

Waste at Work

Non-residential waste constitutes more than 60% of Calgary's total waste. Businesses have a responsibility to themselves and the citizens of Calgary to voluntarily take the steps needed to reduce the amount of material sent to landfill.

It is Alberta's goal to reduce per-capita waste to landfill from 800kg in 2001 to 500kg by the year 2010. Business participation is crucial to the reduction plan because all waste, including business, is calculated and divided per capita.

In Calgary, the goal is to divert 80% of the waste from the landfill by the year 2020. Residential programs will certainly help with our City's goal however business participation is also needed.

Starting your program

Step 1 – Upper management buy-in.

- There are many things you can do on your own too.

Step 2 – Complete a waste assessment.

- Outline can be found on the backside of this sheet.

Step 3 – Define goals and objectives.

- They can be to win an award or reduce waste by 80%.

Step 4 – Identify solutions (3Rs).

- Green procurement, paper recycling, composting etc.

Step 5 – Implement feasible ideas.

Step 6 – Inform all levels of staff including maintenance staff.

Communicate, communicate, and communicate

- START SMALL, THINK BIG.

Step 7 – Monitor, evaluate and modify.

- New solutions for waste are always being developed.

The bonus step – Give recognition.

Communication is the key to running a successful program. Start by informing staff or co-workers about the materials which will be collected, the appropriate bins for each of the materials and the importance of compliance and non-contamination.

Designate "Champions" to oversee the program and to act as a resource for others.

Listen to everyone's suggestions and concerns about all stages of the program. It is important to evaluate and re-evaluate your program to insure it is still the most effective for you.

The CMEX team at Clean Calgary Association is Calgary business's resource for information about environmental programs and initiatives. If you're having trouble, give us a call.

DID YOU KNOW?

- Turning off your PCs at night and on weekends will save you an average of \$100 annually.
Eco-Efficiency Centre
- If a faucet drips once every second 10,000 liters of water are wasted in one year.
Environment Canada
- 25% of the energy used to manufacture cardboard is saved when cardboard is recycled.
Eco-Efficiency Centre
- 10 seconds of idling uses more fuel than restarting your engine.
Alberta Motor Association
- The average employee generates about a tonne of loose garbage every year.
Waste Reduction Week
- Incinerating 10, 000 tonnes of waste creates 1 job, landfilling the same amount creates 6 jobs, recycling the same 10, 000 tonnes creates 36 jobs.
Clean Nova Scotia
- A 600-watt photocopier left on standby for 24 hours a day uses about \$750 of electricity in a year. If this machine is turned on only during normal working hours, two-thirds of this electricity would be saved, and two-thirds of the money too!
New Zealand Ministry for the Environment
- It takes 19 full grown trees to make one ton of paper. By recycling 54 kilograms (about 119 pounds) of newspapers, you can save the equivalent of one tree from being cut down. Canadians are among the world's largest consumers of paper products.
Recycling Council of Ontario
- For every tonne of garbage North American's throw out, manufacturers' dispose of 5 tonnes and primary industries, like mining and logging, dispose of at least 20 tonnes. **Statistics Canada**

Waste Assessment for Offices



A key step in implementing or improving your 3Rs program is identifying what you have to start with. Use the chart below to develop a baseline to work from (Please note: the following list is not exhaustive).

| Material | Disposal weight (kg/wk) or volume (8yr ³ /wk) | Recycled Y/N | Reused Y/N (Donated etc.) | Comments (Other information, source etc.) |
|--------------------------------|--|--------------|---------------------------|---|
| Office paper | | | | |
| Newspaper | | | | |
| Post-it's | | | | |
| Used envelopes | | | | |
| Old phone books | | | | |
| Cardboard | | | | |
| Books | | | | |
| Magazines | | | | |
| Other paper | | | | |
| Beverage containers | | | | |
| Plastic | | | | |
| Cans (metals) | | | | |
| Toner and ink cartridges | | | | |
| Computers | | | | |
| Cell phones | | | | |
| Desks | | | | |
| Batteries | | | | |
| Light Bulbs | | | | |
| Office supplies | | | | |
| Organics (coffee grounds etc.) | | | | |
| Old marketing material | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| TOTAL | | | | |

If you have any questions, give the CMEX team a call;

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Sources and information resources;

Local

1. Calgary Materials Exchange www.cmex.ca
 - Information resource for businesses in Calgary.
2. Clean Calgary Association www.cleancalgary.org
 - Provides residential waste and water issues information, operates a store for water and waste wise products and provides educational programs.
3. Climate Change Central www.climatechangecentral.com
 - Provides information on climate changes issues.
4. City of Calgary www.calgary.ca/waste
 - Information and resources for Calgarians on waste and recycling.

Provincial

1. Recycling Council of Alberta www.recycle.ab.ca
 - The RCA's mission is to promote and facilitate waste reduction, recycling, and resource conservation in the Province of Alberta. Provides business resources and information.
2. Alberta Recycling Management Authority (ARMA) www.albertarecycling.ca
 - Collect and properly recycle tires and electronics.
3. Alberta Used Oil Management Authority www.auoma.com
 - Collect and properly recycle used oil and used oil containers.
4. Alberta Environment www.environment.gov.ab.ca

National / Other areas in Canada

1. Eco –efficiency centre www.eco-efficiency.ca
 - Toolkits for businesses, tips on “greening operations, practical guides to changes processes.
2. QNET Manitoba Quality Network www.qnet.mb.ca/lean.htm
 - QNET is a network of individuals and organizations focused on the pursuit of organizational effectiveness and continuous improvement.
3. Recycling Council of Ontario www.rco.on.ca
 - Provides comprehensive information and resources about waste reduction.
4. Waste Reduction Week Canada www.wrwc.ca
 - Provides resources and contacts to assist your communities, schools or businesses with waste minimization and conservation initiatives.
5. GVRD www.gvrd.bc.ca
 - Information on making your operations more eco-efficient, green, water sensitive and so on.
6. Environment Canada www.ns.ec.gc.ca and Statistics Canada www.statcan.ca
7. Harvard Medical School -Center for Health and the Global Environment. www.chge.med.harvard.edu
 - Information about your health as it relates to waste and the environment (Click ‘Publications).

DID YOU KNOW?

- Recycling one ton of glass saves about nine gallons of oil.
Recycling Council of Ontario
- In a lifetime, the average North American will throw away 600 times his or her adult body weight in garbage. A 68 kg adult will leave a legacy of 40,825 kg of trash.
Natural Resources Canada
- 10 plastic soft drink bottles are required to make the fiberfill for one ski jacket.
Greater Vancouver Regional District
- By the age of 6 months, the average Canadian has consumed the same amount of waste the average person in the developing world consumes in a lifetime.
Eco-Efficiency Centre
- Water is a limited resource that we need to use wisely. Only 1% of the world’s water supply is usable, 97% is ocean and 2% is ice frozen in the poles.
Environment Canada



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Programs and Activities of the Clean Calgary Association

Waste Wise Dalhousie Community Project

Our Waste Wise pilot project is underway in Dalhousie. In 2006-07 CCA will train Dalhousie residents to coach more than 100 households to reduce their household waste through backyard composting.

School Presentations

- **Waste in our World (Grade 4)** This interactive workshop covers the types of wastes produced by human activity, alternate methods of disposal (reuse, recycling and composting), waste reduction, the impacts of different kinds of packaging, making informed consumer choices, and taking action as individuals and groups to reduce waste.

- **Water for Life (Grade 2)** This dynamic presentation will cover the importance of water for living and nonliving things, water quantity issues including sources of water on the planet and their distribution, water quality issues such as pollution to its sources along with ways in which we use water, and opportunities we have to conserve water which is essential to life.

Composting Workshops

Clean Calgary provides one-hour workshops for the beginner, intermediate, or frustrated composters confirming that when tended correctly, compost bins don't smell, but do generate fantastic natural fertilizer.

The Calgary Materials Exchange

CMEX/Clean Calgary staff connects companies that can reuse or recycle one another's valuable by-products and provides forums for diverse industrial stakeholders to tackle challenging waste issues.

EcoStore - selling environmental products that reduce our environmental footprint

The Clean Calgary EcoStore sells products that are environmentally sustainable and help to reduce waste and conserve water. Products include;

- compost bins
- green recycling bins
- natural baby products
- compost aerators
- indoor and outdoor water saver kits
- recycled plastic toothbrushes
- rain barrels and accessories
- 100% post-consumer recycled office paper
- environmentally friendly cleaning products

Information Services & E-newsletter

We respond to thousands of public requests for environmental information. Calgarians want to know how to recycle their household waste and otherwise reduce their environmental footprint.

Please contact the Clean Calgary Association if you would like more information about our programs or if you are interested in volunteering.

Tel: (403) 230-1443
info@cleancalgary.org

Clean Calgary Association (CCA) is a non-profit charitable organization that empowers Calgarians to create healthy homes and communities by providing environmental education, products and services.

Our Mandate: Striving for Zero Waste & Protecting our Water Quantity and Quality



Green Procurement



Green procurement means the procurement of products and services that have less impact on the environment than their traditional counterparts. Greener procurement incorporates environmental considerations into decisions in addition to the conventional criteria of price and quality.

If you do one thing:

**Purchase paper with minimum
30% recycled content.**

Following are some tips for implementing an effective green-procurement program:

- **Research company procurement policies.** Find out if and to what extent your company's procurement policies give price preference to environmentally preferable products.
- **Define your terms.** Many people don't have a specific understanding of common phrases such as "environmentally preferable purchasing."
- **Screen suppliers and subcontractors.** Survey them on specific EH&S practices and use a point scale to judge their responses. Encourage or require suppliers to implement environmental management systems. Provide suppliers with "blacklists" of undesirable chemicals or other materials.
- **Choose green products.** Purchase raw materials that contain fewer toxic ingredients, are recyclable, or utilize recycled materials.
- **Buy in larger quantities.** Buyers' cooperatives enable smaller buyers to aggregate purchasing power, providing them with more leverage to persuade suppliers to undertake EH&S initiatives.
- **Expect slow, incremental change.** Put your procurement plan through an initial testing phase to pinpoint and solve potential problems. Assume that it will take time for programs to roll out company-wide.
- **Communicate the benefits.** Resistance to change is common. Sharing the positive environmental impacts of purchasing policies with suppliers and procurement managers can help green-procurement programs maintain momentum.
- **Bottom Line**

Implementing green procurement may require a larger initial investment of time and effort, but it can pay lasting dividends in terms of reduced product life-cycle cost, overall cost efficiency, and minimized environmental risk.

There are many green suppliers in Calgary. Please contact the Calgary Materials Exchange team for specific information about green products for your needs.

Source: GreenBiz.com and Wikipedia .com

Clean Calgary EcoStore

The Clean Calgary EcoStore sells products that are environmentally sustainable and help to reduce waste and conserve water. Some of the products include;

- 100% post-consumer recycled paper.
- 100% recycled content garbage bags.
- Envelopes with 25% hemp and 75% post consumer waste.
- Environmentally friendly cleaning products.
- Indoor and outdoor water saver kits.
- Dual flush toilets.
- Compact fluorescent light bulbs.
- Re-blended paint.
- Recycled content mulch.
- Biodegradable pens.
- Plantable Thank You cards.
- Recycling bins.
- And much, much more...

For more information about EcoStore products, please contact

Renee at 230-1443 ext. 222
or check out the website at

www.cleancalgary.org/ecostore

WASTE AT WORK TIPS

Materials

Reduce

- Reduce paper use by using both sides of the paper, therefore reducing deforestation (Work towards being paperless).
 - Reduce the amount of packaging needed for a product.
 - Rent equipment which is used infrequently.
 - Purchase longer warranties on items.
 - In one given area, only have one garbage pail so it isn't as convenient to just throw things away.
- Purchase in bulk to reduce packaging waste.

Reuse

- Buy durable high quality goods which translate into a longer product life outside the landfill.
- Repair, sell or donate items.

- Durable goods may cost a little more at first; however, they will save you money in the long run.
- Use reusable coffee mugs and utensils in the workplace to save on purchasing and disposal costs. Bring reusable lunch containers. Have all events catered with real plates, cups/glasses and cutlery (i.e. Stampede Breakfasts).

Recycle

- The garbage bins at each desk should be replaced with paper recycling bins.
- Provide the office with an entire recycling program, not just paper. It is possible to use a curbside recycler for this pickup.
- Purchase recycled paper for office use.

If you only do one thing:

Have a curbside recycler pick up materials from your office

Water

- Install low flow or two flush toilets.
- Run the dishwasher only when it's full.
- Report all leaks immediately.
- If you have a lawn or garden, grow wild flowers.
- If you have a lawn or garden, use a rain barrel.

- Rather than having water bottles available, move towards having a water cooler.
- If you're washing dishes in a sink, don't just let the water run.
- Consider installing a gray water system.

If you only do one thing:

Only run the dishwasher when it's full

Energy

Basic

- Install compact fluorescent light bulbs.
 - Purchase local products.
 - Turn off electronic devices during non-work hours and unplug chargers when not in use.
- Take the stairs when possible.

- Purchase compact or fuel efficient vehicles
 - Consider installing track lighting.
- Have automated lights in the bathroom and hallways.

Advanced

- Investigate possibilities for eco-efficient products for renovation or construction projects.

Moderate

- Use programmable thermostats..

If you only do one thing:

Turn off you computer every night

WASTE AT HOME TIPS

**If you only do one thing:
Recycle everything you can**

At home, try to cut to garbage you send to the curb by half. It is very attainable. The number one way to achieve this is to start composting at home. Organic waste makes up 47% of the residential waste stream in Calgary and you have the ability to make a difference.

TIPS

- 1) Reconsider your purchasing decisions.
- 2) Take a cloth bag to the grocery store.
- 3) Rent items you seldom use.
- 4) Fix broken items and donate unwanted items.
- 5) Take your lunch in a reusable container.
- 6) Reuse containers to store food, wrap presents etc.
- 7) Install low flow devices in the home.
- 8) Have a rain barrel to capture rain water for garden use
- 9) Unplugged unused appliances
- 10) Replace all light bulbs with compact fluorescents.



Figure 2: Alberta has set the target of reducing waste from 800kgs/capita to 500kgs/capital by 2010 – a reduction by 37.5% (for more on this please visit <http://www3.gov.ab.ca/>). The most recent statistics show that Albertan's are contributing to a worsening situation, actually increasing per capita waste generation from when the target was first established (personal communication with Dave Whitfield – Alberta Environment).

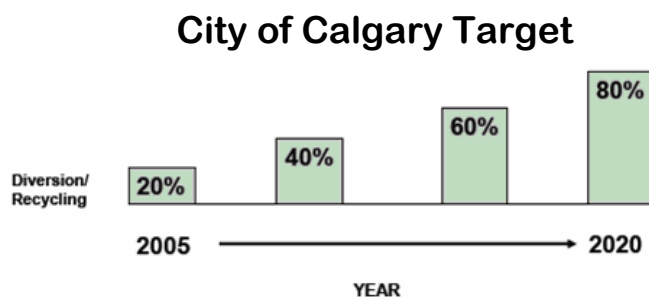


Figure 3: 80/20 by 2020. Projected increase in recycling rates over the next 15 years. Taken from the City of Calgary Recycling Pilot Summary Report 2004/2005 which can be accessed at: <http://www.calgary.ca/> .

Report Card

What grade does your office receive? What grade do you want to receive?

| Grade | Criteria*each category includes the previous |
|-------|---|
| A+ | EPR policy and striving for 'Zero Waste' |
| A | Green procurement policy |
| A- | Composting organic waste |
| B+ | Office furniture, all plastics, batteries and electronics |
| B | Water and energy conservation initiatives |
| B- | All recyclables (City of Calgary green bin) |
| C+ | Doubling siding all paper, no disposable dishes |
| C | Paper, cardboard and ink/toner cartridges |
| C- | Beverage containers only |
| F | No reduce, reuse or recycling |

Write the goal(s) for your office/company and post it were it can be seen by everyone.

Remember: START SMALL, THINK BIG.

Although waste management is the issue Clean Calgary Association has chosen to focus on, we are still very aware and concerned with a variety of sustainability issues. For this reason, we have fostered a close relationship with the Pembina Institute.

The Pembina Institute is a non-profit environmental NGO focused on Sustainable Energy Solutions. To learn more about the Pembina Institute and there various programs visit www.pembina.org

For any company looking to improve the environmental impact of their operations Energy is a major concern. The Pembina Institute can help your organization develop a strong energy strategy. Whether reducing your energy consumption, purchasing Renewable Energy Certificates or developing messaging around your energy commitments they are a fantastic resource. To purchase wind power for your PC or for your office energy uses visit www.ilovewindpower.com

For information on the Wind Power Program or for a free presentation, please contact Alex Day at 403.269.3344 ext. 117 or by email at alexday@pembina.org