

Business Resource Kit



Waste Reduction Week

October 17-23, 2011

Semaine canadienne de réduction des déchets
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Welcome to the Waste Reduction Week Business Kit

By participating in Waste Reduction Week in Canada you are about to start your business on an exciting campaign of waste reduction that has become an annual event involving thousands of Canadians from across the country.

Adopting environmentally sustainable practices can produce significant benefits for businesses. Simple changes can result in financial savings, an enhanced corporate image and improved customer trust.

This kit provides you with information and tips on the 3Rs - reducing, reusing and recycling; as well as educational and promotional materials and activities to guide your WRW initiatives. We hope that you will use this kit to learn more about the importance of reducing waste and how you can play an important role in contributing to a zero waste society.



Eight Steps to Less Waste

This booklet outlines eight steps your business can take to seriously reduce the amount of waste you generate. Follow them in order, or make use of specific steps that you think will have the greatest impact for your business.

1.	Conduct a Waste Assessment	4
2.	Create a Waste Reduction Action Plan	5
3.	Reduce	7
4.	Reuse	8
5.	Recycle	9
6.	Sustainable Purchasing	10
7.	Energy Efficiency	11
8.	Other Concepts and Tools	12

Too Good to Waste!

What is waste?

The Oxford English Dictionary defines waste as “eliminated or discarded as no longer useful or required,” but increasingly people are looking at waste more and more as a *resource*. As businesses change the way they deal with waste they also need to start thinking of items that would otherwise be discarded as “resources that we conserve, reuse or recycle to protect our environment.”

Waste is material and supplies that are paid for, and subsequently rendered useless. Before those materials and supplies are rendered useless, they are housed in expensive office or warehouse space. After they are rendered useless, money is paid to haul them away. Sound crazy?

Waste is a symptom of an inefficient process. Preventing waste increases efficiency. Increasing efficiency increases profits.



What can I do?

Everything! Waste reduction starts with every individual, every business, taking responsibility for their consumption and waste. By following the hierarchy of the three Rs (Reduce-Reuse-Recycle) you can make a significant impact.

This kit will provide knowledge and direction to businesses looking to start a waste reduction program or to help improve existing programs. It will introduce concepts and tools to consider when looking at reducing the waste your business generates and how this can improve both your productivity and your bottom line.

Why waste reduction?

Reducing waste reduces needless consumption. Reducing needless consumption preserves renewable and non renewable resources. Reducing waste conserves energy and reduces the air, soil, and water contamination that is often caused by the production of those materials and supplies that become waste, and from the fossil fuel powered transportation that delivers those materials and supplies and hauls away those materials and supplies after they become waste. Reducing waste also reduces the use of landfills.

Most of our waste is buried in landfills. As waste slowly decomposes it reacts with what is around it, producing a leachate, which may end up in our groundwater system, and greenhouse gases such as methane and carbon dioxide. According to Environment Canada, landfill sites account for 38% of Canada’s total methane emissions. It is up to each of us to consider what we are throwing away and the environmental impact this is causing. We need to look for alternatives that will promote waste reduction and help to protect our environment.

Conduct a Waste Assessment

Looking at the waste your business generates will help you to identify materials that are going to the landfill that you could potentially reduce, reuse or recycle. The waste assessment can be used as a starting point to collect information on the volume and type of waste produced by your business, as well as your disposal and recycling costs. By determining how much your business wastes, both in quantity and cost, you can calculate potential savings, track progress, benchmark and convey your success to others.

Walk around your site. Depending on the size of your organization, the format for your waste assessment may vary. You may want to look at a few trash bins throughout your office, or you may want to try a larger-scale study of your building's dumpsters. You can also hire a company to do the waste assessment for you for a more thorough analysis.

Key points to keep in mind when examining your waste:

- **Reduce** - did we need to use this item? Is there a more durable alternative that wouldn't end up in the garbage?
- **Reuse** - was this item used to its full extent? Could it be replaced with a reusable alternative? Are there others (e.g. employees, organizations) that have a use for it?
- **Recycle** - if the item has reached its end-of-life, it can't be reduced or reused, then is it recyclable?

Tips and Suggestions:

- Use different coloured bags or tags to help identify and keep track of where waste was generated
- Keep in mind that the rate of waste generation varies. For example, retail stores may generate more waste at Christmas, and grocery stores usually have the most waste on Mondays.
- Have all necessary equipment and supplies ready beforehand—gloves, tarps, extra bags, scales, paper and pens.

Sample of a basic waste assessment:

Material	Quantity	Notes
Corrugated Cardboard	5 cubic metres	Mostly generated at loading dock
Disposable coffee cups	2 garbage bags	Brought in from local coffee shops
Food Waste	38 kilograms	Usually mixed with takeout containers
Fluorescent lights	9 bulbs	Currently stockpiled in storeroom
<i>Add new materials to your list as you come across them. You can group them into general categories, such as 'beverage containers' or you can be specific—"pop cans." The more detail you include the longer the assessment will take, but the more information you will have to work with.</i>	<i>These are a few examples of ways to measure your waste. During your assessment try to use the same unit of measurement throughout so you can easily compare the different materials.</i>	<i>Make notes to keep track of important points you notice during the assessment, such as where the material was generated or if it was still useable.</i>

Create a Waste Reduction Action Plan

With the completion of a waste audit, you are now ready to proceed with the development of your waste reduction action plan. Your plan will identify 3R opportunities and help you to create a detailed waste reduction program. A good Waste Reduction Action Plan will take into consideration all aspects of your business operation - from what you buy from suppliers, to manufacturing, right through to waste disposal. If you can cut down on waste anywhere within your business, your savings will go straight to the bottom-line, and you'll reduce negative impacts on the environment. Here is a basic plan format to get you started.



Cutting waste - it's not just about turning off lights, or fixing leaky taps. It's reducing the production, use or disposal of anything that isn't reused or sold by your business. It is not just manufacturers or big companies that can make a real difference. Every business produces waste, and every business can cut it.

Think about your own organization.

Which of these do you use or produce?

- Water
- Inks and paints
- Gas
- Electricity
- Paper and packaging
- Solid waste
- Solvents and chemicals
- Office electronics

How to create a Waste Reduction Action Plan

1. Identify waste reduction opportunities

Look at the materials you found in your garbage bins during your waste assessment. Identify the materials that take up the most space and prioritize your waste reduction efforts. Some options may be easy to implement. For example, if you have a "two-sided" photocopier, promoting double-sided copies would be a practical and easy initiative. However, other initiatives may require a change in operations or start up costs. Quantify financial savings, payback periods, quantities of waste reduced and keep in mind long-term feasibility. Start up costs may be recovered in savings or revenues over several years.

2. Establish timelines, roles and responsibilities

Now that you know what initiatives you want to implement, it's time to establish a timeframe. Remember that some changes can occur overnight, but others will take much longer and require careful planning. Think about short, medium and long-term goals and allow some time to order and set up recycling depots, employee education programs, or to work with suppliers. Roles should be assigned to determine who is responsible for the different facets of your program. For example, one important role will be to communicate to employees so that they can actively participate in the program, another will be to work with suppliers, and you will also have staff responsible for collecting material and maintaining equipment.

3. Summarize your action plan

A summary of the specifics of your plan will help with implementation and monitoring. The following table is an example of how you can organize your action plan.

Sample Waste Reduction Action Plan



Things to keep in mind when creating your action plan:

- The amount of material in waste stream
- The potential for diversion
- Implementation costs, savings, revenue and ease
- Resource requirements (staff, space, equipment, training etc.)
- Financial savings, payback periods and quantities of waste reduced.

Material	Action	Target	Costs/Savings	Resources	Responsibility	Start/Completion Dates
Printer paper	<ul style="list-style-type: none"> • Edit documents online • Print double sided • Distribute electronic memos • Purchase with post-consumer recycled content 	Reduce the amount of paper usage by 5 reams per week	<p>Costs</p> <ul style="list-style-type: none"> • Upgrading equipment to print double sided • Paper with recycled content <p>Savings</p> <ul style="list-style-type: none"> • Less paper will need to be purchased 	<ul style="list-style-type: none"> • New printer for front office • Staff time 	<ul style="list-style-type: none"> • Office manager—purchasing, organizing, implementation • All staff—on-going implementation 	<p>Start—July 18, 2012</p> <p>Complete</p> <ul style="list-style-type: none"> • Purchasing—09/30/09 • Upgrade equipment—12/01/12 <p>Overall reduction—01/01/13</p>
Cleaning products	<ul style="list-style-type: none"> • Switch to biodegradable cleaners with EcoLogo certification • Purchase concentrated products in bulk • Switch to reusable rags and cleaning supplies • Properly dispose of existing toxic supplies 	Reduce waste from disposable containers and other supplies	<p>Costs</p> <ul style="list-style-type: none"> • Disposing of existing toxic products • Increased cost for eco-friendly products <p>Savings</p> <ul style="list-style-type: none"> • New cleaning equipment • Less waste disposal costs • Less toxic products in the work environment 	<ul style="list-style-type: none"> • Staff time—researching and purchasing new products 	<p>Office manager and janitorial staff will organize and implement new products</p>	<p>Start—July 31, 2012</p> <p>Complete</p> <ul style="list-style-type: none"> • Purchasing—09/31/09 • Upgrading equipment—10/31/12 • Disposal of old products—09/30/09 • Complete implementation—12/13/13

three

Reduce - the first and most important R

Reducing the amount of waste we produce in the first place is by far the most efficient way of conserving resources and protecting the environment. This can be done by cutting down on the amount or toxicity of waste in the design, manufacturing, purchase and use of materials. Reducing waste makes good business sense because every pound of waste you generate costs your businesses money.

It is far better to prevent the generation of waste than it is to recycle. You can only recycle waste that you have failed to prevent. So, place your emphasis on reducing waste if you can, then recycle the waste that you must generate.

Key advantages to business for reducing waste include:

- Reduced waste disposal fees and savings in material and supply costs
- Revenues from marketing reusable materials
- Savings from more efficient work practices
- Improved compliance with regulations
- Enhanced corporate image
- Improved employee morale through employee involvement
- Enhanced customer trust
- Reduced pollution



Start at the source

Look at ways to reduce packaging - talk to suppliers about reducing excess packaging and ask them to take back shipping boxes and pallets. This will help reduce disposal costs for your business and increase transportation efficiency.



Try these tips to reduce waste around the office:

- Set your photocopiers and printers to print on both sides by default
- Make computer files, not paper files when possible
- Opt out of junk mail
- Rent instead of buying equipment that is used only occasionally
- Buy company mugs; stop providing disposable cups
- Order merchandise with minimal packaging
- Implement electronic billing

four

Reuse

Reusing materials gives resources a new life, while reducing the pollution and energy that comes with the manufacturing and recycling of new products. By reusing materials your business can save money by not having to buy as many new items, and by not having to pay to dispose of as many old items.

Here are some ways you can easily reuse materials around your work place:

- Use non-disposable products - keep your office kitchen stocked with cutlery, dishes and coffee mugs, and use durable towels, tablecloths, and napkins
- Invest in rechargeable batteries and battery chargers for digital cameras, flashlights, and other small electronic devices
- Route or circulate memos, periodicals and reports, rather than distributing individual copies
- Use remanufactured office equipment
- Rather than purchase new office supplies, save old file folders and binders that can be relabelled and reused
- Request that deliveries be shipped in returnable containers
- Buy durable, reusable, high-quality supplies - such as reusable toner cartridges, rechargeable batteries or refillable pens. These products will last longer and help delay replacement and disposal costs



Compost

Don't neglect organics! If your business has any landscaped property to manage there are opportunities to prevent waste, recycle, and reduce waster use. Some organizations also have cafeterias or restaurants and can thus divert food scraps and left over food from the trash. Even if you don't produce yard or food waste, you will have employees eating at work generating food waste. Here are a few ways to divert organic material from your office waste:

- Office **vermicomposting**, also know as worm composting, can recycle apple cores, banana peels, coffee grinds and other food scraps left over from lunch. These bins are small and wont produce any smells if they are looked after.
- For larger amounts of food waste you could consider an **outdoor composter** (or even an **electric composter**). Kitchen waste can be collected at a convenient location and then composted outside to produce fertilizer that can be used around the grounds.
- Most regions have local facilities where you can drop off **yard waste** for composting. If your business is producing a large amount of yard and garden waste then consider having it taken to a composting facility - it can have a serious impact on the volume of waste you produce.



five

Recycle

Recycling makes good business sense. It improves your company's image and it saves money by reducing the size and number of garbage containers you use or the frequency of pick-up.

The easiest way to start a recycling program is with paper and cardboard. If you are already recycling these then check to see if they are still ending up in your garbage bins, and if so why?

Use your waste assessment to determine what materials are taking up the most space in your bins—plastic, wood, glass, scrap metal, electronics? Recycle at least one additional high-volume material.



Remember...

Recycling is a three-step process. Collecting used materials is the important first step. The second step involves using recovered materials as feedstock in the manufacturing of new products. The final step is purchasing and using the recycled products. To really recycle you need to participate in the full cycle.

Convenience

Convenience is the key to a successful waste reduction program. A convenient collection system will encourage employees to carefully sort recyclables by material type and to eliminate contaminants.

Place collection containers in convenient locations as close as possible to areas where recyclables are generated. For instance, in an office paper collection program, it is most convenient for individuals to have small paper collection containers at their desks, or central bins near printers and photocopiers. Employees or custodial staff can then transfer the paper collected in these small containers to a larger central collection point. Make sure bins are clearly labelled so they don't get contaminated with garbage.

Sustainable Purchasing

Sustainable purchasing is the procurement of “green” products and services that can reduce the negative effect on human health and the environment when compared to other products or services that serve the same purpose. A Purchasing Policy is a commitment a company makes to the environment to minimize negative environmental impacts by ensuring the procurement of “green” services and products that:

- Reduce toxicity
- Conserve natural resources, materials and energy
- Maximize recyclability and recycled content

The Policy usually specifies the recycled content of purchased items such as stationery or toner cartridges. There is a wide range of recycled stationery available including envelopes, fax paper, mailing labels, files and document wallets, flip charts, storage boxes and Post-It notes.



Your businesses Procurement Policy may include the following elements:

- A general preference for recycled products
- A price preference, whereby your business is willing to pay a higher price (such as 5% or 10% more) for recycled paper or recycled products
- A set-aside goal where a certain percentage of all purchases must have recycled content.

The International Institute for Sustainable Development provides useful information, resources and best practices for green procurement as well as a certified office products database. The website can be found at: www.iisd.org

The format of a Procurement Policy will vary from business to business. It is important for businesses to begin by first committing to the policy that will be established. It will be used as a guide when materials are acquired and specify the relationship with partners such as suppliers.

What is a Green Product?

A green product is one that is less harmful than the next best alternative, having characteristics including, but not limited to, the following:

- Is recyclable - local facilities exist that are capable of recycling the product at the end of its useful life
- Is biodegradable
- Contains recycled material—post-consumer recycled content
- Has minimal packaging and/or the manufacturer will take-back the packaging
- Is reusable or contains reusable parts
- Has minimal content of and use of toxic substances in production
- Produces fewer and/or less polluting by-products during manufacturing, distribution, use and/or disposal
- Produces the minimal amount of toxic substances during use or at disposal
- Makes efficient use of resources - a product that uses energy, fuel or water more efficiently or that uses less paper, ink or other resources
- Is durable - has a long economically useful life and/or can be economically repaired or upgraded

seven

Energy Efficiency

Energy efficiency is equally important in reducing your businesses environmental footprint as waste reduction. Saving energy saves you money, protects your reputation and helps combat climate change. Here are a few ways you can improve the energy efficiency of your business:

Lighting

Lighting can be your highest business energy cost—and your greatest opportunity for savings. Reducing heat output from your lighting can also reduce your air conditioning costs.

- Turn off lights when not in use
- Switch to LED or fluorescent bulbs
- Retrofit your old lighting system
- Remove lamps that are not needed
- Only light occupied areas of your building
- Use timers and motion sensors where appropriate

Computers and Office Equipment

Adopting energy saving habits in the office can save significant amounts of money and electricity. Turning off equipment when not in use improves workers' comfort by reducing fan noise and heat generation.

- Look for ENERGY STAR® products
- Shut down computers, monitors, photocopiers and other equipment on evenings and weekends
- Use software to automatically power off workstations
- Consider using laptops—they can use up to 10 times less energy than desktop computers and monitors!

Heating, Ventilation and Air Conditioning (HVAC)

Adopting more efficient practices with your HVAC equipment can significantly extend their life and save you money.

- Optimize heating and cooling systems
- Shut down equipment when not needed
- Keep all HVAC components clean
- Consider an energy management system
- Inspect HVAC equipment regularly and fix if necessary
- Minimize heat loss

Transportation

There are many ways your business can reduce its carbon footprint through transportation—by reducing commuting kilometres, increasing the efficiency of your transportations routes, or changing your means of transportation

- Create an employee carpooling program
- Use video or teleconferencing rather than driving or flying to meetings
- Switch fleet vehicles to fuel-efficient or alternative fuel
- Reduce the frequency of shipments so deliveries are only made when a truck is full
- Offset the carbon emissions from flights and vehicle travel
- Switch to e-statements to reduce paper and transportation from mail

Life Cycle Assessment (LCA)

Life cycle assessment is defined as “an integrated approach to minimizing the environmental burdens associated with a product or service over its life cycle” - from the extraction of raw materials to its end of life. The term cradle-to-cradle is also often used to describe the detailed assessment of a product.



During the life-cycle of a durable product about 75% of waste is generated during the “Use” phase—e.g. packaging materials. While the result varies from industry to industry, it is imperative to assess each aspect of a product individually and then make a comparison before deciding the most cost-effective, environmentally friendly product that is suitable for your business. Some important issues to consider when assessing a product or service are:

- Energy usage
- Noise
- Work environment
- Odours
- Detergents
- Water Usage
- Waste
- Recycling/ reuse/ composting abilities

eight

Other Concepts and Tools

Design for the Environment

Design for the Environment (DfE) is a concept that integrates social, economic and environmental considerations into the design and development of a product in order to create products with more value and less impact. There are three major components to consider when designing for the environment—Manufacturing, packaging and disposal.

Key points to consider:

- Non-toxic processes & production materials
- Minimum energy utilization
- Minimize emissions
- Minimize waste, scrap & by-products
- Minimum of packaging materials
- Reusable pallets, totes and packaging
- Recyclable or biodegradable packaging materials
- Re-use / refurbishment of components & assemblies
- Design for serviceability to minimize disposal of non-working products
- Material selection to enable re-use and minimize toxicity
- Minimum number of materials / colors to facilitate separating materials and re-use
- Design to enable materials to be easily separated
- Design for disassembly (e.g., fracture points, fastening vs. bonding)
- Avoid use of adhesives
- Maximize use of recycled or ground material with virgin material

EcoLogo

Founded in 1988 by the Government of Canada but now recognized world-wide, EcoLogo provides the public with assurance that the products and services bearing the logo meet stringent standards of environmental leadership. EcoLogo certifies environmental leaders in a variety of product and service categories, using rigorous and scientifically relevant criteria that reflect the entire lifecycle of the product.

The EcoLogo mark also meets ISO 14024 standards for eco-labelling.



LEED Green Building

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is a third-party certification program and an internationally accepted benchmark for the design, construction and operation of high performance green buildings. It provides building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance.

LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health:

- sustainable site development
- water efficiency
- energy efficiency
- materials selection
- indoor environmental quality

Green House Gas Emissions (GHG)

GHG emissions are usually related to fuel and energy consumption via heating and cooling office space, powering electronic equipment, transporting goods, travelling for business, and manufacturing processes. A greenhouse gas management program will include measuring, reducing, and offsetting emissions.