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MEDIA PLANET

August 2011

RECYCLING & WASTE MANAGEMENT

3 TIPS FOR REDUCING YOUR WASTE OUTPUT

OUR YEAR WITHOUT WASTE

Grant Baldwin and Jenny Rustemeyer of The Clean Bin Project share their story of understanding—and eliminating—the effects of trash.

MAIN PHOTO: GRANT BALDWIN, THE CLEAN BIN PROJECT

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CHALLENGES

WASTE NOT
Many items that end up in trash bins could be recovered for additional use.
PHOTO: THE CLEAN BIN PROJECT

One man's trash could be another's energy source. It's time to trash the misconception that garbage is useless—it can, in fact, be a resource. The onus is on consumers to recycle, reuse and, most importantly, reduce.

The evolution of a recycling revolution

Does change happen through evolution or revolution? In B.C. it's both.

Since the late 20th century, B.C. has led an evolution in the way we manage and think of waste, slowly transforming it into a resource, in a process that is the basis for the next industrial revolution. It's called extended producer responsibility (EPR).

EPR shifts the responsibility and costs of managing end-of-life products from municipalities to producers, potentially saving local taxpayers more than $250 million annually in operating costs alone. Six years of those savings would completely pay for Translink's Evergreen Line.

Once diverted from disposal, those resources provide the foundation for new economic activities and products that are more sustainable and reduce our environmental footprint.

A bright beginning

As more producers apply "design for environment," the results will be less waste, a greater pool of reusable resources in a closed-loop system that is the core of the next industrial revolution. It mirrors nature's sustainable process and in B.C. it began in a colorful fashion with paint.

Much of this evolution or revolution, depending how you look at it, began in 1994 with the Post-Consumer Paint Stewardship Program Regulation. This made the paint industry responsible for the collection of its end-of-life product at depots across the province, where you could take leftovers to be managed in an environmentally responsible manner. Metals were recycled and leftover paint was either reused or used as a feedstock for new products.

Since then, the legislation has evolved into the B.C. Recycling Regulation. Enacted in 2004, it is based on performance measures, such as a 75 percent collection rate. It is up to industry to determine how to achieve that rate through a plan submitted to, and approved by, the B.C. Ministry of Environment.

Generally, programs are managed by producer-formed non-profit industry stewardship agencies. These organizations track program results against the objectives within their approved plan, and then report those results annually.

Like every other cost associated with producing, distributing and marketing a product, the cost of EPR programs are part of the product price. None of the program fee portion of the price goes to government. It is set and applied to products by the industry stewardship agencies based on a number of factors, including the ability to operate a program on a long-term basis.

Public support

British Columbians are firmly behind EPR programs. A recent survey by McAllister Opinion Research found 78 percent of us think applying fees as part of a recycling program is a reasonable approach to funding such a program. Seen as fair, it is a polluter pay system, rather than a collective tax-based approach which rewards the wasteful, and provides no incentive for those who waste less.

Brock MacDonald
Executive Director,
Recycling Council of British Columbia

"As more producers apply "design for environment," the results will be less waste, a greater pool of reusable resources in a closed-loop system that is the core of the next industrial revolution."

There are now 12 industry-managed programs in B.C., and as more roll out, much of which heads to landfills now will be diverted to become a potential resource rather than a part of a toxic stew, brewing beneath the surface to boil up as potential problems for future generations.

Seeing results

In 2007 alone EPR removed 267,000 metric tonnes of C02, diverting one billion beverage containers from landfills; and managed 51 million litres of used oil, solvents, flammables, pesticides and gasoline—so that toxic chemicals didn't end up in our environment.

Aside from diverting potential toxic material, thousands of tonnes of plastics, metals and rubber were collected and made into new products in Canada, creating jobs, building our tax base and forming the foundation of the next industrial revolution.

B.C. leads in this field, as lawmakers and industries from across North America now look to our province as the prime example to follow.

Our EPR programs are supported by industry as well as waste management professionals in both the public and private sectors. With every stage of evolution, and instance of revolution, there is change. In this case, B.C.'s leadership in EPR will ensure an environmentally and economically sustainable future for all.

Waste, meet your maker: Explaining product stewardship

As landfills overflow, a movement called product stewardship aims to put the onus for waste disposal of products in the hands of the producer is gaining momentum.

"Generally speaking, product stewardship is a new program," says Mark Kurschner, president of Product Care Association. "It's a polluter pays concept."

Product Care manages programs to dispose of household hazardous and special waste for companies.

Products such as batteries, electronics, light bulbs, fertilizer, paints and solvents all require specific handling methods to ensure their toxic ingredients aren't absorbed into soil and watersheds at landfills.

In B.C. there are many agencies operating stewardship programs for a variety of hazardous waste—most of which run depots for consumers to dispose their special waste.

Some of the latest products of concern include:

A brighter future

The lighting industry's stewardship programs focus on ensuring that Compact Fluorescent Lamps (CFL)—which require small amounts of mercury to ignite—are disposed of properly.

"We don't want that mercury to end up in landfills so we work with Product Care to manage the (post-consumer waste)," says Sheryl Keller, senior manager of strategic marketing for Philips Lighting.

Mercury is a potent neurotoxin that can affect the brain, liver and kidneys, and cause developmental disorders in children.

When the toxin makes its way into landfills it can seep through the ground into the water table or release toxic emissions if incinerated.

A small fee is included in the cost of the light bulbs to help fund proper disposal.

Batteries and cellphones

As technology improves, the list of chemicals used to manufacture batteries and cellphones grows.

Some of the more damaging ones include chlorine, zinc, lead, brominated flame-retardants and arsenic.

Joe Zenobio, executive director of Call-2Recycle Canada, a product stewardship program that recharges or disposes batteries for the electronics industry, says they yield plenty of recycling promise.

"With rechargeables the metals can sometimes be extracted," says Zenobio. "There's opportunity to reuse those materials."

Last year, Call2Recycle collected 1.2 million kilos of batteries.

"We pick those batteries up across Canada through 1600 sites," says Zenobio.

A refreshing take

Despite efforts by the beverage industry to manufacture beverage containers that can be pelletized and reused, the containers still work their way into landfills where they take thousands of years to decay.

Neil Hastie, president and CEO of Encorp Pacific, which provides stewardship for the beverage container industry, says most bottles include a deposit in the price.

"You get your money back when you take it back to the depot," says Hastie.

Encorp collects about a billion bottles a year.

"We bring them back to processing plants where they are bailed or compressed and shipped to a recycling facility."

MARK CHAPPELL
editorial@mediaplanet.com

WE RECOMMEND

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The power of food waste
How bioenergy and biofuel power cities.

"It doesn't really make sense for (organic waste) to end up in a landfill."

MEDIA PLANET

RECYCLING & WASTE MANAGEMENT
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Responsible for this issue:
Publisher: Ash MacLeod
ash.macleod@mediaplanet.com
Designer: Penelope Graham
penelope.graham@mediaplanet.com
Contributors: Mark Chappell, Brock MacDonald, Jenny Rustemeyer, Andrew Seale

Managing Director: Justin Guttman
justin.guttman@mediaplanet.com
Business Developer: Josh Nagel
joshua.nagel@mediaplanet.com

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DON'T MISS!

Top tips to reduce your garbage

Reduce plastic bag use

1 If you forget your bag, don't buy it, or carry your goods without one. Use smaller bags like those from Moukisac or Carebags for produce and bulk.

Set up your recycling system

2 Make a mini depot in a convenient place; having bins for newspaper, mixed paper, and bottles and cans next to each other in the kitchen makes it easy to recycle. Private recyclers take milk cartons, soft plastics, styrofoam, and scrap metal.

Compost!

3 This is the single most effective way to cut your garbage output. According to the David Suzuki Foundation, "roughly 40 percent of the waste in our landfills is compostable organic matter."

Stop using takeout containers

4 Carry a reusable coffee cup and sandwich container instead.

Check the package BEFORE you buy it

5 If something comes in a non-recyclable package, make a choice not to buy it.

JENNY RUSTEMEYER
The Clean Bin Project
editorial@mediaplanet.com

PRINCIPLES FOR PRODUCT STEWARDSHIP

1. Producer-user responsibility – Costs are shifted from taxpayers to producers and users, not downloaded to local governments.

2. Level playing field – Producers are accountable for stewardship responsibilities. Consumers have reasonable and free access to collection facilities.

3. Results-based – Methods and programs are developed by the corporation and measured by the results achieved.

4. Transparency and accountability – Financial statements are independently audited and publicly available.

One billion containers are recycled every year

Encorp Pacific is one of North America's leading product stewardship corporations

With over 180 depots and mobile collectors across BC, the Return-It™ system is a British Columbia success story. Thanks to BC residents, 80% of the beverage containers sold in the province are recovered and recycled into something new. That's over one billion containers kept out of our landfills.

Encorp Pacific (Canada) runs the Return-It system. As one of BC's largest product stewardship corporations, Encorp's mandate is to develop and manage a consumer-friendly and cost-effective system to recover end-of-life consumer products and packaging for recycling.

Encorp monitors and estimates greenhouse gas emissions associated with its recycling activities. This helps reduce their carbon footprint and maximize their net benefit to the planet.

The numbers speak louder than words

In 2010, more than one billion containers were recycled. That's approximately 365 million aluminum cans, 355 million plastic bottles, 215 million glass bottles, 82 million drink boxes and cartons, and 10 million other containers of varying types.

"One billion containers weigh around 97,000 metric tonnes. That's about the size of an aircraft carrier," adds Encorp's President and CEO, Neil Hastie. "Imagine if our landfills had to accommodate that in addition to everything else that's thrown out."

It all started with soft drinks

First established in 1994, Encorp created a network of province-wide recycling depots to ensure soft drink containers were recycled. The system expanded in 1998 when the provincial government expanded the recycling regulations to include water, juice and alcohol containers. Today, consumers pay a deposit on all ready-to-drink beverage containers sold in BC, except for milk. Encorp's Return-It Depot system collects containers from consumers and returns them for recycling on behalf of more than 1,000 beverage brand owners.

"When Encorp first started, we were recycling about 300 million containers. Over the past 16 years, that number has just kept growing and growing," says Hastie.

Milk and electronics too

As product stewardship has expanded over the years, so has Encorp. They also manage the recycling of milk containers on behalf of the Dairy Council of BC and electronics for the Electronics Stewardship Association of BC (ESABC). "In less than four years, over 53 million kilograms of electronics have been diverted from landfills and recycled responsibly in BC. It's one of the highest rates of e-waste diversion in North America," says Tyler Garnes, Encorp's Logistics Manager.

Transparency is a priority

The details of Encorp's financial system are available to the public, including audited financial statements.

Revenues include the sale of collected materials to recyclers, unredeemed container deposits and, if required, a Container Recycling Fee (CRF).

Expenses include deposit refunds, handling fees to depots, transportation and processing of collected containers, consumer awareness and administration.

No government funding

Encorp is 100% industry operated and receives no government funding. They combine private sector efficiencies with a high degree of public sector transparency to manage collection and recycling programs. You can view Encorp's 2010 annual report at encorp.ca/ar2010

Taking responsibility creates a world-class recycling system

BC's product stewardship model is one of

North America's best. The model shifts responsibility for managing end-of-life products and packaging from local governments and taxpayers to producers and consumers. The Recycling Regulation, under authority of the *Environmental Management Act*, sets out the requirements for product stewardship in BC. Returning your products through the collection systems established by any of BC's stewards guarantees they will be recycled safely and responsibly.

ENCORP Return-It™ It's Worth It.

return-it.ca

INSPIRATION

TIP 2

GO THE EXTRA MILE. TAKE YOUR OIL CANS BACK TO THE DEPOT

Do you find yourself dazed by an abundance of bins? An emerging recycling initiative is consolidating sorting efforts and decreasing municipalities' overall footprints.

Sorting it out: Explaining single stream recycling

HOW WE MADE IT

Environmentalists, governments and the industry alike understand that one of the major enticements to fostering sustainability is convenience—if recycling is easy, chances are people will do it.

That's why single-stream recycling—a process where all recyclables are placed in a single blue bin then separated at facilities—is becoming the norm for municipalities.

In B.C. 43 percent of the population receives single stream recycling service while 20 percent of the population receive two-stream recycling (mixed fibres and comingled containers) and about 30 percent receive three-stream recycling (newspaper, mixed paper, and comingled containers).

The simplicity of the process increases the amount of recyclable products diverted from landfills.

"Single stream is really a child of an overall interest in diversion," says Geoff Love, an environmentalist who has worked as a waste diversion and energy conservation consultant for over 25 years. Although his consultancy company Love Environment is based out of Toronto, Love has worked throughout Canada.

Decreasing traffic

"B.C. has always had a history of recovering a lot of materials from drop off programs," says Love. "The first step is getting high recovery."

Love points out that single stream only requires one vehicle to pick up the blue bin rather then separate compartments for separate products.

Keep it simple, Surrey

Surrey employs a single stream system says Rob Costanzo, deputy manager of operations for the City's engineering department.

In 2010, Surrey diverted approximately 26,000 tonnes of household recyclables from landfills, up from 23,000 tonnes (in 2007) prior to the introduction of its single stream program.

"This represents an increase of 13 percent in diverted recyclable waste since switching to single stream—despite the fact that waste tonnages in general, including recyclables, have been declining," says Constanzo.

Smaller footprints, bigger bins

But it's not just about simplicity, says Love.

"Footprint issues are important," says the environmentalist, noting that multiple bin systems require multiple vehicles on the road to collect the respective recyclables and, in cases where there's one truck with separate compartments, idling becomes an issue.

"It's 95 percent more energy efficient," says Love.

In single stream collection, the recyclables are separated using cameras and computers. Once separated the materials can be sent to product recovery sites for reuse—from plastic being pelletized to newspaper being turned into recycled paper.

Education definitely plays a large role in single-stream recycling.

Greg Moore, mayor of Port Coquitlam, says the key to the success of his city's recycling system (one of the first in Western Canada) is working with industry through stewardship programs and keeping residents in the loop.

"The improvement we're in need of is better communication with residents," says Moore.

Love echoes Moore's sentiments saying the municipality needs to let residents know "what needs to go where."

"The recycling business is an essentially an item-by-item industry," says Love. "It's important to make sure that what goes in the bin is recoverable material."

ANDREW SEALE
editorial@mediaplanet.com

As Canada's leading provider of integrated waste diversion and recycling solutions, we look at 'waste' from a different perspective - not something to be hauled to landfill but resources that can be transformed into new products like automotive parts, fleece jackets, aluminum cans and ethanol.

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INSPIRATION

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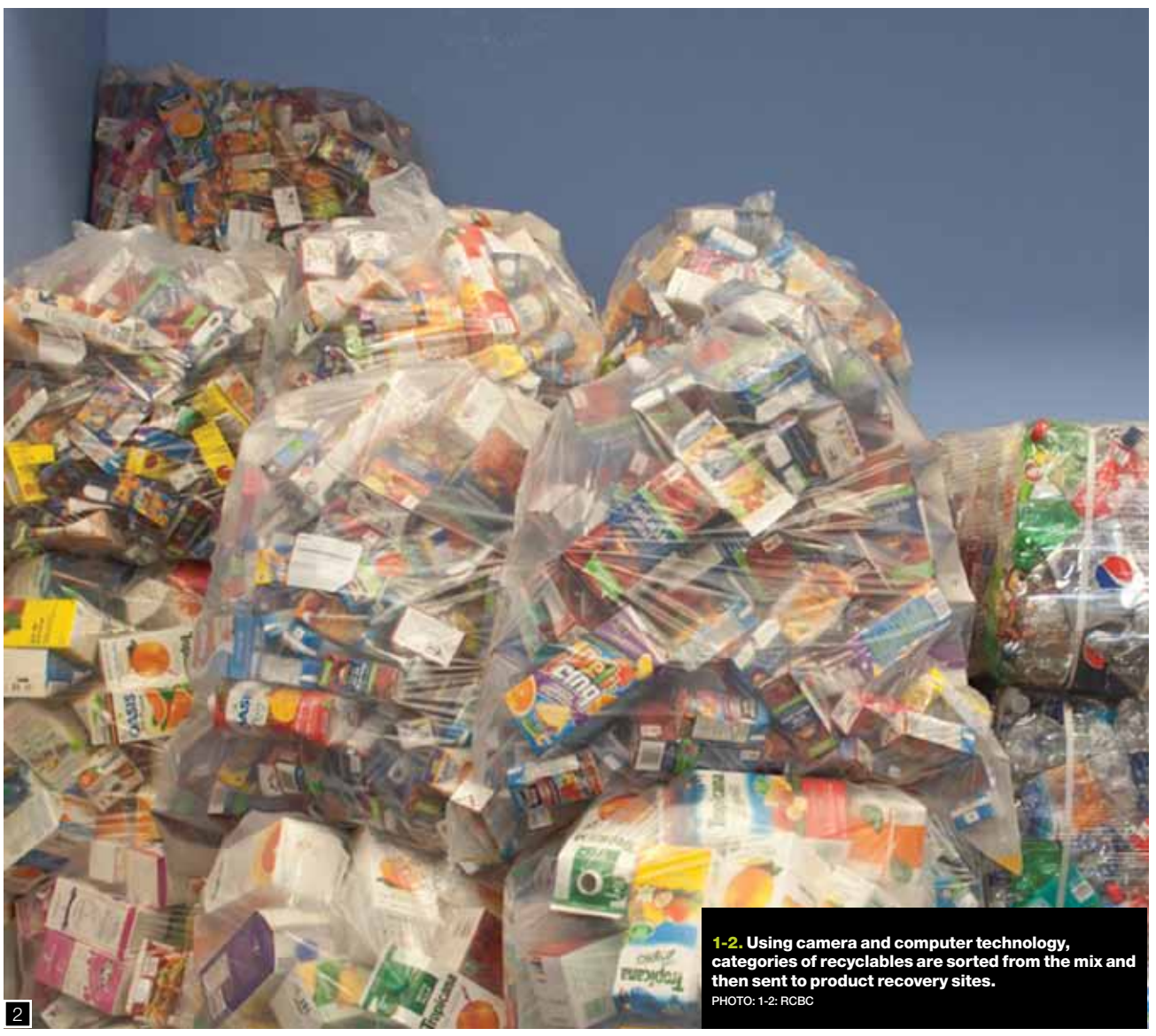

2

1-2. Using camera and computer technology, categories of recyclables are sorted from the mix and then sent to product recovery sites.
PHOTO: 1-2: RCBC

NEWS IN BRIEF

New life for old oil

Like it or not, oil-derived products play an overwhelming role in our lives. Granted, it's no secret that the slick liquid—like most non-renewables—will run dry some day.

But while industry drills new frontiers in search of "black gold", innovative recycling efforts at home have shown ways to reuse and re-refine oil to alleviate some of the pressure on environmentally damaging practices associated with getting oil.

"The greatest greenhouse gas benefits are when the oil is re-refined," says Ron Driedger, executive director of the Used Oil Management Association (UOMA), an organization that helps recycle oil for both consumers and the industry.

"Before then, the consumer had to pay to dispose of it," says Driedger. Needless to say "very few filters and oil containers were recovered—they ended up in the landfill."

According to the Used Oil Management Association (UOMA), about 215 million litres of new oil are sold across western Canada each year with a majority of that oil not consumed during use and available to be recycled.

"Half of the 47 million litres of recycled oil collected in B.C. goes to the re-refinery," says Driedger. "The remainder that doesn't get re-refined gets used as fuel at the pulp mills."

North Vancouver is home to Newalta's Mohawk re-refinery—one of two located in Canada.

The facility operates year round, producing 20 million litres of base oil annually.

The re-refining process basically emulates the original refining process to return the oil to its original state where it is virtually indistinguishable from it base oils made using virgin crude oil. Afterwards it can be used in place of or in conjunction with other virgin based oils.

Where's the incentive?

Oil is one of our most vital non-renewable resources and when you consider that a litre of oil can contaminate a million litres of water, it seems like common sense to keep it out of our landfills.

"Any time you can divert something from the landfill to recycling that's a good thing," says Harvinder Gill, information services manager for the Recycling Council of B.C.

She points out how silly it is considering that oil products already have a built in deposit fee when you purchase them.

"You already essentially paid into the program so you might as well use it," says Gill.

According to Driedger, 12 percent of the oil by weight remains in an oil jerry can.

But the success of reusing oil lies in ensuring oil cans are returned to one of the 490 plus recovery stations in the province—which also collect discarded anti-freeze containers.

"There's no incentive at the back end to do the wrong thing," says Driedger.

Visit www.usedoilrecycling.com to find the nearest recovery depot.

ANDREW SEALE
editorial@mediaplanet.com

ADVERTORIAL

Mission Possible:
Tetra Pak's holistic approach to sustainability

Tetra Pak's products are everyday food and beverage cartons, but the 60-year old Swedish company is determined to do its part to help protect the environment.

Greening business through the three "Rs"

Reduce, renew, recycle – these three words underpin Tetra Pak's mission to reduce the impact of its value chain operations on the environment. Two months ago, the company published its Mission Possible report, which outlines an ambitious global 2020 strategy to produce a better product while conserving the earth's limited resources.

Driven by its company motto, "to protect what's good", Tetra Pak is working hard to minimise its environmental impact, writes Dennis Jönsson, president and CEO Tetra Pak.

Elizabeth Comere, Tetra Pak director, environment and government affairs said the company's long-term environmental strategy is three-pronged.

The first pillar is reducing the company's environmental footprint across the value chain. This spans raw materials suppliers to transport providers. "In 2005, we pledged to cut our absolute CO2 emissions by 10% by 2010. We succeeded in reducing emissions by 13%, despite a 23% increase in sales," explains Comere. "We have now decided to go further and our global 2020 goal aims to cap our carbon emissions at 2010 levels, across the value chain."

This will require a hefty cut of 40% in CO2 emissions, especially considering Tetra Pak's global growth ambitions, she adds.

Innovation is key

The second pillar involves the use of renewable materials in its packaging. Tetra Pak's cartons are made mainly from paper (on average 73%), which is a renewable resource. However, "our vision is to have packaging made up of 100% renewable material," says Comere.

This requires sustained investment in research. However, its award-winning Tetra Recart packages show how innovation can reap rewards. Tetra Recart is the world's first carton made mainly from paper which is suitable for products like tomatoes, soups, sauces and beans, typically packaged in steel cans or glass jars.

The lightweight square cartons are shipped flat, so one standard truck with empty Tetra Recart cartons equals nine trucks with empty cans -- meaning less fuel is used to transport packaging, and less trucks are clogging the highways, says Comere.

Tetra Pak is also researching the use of plant-based plastics, or green polymer, in its packaging, as such materials have a lower carbon footprint.

We can recycle more

For its third pillar, recycling, Tetra Pak aims to achieve a 40% recycling rate for cartons by 2020, doubling the current global rate of 20%, as rates among countries vary.

According to official statistics, the recycling rate in Canada is about 43%, but we can do better, says Comere.

At Tetra Pak's instigation, the Carton Council of Canada, established earlier this year, aims to increase recycling in this country. The Council has been tasked with advancing sustainable recycling solutions through promoting recycling technology and local collection programs to divert carton packaging from landfills, she explains.

"There is some critical work we need to do to achieve this goal, and the bulk of it involves educating the consumer," says Comere.

INSIGHT

NEWS IN BRIEF

Where to put hazardous materials?

With the approval of Metro Vancouver's solid waste management plan in late July, stiffer restrictions on waste at landfills presents new challenges and solutions for the hazardous waste industry.

"Many people aren't conversant with how much hazardous waste is moving on our roads, rails and waterways," says Frank Came, president of the B.C Environment Industry Association.

In B.C., transportation of hazardous waste, such as used motor oil, acids, waste pesticides, biomedical & radiological wastes, PCBs, solvents, metals and asbestos - follow strict regulation.

"You get a tremendous amount of hazardous waste from construction and resource industries," says Came.

He points out that some contaminants can't be reused. "Soil is something that can't just be trucked off to a golf course to use as a green," he says.

Just keep it out of there

But Dave Rogers, founder of hazardous waste consultancy firm BC HAZMAT, says the new plan, which will divert 40 percent of disposal costs into 40 percent recycle costs, will help the industry in a few interesting ways too.

"If we divert more plastics from the landfills we will find uses for it," says Rogers. "Most of our Spill Response Products, pads, booms and such, are all made from these recycled plastics."

The plan will increase public education to cut down on improper handling of potentially toxic materials.

Rogers says that by the time pre-consumer chemicals and hazardous products get to the recycling stage, most of the products are so far removed from their original protective packaging and identifiers that it's not surprising people have no idea how to handle the waste and it finds its way into the garbage.

"I think this will be good for our member industries and that this type of plan will allow our folks to gear up and will also allow the generators to gear down," says Rogers.

But when it comes to hazardous waste, educating the public is only half the battle.

"It's not just on the user—it falls on the user to question what goes into the product," says Came. "Find out what is hazardous and machine it out of the process."

KYLE BODNARCHUK
editorial@mediaplanet.com

The Clean Bin Project: One wasteless year

Jenny Rustemeyer
Writer,
The Clean Bin Project Blog

WHAT CUTTING BACK CAN DO
Rustemeyer and project partner Grant Baldwin used packaging alternatives for an entire year.
PHOTO: THE CLEAN BIN PROJECT

When I tell people that I didn't take my garbage out for an entire year, it takes them a moment to process it. I think they're envisioning a huge pile of black garbage bags festering in my backyard.

But, the reason I didn't take my garbage out is that I didn't really have any. For one year, the three people in my household held a competition we dubbed The Clean Bin Project. We challenged ourselves to consciously buy less stuff, pick things without packaging and recycle more. And we managed to reduce our annual garbage from over 500 pounds per person to just one grocery bag.

Going without

Then the questions start. "How did you do it? What about toilet paper and feminine hygiene? What about snack food? How did you wash your hair without shampoo bottles and brush your teeth without toothpaste tubes?"

In what my brother-in-law would call "extreme recycling", we set up kitchen bins not only for compost and curbside recyclables that get picked up by the city, but also soft plastics, styrofoam, scrap metal, batteries, lightbulbs and other items not included in municipal systems but accepted at private recyclers (see www.MetroVancouverRecycles.org as a resource).

We became acutely aware of waste. We ate pizza without the paper plate, eschewed toothpicks and drinking straws, shopped the bulk aisle with cloth bags in hand, and (after getting over our initial embarrassment) brought our own containers to the deli counter, the butcher shop and the food court. We even made our own (excellent) laundry soap and (not so excellent tasting) toothpaste and learned to bake bread and make crackers from scratch.

You can do it too

Maybe you're thinking that our year sounds more like a shameless display of "greener than thou" deprivation, than a feasible lifestyle change, but I think there's something to be said for committing to a challenge and making it fun. Now two years past the official project, I'm still using my cloth bags and ardently composting. Sure, I buy the occasional tube of deliciously minty-fresh toothpaste or plastic-wrapped treat (we aren't completely zero waste), but it sure feels good come garbage day when I don't have to drag that smelly black bag to the curb.

The documentary film of Jenny's household's zero waste year recently won Best Canadian Documentary at the Projecting Change Film Festival and is currently screening in select communities (www.cleanbinmovie.com).

JENNY RUSTEMEYER
The Clean Bin Project blog
editorial@mediaplanet.com

NEWS

BEYOND THE BACKYARD
High levels of bioenergy can be derived from everyday food waste.

How food waste and bioenergy is cleaning your community

Question: How can organic waste decrease the burden on landfills?

Answer: The latest methods go beyond fertilizer, transforming your food garbage into usable biofuel.

In the 1980's film "Back to the Future," Doc tosses a banana peel and garbage into his DeLorean's to fuel the vehicle. Granted, our society may not have the ability to zip through time but using waste as a fuel isn't so far off.

Dr. Bryan Imber, founder, president and CEO of ICC Group, a company that turns organic waste into fuel and fertilizer, points out that about seven to 10 percent of all greenhouse gasses produced in Europe and North America come from landfill methane and CO2 emissions.

According to Imber, 40 percent of waste in a landfill is compostable organics.

"At the moment all of the greenhouse gases from landfills come from (organic waste)," say Imber.

ICC is one of several companies looking to turn high-grade compost into bioenergy.

"Unlike other biofuels, when you turn that organic waste into fuel you're not using farmland," says Imber referring to other alternatives that require significant land-use such as corn-based ethanol.

"It doesn't really make sense for (organic waste) to end up in a landfill."

Paul Sellew
CEO, Harvest Power

And the best part about biofuel? It's a by-product of everyday activities. Imber points out that 100 thousand people produce about a hundred tonnes of organic waste a day.

Breaking it down

Paul Sellew, CEO of Harvest Power, a bioenergy company says the concept of putting organic waste in a landfill is dated.

"It really doesn't make sense for (organic waste) to end up in a landfill," says Sellew.

Harvest Power's facility in Richmond uses a process called anaerobic digestion to compost. A series of processes break down organic compounds through the use of bacteria in an oxygen-free environment.

"This is a biological system," says Sellew. "We're able to generate 200 kilowatt hours of electricity through a tonne."

The gases from the compost can be used to power the facility itself.

"From the standpoint of the environmental community, this is really considered the highest and best form of bioenergy," says Sellew. "This is going to be the model for how organic waste should be managed."

Learning from Naniamo

Nanaimo, is ahead of the curve when it comes to dealing with its organic waste says Carey McIver, manager of solid waste

for the Regional District of Nanaimo.

"We spent the 90's developing our solid waste plan," says McIver. "We said once the private sector has constructed a facility we will ban food waste from our landfills."

In 2005, the region banned food waste in light of ICC's development of a compost facility near Nanaimo.

According to Stats Canada, the average Canadian disposed of 777 kg of solid waste in 2008.

That year, Nanaimo began a pilot program for curb collection of organic waste.

"We've achieved a 60 percent diversion rate," says McIver. "In 2010, the disposal rate in Nanaimo was 414 kg per capita."

Last year the region signed a 10-year contract with ICC, one of several disposal companies operating in Nanaimo, to pick up regional compost.

And the next step? McIver says she hopes the bioenergy from the compost can help the communities zero waste goals.

"We would be delighted to see our buses fuelled by our food waste."

ANDREW SEALE
editorial@mediaplanet.com

DON'T MISS!

Plastic's second life

All it takes is a quick glance around oneself to see how pervasive the use of plastic has become in one's life. Did you know that in a landfill plastic takes 1000 years to decompose, but if diverted to a proper recycling facility it can be pelletized and reused in the same manner virgin plastic is?

Peter Bissada, of Westcoast Plastic Recyling says when plastic is separated properly, the process for recreating usable plastic is actually quite easy.

"Once it goes back to the pellet form it can basically be made into anything," he says.

Take Altwood for example, a lumber product created by Victoria-based Syntal Products using recycled plastic.

"The recycled plastic is ground up into flakes and chunks and fed into machines that melt them together," according to Brian Burchill, manager of Syntal.

Now you may be thinking, "Doesn't burning plastic create green house gas emissions?"

In Syntal's case, the plastic flakes are melted using pressure, with 25 percent of the energy being generated by the plastic itself.

The product has been approved by the organic farming industry and is often used in situations where there would be direct contact between wood and soil, which causes decay.

Although you can't use Altwood to replace lumber as a whole, a product like this can help to reduce the amount of trees cut down.

Green by design

The recycling process is relatively similar in most facilities—separate the different types of plastic from any piggybacking products such as metal or organic waste.

"Once you start mixing plastic it kills its value," says Bissada, pointing out that food wastes and metals can contaminate the pellets.

Once the different types of plastics are separated the product is washed, shredded and bailed, companies can then bid on the bails.

Tony Moucachen, president of Merlin Plastics—one of B.C.'s largest plastic recycling companies—says the industry is also beginning to understand how creating products that can be easily pelletized will help them in the long run.

"When a brand owner is serious they put effort into designing their product so it's environmentally responsible and recyclable," says Moucachen.

He points to the beverage container industry, which has started to produce bottles made of plastics that can be melted down with the label and the cap.

With the efforts put into designing a recyclable package, public education plays a big role in making sure plastics are separated properly.

"The whole concept of environmental stewardship translates into product design," says Moucachen. "Look at the product life cycle and how long it's on the shelf and what can be done to remove excess waste from the process."

ANDREW SEALE
editorial@mediaplanet.com

To solve the toughest problems you have to look at the world differently.

By focusing on recycling and recovery, we push beyond conventional thinking and find cost-effective ways to transform industrial residues back into valuable products. For example, we operate British Columbia's only used oil re-refinery. Last year we recovered over 20 million litres of base oil and lubricant products using a process that saved more than 100,000 tonnes of carbon dioxide equivalent emissions from entering the environment. There are better ways to think about waste.

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