

## Local Society Short-Circuits E-waste

**S**elf-confessed computer geek Ray Carling is applying his understanding of electronics to environmental sustainability. The result is Stop Computer Land Fill, a non-profit society committed to recycling the electronic waste (e-waste) generated primarily from discarded computers and printers.

Since its inception last July, the society has collected more than 20 tonnes of e-waste. Discarded computers are first disassembled into their three major components: steel, plastic, and electronics. Steel is flattened before being delivered to Kelowna for recycling. Stockpiled plastic will be baled or chipped before being shipped to Alberta, where it will be made into two-by-four planks for decking. Electronic components – including logic boards and power supplies – will go to Noranda, where the individual metals will be melted out and recycled into new products. Carling is very proud that, “nothing is landfilled.”

While still in its infancy, the society is looking to grow quickly. Plans to expand its services throughout the Thompson Okanagan and Columbia Shuswap regions are expected to generate about nine tonnes of e-waste monthly.

“Hitting smaller centres is complex because of the relatively small volumes,” says Carling, “but it has to be done. There’s too much at stake to ignore the problem. The old adage “out of sight, out of mind” simply doesn’t apply here.”

E-waste is a growing problem, particularly for communities committed to recycling renewable resources, preventing the release of hazardous substances into the environment, and conserving valu-

able landfill space.

Case in point: A typical computer weighs about 30 pounds, of which three to five pounds is e-waste. Ninety-five percent of these materials are recyclable. It also contains about three pounds of lead, four pounds of copper, one pound of zinc, half a pound of nickel, and smaller amounts of at least 20 metals. Many of these are recyclable; some (such as lead, mercury, cadmium, and arsenic) are toxic. Considering more than ten million computers are discarded in Canada every year, the cumulative environmental and economic implications are significant.

A real problem, as stated by the Recycling Council of British Columbia (RCBC), is that “the computer industry’s current benchmark for up-to-date performance is as short as 18 months. Technology advances so quickly that last year’s model may not run this year’s software.” Because manufacturers emphasize performance and price rather than designs that enhance end-of-life management, “society is left with a growing stockpile of toxic discards.”

Common accounting practices also contribute to the problem. The RCBC notes that it is common for companies “to write-off computer components over a three-year period” and that “many replace entire computer systems on that basis.”

The resulting trash is taking its toll, not only here, but abroad. As explained by the RCBC, “A significant amount of e-waste is being sent offshore to developing nations where it is managed in a manner considered completely unacceptable in North America. Worker safety, child protection and environmental standards



Ray Carling is a founding member of Stop Computer Land Fill, a local society devoted to recycling the electronic waste generated primarily from computers and printers. He’s optimistic that, given the option, people will recycle their e-waste rather than dispose of it in local landfills. And if the non-profit society’s first eight months of operation are any indication, he’s right!

are non-existent.”

In response, the province is working with the RCBC to develop a product stewardship program that will require manufacturers to take responsibility for their products’ collection and management within an environmentally sound recycling program. The first of its kind in the world, the legislation is scheduled to

be introduced by the end of the year. As noted by the RCBC, “it is expected to follow the framework for other established stewardship programs in B.C.: government regulated, but producer-managed and funded.”

For more information about e-waste recycling, and what you can do to help, contact Ray Carling at 503-5593.

### What’s Inside...

A Look at Glass Recycling . . . . .

2

Solid Solutions Leadership Award . . .

2

Capital Upgrades . . . . .

3

Bylaw Bulletin . . . . .

3

Recycling & Disposal Facilities/Fees . . . . .

4

## Plastics Recycling Expanded

The Regional District of North Okanagan (RDNO) is the first interior jurisdiction to expand its recycling program to include all varieties of plastic. Driven by public demand, the move will help conserve valuable capacity at local disposal facilities. It’s estimated that the 55,000 m<sup>3</sup> of waste generated annually in the RDNO now will be reduced to 53,000 m<sup>3</sup> as a direct result of the initiative.

“Until now,” explains Nicole Kohnert, the RDNO’s solid waste manager, “unstable markets and high shipping costs have prevented us from expanding our plastics

recycling program. With the market now proven, it’s practical and affordable for us to proceed.”

The RDNO now accepts plastics of all types (1-7) and colours, with the exception of lids (which produce litter and are difficult to sort), styrofoam (for which there is no proven market), and pesticide, solvent, motor oil, and anti-freeze containers (which contain toxic residues). All containers must be rinsed and flattened.

To prevent an initial onslaught that could stress collection systems, Kohnert recommends you recycle stockpiles of plastics gradually.



The Regional District of North Okanagan worked with the Vernon & District Association for Community Living (VDACL) to design, build, and man a Winter Carnival float intended to educate residents about new plastics and glass recycling programs. Of the 180 developmentally disabled Vernon and area residents employed through VDACL contracts, more than 20 are involved in recycling. Changes to RDNO recycling programs will provide additional opportunities for VDACL workers. The expanded plastics recycling program is expected to generate 2,000 additional m<sup>3</sup> of recyclables annually, all of which will be sorted into types before being baled and shipped to the lower mainland for reprocessing. With glass now banned from the Blue Bag program, VDACL workers will sort, by colour, recyclable glass retrieved from local depots.

# Capital Upgrades

Recent upgrades at regional recycling and disposal facilities (RDFs) have improved customer service and ensure environmental protection.

## LUMBY RDF

A new weigh scale at the Lumby facility guarantees accurate and equitable tipping. It also provides detailed statistics, which will enable better planning and estimation of future recycling and waste management initiatives. The Lumby facility is also home to new storage buildings and compaction equipment.



## ARMSTRONG/ SPALLUMCHEEN RDF

A newly excavated pit at the Armstrong RDF will accommodate more than 30,000 cubic metres of land-filled waste. To prevent "leachates" or toxins from escaping into the surrounding environment, the pit was lined with 2 metres of clay before being commissioned in September 2003. A new drop-off area for self-haulers was also introduced to the Armstrong facility in 2002.

## KINGFISHER RDF

The Kingfisher facility was recently closed after almost 30 years of operation. The site was covered with clay and then seeded to guarantee public safety, reduce environmental impact, control litter, and discourage animals. As required by the province, the site will be monitored for leachate for at least 25 years. As shown, the Kingfisher RDF is also home to a new transfer station, which enables safe, easy and clean access for drop-off.



# New Glass Recycling Program

While glassware has been accepted for recycling since the inception of RDNO's Blue Bag program in 1997, problems associated with breakage and contamination prompted staff to explore other options. "Glass is often broken in the blue bags," explains RDNO solid waste manager Nicole Kohnert, "which contaminates the remainder of the recyclables. The broken glass has to be landfilled, which accounts for about 10 tonnes going to the Greater Vernon disposal facility monthly."

The most practical and affordable solution was to remove glass from the

Blue Bag program and provide other opportunities for recycling it. Glass must now be delivered to a commercial depot (see sidebar), after which it will be picked up and sorted by crews from the Vernon and District Association for Community Living. The non-profit group has a five-year contract with the RDNO. The glass will then be delivered to O-I Canada Corp. (formerly Consumers Glass), where it will be recycled into new bottles and jars.

"This is a great opportunity for us to rebuild the recycling component of our business," says Bernard Smith, O-I Canada's batch and furnace supervisor. Before 1999, when the province

## A Look at Glass Recycling



Of the dozen or so different types of glass manufactured, O-I Canada recycles only the "container" glass found in bottles and jars. At the front end of the recycling process, glass or "cullet" sorted by colour is crushed and then separated from caps, labels and other debris.



Clean glass is heated to 1500°C in the furnace, melting the cullet into a red-hot liquid.

# Leadership Award Recognizes Commercial Composting Efforts

The most recent recipient of the regional district's Solid Solutions Leadership Award is Roxanne Nachuk, whose exemplary composting efforts at Little Tex Café & Bistro have reduced the amount of solid waste going to local landfills.

When Little Tex opened its doors eleven years ago, Nachuk approached a local farmer about using the café's food waste for animal feed. This worked well until the farm was sold. About a year ago, she talked with Briteland's Dave Weatherill about worm composting the 40-100 litres of produce ends and leftovers Little Tex generates every day. The rest, as they say, is history. Food waste is picked up daily by Briteland, and it is composted in one of Weatherill's custom-designed and -built bulk "biobins" (see photo). The resulting castings are packaged and sold as high-quality fertilizer.

"There are many benefits associated with composting," says Nachuk. "First, there's a direct cost saving. I don't have to use garbage bags and it's less labour intensive than traditional ways of dealing with

food waste."

"And then there are the environmental benefits. It's the right and smart thing to do to keep as much waste as possible out of local landfills. If every restaurant in our area composted, we'd make a huge dent in the waste stream."

Nachuk was recently congratulated

by members of the regional Solid Waste Management Plan Review Committee (see photo). Established last November, the committee's mandate is to monitor and update the Solid Waste Management Plan, which was adopted in 1996 and updated in May 2002. The plan's overall

objectives are to:

- Maximize ecological sustainability;
- Reduce the waste stream to the greatest extent in accordance with the 3Rs, considering the nature of local financial resources;
- Consider the provincial goal of zero pollution;
- Utilize user-pay and market-based mechanisms to encourage waste diversion; and
- Permit flexibility as to time and method of plan implementation so as to reflect the regional district's financial resources and to permit provision of services by the private sector, if desired.

For more information about the Solid Waste Management Plan, or to nominate someone for a Solid Solutions Leadership Award, please contact the RDNO at 550-3700.



Members of the RDNO's Solid Waste Management Plan Review Committee met recently to congratulate Little Tex's Roxanne Nachuk (right) for composting efforts that conserve valuable landfill space. Pictured are Jan Aarsen (left), Lori Borchert, and Brian Olson (RDNO solid waste technician). Other committee members are Stan Felix, Brian Guy (co-chair), Will Hansma (Regional Services Committee liaison), Raymond Paul, Jamie Sunstrum, and Michael Tindall (co-chair).



While attending a Scouts Canada jamboree more than ten years ago, Briteland's Dave Weatherill toured a recycling pavilion that promoted worm composting. As part of a resulting pledge to enable and promote "vermiculture" in his own community, Weatherill researched and then designed and built "Biobins" to help homeowners and businesses reduce landfilling through composting. Shown at the left is the bulk Biobin, designed for businesses such as restaurants that produce significant amounts of compostable waste. Predator Ridge, for example, is using this model very successfully to compost kitchen waste, the "castings" from which are then applied to the golf course and gardens. The residential unit can be used indoors, as the composting process is easy and odorless.

# Makes Environmental and Economic Sense

introduced its Return-It stewardship program, O-I Canada was recycling more than 10,000 tonnes of container glass annually. This number dropped to less than 1,000 tonnes of BC recycled glass containers in 2003. The plant could recycle more than 50,000 tonnes annually given an adequate supply of recyclable container glass.

“This makes great environmental and economic sense,” says Smith. “First, it keeps glass out of the landfill. Second, it reduces costs because processing “cullet” or recyclable glass is less expensive than using raw materials such as sand, soda ash, and limestone. Thirdly, it takes less energy to remelt

cullet than to melt raw materials. That saves money and non-renewable

resources.”  
A win-win for all concerned!

## GLASS RECYCLING DEPOTS

Wal-Mart	2200 - 58th Avenue
Enderby Bottle Depot	904 Belvedere
Armstrong/Spallumcheen Bottle Depot	3730 Pleasant Valley Road
Interior Freight and Bottle Depot	3610-26th Avenue
Chasers Bottle Depot	4612-27th Street
Happy Harry's Used Building Materials	4321-25th Avenue
Meier's Building Products	8711 Kalamalka Road
All RDNO Recycling and Disposal Facilities	See page 4



is then fed into a 300-ton furnace, which heats “Gobs” or lumps of molten glass slide down from the furnace and are dropped into specific molds. The resulting bottles or jars take about 45 minutes to cool.



O-I Canada manufactures about 300 million beer, juice, and wine bottles yearly for a variety of North American interests, including Coke, SOBE, and both the Okanagan and Napa Valley wine industries.

# Bylaw Bulletin

## Open Burning/Fire Regulation Bylaw (No. 1915)

Adopted in February 2004, this bylaw regulates open burning in Electoral Areas “B” and “C” to reduce or eliminate uncontrolled fires and the resulting smoke. It is now illegal to light an open-air fire (e.g. in an incinerator, burning barrel, or similar device) on properties less than one hectare (2.5 acres) in size. Property owners with more than one hectare may burn between April 1st and April 15th and November 1st and November 15th inclusive if they obtain a permit from the Regional District and can verify that the Ventilation Index and Air Quality Index are in the “good” range on the day of the proposed burn. Other restrictions also apply. Inspectors – who can enter any property subject to the bylaw – can order property owners to extinguish fires. Fines ranging from \$100 to \$400 may be issued. As an alternative, residents with yard waste can either mulch it on site or deliver it year-round to an RDNO Recycling and Disposal Facility (RDF) for chipping. The tipping fee is \$20/metric tonne.



Wood chips from yard and construction waste are used for roadbuilding at the Armstrong/Spallumcheen RDF, windrow composting at the Greater Vernon RDF, and as final cover material at the Lumby RDF.

## Rendering Materials Banning Bylaw (No. 1913)

Adopted in January 2004, this bylaw bans the disposal of animal carcasses or byproducts (e.g. meat-cutting waste that can be rendered) at local Recycling and Disposal Facilities. A bylaw enforcement officer, facility operator, or other regional employee may inspect any or all loads to determine compliance with the bylaw. Loads in violation may be refused or the person in violation may be fined up to \$2,000.

## Recyclable Materials Separation Bylaw (No. 1598)

Adopted in January 2003, this bylaw makes it illegal to dispose of more than ten percent by volume per load of recyclable materials at any regional Recycling and Disposal Facility (RDF), except in designated containers or in designated areas located at the RDF. Incoming loads may be inspected by a bylaw enforcement officer, a facility operator, or other regional employee. Loads in violation of this bylaw may be refused entry and/or charged one-and-a-half times the applicable tipping fee.

See page 4 for a list of recyclable materials that won't be accepted as waste.

## Meeting Industry-Specific Waste Management Challenges

The Regional District of North Okanagan has prepared waste management information sheets for the following specific industries.

- Automotive Service & Repair Shops
- Construction/Renovation/Deconstruction
- Educational Facilities
- Grocery Stores
- Hospitals/Medical and Dental Offices
- Hotels/Motels
- Retail Outlets
- Restaurants/Cafes/Bars

Also available:

- Waste Assessment Worksheet for Small Businesses
- Waste Audit Kit
- Waste Reduction Planning Kit



For copies please call the RDNO at 550-3700.

## Illegal dumping poses serious threats



Dumping of garbage on private or Crown land poses many serious threats. It can injure children playing in or around dumpsites; contaminate nearby streams, lakes, groundwater sources, or drinking water wells; damage plant and wildlife habitats; and/or compromise the beauty of our area. It is also illegal! Please report illegal dumping to the RDNO at 550-3700.

