REAPS REPORT

RECYCLING AND ENVIRONMENTAL ACTION PLANNING SOCIETY

Hotline 250-561-7327 Box 444, Prince George, BC V2L 4S6 www.reaps.org September 2003

E-cycle in P.G. with EPS

Electronics Product Stewardship Canada (EPS Canada) officially launched on March 4, 2003.

EPS Canada is developing a national electronics end-of-life program in Canada. As a not-for-profit organization, EPS Canada will work with an array of partners and stakeholders to design, promote and implement sustainable solutions for Canada's electronic waste problem.

An Industry-Led Organization
The founding members of EPS Canada are 16 leading electronics manufacturers: Apple Canada Inc.; Brother International Corporation (Canada) Ltd.; Canon Canada Inc.; Dell Canada; Epson Canada Ltd.; Hewlett-Packard (Canada) Co.; Hitachi Canada Ltd.; IBM Canada Ltd.; Lexmark Canada Inc.; LG Electronics Canada; Panasonic Canada Inc.; Sanyo Canada Inc.; Sharp Electronics of Canada Ltd.; Sony of Canada Ltd.; Thomson Multimedia Ltd.; and Toshiba of Canada Ltd. The organization was created through the joint efforts of the Information Technology Association of Canada (ITAC) and Electro-Federation Canada (EFC).

An Industry-Led Solution
The founding companies and associations of EPS Canada want to see Canada's electronic waste properly managed. These industry leaders are aware of both the pressures on municipalities for landfill management and the environmental necessity to handle the potentially hazardous content of electronics products and reuse the valuable resources they contain. EPS Canada was created to work with both industry and government to develop a flexible, workable Canadian solution.

EPS Canada members have agreed that industry will step up to the challenge of electronics waste management and develop a solution through a consultative process with provincial governments, municipalities, recyclers and other stakeholders. The initial program will focus on:

- personal computers;
- monitors;
- television sets;
- laptop computers;
- printers.

Additional electronic products will be added as the program evolves.

In Prince George computers, monitors, scanners, printers, copiers, VCRs, and faxmachines can be dropped off at Computer Mail Order & Trading, 835 Victoria Street. Ye Olde Junque Yard, of Vanderhoof, B.C., is collecting the materials from Computer Mail Order & Trading, salvaging and shipping them to Vancouver for further recycling. Ye Olde Junque Yard will also take any metals, cars and trucks although these cannot be dropped off at Computer Mail Order & Trading. They can be reached at 567-4340 or e-mail: yojy@telus.net

CONTENTS

R.E.A.P.S NEWS

We had a busy summer and the Compost Demonstration Garden saw lots of visitors come through the gates. Some highlights were:

- 2599 Visitors through the Garden (May to August)
- 221 Hotline calls received (May to August)
- 15 Workshops on composting
- 15 Workshops on vermicomposting
- 1735 Homes reached through the Compost Works and Recycling Reduces Campaigns
- 11 Community Outreach presentations
- 18 Day Camp presentations
- Participated in the Communities in Bloom Competition
- Composter Construction workshop at the Metis Elder Community Gardens
- Dumpy visited the SummerFest 03
- Vegetables grown for local food banks
- Hosted booth at the PGX
- Participated in the Kidz Art Day at the Art Gallery
- Go For Green Week at the Garden with daily recycle craft activities for children
- Tour held for the David Douglas Botanical Gardens Society
- Monthly recycle craft hour with Rainbow Lodge Day Centre
- Guest Speaker: Cynthia Rebman, Horticulturalist, Parks Division, City of PG spoke on Natural Pest Control Methods and the Integrated Pest Management Program

LOCAL NEWS

HABITAT FOR HUMANITY PRINCE GEORGE ReStore

Located at 220 Queensway (across from Court House) is now open and accepting materials.

The ReStore Service

ReStore recycles overstocked, seconds, used, discontinued and salvageable building materials and large appliances donated by manufacturers, stores, contractors and individuals. These donated items are used in two ways: to build simple, decent houses for low-income families serving the Habitat mission and to be re-sold to the general public to finance building projects. For more information and what materials are accepted check out www.habitatpg.org or call (250) 564-1188 or e-mail: hfhpg@telus.net

NEWS FROM THE REST OF THE WORLD

Grounds For Gardening

Now even your garden can get hooked on Starbucks coffee. The Composting Council of Canada announced in March that Starbucks stores are now offering spent coffee grounds for gardening or composting at no charge. The grounds are packaged in reused coffee bags and are available at retail locations upon request. Gardening experts say that coffee grounds can be applied directly to acid-loving plants, such as azaleas and roses, or they can be composted and turned into a nutrient-rich soil amendment for your garden. Starbucks "Grounds For Your Garden" program began over eight years ago as a grassroots initiative to reduce the amount of waste going to landfills. For more information, visit www.starbucks.com/aboutus/compost.asp.

Source: Solid Waste and Recycling.

New fund focuses on zero-waste goal in B.C.

5/28/2003

The British Columbia Ministry of Water, Land and Air Protection (WLAP) and the Advance Systems Institute of B.C. (ASI) have jointly launched the ASI Environmental Futures Fund (EEF) to accelerate environmental and waste management research in B.C. The new partnership aims to promote research to find alternatives to landfills with a view to the province's goal of zero waste, and to improve the sustainability of coastal ecosystems.

ASI will administer the fund, and WLAP will provide financial assistance of $1-million. ASI will also use the government money to leverage further contributions from industry, anticipated at more than $2-million. Qualifying one-year projects will receive up to 50 per cent support from the EEF and a minimum contribution of 50 per cent will be required from industry and/or other contributing sources. Select projects may match funding of up to $50,000.

To view the application guidelines, visit www.asi.bc.ca or for further information, e-mail Gordon Bird at gbird@asi.bc.ca

World's "first zero waste" paper recycling plant

Michele Raymond (Raymond Communications, USA) reports that the US$150 million Corelex plant in Kawasaki, Japan - built with the help of government loans - is the first *zero waste* paper recycling plant in the world, according to its developers.

Unlike many paper plants, which struggle over yellow stickies and landfill growing quantities of sludge, this new plant can take all manner of mixed paper, binders, paper with plastic clips, metal parts, and aseptic poly-coated paper with no problem. The only waste product is some ash, which is used for filler in a concrete product by another plant nearby.

The key, according to Tetra-Pak's environmental engineer Robert Kawaratani, is the system soaks the incoming paper for longer periods that a standard hydra-pulper. In Japan, the government requires such plants getting help to become educational labs, complete with classrooms and tours for children of all ages.

The Corelex plant has a built in classroom with numerous colorful brochures available for children, as well as several videos that explain the whole process. However, unlike many commercial plants with glassed-in areas, visitors receive a genuine tour of the entire facility.

The baled material - ranging from poly-coated cups from Tokyo Disney to boxed confidential documents from big companies, are fed directly into the pulper in a lump, and then swelled while being matured to facilitate ink separation.

The material goes into a large tower where it is soaked for 12-14 hours. A rake system at the bottom pulls pulp out of the tower, and screens out contaminants. The equipment was designed by the San-Ei Regulator company.

The pulp is de-inked, sterilized, and bleached with hydrogen peroxide. The sludge is passed through a screw press to squeeze out much of the water, and then burned in a boiler at 800-900 degrees C. The energy from burning the sludge and the polyethylene from the aseptic material create energy to help run the plant.

The pulp material is passed into a huge tissue maker, which runs a mile a minute.

The plant can handle 250 tons per day but runs at 220 tons per day, making 150 tons of toilet paper daily. It cannot get enough of the higher quality aseptic feedstock, he says.

The rolls are cased in plastic, and then palletized by robots for storage. However, the product must be de-palletised and manually loaded because they don't fit onto Japan's small delivery trucks.

The plant runs 24 hours a day, seven days a week with a staff of about 100.

Unlike in the US, where there is almost no recycling of consumer polycoated and polystyrene, Japanese grocery stores collect these two materials, along with PET bottles, though they are only paid for the polycoat material, Kawaratani explains. Consumers carefully rinse, and then disassemble the cartons so they lie flat. It is easier to store them that way when you don't have a lot of space, he explained.

Based upon a voluntary agreement, PET bottles are all clear to facilitate recycling, though they have shrink-wrap labels. Many bottles are square to save space. Each prefecture and local government collects differently, but Kawaratani says there is no single-stream collection. He notes that federal figures show that for fiscal year 2002, 30.63 million tons of paper was consumed, and 20 million tons were collected for recovery.

About 62% of PS foam is collected, though about 25% is recycled materially, the balance going for feedstock recycling and energy recovery. While federal figures indicate a 14% recycling rate, sources say that when business recycling is counted, Japan is now sending about 30% of its waste for recycling and recovery nationwide.

Sixth Round of Funding for the Moving on Sustainable Transportation (MOST) Program

Transport Minister David Collenette has announced over $355,000 in funding for several projects under the sixth round of the MOST program. The projects cover a range of initiatives that will contribute to a more environmentally friendly transportation system. For more information, contact Amy Butcher, Press Secretary in the Office of the Minister of Transport: 613-991-0700.

Re-localisation - a solution we can eat

by Paul Allen and Joey Hughes
Source: **Clean Slate 40** Spring 2001
http://www.cat.org.uk/catpubs/article.tmpl?sku=art11&cart=326797775317970

Re-localisation is a complementary alternative to globalization which provides us with the means to choose which aspects of our lives we will source locally and which parts we feel confident to trust to multi-national commerce. Re-localisation is both a protection from the fragility of globalization and an opportunity to create robust and diverse local economies. Creating regional food sustainability fits right into this concept, doesn't it?

Anyone watching the news recently will have seen pictures of despondent men and women pouring out of factory gates as the company they have been working for has just announced closure. The news will usually focus on the devastation this will cause to the local community, the disappointment that Government officials could not convince the company to stay, and the knock-on effects the closure will have on other local businesses. Do we really have to be this fragile?

Ironically, the next news item could easily be a politician or business leader asking us to grasp the new opportunities within the globalisation of world markets. What is rarely mentioned is that along with the opportunities of globalisation comes an inherent instability. If a large company can simply close and move to a lower wage economy why shouldn't it? If another company can move away to an area with lower health and safety standards for their work force, why not? This is the reality of the 'global free-market'. Indeed, why are we so surprised that a small town, over-dependent on one large employer, is suddenly ruined by its loss?

What's the solution?

The solution to this problem is not so far away: in fact it is literally on our doorstep. **Re-localisation is a complementary alternative to globalisation which provides us with the means to choose which aspects of our lives we will source locally and which parts we feel confident to trust to multi-national commerce.** Re-localisation is both a protection from the fragility of globalisation and an opportunity to create robust and diverse local economies.

In practice, it means raising the profile of local produce with consumers; getting local farmers to work with local shops to supply more locally produced food; getting a community wind power scheme to include turbine maintenance by the local garage mechanic; getting local engineering firms to look into the creation of a sideline in manufacturing components used by other local companies; or getting domestic organic wastes turned into valuable compost for the garden centre. In short, re-localisation is about making your local economy larger, more robust and more diverse — truly sustainable development.

Too much complexity

Our food, clothes, shelter, drink, warmth and power are now delivered to us by a complex web of interactions between a great many very complex and fragile systems — it's only when it goes wrong that we even notice how complex it all has become. As management criteria go, resilience or robustness hardly gets a look in alongside such titans as 'efficiency', just in time delivery, best value and optimum returns on investment. We have already seen some minor breakdowns: the fuel crisis, BSE, salmonella, computer viruses, freak weather, Railtrack, and now we have the foot-and-mouth disease outbreak. Imagine how today's vital supply systems might cope with something more serious, such as a runaway greenhouse effect situation. We may find that we have lost the infrastructure, skills and knowledge base to provide for ourselves in any meaningful way.

Without realising it, we have created a house of cards, built on foundations of complexity. Worse still, we treat it as if it were a fortress of stone. Clearly,

our local economies need to be stronger for today's problems as well as tomorrow's.

Taking action

In more localised systems however — such as those that Britain had in the past or those in less over-developed parts of the world — there is much more inherent resilience and robustness. Meeting local needs with local resources is an inherently more stable system because:

• things do not travel so far, so they need less preservatives and packing

• they are based around the use of locally available materials

• they are made with local skills

• the people involved know each other

• they more fully understand the technologies they use

• the systems are not driven excessively hard to compete

• they do not require large amounts of imported energy.

It is not necessary to re-localise everything at once, nor is it necessary for re-localised alternatives to become the only option. Globalised and localised systems can exist side by side. Some items you may want to buy locally, on other days you may not. The important thing is that the local options are retained or re-introduced. Economic diversity, like biodiversity, produces resilience in the systems. Looking today at any high street in the UK, we see the dominance of large retailers. If we want to complement their presence, we need to take action to encourage a diversity of smaller independent retail outlets supplying local produce. This diversity increases our economic strength.

Some ideas on what to re-localise and why:

Prioritise the essentials — short life consumables where loss of supply will cause direct hardship. This will help in:

- Preserving or re-introducing economic diversity
- Reducing the complexity of the production system involving
- Reducing fossil fuel emissions
- Increasing local employment
- Adding value to goods and services
- Keeping money circulating locally
- Reducing consumer concerns
- Preserving or re-introducing key skills bases within the local area.

Conclusion

Within any regional economy there is a sector which is driven through meeting local needs with local resources. Although it may no longer be the majority share, this sector is rapidly becoming increasingly significant in a globalised

world, as it is by far the most resilient. By its very nature it cannot be transferred to new areas where labour is cheaper or where the next round of subsidies is being unveiled. Of course there are some items such as spares for the car, computer hardware and software, or hi-fi equipment, which it is quite acceptable to source from trans-national markets. For other things, particularly essential short durability items, we as consumers may prefer to re-localise our supply chains. Some things could be tightly re-localised to the town or surrounding area, other things could be sourced from the region or county. **We must not forget that collectively we are in control — we just need to re-explore our options.**

Food & Agriculture: a recipe for trouble?

Our farming industry is important — economically, environmentally and socially. It's hard to believe the run of bad luck currently being dealt to the agriculture sector. First it was salmonella and eggs, then it was chickens, then came BSE followed closely by diminishing fish stocks, and now we're back to foot-and-mouth disease. This seems to be such a strikingly significant run of misfortune that perhaps there's more to it than just luck.

In agriculture, globalisation has brought about incredible increases in complexity over the past few decades. On the supply side, our farmers have been encouraged to borrow money to buy new plant and machinery to meet production targets or increase yields. On the demand side, large chains of out of town supermarkets have had the economies of scale to drive local traders out of business, thus removing supply chains for local produce. **Many of these changes are not introduced for the benefit of the farmer or the consumer; they are made for the benefit and profitability of the trans-national distribution chains and supermarkets.** All these increases in complexity to the food chain, which itself is rooted in an industry that by its primary nature is already biologically complex, must make us wonder about what control we have left.

We may think that the food we buy today is basically much the same as the food we bought in the 1970s. Nothing could be further from the truth — the food, and more importantly, the systems that provide it have changed almost beyond recognition. Unsurprisingly, the hidden costs of the changes to food production and distribution are not fully internalised, e.g. greenhouse gas emissions, job losses, and public health scares. Vegetables that could be grown locally are flown thousands of miles to reach our dinner plates. Millions of animals are now moved vast distances, held briefly in collective holding centres, then quickly moved on to somewhere else. What we buy might be part of an English sheep, slaughtered in Belgium, processed in France, part sent to Canada and part sent to the UK. Although meat is an important export market, if animals are fed on local feed, slaughtered locally, and processed locally, not only do we significantly reduce the risk of damaging problems across the industry, we also keep an increased share of the value of the product in our local economy. Re-localisation — even in this sector alone — would benefit farmers, consumers, the economy, and the environment.

TAKEN FROM: *sound bits* Internet Newsletter
Small Scale Food Processor Association (SSFPA)
1702 Ash Road, Victoria, BC V8N 2T6
(250) 370-5167
August 6, 2003

George Washington, The Revolutionary Farmer:

America's First Composter

A knowing farmer, who, Midas like, can convert everything he touches into manure,
as the first transmutation towards gold.

--G. Washington (1785)

By Dennis J. Pogue and Robert Arner
George Washington's Mount Vernon Estate and Gardens

Dennis Pogue is Director of Restoration at Mount Vernon. He holds a master's degree in American Studies from George Washington University and a doctorate in archaeology from American University. He has 20 years experience in colonial plantation archaeology. denpog@aol.com or mountvernon.org

Robert Arner is a solid waste program manager for the Northern Virginia Planning District Commission. A graduate of the University of Maryland, he has 16 years experience in dealing with various facets of solid waste and recycling issues.

(We hope to reconstruct the Dung Repository as an active composting facility in the next few years. Anyone interested in contributing to the @$75,000 needed to carry out the reconstruction, please contact D. Pogue.)

Two weeks after George Washington died; he was eulogized by Henry Lee in a memorial address delivered at the request of Congress: "First in war, first in peace, first in the hearts of his countrymen." But in addition to his famous public career, there was a less well known, "earthier," side to George Washington.

For 45 years George Washington was the master of Mount Vernon, and he viewed his occupation as farmer very seriously. Beginning as a tobacco planter like his father and older brother before him, Washington devoted himself to producing bounteous crops of the weed for export to England. He realized early on, however, that this plant was ruinous to the fertility of his soil. Therefore, he soon stopped growing tobacco and took up the cultivation of wheat as his primary money maker, complemented by corn and a variety of lesser crops aimed at sustaining his family and slaves. The quest to improve his yields led Washington to explore a wide range of agricultural experiments, including composting as a means of restoring soil nutrients.

In 1794 Washington sadly noted in his diary that, "Unless some practice prevails, my fields will be growing worse every year, until the crops will not defray the expense of the culture of them." Unfortunately for his successors who attempted to farm Mount Vernon after the death of the great man in 1799, this gloomy prediction was all too true. For Mount Vernon's soils were simply too poor to be a good producer no matter what innovative measures were employed. Thin topsoil overlying a dense, impermeable clay foundation was the main culprit, exacerbated by severe erosion caused by the poor practices of the day.

Washington never gave up the challenge to improve his soils, however, and he undertook numerous experiments to find the best form of fertilizer. He subscribed to John Spurrier's **The Practical Farmer**, which advocated the wise use of agricultural by-products and adding organic matter to improve the soil. Washington revealed an experiment in composting in his diary on April 14, 1760, when he "Mixed my compost in box" with different types in the various apartments. He planted the same number of seeds in each compartment and systematically recorded the results. After many trials, Washington applied manure, river and creek mud, fish heads, and plaster of paris to his fields with some success.

As evidence of George Washington's devotion to composting, he erected a highly unusual building specifically designed to compost "manure" and to

facilitate its "curing" into usable fertilizer. Mount Vernon archaeologists have excavated the site of this building, called the "dung repository" or the "stercorary", to gain more insight into Washington's farming activities and to provide the information necessary to reconstruct this interesting structure.

Washington's typically detailed directions for constructing the repository provide several important clues to building details. In a letter to his farm manager in May 1787 he lectured:

When you go about the repository for the compost ... if the bottom should not be of good clay, put the clay there and ram it well before you pave it, to prevent the liquid manure from sinking, and thereby being lost.

He also directed that the manure pit have masonry sides and that the bottom was to be paved with cobble stones.

The archaeological excavations have revealed that the repository was a long, narrow building (31x12-ft in dimension) supported by posts on a brick foundation on three sides and by posts set directly into the ground on the fourth. The interior stone floor is recessed almost two feet below the ground surface, presumably to aid in the composting. A depiction of an idealized dung repository published in an agricultural journal in Philadelphia in 1808 shows a remarkably similar building. It is open on all four sides, to improve ventilation and facilitate curing the compost, complete with a floor paved with stone.

The plans for a dung repository were published by the Philadelphia Society for Promoting Agriculture, along with an essay on composting in general and on the benefits of this structure in particular, under the authorship of Richard Peters. Both Peters and George Washington were members of the Society, and they corresponded at great length pertaining to a wide range of agricultural issues. Whether Peters' dung repository drawing was partly based on Washington's stercorary is impossible to tell, but the marked similarity raises the possibility of a connection.

In his book, **The Practical Farmer**, Spurrier recommends an impressive diversity of materials -- waste from a wide variety of animals, leaves, domestic trash, corn stalks, the carcasses of dead animals, and many more -- as potential sources of manure. Little information is available as to what was actually composted in Washington's dung repository. One reference from 1796 provides some insight, however, as Washington instructed:

Let others rake, and scrape up all the trash, of every sort and kind about the houses, and in the holes and corners, and throw it (all I mean that will make dung) into the Stercorary.

Less than half a mile from the site of the dung repository is a new educational project devoted to portraying the way Mount Vernon was farmed in the 18th century. Known as "George Washington: Pioneer Farmer", this interactive exhibit shows how Washington experimented with crop rotation and with different crops, fertilizers, and soil amendments. In addition, by 1794 Washington built a novel 16-sided barn at one of his outlying farms to more efficiently process wheat. This structure, which was round to enable horses to tread the wheat on the barn's second floor, has been authentically reconstructed and is a working reminder of George Washington's commitment to agricultural experimentation.

Washington's devotion to implementing the agricultural innovations of his day was more than just the natural desire of a farmer to improve his yields. He was acutely aware of the need for the new American nation to establish

itself in the world, and farming was the first occupation of the country. His championing spirit is expressed in a letter to Samuel Chamberline from April 1788:

Every improvement in husbandry should be gratefully received and peculiarly fostered in this Country, not only as promoting the interest and lessening the labor of the farmer, but as advancing our respectability in a national point of view; for, in the present state of America, our welfare and prosperity depend upon the cultivation of our lands and turning the produce of them to the best advantage.

Thus, Washington viewed his own efforts at Mount Vernon as experiments that could benefit all of his countrymen. Even when testing the relative restorative values of cow manure, fish heads, and creek mud, or when calculating the returns from his many different crop rotation plans, George Washington still had the welfare of his beloved new nation closest to his heart.

THE R.E.A.P.S REPORT

The newsletter of the Recycling and Environmental Action Planning Society, (AKA R.E.A.P.S)
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Articles, suggestions for articles, or comments in general can be submitted to the R.E.A.P.S office, or directly to the Newsletter Editor: Barbara Rayment Phone 250-964-6684, Fax 250-964-1864 or e-mail birchcreek@telus.net

RECYCLE CRAFT CORNER

Recycle Styrofoam Stamps

Need: styrofoam tray
Blunt tip
Ink stamp pads
Clip-art
Glue and scissors

How:
1/ wash and dry styrofoam meat tray thoroughly
2/ take a pattern and trace it on with a blunt tip onto the styrofoam
3/ make a handle by gluing a piece of the tray to the back of the stamp
4/ use a stamp pad to ink it and press onto paper, cardboard etc.

RECYCLING and ENVIRONMENTAL ACTION PLANNING SOCIETY

MEMBERSHIP APPLICATION

Name:_____

Mailing Address:_____

_____

City: _____ Postal Code_____

Telephone: _____

Annual Membership Fee:

- ☐ Individual ($8.00)
- ☐ Family ($15.00)
- ☐ Business ($25.00)
- ☐ Student ($5.00)
- ☐ Senior ($5.00)

I'm interested in volunteering: ☐ Yes ☐ No

Things that I would like to take part in are:

- ☐ School presentations
- ☐ Master Composter Program
- ☐ Spring Plant Sale
- ☐ General Garden Work
- ☐ Information Booths
- ☐ Fundraiser Events
- ☐ Public Workshops and Presentations
- ☐ Board of Directors

Date: _____

Cheque payable to:
R.E.A.P.S.
Box 444 Prince George, B.C. V2L 4S6

COMING EVENTS

SEPTEMBER

28 Vermicomposting Bin Construction 2 p.m. at Compost Demo. Garden
28 Green Consumers Day (buy environmentally safe products)

OCTOBER

4 Compost Demonstration Garden Fall Cleanup (volunteers welcomed noon – 3p.m.)
20-26 Waste Reduction Week School District 57 Challenge
31 R.E.A.P.S Compost Demonstration Garden closes till May 2004

NOVEMBER

1 R.E.A.P.S fall / winter office hours are: Tuesday to Thursday 9 a.m. to 5 p.m.
28 Buy Nothing Day