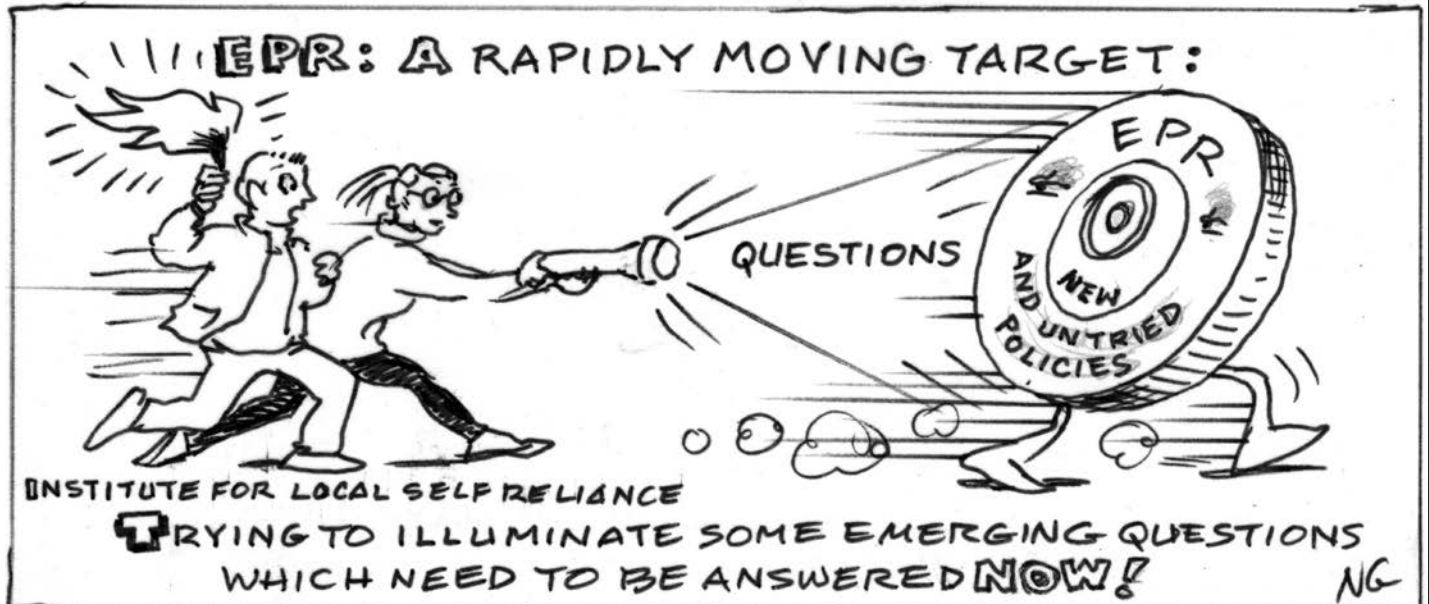


The EPR Trilogy



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Together At Last: Extended Producer Responsibility (EPR) and Total Recycling

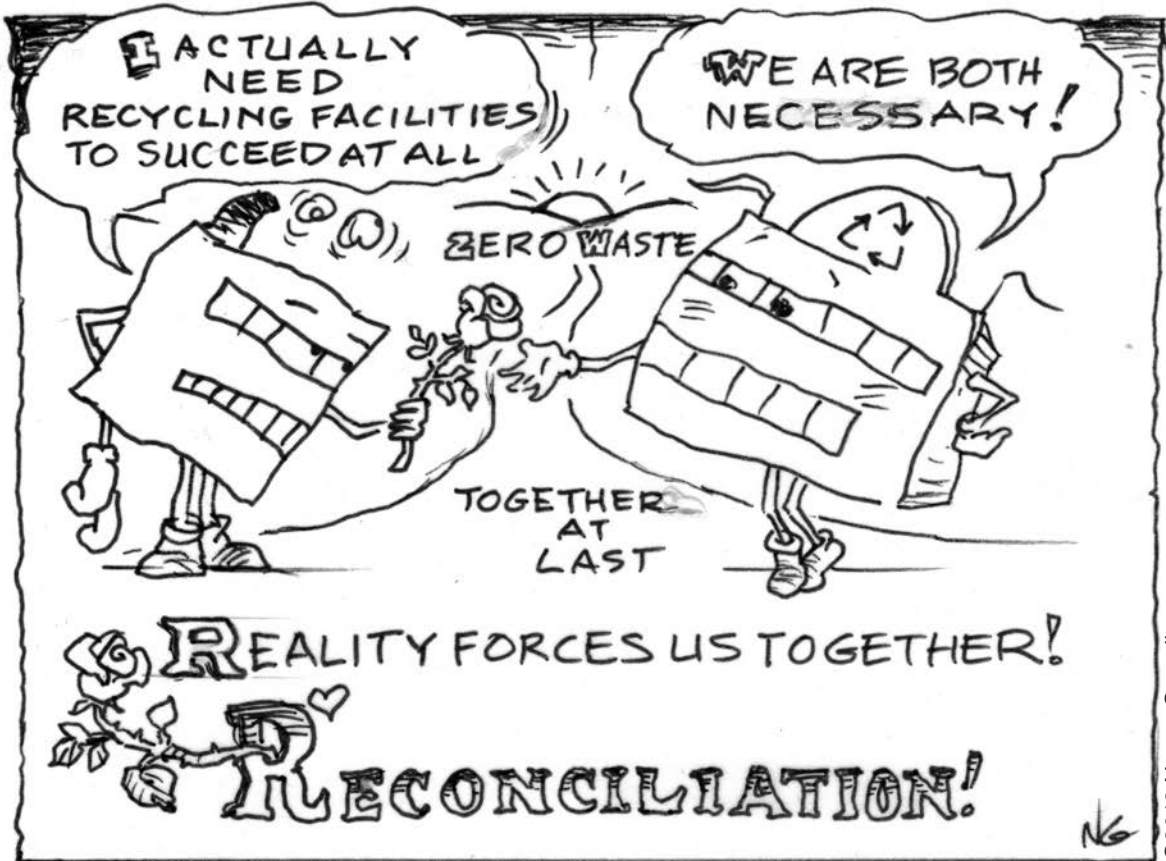
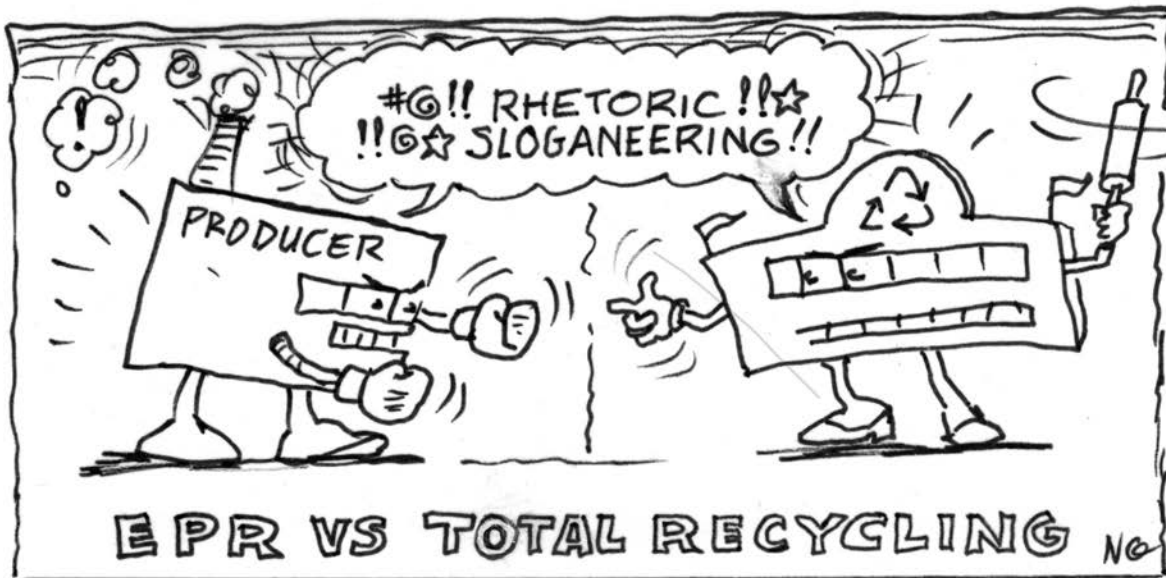
Total Recovery for Reuse, Recycling, and Composting: How to Make It So

Extended Producer Responsibility in British Columbia – A Work at Risk

These articles were written individually for publication elsewhere and are collected here pre-publication for distribution to attendees at the Northern California Recycling Association's Recycling Update XVII, March 27, 2012.

They are presented in the order written.

TOGETHER AT LAST!



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Together At Last: Extended Producer Responsibility (EPR) and Total Recycling

Daniel Knapp, Ph.D.

EPR versus Total Recycling.

Sometime in the cold wet spring of 2011, NCRA President Arthur Boone set up what he hoped would be a stirring and member-pleasing debate between opponents on the EPR issue. He allotted one hour of NCRA's agenda to thrashing out the differences. He invited me to to represent the Total Recycling side.

I started by reviewing my files and catching up on the sometimes sizzling online debate over EPR. The audience online was the more than 1,000 participants in a listserve operated by the GrassRoots Recycling Network, or GRRN. The listserve is GreenYes.com. Although I support and believe strongly in producer responsibility, I've argued strenuously for Total Recycling in a lot of these arguments, which can go on for days.

I'm for EPR, always have been. But the people who grabbed the EPR brand and ran with it about ten

years ago developed a rhetoric that assumed recycling was in the way and had to be set aside for EPR to work. This rhetoric often resorted to sloganeering: recycling was "so last century," recycling "enables wasting." They said EPR, pursued correctly, made recycling outmoded and unnecessary, because products would simply go back to their makers.

But as we came closer to the May 19 meeting date, the issues morphed or evaporated.

One event brought matters to a head for me: I attended an all-day Webinar sponsored by the California Product Stewardship Council (CPSC). Heidi Sanborn was the very able master of ceremonies for the nine or so speakers that gave us a grounded and factual picture of how EPR is actually working.

And how it is working is not like the EPR Framework says it should be working. It needs recycling facilities to succeed at all.

The CPSC Webinar focused on just one commodity type: batteries. The speakers were actually part of the battery reclamation supply chain in various parts of California. My big takeaway from a day of listening: as EPR ideas are being tested and refined in actual practice, reality is forcing EPR and total recycling back together. They are complementary, not opposed. Both are necessary.

No one could be found to represent the "purist" EPR position at our meeting.

With no opponent to debate and the deadline approaching, I decided to lay out the experiential basis for reconciliation and agreement on next steps.

I came up with six arguments to support the happy conclusion that Total Recycling and EPR are essential and complimentary approaches to attaining Zero Waste to landfill and incineration. Here they are, somewhat revised in the ensuing months:

1. FORMER OPPONENTS ARE GETTING TOGETHER.

Helen Spiegelman of the Product Policy Institute and I have debated both sides of the EPR issue for years on the GreenYes listserve. Others often joined in. These discussions

Daniel Knapp is President of Urban Ore, Inc. This report was originally prepared for presentation to the Northern California Recycling Association meeting May 19, 2011, by Daniel Knapp, Ph.D. and CEO, Urban Ore, Inc. This version was published in NCRA News, the organization's online newsletter. It was revised slightly a few days later and distributed to an invitation-only EPR/ Total Recycling Planning Group meeting, which took place June 4 and 5, 2011, at Avrom Systems' conference center just outside Springfield, Illinois. Illustrations by Nancy Gorrell. This version of the article ©2012 Daniel Knapp.

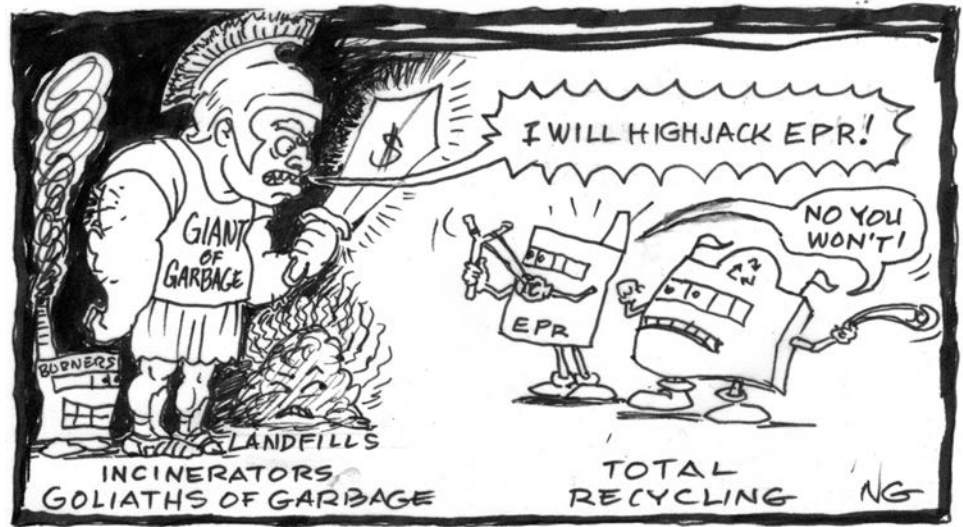
erupted spontaneously, usually stimulated by some event or other that we could use as a launching point. They could be contentious, but more recently, Helen and I have been emailing back and forth in tones of reconciliation and mutual respect. Helen seems as dismayed as I am about some of the ways EPR is being implemented. Besides writing some very kind words about Urban Ore as a reuse business, in one of her responses Helen praised the Institute for Local Self-Reliance (ILSR) and Urban Ore for defending EPR from the “Giants of Garbage” who want to “highjack” EPR commodities to feed landfills and incinerators.

2. EPR NEEDS A NEW GENERATION OF TOTAL RECYCLING FACILITIES WITH PURPOSE-BUILT SPACES FOR HANDLING EPR-COLLECTED COMMODITIES.

Batteries are one commodity whose final disposal just about all EPR programs are designed to control.

A very important speaker was Tedd Ward, who with Kevin Hendrick (VP of CPSC) manages the regional recycling and waste transfer station in Del Norte County, California. This is a rural county six hours by road from San Francisco, so it is distant from export markets. Nevertheless, the county has had great success in waste reduction, having exceeded the statewide 50% “diversion” mandate a couple of years ago.

Tedd Stated that the Del Norte Transfer Station is the largest source of EPR-collected batteries in Del Norte County, California, despite the fact that most if not all retailers in the county now have take-back systems. He presented a graphic that shows battery reclamation at very low levels until 2008, when they jumped tenfold. The increase roughly coincided with the opening of the “regulated materials area” at the



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new publicly-owned transfer facility. A faxed spreadsheet from Tedd shows the top three contributors to this sudden jump in collection. The transfer station accounts for 3,065 pounds in 2009, *more than nine times the contribution of the next two collectors, large stores that sell the batteries.* The Product Policy Institute’s Framework for EPR would lead one to expect the reverse, as in reverse logistics, which it champions. But that is not what is happening.

Incidentally, the in-store takeback program was funded by a grant from CalRecycles, the new agency that in 2009 replaced the California Integrated Waste Management Board. Since the county population is small, the retailer takeback program has achieved very high participation by businesses selling batteries, so it is a good case study of the emerging industry.

This finding verifies that a new generation of transfer stations is needed even with full EPR at the retailer level. The reason a new generation of transfer stations is needed is that the old ones built in the 1980s to replace closing landfills are wearing out and were usually not designed to fit today’s best practices in reuse, recycling, and composting. Many lack a designated area where regulated materials may be collected, sorted, and shipped to producers or end-users.

This finding also validates the design approach used by Gary Liss and Associates, Rick Anthony and Associates, the Institute for Local Self-Reliance, Urban Ore Development Associates, and county staff when together we created the Del Norte conceptual site plan for the engineers and builders to follow. **Urban Ore’s design practice for more than a decade has been to provide for a substantial area and at least one purpose-built building on the transfer station site dedicated to handling any and all regulated materials.**

3. THE LIST OF MATERIALS HANDLED BY A VERY COMPREHENSIVE EPR PROGRAM IN CANADA IS ABOUT THE SAME AS THE LIST OF MATERIALS HANDLED BY ZERO-WASTE TRANSFER STATIONS IN CALIFORNIA DESIGNED WITH A SUBSTANTIAL PURPOSE-BUILT REGULATED-MATERIALS AREA .

On May 16, 2011, Bill Sheehan of Product Policy Institute forwarded a summary written by Monica Kozmak of the regulated materials covered by Vancouver, British Columbia’s actual EPR program, with commodity-specific links. This list is a fairly complete snapshot of the universe of EPR commodities circa 2011. Mr. Sheehan endorsed British Columbia’s program as “the most comprehensive, industry-supported Extended

Producer Responsibility approach in Canada". Here is Ms. Kozmak's list:

"British Columbia also has takeback programs for

electronics <http://www.env.gov.bc.ca/epd/recycling/electronics/index.htm> (like computers, TVs, audio-visual equipment, cell phones, batteries),

paint, <http://www.env.gov.bc.ca/epd/recycling/paint/index.htm>, pesticides, solvents, gasoline <http://www.env.gov.bc.ca/epd/recycling/liquid/index.htm>,

used oil and empty oil containers. <http://www.env.gov.bc.ca/epd/recycling/oil/index.htm>,

oil filters <http://www.env.gov.bc.ca/epd/recycling/oil/index.htm>,

tires <http://www.env.gov.bc.ca/epd/recycling/tires/index.htm>,

lead acid batteries <http://www.env.gov.bc.ca/epd/recycling/batt/index.htm>,

compact fluorescent bulbs, thermostats and unused medications <http://www.env.gov.bc.ca/epd/recycling/pharm/index.htm>.

Programs for antifreeze and empty antifreeze containers <http://www.env.gov.bc.ca/epd/recycling/oil/index.htm>,

as well as small appliances will be introduced this year. In 2012, all electronics will be covered."

I believe that all of the above commodities are currently handled by and within the Del Norte Transfer Station regulated materials area. Some are dropped off at or near the purpose-built "household hazardous materials" building on the site, some are salvaged from the wasting area tip floor and brought there for processing. Customers pay a disposal service fee to enter the facility, and may also pay additional commodity-specific fees in order to drop off certain regulated items. Other collections may be partly or fully supported by manufacturers or payments from the state. In contrast to what the Product Policy Institute's Framework requires, the county Solid Waste Authority rather than the manufacturers is currently bearing the full cost of sortation, packaging, and shipping. So governments looking to save money by implementing EPR may find their costs increasing rather than decreasing.

My guess is that just about any transfer station or landfill these days that is open to the public will have a place or places where most of these commodity types can be handled.

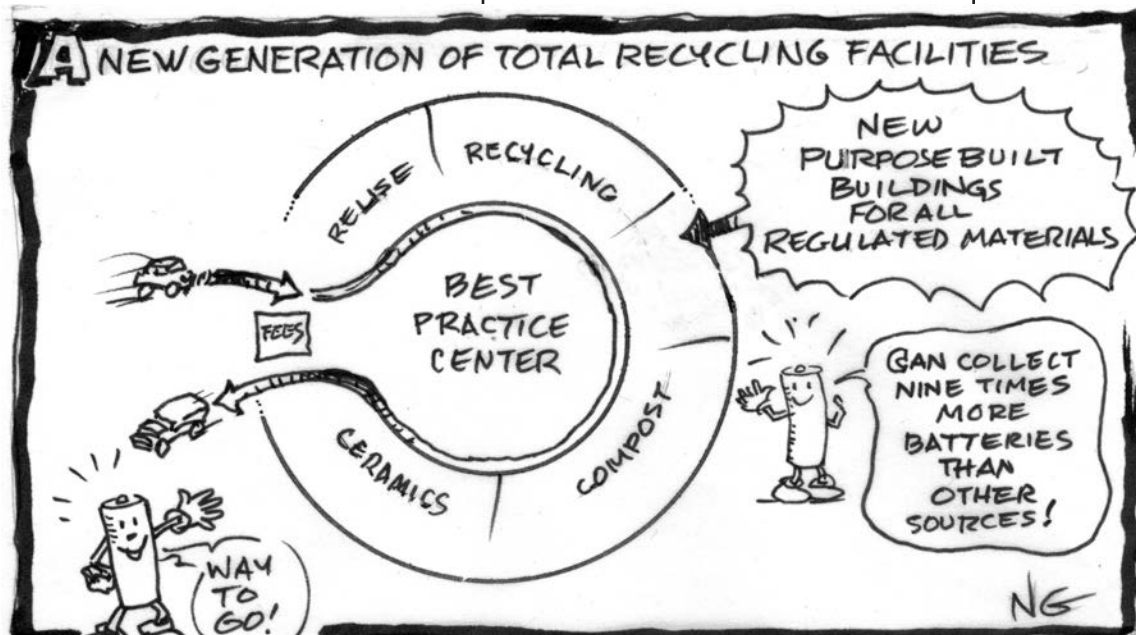
4. MANY EPR BATTERY PROFESSIONALS THINK SORTATION SPACE, LABOR

REQUIREMENTS, AND SORTATION FUNDING ARE CRITICAL PROBLEMS THAT ARE CURRENTLY HOLDING BACK EPR'S FURTHER DEVELOPMENT.

Controlling the collection of targeted materials with mandates is just the first step. Next comes processing. In the EPR webinar I heard again and again from different speakers representing all levels of the battery supply chain that **the space and funding to do the labor- and skill-intensive work of EPR processing is a big problem that must be solved.** Rob Darcey, Program Manager for the Santa Clara Hazardous Waste Management Program, said "you have to be careful for what you wish for." He was referring to being inundated by regulated toxic and hazardous materials soon after the startup of takeback programs. He said that currently "the takeback concept is burying local governments." He gets some of his funding for state-mandated universal waste handling from PG&E (regional electric utility), and has been thinking of asking them to earmark 60% of any funding for lighting takebacks to be spent on "infrastructure" – space and labor to handle the fluorescent fixtures, tubes, and compact fluorescent lights (CFLs). He said his agency's ability

to pay for processing costs for these and other materials is almost nil. So, he said, his impression is that "household hazardous waste programs are among the best-kept secrets of local governments."

Sortation requirements can be labor-intensive and costly. What kind of work must be done? Just in the case of batteries, which collectively are less than



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1% of the discard supply, they must be sorted quite carefully. Leaving aside the question of auto and other large batteries, there are at least five major types of smallish batteries from gadgets and appliances such as TVs, computers, and phones. These are: alkaline rechargable, alkaline non-rechargable, lithium ion, nickel-cadmium (NiCad), and nickel-metal hydride (NiMH). Some battery types are dangerous and can explode if mishandled. NiCad and batteries larger than 9 volt have to be taped and bagged. Sortation and prepping for shipment offsite is a major cost for collectors, and too often it is unpaid. At the Del Norte Transfer station, for example, sorting and packaging batteries for transport now takes about three person-days per month. ***At the much bigger and more automated Recology transfer station south of San Francisco, sortation takes 10 hours of hand labor every day.*** Another speaker said at his facility, one person stands at a table all day every day doing nothing but sorting batteries. He said the work was “like shuckin’ oysters.”

Other commodities covered by EPR mandates have similar processing requirements. All this takes lots of human energy, and space. So EPR done right creates lots of jobs. The webinar was full of real-world examples that confirm that lots of careful human handling is needed to make EPR work. EPR done well is labor and skill-intensive, just like reuse done well.

Although the space needs of EPR are large, EPR policy does not provide much in the way of specific guidance on what kinds of spaces are best. One representative from Energizer batteries laid out a vision for an industry-sponsored rollout of EPR battery takeback, and said any program they back will have to be multibrand, involve “all levels of the supply chain,” be implemented in phases, and based on “trials” of

different ways to handle the materials. He asked participants to “be patient with us” as the industry figures out what to do.

5. THE UODA-STYLE 12 CATEGORY ZERO WASTE TRANSFER STATION CREATES THE WORKING SPACES NEEDED TO HANDLE REGULATED COMMODITIES SO THEY CAN BE SHIPPED.

That space can be used by one operator, or many. The fee gate will be a very important source of day-to-day funding. The authority running the facility can probably charge rent to the specialized materials processors and operators. Financing from industry support can come to the processors whether they are in-store or in-transfer station.

The model for this portal of discard management is the airport. Nearly all airports are owned and operated by an authority of some kind that builds and maintains the infrastructure while collecting rents and user fees to finance itself.

6. SO EPR ZEALOTS CAN RECONCILE EPR AND RECYCLING JUST BY RECOGNIZING AND HELPING RECYCLERS TO BUILD OUT THE NETWORK OF CENTRALIZED TWELVE-MARKET-CATEGORY ZERO-WASTE TRANSFER STATIONS THAT WE HAVE LONG PROMOTED AS A KEY GOAL OF EPR AND ZERO WASTE POLICY. THAT’S LESS OF A JUMP, NOW THAT WE SEE WHAT EPR IS ACTUALLY DOING.

Do that, and we’re on the march.

Then we can take our ideas and designs to a federal government still trying to find projects that they can finance that will soak up some of the excess labor now sloshing around in the US economy. How about a rollout of Zero Waste transfer

stations like Del Norte to replace the landfills and incinerators, and over time to replace the dirty mrfs too?

By forwarding the article by Ms. Kozmak about Vancouver’s EPR programs, *Bill Sheehan seems to be endorsing their seven-point strategy for achieving Zero Waste, which in part recommends reducing and reusing, capturing the organics, keeping recyclables out of landfills and incinerators, and providing for construction, renovation, and demolition recycling, as well as “fostering a local closed-loop economy. All these worthy goals are best served by comprehensive twelve-market-category Zero Waste transfer stations, in addition to other strategies such as retailer take-back.*

I still have trouble with parts of The Framework document promoted by PPI and CPSI, and would love to see it revised or dropped. It is too narrowly conceived to account for the actual way EPR has developed and is developing. A review of EPR statements from the Sierra Club, ILSR, Clean Production Action, and GRRN shows that all are prepared to be somewhat flexible in determining when something is “true EPR” and when it is not. ILSR, for example, says “EPR initiatives include product take-back programs, deposit refund systems, product fees and taxes, and minimum recycled-content laws.” EPA says “There is no ‘one size fits all’ EPR solution appropriate for all product systems.”

Urban Ore has never been against EPR itself, just what we see as overly rigid interpretations and a tendency to label recyclers as “enablers” of wasting. That now seems to be behind us.

Together we can do great things.

DAN KNAPP



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Total Recovery for Reuse, Recycling and Composting: How to Make It So

Midwest Recycling Leaders' Heartland Meeting Merges Producer Responsibility (EPR) and Total Recycling Agendas; Benefits for Zero Waste Planning Worldwide; Group Charts New Zero Waste Business Model for Sustainable Resource Development, Calls Supporters Zeronauts

Wynne Coplea

Although this is getting on toward being "olds" rather than "news," I think BioCycle readers will take some useful concepts and maybe some inspiration from my report out of a place near the geographic center of the North American continent.

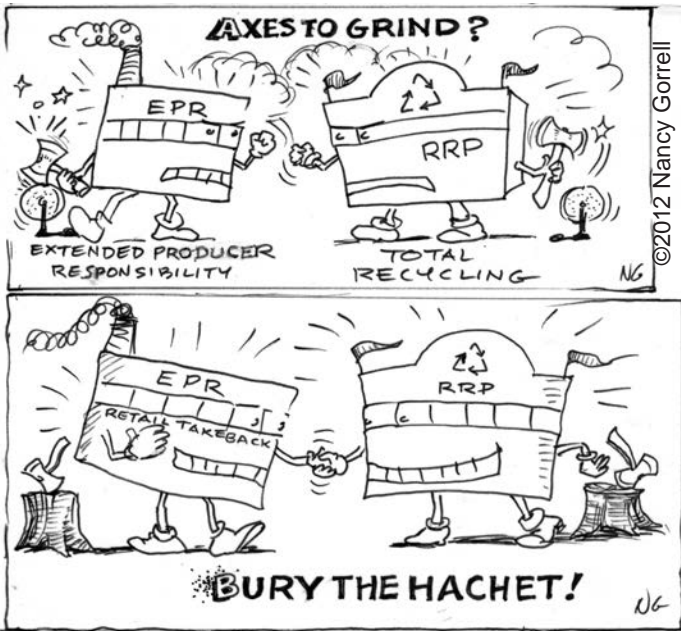
A select group of 25 materials recovery business leaders and planners, invited mostly from Illinois, Missouri, and Iowa, got together on two verdant spring days outside Springfield, Illinois, to discuss how to integrate Extended Producer

Responsibility with Total Recovery for all discards. The meeting was held in a large private residence on a wooded hilltop that is equipped with a conference center having all the bells and whistles you might expect in a five-star hotel. Harvey Koplo and Annette Chinuge of Sustainable Springfield and Avrom Systems hosted the Spaulding House meeting at no charge to the participants. Local businesses contributed delicious and locally-grown food and drink, including

century-old Maldaner's Restaurant, Food Fantasies grocery store, and Trout Lily Cafe. As we toured the solar heated and cooled house, we learned that our host Harv Koplo chairs Earth Springfield, a collection of about 20 environmental advocacy groups networking "to provide communication and support and working for local and regional betterment".

The meeting was convened over the weekend of June 4-5, 2011. It was

After 20 years managing recycling and waste for the City of Springfield, Illinois, Wynne Coplea has now joined Heartland Community College as Director of College Partnerships within the Illinois Green Economy Network. She will now work at a statewide level on large issues of sustainability. This article is ©2011 Wynne Coplea. Illustrations by Nancy Gorrell.



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MaryEllen Etienne of Reuse Alliance, based in North Carolina; Debra Kendrick-Hopgood, owner of Kendrick Paper Stock in southern Illinois; Paul Jaquet, a Director of Eagle Enterprises Recycling in northern Illinois, and IRA President; and Walter Willis, staff member at the Solid Waste Agency of Lake County.

timed to end one day before the three-day annual meeting of the Illinois Recycling Association (IRA), also in Springfield, on June 6-8. Organizers assumed that the Heartland recycling industry leaders' meeting would generate some conclusions that this group could report out to the broader IRA membership for peer review. A special track was created to receive our report on the afternoon of the annual meeting's first day. We the participants would decide who was to present to the IRA member meeting. So the two events were linked. No one knew beforehand what would make it into the report, but we were optimistic that it would be good.

The people who came represented for-profit and nonprofit material recovery businesses, city and county governments, advocacy groups, and colleges and universities. The group included Mike Mitchell, Executive Director of Illinois Recycling Association; Teresa Kurtz, Executive Director of the Iowa Recycling Association; John Bradford, Chief Innovations Officer, Interface Inc., (world's largest carpet tile manufacturer and major take-back corporate pioneer); Dr. Neil Seldman from the Institute for Local Self-Reliance in Washington, DC; Buddy Boyd of Gibsons Recycling, near Vancouver, British Columbia;

All were distinguished, informed, accomplished, and good at problem solving. About half the participants hailed from Illinois. Coastal folks were a minority, less than one-fourth.

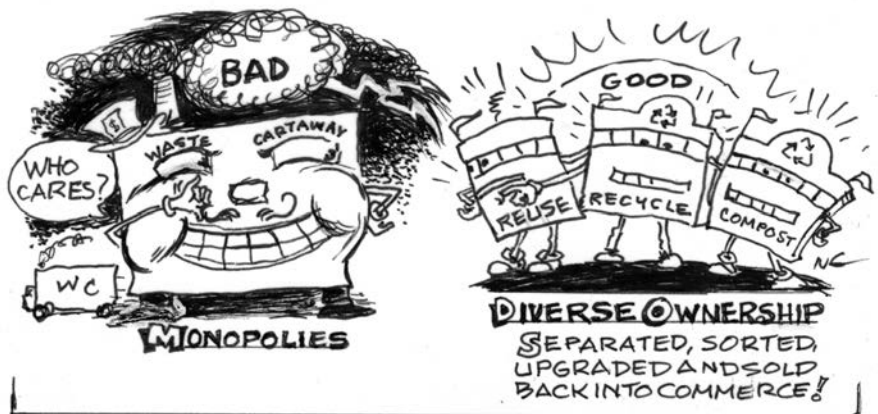
We agreed at the outset to explore and map the linkages between Extended Producer Responsibility and Total Recycling policies, as these terms are currently defined in the industry and as we encounter them in our work. Issues arising from clashes between advocates for EPR versus Total Recycling had been hotly debated over several years by participants in the Grassroots Recycling Network's GreenYes blog. Organizers from both coasts felt it was time for an extended discussion in a more neutral place with people having no particular ideological axe to grind, bearing in mind always the theme of reconciliation. Heartland organizers

like myself thought this vision was just fine, and put considerable time, energy, and money bringing the right mix of people home to Springfield.

Grant support was generously provided by Urban Ore, Inc., and the Institute for Local Self Reliance helped offset travel costs for several attendees. But the overall cost was very low.

Dr. Daniel Knapp of Urban Ore provided all participants with a thought piece prior to the meeting. "EPR and Total Recycling: Together at Last" is an essay originally published in NCRA News, the newsletter of the Northern California Recycling Association. Using California's regulations for batteries as a case study of how EPR recycling is actually being done, Dr. Knapp marshalled evidence that EPR battery reclamation efforts in California are most effective when they use both retail take-back and multimaterial purpose-built resource recovery parks.

These multimaterial Resource Recovery Parks (RRPs) exist in varying stages of development. No one model can do justice to the variety that is out there. But these facilities are pushing diversion numbers ever higher, past 75% in some cases, with vigorous competition between communities like Berkeley and San Francisco to see who can get closest soonest to Zero Waste to landfill. All RRP's are essentially concentrations of disposal service



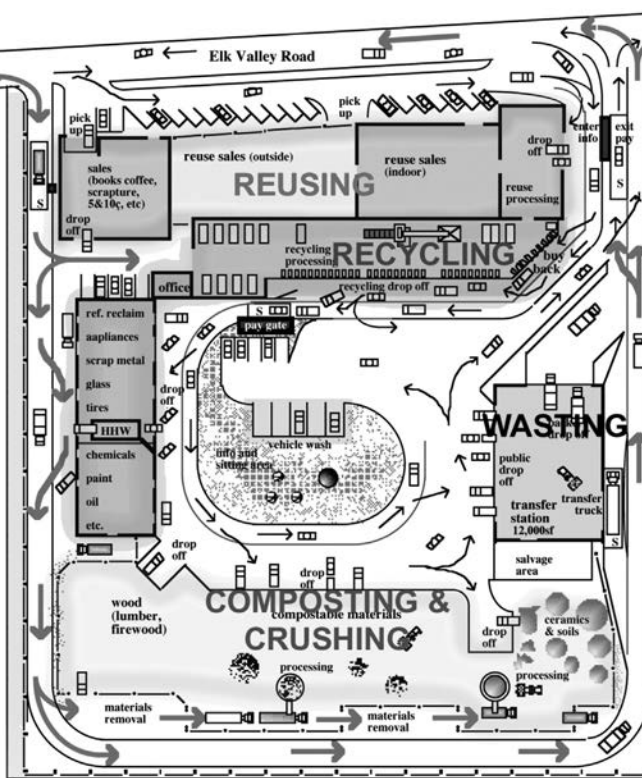
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enterprises handling virtually all commodities that can be separated from the entire discard supply prior to wasting. Some are monopolies; others feature diverse ownership models, including some run by governments for a profit. RRP's are showing daily that all commodity types (and there are hundreds) can be readily sorted, upgraded, and sold back into commerce. Materials subject to regulatory mandates are a special part of RRP's, often with their own dedicated buildings, equipment, and staff. Since battery reclamation is a subspecialty of most EPR programs, the emerging business model for reclaimed batteries is similar to that for other commodities such as fluorescent fixtures, paints, electronics, and anything else EPR advocates want to manage.

Dr. Knapp's paper argued that Total Recycling is not only completely compatible with EPR, but the two actually require one another to succeed in the competition against wasting. In other words, the game we should be playing is win-win, not zero-sum.

Still, there was a history of discord over these points. And with the array of organizations and geographic locations represented, retreat organizers weren't sure that the group could arrive at agreement. They decided not to allow audio or video recorders in order to give people more freedom to speak their truest thoughts. It turned out there was nothing to fear. After many hours of discussion and friendly debate, the Heartland working group reached not only general agreement but consensus, which is hard to do with 25 people who have never been together before.

I serve as Springfield's Recycling



The Heartland working group selected this compact Zero Waste Resource Recovery Park design as an example of what is needed. This RRP combines reuse, recycling, regulated materials handling, and composting in one purpose-built facility. Over time, such facilities can completely replace landfills and incinerators by reducing unrecyclable residues to near zero levels. Design by Mark Gorrell, Architect, for Urban Ore Development Associates (UODA), for Del Norte County Solid Waste Management Authority.

Coordinator, and I know almost all these people very well. I came prepared to be the moderator, but the group's overall can-do attitude and respectful demeanor made my job easy. Discussion at all times remained courteous and inviting to anyone who wanted to be heard. And what a conversation it was! We shared current, working examples of Extended Producer Responsibility (EPR) in action, and noted what works well and what doesn't. At breaks, we got to know one another better while strolling outside in Ms. Chinuge's magnificent garden.

We listened sympathetically while delegates told how well-intended EPR policy has sometimes reduced opportunities for conservation, in one example by setting up channels for EPR-collected pharmaceuticals that

require them to be incinerated rather than digested.

Some told of inequities and disincentives in actual practice. One delegate complained that even though he collects and prepares EPR-covered materials, the only processor who gets paid for the work his business does is the one that takes the materials off his hands for free. He cannot legally dump the materials, so he has to give them away. So he loses money every time he handles fluorescent light bulbs.

Despite these glitches, the group agreed that this was not a debate about opposing philosophies, but rather a working out of details of when and how EPR policy should be applied.

The group agreed that extended producer responsibility is actually just one tool in the resource management policy toolbox. EPR is best used cautiously and incrementally

to control those materials and items that are hazardous or toxic, are made of multiple materials or are difficult to recover for recycling.

It was generally agreed that EPR in the form of take-back laws and regulations should not focus solely on manufacturing and retail communities, but should also involve some level of government participation, financing, oversight, and even ownership in the case of resource recovery parks that handle multiple resource streams.

What is needed is a new infrastructure for discard management, a new hardscape focused on resource conservation, not elimination.

Also needed are many new entrepreneurs and niche enterprises

focusing on quality of service and product and handling one or more of twelve master market categories.

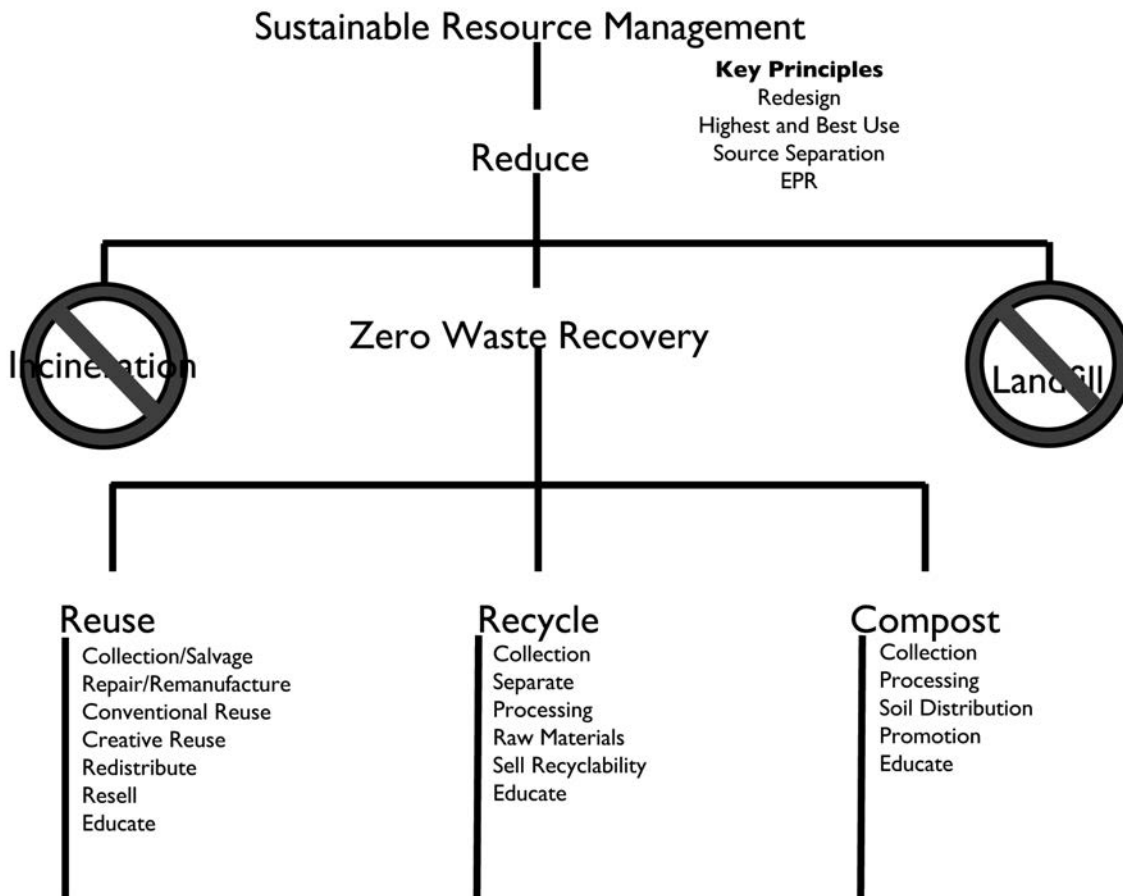
The group agreed jointly to pursue a goal of sustainable resource management in all of their territories and localities. The idea is to reduce wasting (of any sort) incrementally by increasing recovery for composting, recycling, and reuse

On the second day, using John Bradford's computer and with John himself as Scribe, the group projected its thinking onto the conference center's large screen so that all could see. Then for a few hours the 25 delegates focused collaboratively on building up a coherent chart of actions and program choices that any unit of government or business may



reasonably be expected to undertake. Why is a new hierarchy needed? It is because the Solid Waste Management Hierarchy of about twenty-five years ago is badly out of date, and a new one just promulgated is clunky. The decades-old one featured a triangle-shaped chart showing most-preferred to least-preferred methods of "disposing of waste materials." All discards were

classified as wastes, a major error. Waste reduction and recycling were placed at the top point of the chart, which is flattering. But thanks to the triangle shape of the model, the space that could be occupied by source reduction (including EPR) and reuse and recycling was tiny. So solid waste managers didn't expect much of waste reduction and recycling back in the day, and they built facilities based



The group created this Sustainable Resource Management Hierarchy believing that it can serve as a general basis for improving recycling laws and materials management policies. Municipalities, businesses, and other units of government will start by enacting policies and programs that acknowledge Zero Waste as the ultimate goal of a new approach to discard management. Governments' most important role is to identify, provide, and regulate preferred and superior methods for handling and final disposition of all discards without wasting anything.

on that assumption. Meanwhile, Incineration for energy recovery and sometimes only for volume reduction occupied the center of the pyramid, a space much bigger than recycling. Landfill disposal with no energy recovery was shown as the last choice (some called it "The Baseline Alternative") at the bottom, which was unfortunate placement because as the bottom of the pyramid it was the biggest part. This was obviously not about Zero Waste at all. Landfilling was the only destiny for almost all discards not destroyed by burning.

This chart was widely disseminated for many years among waste professionals as a graphic representation of typical public policy at state and local levels of government across the nation.

But perceptions change. Very recently, the triangle chart on the USEPA's website was turned upside down. This shift brought the hierarchy closer to what is actually happening, because it showed vastly greater amounts of material in the reduce, reuse, and recycle category. Landfilling, which has been declining since about 2004, is placed at the bottom, now the small end. This probably means the EPA expects to see less reliance on landfilling and less material in this category. Incineration is still there, though, still in the middle.

The problem with this chart is that it assumes there will be materials to dispose of that have no beneficial use. Therefore they must be landfilled or incinerated, with or without capture of energy. The Heartland working group

made no such assumption when they built their chart. The new model that they invented on the spot has no waste as part of the cycle of materials through our economy. So the word "waste" was intentionally omitted in this new approach to the discard stream, formerly known as the waste stream.

And here we were, a bunch of supposedly stodgy, conservative Midwesterners! Pardon us if we felt we were making a conceptual breakthrough of coastal proportions.

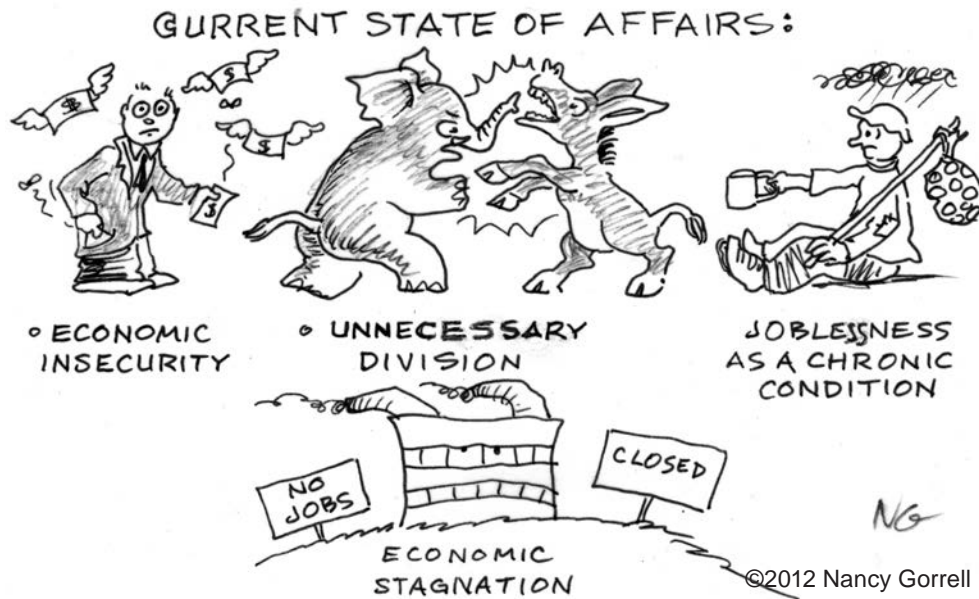
Taken together, the strategy embedded in this chart challenges

Proven underutilized handling methods such as reuse recovery do not require any new high-tech solutions; quite the opposite. Reuse industry practice has shown that approximately 5% of the discard stream can be recovered for reuse as is, with no repair or refurbishment required. Reuse enterprises are typically self-supporting, and some such as Urban Ore have developed substantial niche recycling enterprises for materials as diverse as ceramics, textiles, and nonferrous metal scrap, to ensure that most nonreusable items can be recycled.

The reuse industry has continued growing in the past two to three years of our slowed economy. Newly established secondhand, pawn and consignment shops are proliferating everywhere. Our culture has greatly expanded opportunities for purchasing gently-used goods. Cable TV shows such as American Pickers and Pawn

Stars tap into this enthusiasm for old stuff. Antiques Roadshow and Do It Yourself (DIY) programming do the same for PBS stations. Online retailer eBay does a booming business in used items. Online reuse matching services such as Freecycle.org are expanding. Reusing and repurposing is something of an obsession with many Americans right now, and feeding this growing demand brings with it a bounty for governments in the form of sales taxes, payroll taxes, income taxes, property taxes, and licensing fees.

In addition to reuse and to recycling paper, bottles and cans, some materials formerly considered difficult



the status quo in the field of discard management. It's about time! The current state of affairs in this industry has helped bring us economic insecurity, unnecessary division, joblessness as a chronic condition, and economic stagnation. In this economy, who can afford to be waste-ful?

The working group assumed that government policy toward infrastructure renewal and redesign should encourage, incentivize or even require composting, reuse, and recycling as first and best choices for materials handling. These beneficial uses should gradually replace current wasteful disposal practices.

to recycle are enjoying greater recycling success these days. Food scrap recycling is expanding rapidly, adding putrescibles to plant debris and food paper as major compost feedstocks. A

broader range of polymer types are being accepted for recycling. Scrap prices for all kinds of recycled commodities are nearing the last historic highs achieved just before the last bubble burst in 2007 and 2008.

Meanwhile, disturbing news stories on mining and oil well disasters have sharpened our focus on the importance of conserving the refined resources we already have. Recycling processing centers, and especially publicly owned resource recovery parks such as the one in Goteborg, Sweden, are newly respectable. The public increasingly sees them as above-ground mines, more



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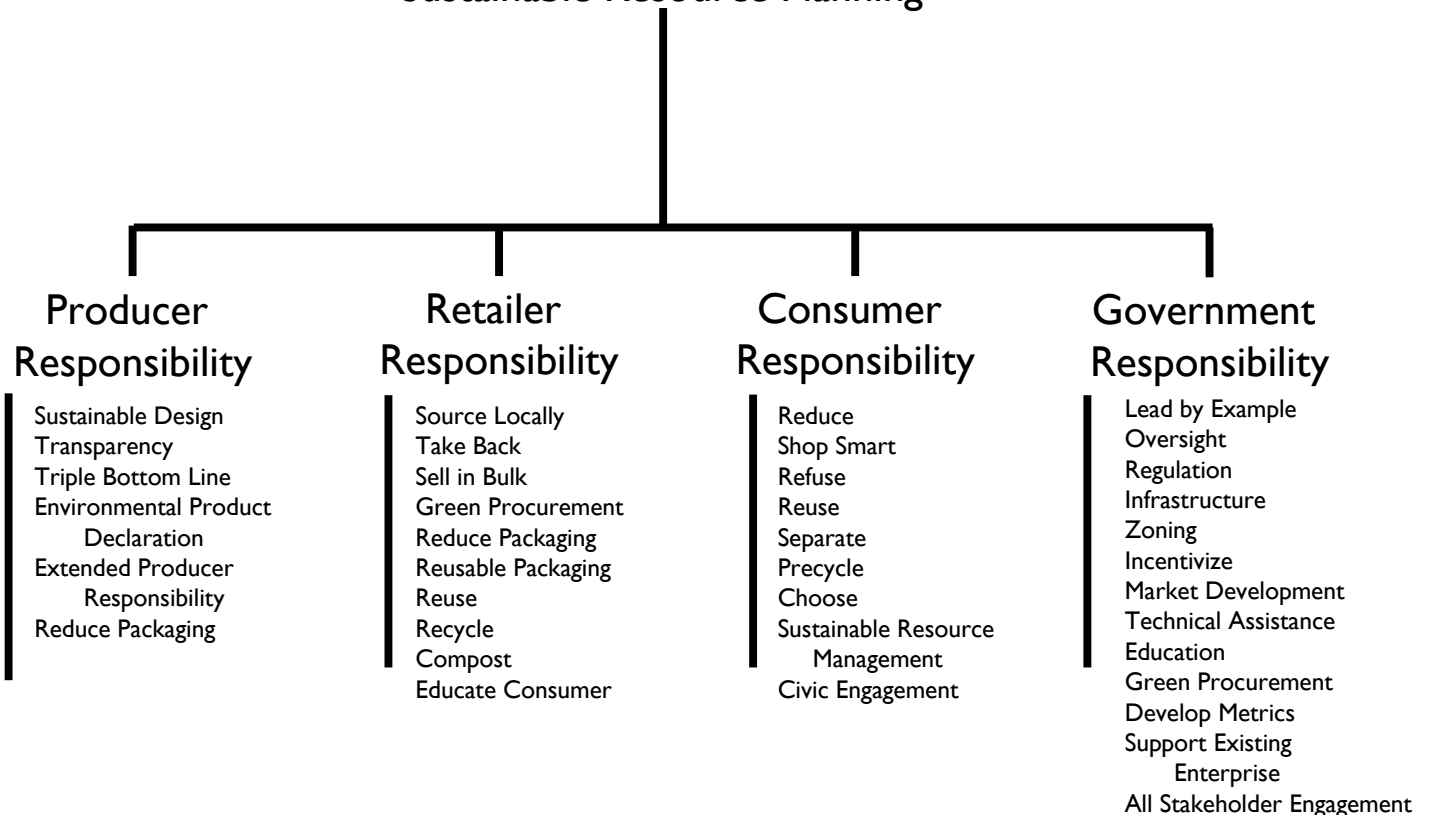
We must compost everything we can because we need to shut off the flow of carbon into landfills, which are the number one human-caused source of methane, a potent greenhouse gas. It is expensive and inefficient to

productive and less risky than their below-ground counterparts. With the model provided by Goteborg, we also know they can be destinations, with restaurants and entertainment operating alongside the familiar disposal services and serving the hungry hardworking people who frequent this type of marketplace.

Composting is prominent in the sustainable resource management business hierarchy. Processing organics into compost for use as soil amendments and natural fertilizers is a low-impact, job-creating, highly effective method for developing the value inherent in these materials.

capture methane from landfills to generate electricity, and it destroys materials that otherwise have high potential value. Methane in landfills is produced by organics rotting with little or no oxygen. The explosive gas hydrogen sulfide is also produced in this environment. These are the same materials that are so beneficial to soil when properly composted. Discarded food comprises approximately 14% of all that we currently landfill, according to USEPA estimates. When combined with other compostable materials, nearly half of our current discard stream could be recovered for beneficial use through aerobic composting.

Sustainable Resource Planning

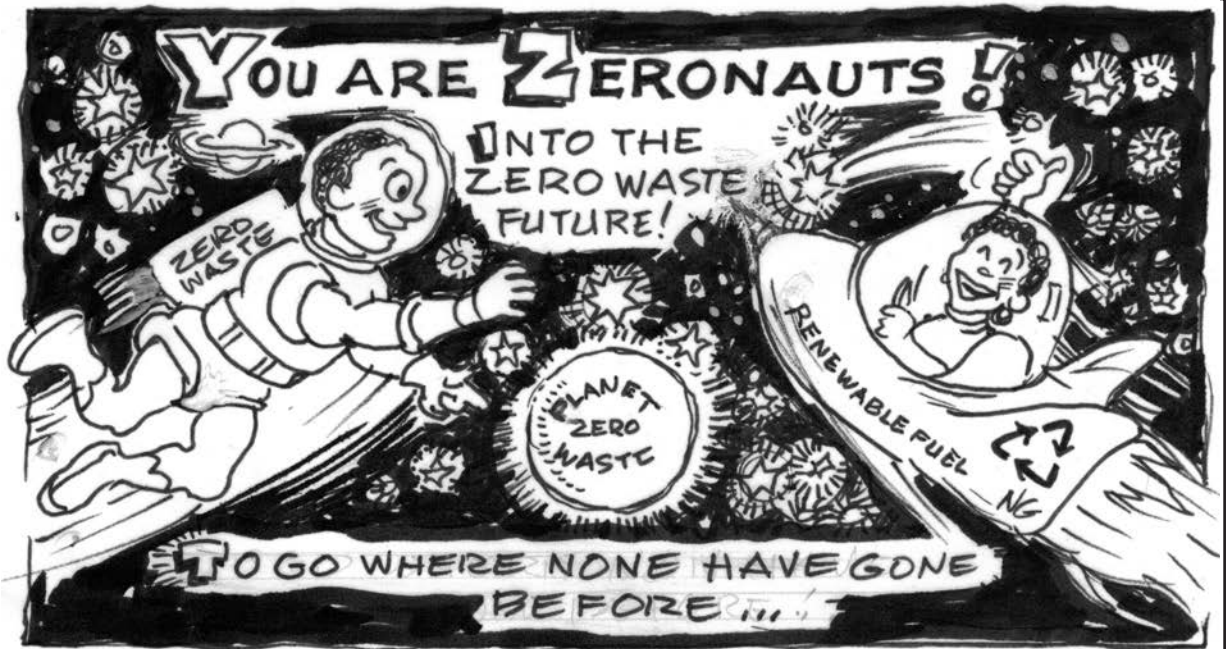


Anaerobic digestion has a role to play as well, but not for mixed-MSW feedstocks. AD is best used to dispose of manures and fats by converting them to methane and converting the methane to electric current. Small-scale 3-5MW powerplants based on this feedstock are being built

and operated successfully in many locations around the Heartland states.

The barriers to total recovery for composting, reuse or recycling include a vast lack of sufficient infrastructure spread across each state. This missing or poorly designed discard handling infrastructure is a significant barrier to total recovery for composting, reuse, and recycling. There simply are not enough compost sites, reuse operations and recycling processors to handle the flow of potentially recoverable material that poor handling is currently wasting. But this lack of infrastructure is a huge opportunity for government and business entities that are looking for proven, reliable new sources of revenue. There is much more revenue to be gained from conserving resources than from destroying them, even with energy recovery.

In the next ten to fifteen years, the best and most efficient reuse, recycling and composting practices should be provided with affordable land and work spaces sufficient to satisfy consumer demand for low-cost, conserving disposal. Landfill disposal and incineration should be de-subsidized, which will cause destructive disposal methods to be



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priced much higher, and closer to their actual cost, reflecting public will and policy to redirect these materials to other, more beneficial end uses.

After creating the first chart, the Heartland working group also created a second chart listing responsibilities for government, business, manufacturers, and recyclers as they reach for total recovery. Note that education figures prominently in this chart and tops the list for government responsibility for sustainable planning. New disposal systems will work much better when the people who use them understand the how and the why. Developing enterprises and teaching customers how to use new material recovery infrastructures will help effective sustainable resource management systems succeed wherever and whenever they are built.

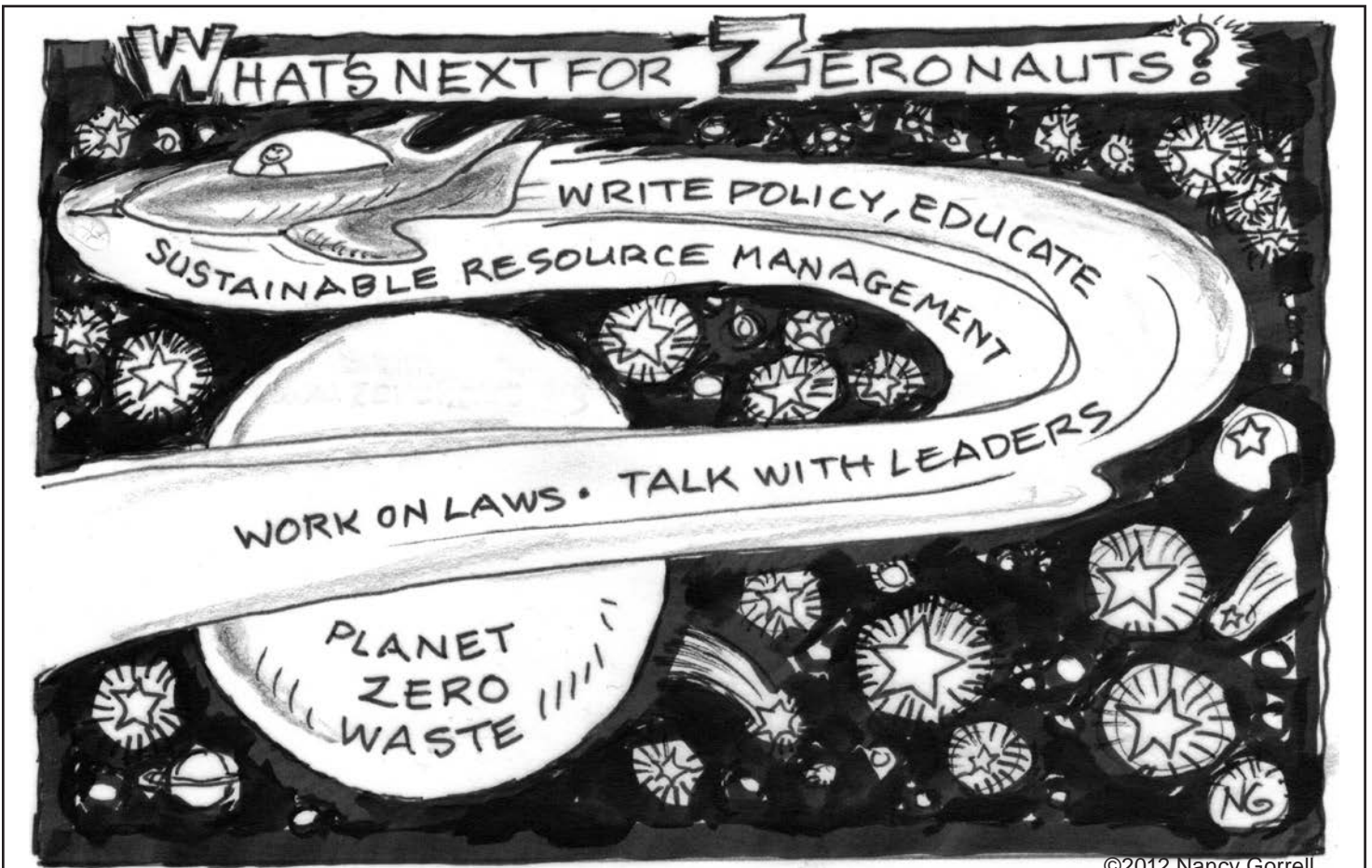
Wasting is machine- and capital-intensive, and the overall trend in the wasting industries is to shed jobs, not create them. Meanwhile sorting, cleaning, densifying, classifying, and otherwise preparing materials for reuse, recycling, or composting is far more job-intensive for the same unit of disposal. That means a greater number of jobs in resource

conservation. Some green jobs are very labor intensive, knowledge-intensive, and low tech, and produce benefits that go well beyond the perceived convenience of one time use followed by compulsory wasting.

At the end of the retreat, attendees asked "what next? What should be our priorities for action? What shall we call ourselves, and should we meet again?"

Members said their goodbyes and went back to their home organizations and began to write policy, educate others, and talk with public leaders about the need to enact improved plans and laws that incorporate sustainable resource management. They will advocate for much higher recovery and quality goals for recycling, reuse and composting. They will work together advancing actions that educate and encourage policies for total recovery for recycling, revising local government plans and state laws as needed.

Participants agreed we could be called "Zeronauts" – a name representing both the people and the Zero Waste philosophy of the group, soon to be online at www.zeronaut.org.



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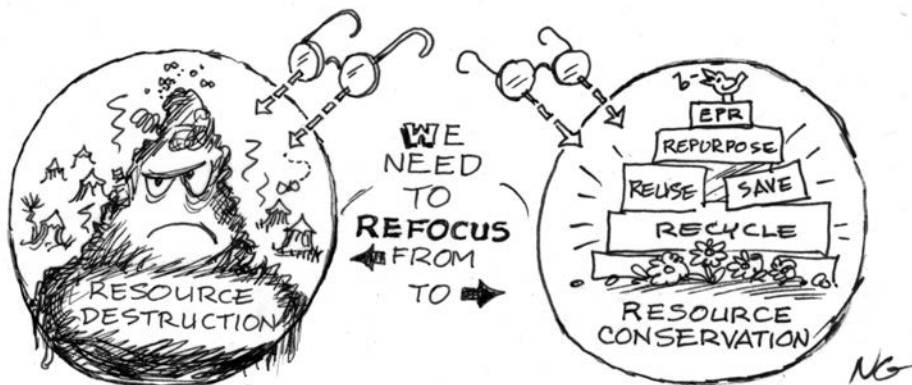
We agreed that we will meet again, probably near the one year anniversary of our June 2011 meeting, if not sooner. We Zeronauts hope that with this new Sustainable Resource Management Hierarchy as a guide, business entities and local and state governments anywhere and everywhere will move to implement specific, increased goals of total recovery for recycling, reuse and composting, and pledge to support stated goals of near-zero disposal by landfill and incineration.

Then we reported out to the Illinois

Recycling Association's Statewide Conference, June 6-8, 2011, and beyond. The working group chose four people to present the charts to the special IRA track. Ironically, they were all coastal people! But it didn't matter, because the findings and charts were everyone's. Mary Lou Van Deventer, Neil Seldman, Rick Anthony, and MaryEllen Etienne did the honors. During the presentation, the large audience responded at first with a quiet hush and then with an excited conversational buzz. It seemed to this observer that the Zero Waste approach blending EPR with

total materials recovery was very well received. People sensed all the hard work, and supported the working group's output with strong applause, suggesting to me a profound change from our current, general perceptions and practices nationwide might be coming to the discard management field.

Our society is moving quickly to embrace a more environmentally friendly and sustainable culture, with new habits and new language affirming the axiom that "waste isn't waste until it's wasted!" Cultural change is moving ahead of industry and government – with Zeronauts leading the way! It is time for industry and government to respond by replacing the outdated hierarchy that assumes waste with something more like the one we created in two intense days of collective effort, thus setting ourselves on course to achieve total materials recovery for a truly sustainable future.



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Extended Producer Responsibility In British Columbia – A Work at Risk

Nadine Souto and Dr. Neil Seldman, with edits and footnotes by Dr. Daniel Knapp

Product Stewardship programs based on Extended Producer Responsibility have been in place since 2004. The Product Policy Institute¹ has long championed this Canadian province as a model for communities seeking to boost resource recovery and minimize environmental damage both in Canada and the US. In fact, PPI has had a great deal to do with setting up the particular EPR system that British Columbia adopted and is now using. BC's EPR regulations borrow their guiding principles directly from PPI's 'Framework,' for example.

This BC boosterism could be strident at first. Soon after passing the EPR legislation, an article in British Columbia's online environmental

¹ www.productpolicy.org

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journal The Tyee claimed "...BC Recycles Better than U.S."²

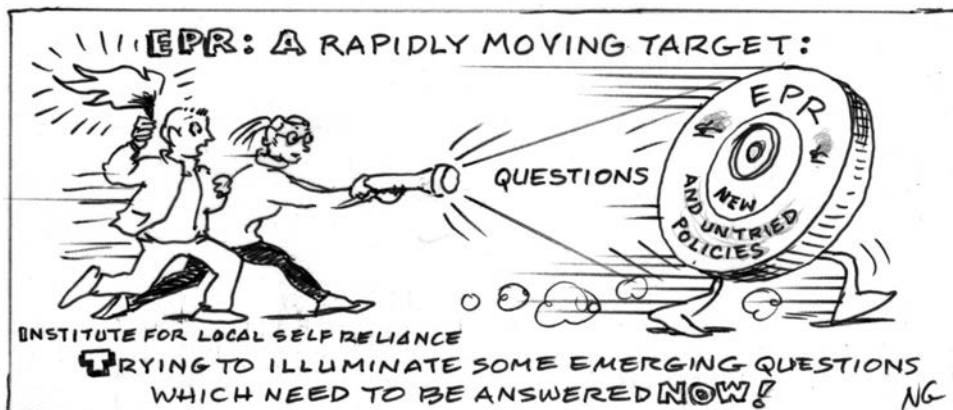
Citing "different philosophies about trash", author Alan Thein During, Executive Director of Northwest Environment Watch, stated that "the Canadians have left the Americans in the dustbin, so to speak." The reason? "Surprise!" he said, "Our approach is more market driven than the Americans."

² The Tyee: A Feisty One: Online News and Views For B.C., "Why B.C. Recycles Better than U.S.", by Alan Thein Durning. <http://thetyee.ca>.

Today is BC really far ahead? Has it generated a free and fair marketplace for resource trading? Are the differences profound? And how are those pioneering EPR programs working out, now that seven years have passed?

In 2011, the Institute for Local Self-Reliance launched an inquiry about BC's experience³:

³ ILSR wrote about BC developments in 2000. See, Kelley Lease, Product Stewardship in British Columbia, FactsTo Act On, #39, October 2000; And, Brenda Platt, Local Initiatives Leverage Extended Producer Responsibility, Facts to Act On,



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Nadine Souto is a senior at Vassar College in Poughkeepsie, NY. She is a Zero-Waste organizer for Vassar College, which has reached 85% diversion, including an on-campus food discard composting program. Ms. Suoto was an ILSR intern during the summer of 2011.

Edits and most footnotes are by Dr. Daniel Knapp, a public sociologist who is founder and CEO of Urban Ore, Inc., a reuse and recycling business in Berkeley, California, since 1980. Thanks to Helen Spiegelman for her constructive criticism of an early draft of this article. This article is ©2012 by the Institute for Local Self-Reliance.

As a co-sponsor of the 2011 Heartland meeting⁴ called to integrate EPR with Total Recycling held in Springfield, Illinois June 29 and 30, ILSR wanted to find out more. With intern Nadine Souto as lead researcher during summer and fall, we reviewed the enabling legislation, tried to sort out some of the “different philosophies” that we found, and talked with some Canadians well placed to evaluate how well the system is working. The result, we found, is a nuanced picture, a cause for some joy, but much more worry and heartache and even fear.

Like EPR in British Columbia, this ILSR report is also a work in progress. That is because EPR is a complicated mix of new and sometimes untried policies. Implementing new rules and procedures is always difficult, but rolling out EPR in all its fullness has been especially so. After our initial review, we see a bumper harvest of probably unintended consequences that threatens to give EPR a bad name.

But EPR is a rapidly moving target, and revisions are being debated and issued. There is a lot of room for improvement. We hope to illuminate some of the emerging questions about EPR in practice that people are being forced to answer right now. Hopefully others will jump in and help with this research by contributing articles of your own.

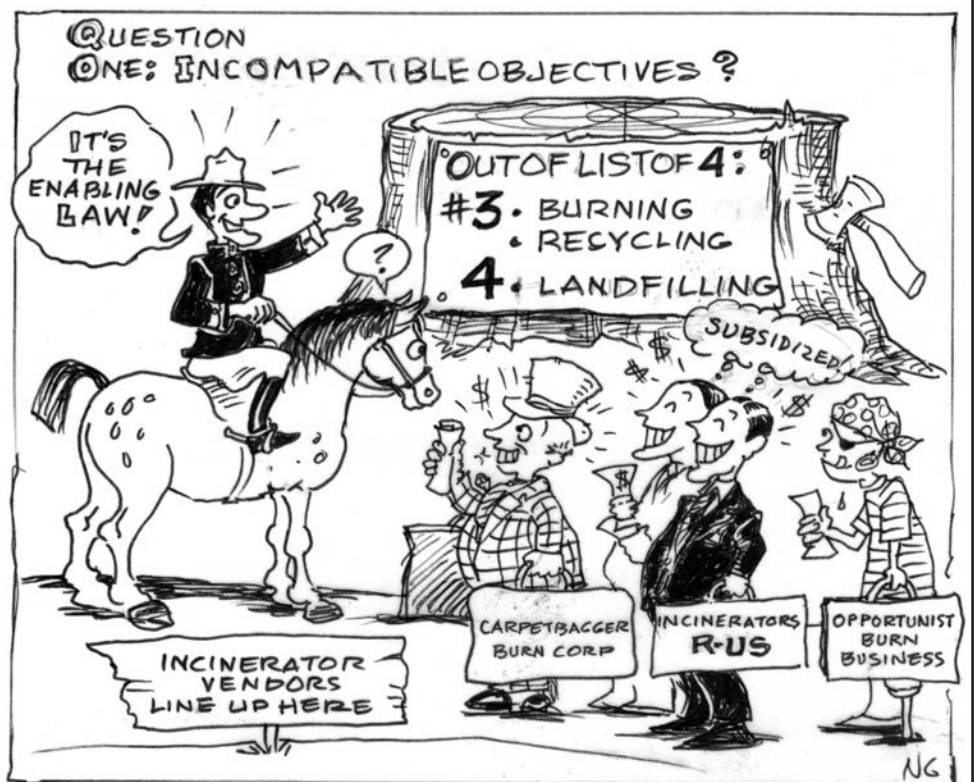
Our tentative conclusions:

1. Incompatible Objectives.

British Columbia's EPR enabling law puts resource destruction on

#40, November 2000. Also, see, Kelley Lease, Asian Countries Jump on the EPR Bandwagon, Facts To Act On, #41, January 2002.

⁴ Wynne Coplea, Springfield's Recycling and Waste Program Manager summarized this meeting, in a companion article. See “Total Recovery for Reuse, Recycling, and Composting: How to Make it So,” by Wynne Coplea, September 2011.



an equal footing with resource conservation. It explicitly endorses “waste” incineration, placing it number three on a list of four alternatives for discard management. In fact, burning resources shares 3rd place with “recover material...from the product”, just above the 4th and last resort, landfilling.⁵ Sensing a big opening, incinerator vendors have flocked to the province and are now forcing existing recyclers, EPR advocates, and downwind communities to mobilize against what they see as subsidized competition for the resource flows. Well financed and working through the new EPR administrative structures⁶,
⁵ “Reuse the product; recycle the product; recover material or energy from the product, otherwise dispose of the waste from the product in compliance with the Act”. Environmental Management Act Recycling Regulation, under the heading “management of collected products”.
⁶ In a just-published report on potential revisions to BC’s Beverage Container Regulation, Neil Hastie and Bill Chan of Encorp, the BC’s designated “Product Steward,” lobbied for relaxing the Province’s requirement that all deposit containers be either refilled or recycled after collection and processing. Specifically, they cited “Section 7 and 8’s provision whereby containers must be recycled or refilled” as needing to

the incinerator vendors are seeking the public’s blessing to add new sources of pollution to the air sheds and watersheds of this very beautiful and still fairly pristine part of the world.

The regulations governing BC’s EPR are posted to BC’s Ministry of Environment’s website. In it, the Ministry commits to “industry-led Product Stewardship programs [that] require producers of designated products to take Extended Producer Responsibility for the life cycle

be weakened. They claimed the refill or recycle requirement “is inconsistent with the recycling regulation (Section C) , specifically the pollution prevention hierarchy whereby ‘recovery material or energy from the product’ is accepted in other approved stewardship plans and continues to be accepted in new stewardship plans.” See “Multi-Stakeholder Review of Prescriptive Measures in the Beverage Container Legislation,” Interim Report, January 2012. Prepared for the British Columbia Ministry of the Environment by CM Consulting. Encorp is the provincewide designated Steward, or agent, for producers of EPR-regulated products. What they want to do, obviously, is to burn aseptic containers and some plastic packaging and get equivalent recycling credits for doing so.

management of their products.”⁷ The regulations specify funding mechanisms for post-consumer collection, reuse, recycling and wasting by incineration or burial.

“Producers” are primarily responsible for product takeback. They can be manufacturers, wholesalers, retailers, or “agencies” chosen by actual producers to represent them for purposes of compliance with the Act. These “producers” are required to pick and choose among the above disposal alternatives while at the same time minimizing the environmental impacts of their products by adhering to a Pollution Prevention Hierarchy.

More specifically, in Section 13 of the regulations, “collected products” are to be managed in four ways: “...

compliance” probably means “landfill the wasted residuals”. But, contrary to practice elsewhere (such as in California), in BC burning is equal to recycling, not inferior, and landfilling is still there at the bottom for the wasted residual coming from any of the first three approved processes.

In section 5-3 of the same website, an expanded seven-part hierarchy is laid out for “Producers” to follow, with three additional options placed at the top of the list, ahead of reuse and recycling. Paraphrased, these are: eliminate toxic components from products; increase energy and resource efficiency in manufacturing; and redesign products to “improve reusability and recyclability”. (From Recycling Regulation Guide, Part B-9, p. 12).

the producer”. Collection facilities occupied by recyclers and reusers before the regulation was promulgated are ignored, and regulations do not say how or whether they could ever be part of the EPR system. Given that they may have to produce annual reports in great detail about all of their “products”, they may not want to be part of the system anyway. This is a problem that is generating complaints, about which more will be said.

Over time, several other product categories have been phased in. Most recently, these include electronics (2007) and packaging and printed paper under an amended regulation passed May 2011. As new products are incorporated into EPR legislation, “producers” are required to develop and implement Product Stewardship Plans as blueprints for compliance.

In some products subject to EPR regulation, such as pharmaceuticals, not only is burning the preferred disposal method, but we found little interest in and no consideration of low-temperature disposal alternatives.

The BC Medications Return Program collects unused medications at community pharmacies for “safe disposal” through incineration. We interviewed Ginette Vanasse of the Post-Consumer Pharmaceutical Stewardship Association (PCPSA). She stated flatly to us that incineration is the surest way to destroy all active ingredients contained in the discarded pharmaceuticals. Regarding low-temperature composting of these organic chemicals, she said “Composting would require “prior denaturalization of active ingredients”. Even then, she said, “there is no guarantee the substances would not contaminate the environment.”⁸

But incineration of mixed and unknown feedstocks is a notorious cause of environmental contamination. In this case, pharma, the supposed
⁸ Interview with Ginette Vanasse, by Nadine Souto, July 6, 2011.



reuse the product; recycle the product; recover material or energy from the product; otherwise dispose of the waste from the product in compliance with the Act.” In the solid waste management field, “waste” means all discards, including those recycled, reused, or composted; “recover energy” usually means some form of incineration. “Dispose of the waste...in

The recycling industry’s term “collection facility” is narrowly defined by the EPR legislation in product-specific terms, calling out each of about a dozen product categories targeted by EPR for control. It is clear that a parallel and separate structure from the existing recovery system is to be built. It redefines “collection facility” as either a “return collection facility as defined in the Hazardous Waste Regulation, BC Reg 63-38”, or “a collection facility established by

⁷ BC Ministry of Environment website, Product Stewardship. Available at <http://www.env.gov.bc.ca/epd/recycling/>. Accessed on July 7, 2011

feedstock, is incredibly diverse chemically. The list of known chemical toxins produced when similar feedstocks are burned is an exceedingly long one. Putting “environmental controls” on the incinerator collects some of these chemicals and substances, many not present in the feedstock but literally manufactured by burning. These processes generate high tonnages of furnace bottom ash and baghouse solids that have to be handled as hazardous waste and landfilled somewhere. What is not collected as dust and ash is emitted to the atmosphere, which disperses such molecules over a wide area depending on the prevailing winds.

Fortunately for the people of British Columbia, their EPR collected pharmaceuticals are sent East to an incinerator in sparsely populated Alberta and/or Saskatchewan. Knowing what we know about collection inefficiencies, we think it important to know how much recyclable paper and how many

is not enforced. In an incineration program run by several jurisdictions in Alameda County in California, users are told that any fluids should be kept in their original containers, and pills must be put into ziplock plastic bags and the original containers discarded elsewhere. This container entrainment makes the burner’s feedstock far more complex.

Given the known hazards of incineration, it seems that BC should be taking the lead in insisting that low temperature alternatives, including bioremediation, be trialed for destruction of surplus and outdated pharmaceuticals, especially pills and liquids. These low-temperature systems’ costs and results could then be rationally compared with incineration for cost and likely environmental damage or remediation. But this is not happening, thanks to the profound tilt toward incineration built into the structure of BC’s “Stewardship Council” approach. In such a system, it should be possible to recycle all or nearly all of

abdicate an important responsibility to protect the public interest. Governments, and BC’s government in particular, should be testing and figuring out how to permit low-temperature disposal alternatives such as destruction by bacteria and fungi in aerobic or anaerobic environments. Making source separation compulsory would add to the recycling rate for paper and for plastic containers.

Then, resource recovery rather than resource destruction could be added to the program’s claim of safe pharmaceuticals disposal.

On financing, PPI’s “Framework” states that these additional costs of separation should not be borne by pharmacies. Rather, that they should be added to the total stewardship program costs and funded by manufacturers.⁹ Is this actually happening? Are drug and container makers paying the true costs of destroying them? Are price signals built in to reward effective preparation at the source? Are collectors formally outside the Stewardship structure paid for their collection and sorting efforts? To what extent and for what materials?

For some EPR-regulated commodities, the preference for single-stream collection over source-separation means that there are large flows of “residuals”, resources made

9 In a position paper on different kinds of fees, PPI’s Bill Sheehan states “EPR requires that the Producer cover the financial costs of end-of-life management of their products....” Mr. Sheehan acknowledges that there are many other kinds of fees extant (he names Extended Retailer Responsibility Fees, Extended Consumer Responsibility Fees, Extended Government Responsibility Fees, and three or four more including the widely used “fee for service.” Notwithstanding all these other kinds of fees already out there and working, he says, “If the producer is not covering these costs, it is not producer responsibility.” Product Policy Institute Discussion Document “To Fee or Not to Fee?... And the answer is...Don’t fee! www.productpolicy.org, May, 2009. P. 1



plastic medication containers and bags are entrained along with the pharmaceuticals and then sent to the burn plant. While the PCPSA encourages participating pharmacists to recycle their containers and packaging through their municipal recycling programs, compliance

the containers currently approved for incineration in the BC system.

We suggest that for government to follow phalanxes of well-financed waste lobbyists down the technological risky and unnecessarily expensive path of incineration is to



unrecyclable due to excessive mixing, breakage, and contamination. Dual-stream and multistream approaches to collection seem to be preferred. The older infrastructure based on small collection depots has been bypassed. It appears that unknown but significant portions and mixtures of these designed -in manufactured “residuals” will be burned, adding exponentially to the molecular complexity and therefore danger.

2. Level Playing Field – Not!

The bureaucratic elements of the EPR takeback system that are supposed to “level the playing field” have instead created profound difficulties for some enterprises already on the scene and working when EPR was promulgated. Soliciting, reading, and monitoring all the “plans” that are required for each of the EPR product reclamation facilities has generated a management structure that relies more or less exclusively on large regional management contractors (agents, really, but defined as producers in the regulations), who understandably tend to internalize whatever cash there is to support their own operations.

This new structure has been superimposed on an older existing recycling infrastructure largely without explicit planning for integration. In August 2004 Buddy Boyd of Gibsons Recycling Depot sent out an email showing pictures of a new, mostly unmanned drop-off facility that the SCRD (Sunshine Coast Regional District) placed near his facility.

“Two recycling depots 2 blocks apart (in a town of 4,500). Ever wonder how and why recycling is (being disrupted up here)? Look no farther than Gibsons BC (which) enables this... practice to occur by allowing one layer of government (regional district) to (enjoy) an unfair competitive advantage over an existing (self-financed) private business practicing resource recovery and quality source separated recycling. Just up the road in the District of Sechelt, computers, power tools and small appliances are allowed to be put into their (single stream) recycling totes there and commingled...with recyclables.”

Contrary to the Tyee’s claim that BC EPR would be “market driven”, interviewees familiar with the program said that the playing field for existing

recyclers has become full of hurdles, blockages, and obstacles. Again quoting Buddy Boyd, Executive Director of Gibsons Recycling Depot: “...the wasting staff and the public relations firms and politicians are trying to force us to close by making sure we have few contracts to bid on. And those we can bid on are for services we must provide at cost or below in order to retain market our existing market share. Subsequently their wasting contractor gets richer, then takes the government money and comes into the market place where we do our disposal business, and predatory prices (their services) almost free...to drive us out of business in some cases.”¹⁰ Since the Stewardship Councils can reject or rescind a permit to operate, putting a source separation business out of business, such small depot operators are now living in fear of government interference in the markets that they built patiently and persistently over decades.

Some insiders say the same thing. Dennis Kinsey, outgoing RCBC (Recycling Council of British Columbia) Director, told us “In British Columbia, EPR tends to be monopolistic.”¹¹ As a Director, Mr. Kinsey opposed “one-size-fits-all” solutions, but found himself out of step with the other directors because of his insistence that “there shouldn’t be just curbside collection”, but also existing “return-it centres for beverage containers and electronics, return-to-retail centres, centralized resource recovery depots, etc.” He noted at the outset of our conversation that he was “restricted about what he can say” because at the time we talked he still had two weeks left to serve as Director. He told us that he “could be more open” after he was out of the decision-making structure.

Why all the secrecy and restricted

¹⁰ Email to Daniel Knapp, Urban Ore, September 5, 2010.

¹¹ Telephone interview with Dennis Kinsey, by Nadine Souto; June 22, 2011.

communication? What do these people have to hide?

The precise extent of market interference is unknown, but we think it could be extensive. We fear that this treatment will be applied selectively to businesses the Stewardship Council does not like, such as those complaining about the new bureaucratic structures and how they operate.¹²

3. No to Source Separation, Too

A strong preference for waste-friendly single-stream collection (where all kinds of recyclables are collected in a single container that is dumped into a single bin, crushed, and later separated mechanically) has emerged among the solid waste professionals and businesses that dominate the provincial program. In the face of what even PPI has recently called “threats”¹³ to EPR’s environmental success, BC’s legislation is at best irrelevant, and at worst complicit in this cultural shift away from quality service and production. It is complicit because of its endorsement of incineration as the third of four options in BC’s solid waste management hierarchy, which perversely helps the single-stream technophiles by providing an approved final destination for their large flows of unrecyclable “residue,” formerly called garbage.

12 There is some evidence that the BC’s EPR brain trust is recognizing that they have a problem. In a 2011 email Bill Sheehan of PPI quotes from a document called “Actions for Vancouver BC’s Zero Waste/ Takeback Strategy” that says Vancouver should “Use the City’s zoning authority and development approval processes to expand the collection network for existing takeback programs, including privately-operated recycling depots and in-store return locations”. Email forwarded from Bill Sheehan by Monica Kosmak, GreenYes Listserve, May 16, 2011.

13 Bill Sheehan, “Extended Producer Responsibility & Next Generation Solid Waste Policy”, PowerPoint delivered to 2010 State Colloquium, Sierra Club, December 9, 2010, slide 42, EPR THREATS.

The results can be grotesque to people used to source separation recycling. In at least one community near Victoria, the certified “waste handler” for EPR has put out a graphic that exhorts its customers to “Go ahead! Throw it all in!” The illustration features pictures of many consumer “products” like toasters and hand tools being dumped into collection carts with spoiled food and food paper and polymers and all sorts of other items that should be kept separate and uncontaminated¹⁴. This is a prescription for destroying, not saving, the feedstocks that might otherwise nurture a growing reuse industry with its sturdy branches of

repair and repurpose and restore. Coincidentally, and again thanks to the deeply flawed hierarchy, allowing and encouraging this downcycling to occur will produce steady flows of unrecyclable residue, just what the incinerator vendors and landfill operators want.

Single stream collection has been studied and found to have important downsides. One Canadian expert we interviewed, Ontario’s Clarissa Morawski, wrote of single stream curbside collection in the USA and Canada alike that it

- blends materials that should be kept separate

GO AHEAD, MIX RECYCLING MATERIALS TOGETHER

NO SORTING REQUIRED *Direct Disposal has facilities with the technology to separate and process recyclables. That means you don't need to sort. Here are the types of recyclables that can go into your blue cart.* directdisposal.ca

| | | |
|---|---|---|
| <p>PAPER</p> <ul style="list-style-type: none"> • Newspapers & flyers • Magazines, catalogues and telephone directories • Books - remove cover from hard-cover books • Junk mail, writing and computer paper, envelopes • Paper gift wrap and cards - remove ribbons and bows • Paper bags & rolls • Paper egg cartons • Tetra-packs • Milk & juice cartons - rinse | <p>PLASTIC</p> <ul style="list-style-type: none"> • Jars, jugs, lids, bags, plant pots, bottles, and prescription containers • Rinse to remove dirt, food & grease | <p>Please <u>DO NOT</u> put the following materials in your Blue Cart:</p> <p>GLASS - of any kind, including light bulbs, mirrors, pottery, bottles or dishes.</p> <p>SYRINGES - or medical supplies of any kind.</p> <p>FOOD WASTE - or any perishables.</p> <p>STYROFOAM - including polystyrene cups, dishes and egg cartons.</p> <p>WAXED CARDBOARD</p> <p>KLEENEX and toilet paper</p> <p>PLASTIC - tarps, toys, tubes caulking, motor oil containers and take-out food containers.</p> <p>FABRIC - clothing & textiles</p> <p>FOIL - potato chip bags, and foil gift wrapping paper.</p> <p>PAINT CANS</p> <p>AEROSOL CANS</p> <p>BATTERIES</p> <p>WOODEN ITEMS</p> |
| <p>CARDBOARD</p> <ul style="list-style-type: none"> • Corrugated boxes, cereal, tissue & detergent boxes <p>Must be clean & unwaxed with any liners removed</p> <ul style="list-style-type: none"> • Flatten to optimize space in your blue cart | <p>TIN CANS</p> <ul style="list-style-type: none"> • Rinse, put loose lid in can pinch closed. | |
| <p>ALUMINIUM</p> <ul style="list-style-type: none"> • Pop cans • Tin foil • Rigid trays & pie plates • Rinse to remove food & grease | <p>SMALL APPLIANCES & POWER TOOLS</p> <ul style="list-style-type: none"> • Electronic components* • Computers (except monitors) | |

directdisposal.ca

*All blue carts **MUST** be at curbside prior to 8:00 am on pickup day*

Check the map for your colour coded pickup days. Collection will occur on all statutory holidays except Christmas.

14 Graphic from Buddy Boyd. See <http://www.district.sechelt.bc.ca/Portals/0/Public%20Document%20Library/General%20Information/Curbside%20Recycling%20Program.pdf>. The same source specifically includes “small appliances and power tools” but excludes “glass (any kind), syringes, food, styrofoam, waxed cardboard, kleenex, six products made of plastic (tarps, etc.), fabric, paint and aerosol containers, batteries, and wood items.” Also, despite the assurance that no sorting is required, customers are instructed to rinse or flatten certain included discard categories.

- downgrades commodities like paper, plastics, glass, and even aluminum
- disrupts markets by driving up costs for remanufacturers who seek quality feedstocks
- depresses prices paid by resource brokers and traders for “upgraded” recyclables coming out of single stream MRFs because of much higher unrecyclable “residuals”
- leads either to the incineration of

high tonnages of EPR materials or to landfilling them as usual¹⁵.

Again quoting Buddy Boyd, this time from an email, "It is odd that so many who have had recycling depots in BC...for many years have to sit by and wait while a bunch of suits decides their (our) fate. Many of the committees these suits sit on are stacked in favour of the wasting model re-branded into looking like ZW. And these well funded committee members are paid to attend the conferences and workshops, (where) the grass roots folks are few..., since these folks must...find ways to pay for participating. The result is very imbalanced with most input coming

range of options being tried, some with less destructive effects than others. The best systems feature load-checking at the front or collection end; rejection of some loads that are too contaminated; and aggressive education and demonstration campaigns. But even those systems may be inferior to more labor-intensive ones. Already in 2004 in the USA, market-driven reuse, recycling, and composting enterprises were found to number 51,000 and to employ over 1 million people is suggestive of the size and breadth of the existing infrastructure which BC's EPR seems to want to replace. These locally owned small businesses are directed at producing jobs from resources that

4. Existing Recyclers Are Bypassed.

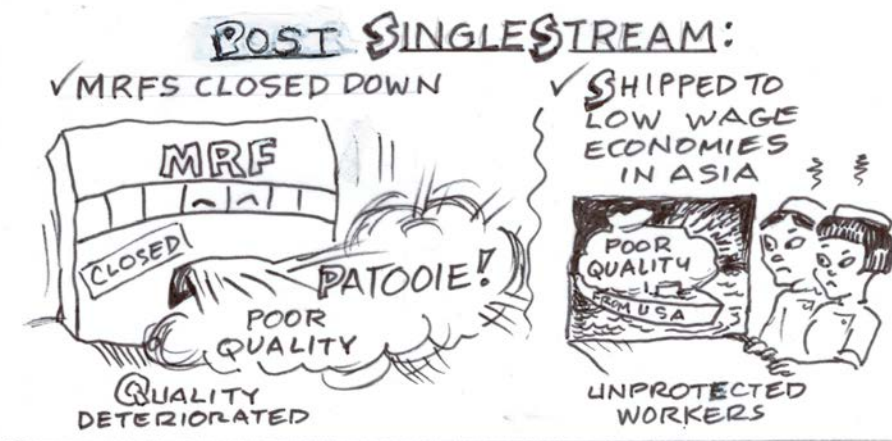
The replacement of already-operating source-separation collection systems with single-stream curbside collection of EPR means that opportunities for repair and reuse at the local level are bypassed, as items are at least meant to be shipped straight to steward-operated depots or other agents most often focusing on end-of-life recycling.

This obviously threatens local entrepreneurial activity, but it also goes against the spirit of zero-waste, which is to recover materials and products at their highest and best use value. A truly sustainable approach to managing discards requires that resources be intercepted "at the source" and put toward economic development and job creation at the local level, not shipped to faraway processing centers.¹⁸

Reading the initial enabling legislation, one is struck by how little is said about the province's preexisting recycling infrastructure¹⁹. It is as if the current recyclers do not exist. This is because the focus of the BC EPR laws at the outset was to enable a new and supposedly superior materials processing infrastructure to be built. Regulations are part of this infrastructure, as is enforcement. Preserving, using, incentivizing, or growing the existing material recovery system was not mentioned. Part of the reason for this neglect is the ideological preference for feeding the collected materials back up the same supply chain that got them to BC in the first place, directly to the manufacturer.

¹⁸ Sunshine Coast Environmental Sustainability Society, Market-Based Zero-Waste Strategic Plan (2010), p. 3

¹⁹ "Environmental Management Act, Recycling Regulation," B.C. Reg. 449/2004, O.C. 995/2004. Available at http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/449_2004. Accessed on February 28, 2012.



from suits who have never handled discards in their lives.

The game is rigged here in BC. Please...get the message out that designing any ZW SWMPs and EPR programs must not just come from top down "experts", who have sold out British Columbians by taking us down the road to incineration.¹⁶

On the other hand, some single streamers have put up spirited defenses,¹⁷ and there are a broad

¹⁵ Clarissa Morawski, "Single-Stream Uncovered" in Resource Recycling, February 2010, pages 21-25.

¹⁶ Buddy Boyd email, January 2012.

¹⁷ One single stream company, Emterra, has put out a set of 12 principles it follows to keep single-stream products as clean as possible. Here are three:

• "Best practice number one is continuous

people sorely and surely need right now. They are far less automated than the wasting competition. This situation cries out for investigation and further research.

communication and education directed at residents about what goes in and doesn't go into recycling.

• "...looking at the blue bin contents before dumping them into the truck is "single-stream best practice number two... (but it is) a fatal flaw in many programs".

• At the MRF, "monitor material quality regularly (as often as hourly), and if material streams have unsatisfactory amounts of cross-material contamination, slow down the picking line".

And so on to a full twelve principles; a complicated program but more effective than no program.

According to Bill Sheehan of PPI, "The rationale for placing responsibility on Producers is that they make design and marketing decisions and therefore have the greatest ability to reduce the environmental impact of their products."²⁰ Thus, the Producer must pay or it's not EPR. The goods must move to the producer or its agent, or it's not EPR.²¹ No other fee is as good as when the Producer pays.

The "Framework Principles for Product Stewardship Policy" by the Product Policy Institute states "All stewardship programs must finance the collection, transportation, and responsible reuse, recycling or disposition of covered products."²² A little further on, the "Framework Principles" slams the door closed on the widespread industrial practice of charging fees for resource conservation and recycling: "End of life fees are not allowed", it says.

One might hope that this ideology might be adjusted in response to criticism²³, but it is 20 Bill Sheehan, To Fee or Not to Fee? That is the Question. And the Answer is... Don't Fee!, PPI Document, May, 2009. P. 1.

21 One observer in 2006 was moved to rename BC's EPR as "Extremely Prescriptive Regulation", "Explicit Property Rights" (because of the transfer of end-of-life ownership responsibility from the generator or the recycler to the "Producer"), and even "Extremely Pedantic Rhetoric". Usman Valiante Blog, Solid Waste and Recycling Magazine, March, 2006. Mr. Valiante is a senior policy analyst with Corporate Policy Group LLP and contributing editor to Solid Waste and Recycling Magazine.

22 "Framework Principles for Product Stewardship Policy", Product Policy Institute, www.productpolicy.org.

23 Usman Valiante says the "overriding messages from the 4th annual Extended

not to be, apparently. Three leading EPR non-governmental organizations -- the California Product Stewardship Council, Product Policy Institute, and the Product Stewardship Institute-- met recently and hammered out a new version of "The Framework", which they posted to the internet. Unfortunately, the new version still states that "end of life fees are not allowed". This policy direction, if it were fully enforced, would cause closure of all clean compost facilities that charge disposal service fees. It would force small collectors of EPR materials to give them to the approved EPR conduits without compensation for the work involved in collecting

5. Garbage In, Garbage Out.

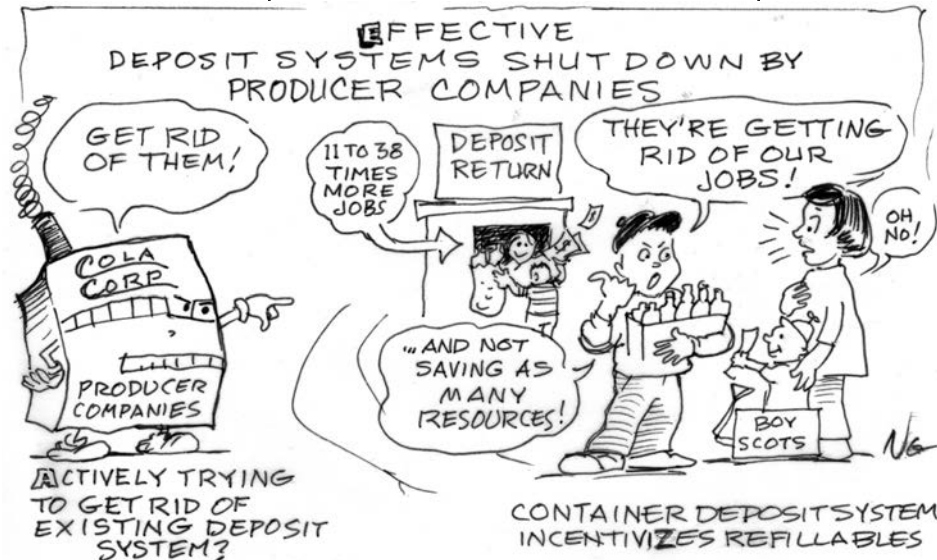
How reverse logistics squares with single stream's "return to chaos" in collection is not clear. Degraded materials will either be fed back the supply chain to the producer or agent, or burned, or landfilled. It is difficult to see this as a sustainable business model, since it destroys far more value than it conserves. The consequences of not thinking this through, of relying on a delusional free market system, can be profound for quality recycling, and for the environment.

In the case of beverage containers, it appears that container takeback under the Stewardship Council is now dominated by the companies that produced the products. These powerful multinational corporations are opposed to incentivizing refillables with, say, very high deposits such as those employed by Prince Edward Island, another Canadian province. Refillables are the

most efficient way to deliver liquids to consumers both economically and environmentally, but advocates for refillables and for high deposits to motivate container takeback will have an uphill climb.

Producer companies are "actively trying to get rid of the existing deposit system", according to outgoing Stewardship Council Director Dennis Kinsey.²⁴ These attacks are occurring despite the elegance, cost-effectiveness, and adaptability of using deposits to incentivize effective recycling behavior. Unbiased research shows that deposit-return systems are far superior to curbside

²⁴ Dennis Kinsey interview, June 22 by Nadine Souto.



them. (This is in fact one of the charges we have heard from one local operator). In general, this simple prohibition seeks to position the EPR bureaucracy to shut down any and all pre-existing recyclers who built their businesses by charging end-of-life fees or any other customer fees-for-service.

Producer Responsibility Conference in Calgary, Alberta...could be paraphrased as, "Extended Producer Responsibility is a good theory but impractical..., (and) if one of the goals of EPR is to promote design for the environment it isn't working..., and there are no true EPR programs in Canada because in practice the requirements are too complicated and onerous". Usman Valiante Blog at Solid Waste and Recycling Magazine, March 2006.

collection systems across the board. According to Canadian scientist Clarissa Morawski for the Container Recycling Institute, in the USA,

- “deposit-return systems create 11 to 38 times more jobs than a curbside recycling system relative to beverage containers...”.

- “CDR systems, in which containers are handled more or less individually, employ an average of 7.34 FTEs (full time equivalents) per 1,000 tons of containers, while curbside systems require an average of 1.66 FTEs in an automated system and 4.46 FTEs in a manual system.

- “ Container deposit-return (CDR) systems generate dramatically higher volumes of beverage containers than curbside systems, an average of 76 percent recovery in CDR states compared to just 24 percent recovery in non-CDR states”.

- Glass bottles manufactured in a CDR state have six times more recycled content than bottles made in a state without a container deposit (72 percent vs. 12 percent).²⁵

In other words, if you want more jobs, choose deposits; if you want more resources, choose deposits; if you want to close the loop to prevent mining, choose deposits.

But BC’s EPR system, as it is being implemented, seems to be encouraging rollbacks in real environmental progress made over the last four decades as recycling, at least in the USA, has grown to at least five times the size of wasting.

One major corporation that profits from the BC’s Product Stewardship

²⁵ Container Recycling Institute: PRESS RELEASE: Increased Recycling of Beverage Containers Creates Jobs. December 15, 2011 5:30:43 AM PST. Reply to: newsletter@container-recycling.org

model is Encorp Pacific. Encorp is a “producer” in the sense that it represents the interests of the actual supply chain producers so they don’t have to do anything but provide operating funds. We interviewed Clarissa Morawski about this.²⁶ Ms. Morawski says Encorp “has a monopoly on the EPR program and squeezes out small depots”. She suggests that BC’s program followed too closely Germany’s EPR program, which initially set up a monopoly that was undone by the courts and split into 9 EPR councils emphasizing disposal service competition. She says in Ontario Canada there is a “mass consolidation of materials recovery facilities (MRFs) due to the changeover to single-stream collection”. She knows of at least

Table 1: EPR product categories in BC

- Product categories
- Anti-freeze, used lubricating oil, filters and containers
- Beverage containers
- Electronics and electrical products, batteries and light bulbs
- Lead-Acid batteries
- Paints
- Pharmaceuticals
- Solvents and flammable liquids, gasoline and pesticides
- Tires
- Packaging and printed paper (amendment passed May 2011)

one paper manufacturer in Ontario that shut down because the quality of feedstock deteriorated so profoundly after their sources switched to single-stream. Now the paper resources formerly feeding local industries are shipped to low-wage economies in Asia instead, she says.

Encorp specializes in beverage container and electronics management. It is part of the Recycling Council of British Columbia (RCBC), where it and other stewards like it are now powerful rivals to small-business entrepreneurs. The stewards’ overemphasis on end-of-life recycling also weakens opportunities

²⁶ Telephone interview with Clarissa Murawski, by Neil Seldman and Nadine Souto, July 26, 2011.

for reuse and undermines even BC’s flawed pollution prevention hierarchy.

We hypothesize that the case of beverage containers is can be generalized to many other commodity types as well. We fear that EPR seems to be replacing, not supporting, repair and resale businesses. This feeds into corporate behavior that is against durability rather than for it, which is virtually opposite the behavior that is predicted by EPR theories.

One prominent reuse executive in California says she was told by a representative of the cell phone industry that “We love cradle to cradle, because it allows us to turn the generations faster,”²⁷ which shortens the time it takes to cycle cell phones from new to obsolete.

6. Same stuff, too.

The Regulated Materials Profile in BC is nearly the same as in California, and probably lots of other places. The list of items covered so far by BC’s integrated EPR laws are not very different from those developed in many California cities, and probably most cities in the USA for that matter. Here

is the British Columbia 2011 list of commodity types covered:

By comparison, the list of regulated materials at a typical transfer station or landfill in the USA will usually include all of BC’s categories minus and printed paper, but additionally covering products such as refrigerants; hazardous substances (California’s oddly named “universal wastes”); switches; light bulbs; ballasts; all types of batteries including lead-acid ones; pesticides; herbicides; and even treated wood.

So it does not appear that a top-down EPR program such as that deployed

²⁷ Personal anecdote, Mary Lou Van Deventer, Past President, Northern California Recycling Association.

currently in British Columbia is necessary to get broad coverage of problematic materials already being collected by recyclers and scrappers and scavengers. Elsewhere, and at countless progressive/conservative nodes throughout the USA, existing reusers, recyclers, discard collectors, and resource processors have adapted to regulations well enough that they can take care of all or most of these discard streams. Some of the highest materials recovery rates in the United States are in California, where jurisdictions are reporting 70% and greater rates. Most recovery businesses are growing and looking for more feedstocks.

This does not support the idea that one state-run system (producer-funded EPR) should take over the businesses created by the existing regulated market approach. BC's EPR regulations should be refocused on using EPR as one of many funding strategies aiming to grow a diverse ecology of recovery enterprises rather than a state-run juggernaut.

7. Not Consumer-Friendly, Either.

The end-of-life EPR financing is supposed to be funded by producers, but even in "pure" EPR systems it is consumers who eventually pay because the upstream makers and suppliers all have to raise their prices to pay for product disposal whether by recycling or wasting. The collection and recycling of all products mandated by the EPR system are costs to be funded by consumers through "eco fees" either added to product retail prices or collected at some other point in the supply chain. Therefore, it appears that the consumer will pay more, not less. All recovery systems cost money to operate; but programs aimed at producing low-quality resources forgo major income opportunities because their products are undesirable and troublesome. Such inefficient systems are often

subsidized by taxes rather than product-disposal-related charges, which is one reason wasteful systems are resistant to reform.

While EPR regulation does not mandate precisely how stewardship plans for each covered commodity are to be funded, the Ministry of Environment's principle is that no costs be borne by local government and the general taxpayer. Where this actually works, the costs of collection and recycling end up being built in to the retail price of the product, which is paid by consumers at the time of purchase.²⁸ The exception to this rule is the BC Medication Return Program discussed above, the operating costs of which are shared by pharmaceutical and consumer health products industries.²⁹

In theory, EPR shifts responsibility for discard management onto producers and consumers, away from the general public. But most BC Product Stewardship programs are consumer-funded, and therefore inconsistent with one of the basic principles of EPR: making producers pay.

8. It Can Probably Be Fixed.

Here is a list of reforms we would like to see:

- Rewrite the EPR regulations to require strengthening the existing recycling networks and nodes by arranging to pay them fair market prices for their disposal services.

²⁸ SCR D Solid Waste Management Plan Working Group, SCR D Zero Waste Management Plan (2011), p. 4

²⁹ Post-Consumer Pharmaceutical Stewardship Association, PCSA 2012 Draft Program Plan, p. 9



- Continue extending regulatory coverage to other categories and subcategories of material.
- Move mixed-feedstock incineration from the hierarchy entirely; ban it.
- Encourage anaerobic digestion to produce fuel and fertilizer, but only for clean feedstocks such as manures, fats, and some food residues.
- Use clean-feedstock composting as a last resort, not wasting by landfilling.
- Ban composting mixed municipal solid waste.
- Restore and enhance source separation by allowing all sorts of fees-for-service to pay operating costs plus profit for niche recovery enterprises that find higher and better uses for all discard categories.
- Find and fill service voids first; build on what you've already got.
- Build new centralized Zero Waste transfer depots laid out like airports; make them into places where responsibility and ownership of all discarded materials can change hands legally, pleasantly, and profitably.
- Adopt policies favoring specialist enterprises within these structures, and allowing for growth and differentiation of the industry, including making and manufacturing.