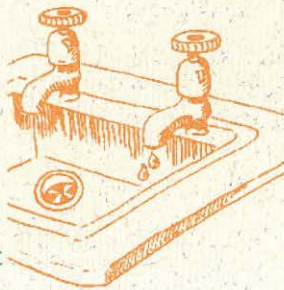
Encourage those responsible to water the grounds only when necessary and at the right times of day. Discourage their use of chemical fertilizers, herbicides, and pesticides.

You can introduce a compost pile for clippings and rakings.

### **REDUCING WATER USE...**

Be sure to always turn off taps tightly so they do not drip, and encourage others to do the same.

Watch for leaks around plumbing fixtures and report them promptly to appropriate repair staff.



### **EQUIPMENT AND BUILDING MODIFICATIONS**

Encourage property management to install water-conserving devices, such as faucet aerators, tap flow-restrictors and toilet water-savers.

When facilities are being renovated, encourage property management to install low-water-using taps, toilets and showerheads where applicable.

"Energuide" directories of appliance energy consumption ratings and other publications relating to energy conservation may be obtained from:

#### **Publications Office Energy, Mines and Resources Canada**

580 Booth Street, 15th Floor  
Ottawa, Ontario K1A 0E4

Tel: (613) 995-2943

Fax: (613) 952-8169



# Transportation

*Pollution from motor vehicles is a significant contributor to acid rain, global warming (the "greenhouse effect") and urban smog. As an individual, you can help to address these problems by changing your form of travel to and from work. You can also encourage your organization to reduce the need for work-related travel and to improve the efficiency and emissions of its vehicle fleets.*

## INDIVIDUAL ACTIONS AND POLICY CHANGES

- Use public transit wherever possible, and encourage others to do the same. If bus service to your office location is poor, assign an employee to lobby the transit company for route changes. Provide the transit company with a list of people who would use the bus if service were better.

- Start a car pool, and encourage others to do the same. Post a map or circulate a questionnaire to find out which employees could ride to work together.

- Encourage management to provide an incentive for car pools by providing parking or reducing parking fees for multi-passenger vehicles.



- If you must use a vehicle, don't let it idle for more than a minute. Idling uses

more fuel than restarting it and creates needless polluting emissions. Use a fuel-efficient vehicle and keep it well maintained. Use Environmental Choice certified re-refined motor oil.

- Walk to and from work, if possible, and when you go out for lunch. Encourage others to do the same.



- Bicycle to work, and encourage your co-workers to follow suit. Post maps of bicycle routes on a central notice board.

- Use the telephone or fax instead of couriers whenever possible. For short-distance courier deliveries, encourage the use of bicycle courier services.

- Encourage policies to favor teleconferencing instead of travel wherever possible.

- Set up a Staff Transportation Efficiency city map on a central bulletin board, colour-coded to indicate which employees live where. This is an excellent way for larger organizations to match up car pooling, walking and cycling partners.

## EQUIPMENT AND BUILDING MODIFICATIONS

Encourage facilities management or property management to install secure, covered or indoor bicycle parking. Racks should accommodate all sizes of bicycles (including mountain bikes) and be of good quality so as not to damage the bicycles.





Environment  
Canada

An employee of ENVIRONMENT CANADA Whitehorse Regional Office donated a bicycle for her fellow employees to do work errands on. Co-workers have hopped on this initiative to reduce fuel consumption and air pollution, and at the same time to get some exercise.

## BELL NORTHERN RESEARCH

BELL NORTHERN RESEARCH in Ottawa has provided bicycle racks and showers to encourage staff to bicycle to work.



PACIFIC RIM NATIONAL PARK employees in Ucluelet have purchased a van and converted it to propane in order to car pool to work. A crew cab and a private vehicle of the Green Committee chairperson have also been converted to propane for lower emissions and savings in fuel cost.



THE HOUSE OF COMMONS has converted three vehicles to operate on natural gas (a five-tonne truck and two shuttle buses), producing fewer emissions. The cost savings and environmental improvements have been so great that the House is looking at converting its entire fleet to natural gas.

Encourage facilities management to provide shower facilities and lockers for staff who walk, run or cycle to work.

## VEHICLE FLEETS

Ensure that all fleet vehicles are well-maintained and that a fleet management information system is in place.

Encourage fleet managers to use Environmental Choice certified re-refined motor oil, to recycle batteries and solvents and to use retreaded tires (particularly for trucks), if they are not already doing so.

Encourage fleet managers to purchase high-efficiency vehicles and to use the most fuel efficient vehicle possible to do the job.

Encourage fleet managers to convert high-mileage vehicles to natural gas or propane. Both of these alternative fuels produce fewer emissions than gasoline; natural gas is particularly clean-burning. Many commercial fleet owners have realized substantial savings using alternative fuels. Information on vehicle conversion is available from Energy, Mines and Resources (EMR) (see chapter 12).



# USING Your Buying POWER

*Improving office operations often involves changing the types of products used and purchased. Even if you're not directly involved with purchasing, you can still influence what is bought by speaking with the people in purchasing departments and with property managers. Ask them about buying environmentally appropriate products. Ideally, your organization should adopt a policy to encourage the purchase of such products.*

## WHAT ARE "ENVIRONMENTALLY APPROPRIATE" PRODUCTS?

Environmentally appropriate products are those that best meet the aims of environmentally responsible management (i.e., using resources efficiently and minimizing chemical contamination). Products approved under the

Environmental Choice<sup>M</sup> Program have been exhaustively investigated and found to be the least environmentally damaging in comparison to other available products of the same type.



## THE ECOLOGO<sup>M</sup>: AN ENVIRONMENTAL STAMP OF APPROVAL

Environment Canada's Environmental Choice Program was established to help consumers make environmentally sound decisions and to encourage commercial development of less harmful products. A Board appointed by the federal Minister of the Environment (with members from consumer groups, industry, science and environmental law) guides the development of standards for Environmental Choice product specific guidelines. Products considered to be least harmful to the environment are licensed to display the EcoLogo, the federal government's environmental seal of approval. After standards are set for a particular product category, a company can submit its product to the Canadian Standards Association for testing to determine whether it meets the Environmental Choice standard.



To date, Environmental Choice guidelines have been developed for product categories including: fine paper from recycled paper; plastic products using recycled plastic; construction material consisting of recycled wood-based cellulose fibre; a recommended level of re-refined oil in the base stock for lubricating oil; low-pollution water-based paint; solvent-based paints; zinc-air batteries; heat recovery ventilators; newsprint from recycled paper; miscellaneous products from recycled paper; and cloth diapers. In all, there are guidelines for 19 categories of products. To date, 98 companies have been licensed to use the EcoLogo. Other Environmental Choice product



categories are constantly being developed. The program encourages manufacturers and consumers to suggest categories. Encourage your suppliers and purchasing staff to look at the types of products used in your office and suggest potential product categories to the program (see chapter 12).

In your day-to-day work, you probably use many products for which there are not yet any Environmental Choice alternatives. This doesn't mean that you shouldn't consider their environmental impacts—you can still apply some general principles of environmentally appropriate product selection and encourage your organization's purchasing staff to do the same.

### **GENERAL PRINCIPLES FOR PRODUCT SELECTION**

In general, products should meet as many of the following criteria as possible:

be reusable or contain reusable parts (refillable pens and beverage containers, rechargeable batteries);

be recyclable (uncoated recyclable paper instead of coated, non-recyclable stocks for publications); contain recycled materials (paper products containing post-consumer recycled fibre, re-refined motor oil; EcoLogo products are available for both categories);

make efficient use of resources and energy (water-saving devices for plumbing fixtures; photocopiers capable of double-sided photocopying; energy-efficient lighting);

produce fewer polluting by-products and safety hazards during use and disposal than competing products (low-pollution water-based paints is an Environmental Choice approved product category; natural gas fuel systems for fleet vehicles);

have a long service life and/or can be economically and effectively repaired as opposed to replaced (energy efficient light bulbs; equipment obtained with provision for regular maintenance by supplier).

### **PREFERENCE SHOULD BE GIVEN TO PRODUCT AND SERVICE SUPPLIERS THAT:**

- use products that are environmentally appropriate;
- use resource and energy efficient techniques and recycle their waste products; and
- manage chemicals responsibly and dispose of hazardous wastes in a manner that meets or exceeds the required regulations.

Of course, purchasing staff will have to consider environmental objectives in the context of other requirements of purchasing (i.e., operational requirements, price competitiveness, quality and availability). Wherever possible, however, the purchase of "environmentally appropriate" products should be encouraged.





The Purchasing Management Association of Canada (PMAC) offers a one-day seminar on Environmentally Appropriate Procurement Practices. As well, the Treasury Board Secretariat, Public Service Commission, Canadian Centre for Management Development (CCMD) offer environmental seminars and workshops; and CCMD is incorporating an environmental module into its senior management orientation training. Encourage your organization's procurement personnel to attend these seminars (see chapter 12).

### **ENVIRONMENTALLY RESPONSIBLE PURCHASING: FEDERAL ACTIVITIES**

Federal purchasing policies are established by the administrative Policy Branch of the Treasury Board and carried out by all federal departments. The Corporate Policy and Planning sector of Supply and Services Canada (SSC) is currently examining its policies and practices in light of environmental concerns and acting in liaison with the Environmental Choice program. Mirroring the approach taken by Environmental Choice, the SSC policy will likely be developed on a product-by-product basis. As a first step, products containing chlorofluorocarbons (CFCs) are no longer purchased unless there is no substitute available.

In early 1990, the Canadian Council of Ministers of the Environment (CCME) endorsed a National Packaging Protocol (NAPP) developed by a national multi-stakeholder Task Force. The Protocol recommends six packaging policies for Canada, which are designed to reduce packaging waste by 50% by the year 2000. All government policies and practices affecting packaging are to be consistent with these national policies.

## **Bell**

BELL CANADA has adopted a policy to purchase environmentally-preferable products. The new purchasing "green" clause also extends Bell's preference for conducting business with environmentally-conscious suppliers.

## **GIPPER**

GOVERNMENTS INCORPORATING PROCUREMENT POLICIES TO ELIMINATE REFUSE (GIPPER) is a committee formed in 1989 by Metropolitan Toronto to incorporate environmental considerations into purchasing procedures with a focus on reducing waste. GIPPER is comprised of representatives from different levels of both waste management and purchasing departments of federal, provincial and municipal government and other concerned organizations. The committee has produced a two volumes Directory of Suppliers of Environmentally Sound Products and Services (see Chapter 12). Symposiums on re-refined oils and cleaning products were conducted in the past two years and GIPPER has sub-committees looking into paint, composting and building materials.



## **HELPFUL HINTS FOR PURCHASERS**

Purchasers can exert pressure on suppliers to provide more environmentally responsible products and services.

One way to start is to establish a Statement of Principle, indicating your organization's intention to favor environmentally appropriate products and practices.

Then, send a notice to regular suppliers indicating your organization's intentions. Include a copy of the Statement of Principle with product and service tenders or incorporate a standard clause into tenders and contracts. This will encourage suppliers to suggest environmentally appropriate products and approaches when they bid on contracts.

## **SAMPLE PURCHASING NOTICES AND STANDARD CLAUSES**

A statement of Principle or Practice could read something like this: "It is the purchasing policy of this organization to give preference, where possible, to products that carry the Eco-Logo symbol; contain recycled waste materials or products; or are otherwise environmentally sound (i.e., encourage reduction and efficient use of resources, and minimization of chemical pollution; and are reusable or recyclable)."

A standard clause in product tenders could read: "Preference will be given to suppliers that use environmentally sound packaging practices: for example, that use reusable, returnable or recyclable packaging; packaging containing recycled content; or no packaging."

If your organization has a Statement of Principle that defines environmentally sound products and practices, a standard clause in a service contract could be: "The contractor shall use environmentally sound products and practices in the performance of the work to the extent that they meet acceptable performance criteria".



# COMMUNICATING AND Motivating

*Good communication is vital to the success of any "office greening" effort. Most people are concerned about the environment and want to do their part. Given good information on goals and objectives, clear instructions on how to make changes and positive feedback on the results of their efforts, nearly everyone will participate. On the other hand, without good information and feedback, even the most committed individuals may eventually become frustrated, confused or uninterested.*

Good communication need not be elaborate or expensive. What's more important is that communication be frequent, clear, visible and useful. In a small office, posting simple signs and memos, and providing regular verbal feedback, may be enough to do the job. In a larger organization, you can use existing channels to get your message out. Editors of employee newsletters, for example, are usually glad to have new material.

## WHAT'S IN A NAME?

A good first step is to develop a name for your office greening program. A co-worker with artistic flair could volunteer to design a logo. The visual impact of using this logo and name on all your communications materials, even the simple signs you post reminding people to turn off appliances or use both sides

of the paper, will have a cumulative effect. Although many green actions may not seem significant when viewed in isolation, the combined impact of many actions can be impressive.

## THE GREEN LOOK

Another useful device is a "green office" noticeboard, where helpful hints, memos and progress reports can be posted. Simple charts or graphs can be used to show how many trees have been spared, how much energy saved, and so on. Post your policy statement (from the Board) on the need to achieve environmental excellence and sustainability in every field of activity.

## GREEN TOURS FOR GREEN EMPLOYEES

Keep memos, etc., relating to the office greening program in a binder for reference by new employees. Provide a "green orientation tour" for new employees, so they know how to use the photocopier, coffee maker and other equipment in an environmentally responsible manner, how the recycling programs work, and where to find more information.

## GREEN THUMBS

Provide practical, quantitative feedback to employees on the progress of greening efforts: report how many tonnes of waste they've reduced, how many trees they've saved by recycling paper, etc. Measure progress against a benchmark (see chapter 11).

## THE GREEN HOTLINE

In large organizations, it's a good idea to set up a "green hotline" to provide advice and answers to employees'





The environmental committee of the MUTUAL GROUP chose Valentines Day as the kick-off for the recycling projects and challenged employees to "put their hearts into it".

## The Gazette

The MONTREAL GAZETTE initiated the "Green line" telephone hotline in September of 1991. The general public calls in with questions or suggested ideas which are published.

## Stora Forest Industries Limited

In Nova Scotia, STORA FOREST INDUSTRIES LIMITED, with over 1,000 employees, invested \$400,000 in an employee awareness program for a company-wide environmental policy. The program aim was to heighten employee's awareness of current environmental issues. Stora's entire staff, 200 contract workers, spouses and other interested groups participated in 50 workshops within 4 months in 1990. Most of all, the awareness program has boosted employee morale and the company's image in the local community.



Ontario Hospitals have a free system of sharing information about waste reduction called the Health Care Environment Network. It is run out of the public office of Toronto's SUNNYBROOK HEALTH SCIENCE CENTER.

questions. Providing one number to call will prevent employees from wasting time or becoming frustrated seeking answers, and will also keep managers and facilities staff from being bothered by frequent calls. The hotline should be staffed by someone actively involved in the greening program. This person should keep a log of all inquiries received. Questions that keep popping up can then be answered in newsletter articles, memos or notices on the green notice board. Establish a suggestion box for "green" suggestions. Consider a "Green Employee of the Month" award.

## THE MEDIUM IS THE MESSAGE

Remember that "the medium is the message" communications should be consistent with the principles of environmentally responsible management. Target communications so that you don't create waste by producing brochures or flyers that people won't use. Make sure printed materials are recyclable.

## GREEN TIPS

Encourage your co-workers to carry the environmental message into their personal lives. Hold regular lunchtime get-togethers with colleagues to trade "green tips". Keep the environment in mind when purchasing gifts for office-related occasions, for example, a gift certificate to a diaper service makes a good baby shower present.

## THE GREEN LIGHT

Be persistent. Remember, we're all bombarded daily with advertisements that encourage consumption and waste. Make sure the green message is heard, too.



# Business as USUAL

*The green office is here to stay; Environmentally responsible management is a necessary and integral part of a sustainable future.*

*Operating a long-term, sustainable green office requires more than just an initial effort to start up waste reduction or chemical management programs. It also involves monitoring and maintaining green programs and policies and constantly looking for further ways to improve.*

Track quantitative information on reduction in waste volumes, reduction in new products purchased, (paper, chemicals, office supplies) total quantities of materials recycled, etc. Tracking and documenting waste reduction, cost savings and so on can strengthen the case for employees putting some time into greening.

Where possible, establish baseline data at the outset, before you make changes, so that improvements can be tracked. Depending on the size of your organization and the level of management involvement, baseline studies could range from simple reviews to formal studies and audits conducted by facility managers or outside consultants.

If monitoring information indicates that the greening effort is wanting (recycling yields declining, paper consumption increasing, etc.), act quickly. Look care-

fully at operations to determine where the problem is occurring. It may be simply that employees need more positive feedback, or it may be related to more complex equipment and infrastructure problems. Quick troubleshooting will help you turn things around before old, wasteful habits set in again.

Keep up-to-date on environmental developments and set up employee environmental training courses.

Use the quantitative information on green accomplishments to provide positive feedback to employees through memos, bulletins, newsletter articles, etc. People will be more motivated if they are aware of the combined effect of the many small changes they're making.



Build on your initial successes. Use the revenues from profitable programs (e.g., fine paper recycling programs) to finance less profitable waste reduction measures.

Continue to work toward longer-term improvements (e.g., ones requiring significant changes to buildings and processes, or significant investment). Make environmentally responsible management a part of the everyday way your organization does business.

Above all, keep smiling. This is good work and we're happy to do it.



# Green Office CHECKLIST

*The goal of an environmentally responsible office is to make the most efficient possible use of resources and reduce waste in order to minimize negative impacts on the environment. Reduced consumption and waste translate into financial savings. In nearly all cases, any initial expenditures needed to transform an office into one that is "green" are offset by the resulting long-term savings.*

USE THE FOLLOWING  
STANDARDS TO SEE  
HOW YOUR OFFICE  
FARES.



## GENERAL PRACTICES FOR ALL EMPLOYEES

☒ Produce only double-sided documents, thereby cutting paper consumption by up to 50%.

☐ Collect paper that has previously been used on one side and reuse it within the office. Applications include fax messages, draft documents and note pads. To avoid confusion, the previously used, irrelevant side is stroked out.

☐ Circulate documents and post notices on a central memo board rather than distributing multiple copies.

☐ Edit documents on-screen rather than printing unnecessary draft copies.

☐ Ensure that all publications meet environmentally responsible printing standards, such as using vegetable-

based ink or paper with the highest percentage of post-consumer recycled paper content.

☐ Return plastic cerlox bindings to the print shop for reuse.

☐ Use electronic mail for internal distribution, in place of hard copies.

☐ Use voice messaging to cut down on paper messages.

☐ Rejuvenate laser printer toner cartridges. A list of rejuvenating companies approved by the Canadian General Standards Board and with federal standing offers is available through Supply and Services Canada.

☐ Regularly review subscriptions and circulation lists and ensure that they are accurate and still appropriate.

☐ Reduce fax-related paper waste at both ends by using a fax cover sheet that is:

☐ reusable (a laminated sheet, with a dry ink pen that can be easily erased); or

☐ printed on paper previously used on one side;

☐ designed with space to list multiple recipients;

☐ designed with space for a short message (which is sometimes all that is required);

☐ on only one half or one third of a page (rather than a full 8 1/2" x 11" sheet).

☐ Follow letter and memo formats that minimize unused space on each page (for example, narrow margins). Recycle fine paper that cannot be reused.



## BREAKS & LUNCHES

- ☐ Use reusable cloth or stainless steel coffee filter in office coffee makers.
- ☐ Use personal mugs for coffee at your desk and at internal meetings, with additional mugs available for visitors to the office.
- ☐ Recycle glass, cans, newspapers and corrugated cardboard.
- ☐ Turn off lights when not in use and computer equipment at the end of the day, to minimize energy consumption.

## OFFICE SUPPLIES

When purchasing supplies, preference is given to the following.

- ☐ Reusable and durable supplies, such as rechargeable batteries and mechanical pencils.
- ☐ Products with the maximum post-consumer recycled content available. In the case of paper products, unbleached, non-deinked products are favored. This applies to all paper products, including envelopes, copy paper, forms and stationery.
- ☐ Products that meet Environmental Choice standards.
- ☐ Products with minimal packaging, including, for example:
  - ☐ Bulk coffee, rather than individually portioned packages;
  - ☐ Bulk cream and sugar.

## EQUIPMENT & FACILITIES

Office is equipped with the following.

- ☐ Bond paper fax machines. These use regular, recyclable paper which files easily and won't fade. Bond paper is significantly cheaper than thermal, rolled fax paper.
- ☐ Photocopiers with automatic double-sided capabilities so that double-sided copies can be made quickly and easily.
- ☐ Photocopiers with an energy-saving automatic stand-by feature.
- ☐ Printers with double-sided capabilities.
- ☐ An accessible area for used supplies such as binders, scissors, padded envelopes and file folders.

*When requirements arise for items such as office furniture and larger equipment, check the warehouse stock for used items first. If purchases must be made, opt for equipment that is durable and can be easily repaired.*

*When seeking services, preference should be given to contractors who demonstrate exemplary environmental standards in their own operations.*

## OFFICE VEHICLES

- ☐ Use only re-refined motor oil (preferably Environmental Choice certified).
- ☐ Are equipped with alternative fuel or dual fuel system to allow the use of propane or natural gas.
- ☐ Are serviced by a garage that recycles used oil and batteries and recovers CFCs when servicing air-conditioning equipment.



# WHERE to get HELP

*For information and publications on waste management issues, contact:*



ENQUIRY CENTRE  
COMMUNICATIONS  
DIRECTORATE  
ENVIRONMENT CANADA  
OTTAWA, ONTARIO  
K1A 0H3

Tel: (819) 997-2800  
Outside Ottawa: 1-800-668-6767  
Fax: (819) 953-2225

■ For more information on the Code of Environmental Stewardship for the federal government and programs to assist departments in achieving the goals of environmentally responsible management, contact:

**Office of Environmental Stewardship**  
Environment Canada  
Ottawa, Ontario K1A 0H3  
Tel: (819) 953-0608  
Fax: (819) 953-4190

■ For information on the Environmental Choice Program and "EcoLogo" products, contact:

**Environmental Choice Program**  
Environment Canada  
107 Sparks Street, 2nd Floor  
Ottawa, Ontario K1A 0H3  
Tel: (613) 952-9440  
Fax: (613) 952-9465

■ For general information about House of Commons activities and initiatives, contact:

**Environment Coordinator**  
House of Commons  
151 Sparks Street, Suite 712  
Ottawa, Ontario K1A 0A6  
Tel: (613) 943-1564  
Fax: (613) 943-0479

■ For information on alternative vehicle fuels, contact:

**Transportation Energy Programs**  
**Energy, Mines and Resources Canada**  
580 Booth Street, 15th Floor  
Ottawa, Ontario K1A 0E4  
Tel: (613) 995-5415  
Fax: (613) 952-8169

■ For information on WHMIS, contact:

**WHMIS Information**  
Product Safety Branch  
Consumer and Corporate  
Affairs Canada  
Ottawa, Ontario K1A 0C9  
Tel: (613) 953-4763  
Fax: (613) 953-3857

■ PMAC offers a one-day seminar for purchasing personnel, entitled "Environmentally Appropriate Procurement Practices. For more information, contact:

**National Seminars Coordinator**  
**Purchasing Management Association of Canada (PMAC)**  
2 Carlton Street, Suite 1414  
Toronto, Ontario M5B 1J3  
Tel: (416) 977-7111  
Fax: (416) 977-8886



■ To remove your name or your organization's name from unsolicited mail-outs, write to:

**Canadian Direct Marketing Association**

1 Concord Gate, Suite 607  
Don Mills, Ontario M3C 3N6  
Attention: Mail Preference Services

**ENVIRONMENT CANADA  
COMMUNICATIONS OFFICES**

**Atlantic Region**

Publications Officer  
Environment Canada  
Queen Square  
45 Alderney Drive, 15th Floor  
Dartmouth, Nova Scotia B2Y 2N6  
Tel: (902) 426-7990  
Fax: (902) 426-5340

**Quebec**

Communications Directorate  
Environment Canada  
P.O. Box 6060  
3 Buade Street, 4th Floor  
Québec, Québec G1R 4V7  
Tel: (418) 648-7204  
Fax: (418) 649-6140

**Ontario**

Communications Directorate  
Environment Canada  
Room 600  
25 St. Clair Avenue East  
Toronto, Ontario M4T 1M2  
Tel: (416) 973-6467  
Fax: (416) 954-2262

**Manitoba**

Communications Directorate  
Environment Canada  
Room 703, 457 Main Street  
Winnipeg, Manitoba R3B 3E8  
Tel: (204) 983-2021  
Fax: (204) 983-0964

**Saskatchewan**

Communications Directorate  
Environment Canada  
1901 Victoria Avenue, Room 241  
Regina, Saskatchewan S4P 3R4  
Tel: (306) 780-6002  
Fax: (306) 780-5311

**Alberta & Northwest Territories**

Communications Directorate  
Environment Canada  
Twin Atria 2  
4999-98th Avenue, Room 210  
Edmonton, Alberta T6B 2X3  
Tel: (403) 468-8075  
Fax: (403) 495-2478

**British Columbia & Yukon**

Communications Directorate  
Environment Canada  
Kapilano 100, 3rd Floor  
Park Royal South  
West Vancouver, British Columbia V7T 1A2  
Tel: (604) 666-5900  
Fax: (604) 666-4810



## **PROVINCIAL AND TERRITORIAL ENVIRONMENT DEPARTMENTS**

### **Newfoundland**

Department of Environment and Lands  
4th Floor, West Block  
Confederation Building  
P.O. Box 8700  
St. John's, Newfoundland A1B 4J6  
Tel: (709) 576-3394  
Fax: (709) 729-1930

### **Nova Scotia**

Department of the Environment  
5th Floor  
5151 Terminal Road  
P.O. Box 2107  
Halifax, Nova Scotia B3J 3B7  
Tel: (902) 424-5300  
Fax: (902) 424-0503

### **Prince Edward Island**

Department of the Environment  
Jones Building  
11 Kent Street  
P.O. Box 2000  
Charlottetown,  
Prince Edward Island C1A 7N8  
Tel: (902) 368-5000  
Fax: (902) 368-5830

### **New Brunswick**

Department of Municipal Affairs  
and Environment  
364 Argyle Street  
P.O. Box 6000  
Fredericton, New Brunswick E3B 5H1  
Tel: (506) 453-3700  
Fax: (506) 453-3843

### **Quebec**

Ministry of the Environment  
3900 Marly Street  
Sainte-Foy, Quebec G1X 4E4  
Tel: (418) 643-6071  
Fax: (418) 643-3358

### **Ontario**

Ministry of the Environment  
135 St. Clair Avenue West  
Toronto, Ontario M4V 1P5  
Tel: (416) 323-4321  
Fax: (416) 323-4564

### **Manitoba**

Department of Environment  
Community Relations Branch  
1020 - 330 St. Mary Avenue  
Winnipeg, Manitoba R3C 3Z5  
Tel: (204) 945-5763  
Fax: (204) 945-5229

### **Saskatchewan**

Department of the Environment  
and Public Safety  
3085 Albert Street, Room 218  
Regina, Saskatchewan S4S 0B1  
Tel: (306) 787-6113  
Fax: (306) 787-0930

### **Alberta**

Department of the Environment  
Oxbridge Place  
9820 - 106 Street  
Edmonton, Alberta T5K 2J6  
Tel: (403) 427-2739

### **British Columbia**

Ministry of Environment  
Parliament Buildings  
Victoria, British Columbia V8V 1X5  
Tel: (604) 387-1161  
Fax: (604) 387-5669

### **Northwest Territories**

Department of Renewable Resources  
P.O. Box 1320  
Yellowknife, Northwest Territories  
X1A 2L9  
Tel: (403) 873-7420  
Fax: (403) 873-0114

### **Yukon**

Department of Renewable Resources  
P.O. Box 2703  
Whitehorse, Yukon Y1A 2C6  
Tel: (403) 667-5634  
Fax: (403) 667-2438



## **RECYCLING ORGANIZATIONS**

### **Action Environment - St. John's**

Box 2549

St. John's, Newfoundland A1C 6K1

Tel: (709) 753-5768

### **Ecology Action Centre**

3115 Veith Street, Third Floor

Halifax, Nova Scotia B3K 3G9

Tel: (902) 454-7828

Fax: (902) 454-4766

### **Environmental Coalition of Prince Edward Island**

c/o Voluntary Resource Centre

81 Prince Street

Charlottetown, Prince Edward Island

C1A 4R3

Tel: (902) 556-4696

Fax: (902) 368-7180

### **Fundy Environmental Action Group**

RR 1

Albert, New Brunswick E0A 1A0

Tel: (506) 887-2314

### **Fonds québécois de récupération**

407, boulevard Saint-Laurent

Suite 500

Montréal (Québec) H2Y 2Y5

Tel: (514) 874-3701

### **Metro Toronto Commercial & Industrial Waste Reduction Hotline:**

Tel: (416) 392-4200

Fax: (416) 392-9607

### **Recycling Council of Ontario**

489 College Street, Room 504

Toronto, Ontario M6G 1A5

Tel: (416) 960-0938

Outside Toronto: 1-800-263-2849

Fax: (416) 960-8053

### **Recycling Council of Manitoba**

1812 - 330 Portage Ave.

Winnipeg, Manitoba R3C 0C4

Tel: (204) 942-7781

### **Saskatchewan Environmental Society**

Box 1372

Saskatoon, Saskatchewan S7K 3N9

Tel: (306) 665-1915

Fax: (306) 665-2128

### **Clean Calgary Committee For Environmental Concerns**

206A - 12 Avenue SE

Calgary, Alberta T2G 1A1

Tel: (403) 237-0270

Fax: (403) 237-0283

### **Edmonton Recycling Society**

11631 - 80 Street

Edmonton, Alberta T5B 2N3

Tel: (403) 471-0071

Fax: (403) 479-7700

### **Recycling Council of British Columbia**

1525 West Eight Avenue, Suite 102

Vancouver, British Columbia V6J 1T5

Tel: (604) 731-7222

Fax: (604) 734-7223

### **Northern Environmental Network - Northwest Territories Office**

4807 49<sup>th</sup> St. Suite 8

Yellowknife, Northwest Territories

X1A 3T5

Tel: (403) 873-6019

### **Northern Environmental Network - Yukon Office**

Box 4163

Whitehorse, Yukon Y1A 3T3

Tel: (403) 668-2482

Fax: (403) 668-5678



## **PUBLICATIONS AND DIRECTORIES**

### **Environmental Directory**

Products, technologies, services, manufacturers and organizations, 122 pages, \$9.95

■ *Available from:*

Stewart's Green Line  
189 East 28th Ave.,  
Vancouver, B.C. V5V 3R1  
Tel: (604) 872-5498  
Outside Vancouver 1-800-665-1506  
Fax: (604) 872-0156

### **The Green List**

A Guide to Canadian Environmental Organizations, & Agencies, first edition 1991, 424 pages, \$50

■ *Available from:*

Canadian Environmental Network  
Box 1289, Station B  
Ottawa, Ontario K1P 5R3  
Tel: (613) 563-2078  
Fax: (613) 563-7236

### **The Office Guide to Waste Reduction and Recycling**

Presented by Recycling Council of Ontario & Pitney Bowes, 32 pages

■ *Available from:*

Recycling Council of Ontario  
489 College Street, Suite 504  
Toronto, Ontario M6G 1A5  
Tel: (416) 960-0938  
Outside Toronto 1-800-263-2849  
Fax: (416) 960-8053

### **Purchasing of Products Containing Post-Consumer Waste and/or Products which are Environmentally Sound**

General study and identification of target products, impacts of purchasing, quality standards, etc., \$50

■ *Available from:*

Department of Purchasing and Supply  
18th Floor, West Tower, City Hall  
Toronto, Ontario M5H 2N2  
Tel: (416) 392-7311  
Fax: (416) 392-0801

### **Workplace Guide**

Practical action for the environment, 170 pages, \$37.45

■ *Available from:*

Harmony Foundation  
Box 3444, Station D  
340 Laurier Ave. West  
Ottawa, Ontario K1P 6P9  
Tel: (613) 230-7353  
Fax: (613) 230-7740

### **Waste Minimization Guidelines:**

#### **A Practical Manual for the Implementation of a Waste Minimization Program**

An account of Northern Telecom's successful waste reduction strategy

■ *Available from:*

Northern Telecom  
Resource Protection Department  
5550 Skyline Way, N.E.  
Calgary, Alberta T2E 7Z7  
Tel: (403) 221-7803



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Mention of trade names of commercial  
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Office of Waste Management  
Environment Canada  
Ottawa, Ontario  
K1A 0H3

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