

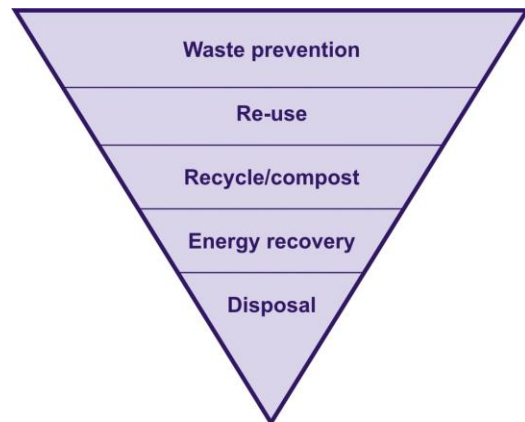
Memorandum

To	Drew Hadfield	Page	1
CC			
Subject	Draft for Discussion – Long List of Zero Waste Options		
From	Maura Walker		
Date	February 15, 2010	Project Number	60141938

The following is a list of zero waste (waste diversion) options presented for consideration. This list will be discussed at the Solid Waste Management Plan Advisory Committee (SWMPAC) meeting on February 23, 2010.

As detailed in the Stage 1 report, Comox Strathcona Waste Management (CSWM) and CVRD/SRD member municipalities are employing a number of strategies to encourage waste diversion; however there is still potential to increase waste diversion in the region. A number of additional strategies exist, many of which have been employed in other jurisdictions in North America. Both program-based and policy-related options are included.

The options identified in the following sections are generally related to reducing the amount of waste requiring disposal, referred to as the “Zero Waste” options. Zero Waste covers the first three Rs of the waste management hierarchy – reduce, reuse, recycle. In subsequent committee meetings, we will discuss “Residual Waste” options related to energy recovery and disposal.



This memo provides only brief information about each of the zero waste options. Additional information will be presented at our meeting on February 23rd. Through review and discussion of these options, the SWMPAC will have the opportunity to select options for further investigation and evaluation. Options that are short listed will be researched in more detail, and estimates of their impact and cost will be developed.

The options are organized into the following categories:

- Reduction and Reuse Options
- Options Pertaining to Single-Family Generators
- Options Pertaining to Multi-Family Generators
- Options Pertaining to Commercial Generators
- Product Stewardship Options
- Options Pertaining to Organics Processing
- Options Pertaining to Recyclable Material Processing
- Options Pertaining to Construction and Demolition Activities
- General Promotion/Education Options
- Policy Options

Each of the following section begins with some background information on the topic, including references to current service levels.

Long List of Zero Waste Options

Reduction/Reuse

Background

- Reduction and reuse eliminate waste from ever entering the waste management system
- Waste reduction and reuse are at the top of the “waste management hierarchy” but are often given the least amount of attention as part of solid waste management system because the impact of programs targeting reduction and reuse are difficult to measure compared to recycling and composting programs
- There are many reuse opportunities in the CSWM area including second hand stores, Free Stores, garage sales and on-line postings

Options

- 1) Promote existing reuse options, including rental and repair services
- 2) Have a reuse promotional campaign
 - a) Promote reuse by having Reuse events , e.g. Nanaimo’s Reuse Rendezvous
 - b) Develop campaigns focused on “reduce” as key part of a green lifestyle – linking with other green behaviours (energy use, water use, etc.), e.g. “Reduce the Use” plastic bag campaign
 - c) Conduct an annual art contest and show using reused/salvaged materials – look for links with local art societies
- 3) Provide Reuse Centres at remote landfills and transfer stations where no reuse opportunities are available locally, e.g. Hornby Island Free Store
- 4) Encourage professional salvage *operators* to recover materials from landfill (e.g. scrap metal, appliances, wood)
- 5) Look for partnerships with community organizations for salvage/repair services
- 6) Conduct “repair your stuff” workshops for the community (similar to Home Depot workshops)

Options Pertaining to Single-Family Generators

Background

- All municipalities are responsible for providing curbside collection to single-family homes. Consequently, this is the sector which local governments can exert the greatest influence on waste diversion.
- Single-family homes in Comox, Courtenay, Cumberland, Campbell River and Royston receive curbside collection services for garbage and recyclables. All other residents must self-haul their recyclables and garbage to local recycling depots and waste disposal facilities.
- Curbside yard waste collection is offered to residents year-round in Comox and Courtenay and seasonally in Cumberland and Campbell River. There are yard waste drop-off depots at the Comox Waste Management Centre, Gold River and Sayward
- Some issues that have been identified with the current system include:
 - Not all areas have the same access to garbage and recycling collection
 - Need to add food waste collection to take residential waste diversion “to the next level”
 - People do not have a good understanding of the options available for the management of household hazardous waste (HHW) and *difficult-to-manage wastes* (tires, TVs, etc.)

Options

- 1) Policy related options
 - a) Reduce curbside can limits, e.g. Nanaimo, Parksville and North Cowichan allow one standard can per week. Ladysmith allows one standard can every other week (food waste collection program in place)
 - b) Implement residential collection bans on recyclables, yard waste and materials managed under product stewardship programs, e.g. City of Nanaimo will not collect residential garbage cans which obviously contain banned materials
 - c) Regionalize recycling collection services to provide better economies of scale, lower costs to smaller communities/rural areas. and to provide a consistent program throughout the region, e.g. Regional District of Nanaimo (RDN)
- 2) Service related options
 - a) Curbside collection
 - i) Provide or expand curbside collection services to areas not serviced, e.g. Regional District of Okanagan Similkameen, RDN
 - ii) Add food waste to the curbside collection program, e.g. Ladysmith
 - iii) Expand list of recyclables collected as markets evolve
 - iv) Move towards a consistent list of curbside/depot recyclables throughout SRD and CVRD
 - b) Recycling Depots



Ladysmith Curbside

- i) Alter the number of depots: Is the number of depots adequate, now and in the foreseeable future?
 - ii) Alter the materials collected at depots: Are the materials collected appropriate to the need and current recycling market?
 - iii) Can additional materials be collected at the recycling areas at the landfills? – e.g. rigid plastics at Cowichan Valley RD transfer station, asphalt shingles at the Campbell Mountain Landfill in Penticton
 - iv) Discontinue glass collection due to lack of markets and cost to handle this material. (Can continue to receive glass at the landfills)
- c) Multi-function waste management centres
- i) Establish multi-function waste management centres at rural waste management centres (if there are no other alternatives available) E.g. Hornby and Cortez waste management centres
- d) Yard waste collection
- i) Like Comox and Courtenay, provide year-round curbside collection in all areas receiving curbside collection
 - ii) Provide yard waste curbside collection in areas not currently serviced, e.g. Royston
 - iii) Continue to collect yard waste year-round at major waste facilities
 - iv) Provide seasonal brush-only curbside collection
 - v) Link any expanded yard waste collection services with burn bans
- e) Backyard Composting
- i) Sell backyard composters
 - ii) Promote backyard composting (link with Bear Aware)
 - iii) Maintain compost education gardens
 - iv) Implement Master Composter programs
 - v) Promote grasscycling and xeriscaping
- f) Household Hazardous Waste (HHW) Management
- i) Provide HHW round up events
 - ii) Set up a permanent HHW depot in each Regional District
 - iii) Educate residents on HHW management options and alternatives

Options Pertaining to Multi-Family Generators

Background

- Multi-family housing is becoming more popular as a housing alternative. This may be particularly true in areas where there are a growing number of retired people. Traditionally, this sector of the population has not been a target for publicly-provided waste management services, education or promotion.
- Multi-family recycling programs often have poor participation rates and high levels of contamination.
- Multi-family buildings are included in the Comox and Courtenay garbage and recycling collection service. In all other areas, they are serviced through private collection contracts.

Options

- 1) Policy related options
 - a) Make recycling in multi-family buildings mandatory (may need municipal involvement), e.g. Metro Portland
 - b) Make space allocation for recycling mandatory in all new multi-family buildings (needs municipal involvement) – in suite and centralized, e.g. Bellevue, WA
 - c) Mandate that private recycling/organics collection services must cost less than garbage collection, e.g. Metro Portland
 - d) Provide refund incentive for good recycling behaviour (minimal contamination), e.g. San Francisco refunds up to 75% of “variable” portion of waste collection fee (fee covers collection of all 3 streams)
 - e) Mandatory solid waste management reporting by each building on waste services in place
- 2) Service related options
 - a) Provide recycling collection services (mandatory or optional), e.g. CRD apartment recycling program, City of Vancouver, City of Burnaby
 - b) Provide food waste collection services (mandatory or optional)
 - c) Provide recycling depots within walking distance of multi-family building clusters (e.g. every 500 units)
 - d) Have a dedicated multi-family zero waste coordinator
- 3) Targeted promotion/education options
 - a) Require all building managers to provide adequate information to all new tenants, as well as signage in the central collection area
 - b) Provide free in-suite containers
 - c) Provide free waste assessments to determine how to increase recycling, add composting and reduce garbage
 - d) Provide assistance to building managers with tenant outreach
 - e) Handouts for building managers
 - f) Information on website
 - g) Presentations to building management companies/associations
 - h) Conduct lobby meetings for buildings getting a new service
 - i) Develop a campaign targeting multi-family residents, building managers, building owners. Tools could include posters, fridge magnets and contests.
 - j) Work with building management associations to develop and deliver promotion and education programs and materials

Options Pertaining to Commercial Generators*Background*

- The main tool for encouraging waste diversion by commercial generators has been tipping fees and disposal bans. Promotion and education of waste diversion has generally been the responsibility of the waste hauling industry. However, this sector is the largest contributor to waste disposed.

- In Comox and Courtenay, commercial waste and recyclables are collected as part of the municipal collection program.
- There are limited options for commercial recycling services outside Comox and Courtenay, particularly for small businesses and institutions

Options

1) Policy related options

- a) Enact disposal bans to encourage more recycling in the commercial sector
- b) Make recycling/source separation in the commercial sector mandatory (needs municipal involvement), e.g. San Francisco, Metro Portland, Halifax
- c) Make the submission of waste audits and waste management plans with defined recycling targets by commercial generators mandatory (may need municipal involvement), e.g. Owen Sound, ON
- d) Make space allocation for recycling mandatory in all new commercial developments (needs municipal involvement), e.g. Seattle

2) Service related options

- a) In municipal areas, provide a recycling/organics collection service to all commercial generators (including institutions like schools, churches, clinics, care facilities, etc.), e.g. Comox and Courtenay
- b) In Comox and Courtenay, provide organics collection services to all businesses once composting capacity is in place
- c) In all curbside collection areas, provide a recycling/organics collection service to small commercial generators – can be mandatory or optional (may need municipal involvement), e.g. Qualicum Beach
- d) Provide recycling opportunities for hard-to-manage recyclables materials such as agricultural plastics, lumber wrap, agricultural trimmings, rigid plastic at main waste management centres
- e) Provide a food waste drop off for small generators

3) Targeted promotion/education options

- a) Develop a Technical Assistance Program for commercial generators Free or low-cost waste audits, e.g. Boulder, CO provides free waste audits and consultation, Regional District of Central Okanagan:

http://regionaldistrict.com/departments/waste/waste_garb_wastewise.aspx)

- i) Develop a Zero Waste certification program (can be linked with audits – similar to home energy audits), e.g. Boulder, CO's Ecocycle
- ii) Zero Waste Awards program (could be done in association with local Chamber of Commerce)
- iii) Awareness campaigns targeting specific commercial generators
- iv) Web-based recycling directory
- v) Work with local business associations to provide education and outreach in the commercial sector
- vi) Provide “free” recycling/organics collection containers (deskside, centralized). E.g. Metro Portland



- vii) Work with tourism/hotel associations to develop a program and support materials for tourist and tourist accommodations
- viii) Develop tools and information specific to different types of businesses (office, retail, restaurant, etc.), e.g. Central Okanagan Regional District,
- b) Lead by example
 - i) Make the Regional District and Municipal offices zero waste leaders and informing the commercial sector of the process and results
 - ii) Build zero waste requirements into all Regional District contracts. Share template of contract language to local governments.



Product Stewardship Options

Background

- Product Stewardship, also referred to as Extended Producer Responsibility (EPR), is a policy approach in which the producer’s responsibility for managing the environmental impact of their product is extended across the whole life cycle of the product, from selection of materials and design to its end-of-life. This means that the producers and consumers have financial responsibility for the products from production to final disposal, so that the cost of managing this waste is not borne by local government. A good example of this type of program is the used-oil management program, where producers provide a product take-back service through retailers, so that the public can return used oil, filters and containers for recycling.
- Other items covered by Product Stewardship programs include: beverage containers, paint, solvents, fuels, pesticides, lead-acid batteries, rechargeable batteries, tires, pharmaceuticals, electronics (limited list).
- Product stewardship issues that have been identified for CSWM include:
 - Many people are not aware of the range of stewardship programs available, or how to access them; therefore these products are still ending up in the garbage
 - Lack of promotion and education associated with most stewardship programs
 - Inadequate servicing in some parts of planning area (lack of access)
 - Lack of servicing in rural areas
 - CSWM is paying to have tires removed from their solid waste disposal facilities. This cost should be covered by the stewardship program
 - Not all difficult to manage waste products/household hazardous wastes are covered by stewardship regulations

Options

1. Provide education
2. Work with stewards and Ministry of Environment to ensure that services are well sited and meet the needs of the communities (access issues are addressed)
3. Partner with stewardship agencies to provide services in a “one stop shop” manner wherever needed/practical

4. Lobby stewards through Local Government Stewardship Council (LGSC) to provide better services
5. Lobby the provincial government through LGSC to have more products covered under EPR
6. Lobby for a broader deposit-based return system (provides incentive to generators to have materials be properly managed)
7. Become a designated collector of specific stewardship materials that are arriving at regional waste management facilities, e.g. tires, lead-acid batteries, e-waste
8. Discontinue collection of stewardship items at regional facilities

Options Pertaining to Organics Processing

Background

- Roughly 35% of the waste disposed is compostable. The compostable portion of the waste stream represents the largest opportunity to reduce the amount of waste landfilled. Additionally, reduction of organics in the waste stream reduces the generation of landfill gases, leachate and the climate change impact of waste management.
- The CSWM has a composting facility at the Comox Valley Waste Management Centre that composts biosolids from liquid waste management facilities with chipped yard waste and clean wood waste.
- Presently, there is no capacity in the CSWM area to compost food waste.
- Presently, there is a lack of yard waste composting capacity in the Strathcona Regional District.

Options

- 1) Undertake a composting feasibility study, e.g. Squamish Lillooet Regional District, Regional District of Okanagan Similkameen
 - i) Determine available feedstocks
 - ii) Determine general composting technology to be used
 - Windrow – need the space and buffer
 - In-vessel
 - Anaerobic digestion – Is there enough feedstock? Is there an obvious energy market?
 - iii) Determine location(s)
 - iv) Determine support mechanisms
 - v) Consider linkages with liquid waste management needs
- 2) Build composting capacity for food waste, e.g. UBC
 - a) Ensure there are mechanisms in place for success
 - i) Can adequate volumes of nitrogen *and* carbon-rich feedstocks be ensured?
 - ii) Collection programs
 - iii) Policy mechanisms
- 3) Set the tone for private sector composting capacity to be developed, e.g. RDN
 - a) Put or pay contract (guaranteed provision of feedstocks)
 - b) Collection program for organics
 - c) Policies (disposal bans, collection bans, tipping fees)

Options Pertaining to Recyclable Material Processing

- Material recovery facilities (MRFs) receive recyclable materials from collection programs and drop-off locations and prepare the materials for market. This includes separating the different types of materials as well as removing contaminants.
 - The main processing facilities for central Vancouver Island are located in Nanaimo and are privately owned and operated. There are no government-owned MRFs on Vancouver Island.
 - The recycling industry is subject to fluctuations in the international commodity market. Almost all materials collected on the Island are ultimately used by mills and plants in the US and Asia.
- 1) Continue to require recycling processing as part of recycling collection contracts
 - a) Ensure that collected materials are appropriately processed and marketed (reporting requirements,
 - i) Review current list of materials collected through Regional District and Municipal programs – add or delete materials based on market history and direction
 - b) Provide more stability for the contractor by sharing the risk/rewards of diversion, e.g. RD of East Kootenay

Options Pertaining to Construction and Demolition (CD) Activities

Background

- CD waste represent 29% of the waste disposed in the CVRD and 17% of the waste disposed in the SRD. The amount of CD waste generated on an annual basis is strongly linked with economic growth in the area.
- Some issues identified with CD waste management in the CSWM area are:
 - The recycling/reuse marketplace is set up to manage only source-separated materials
 - No capacity for mixed CD waste processing (although demolition, which tends to be more difficult to source-separate is not significant in the CSWM area)
 - The private CD waste landfill in Courtenay is almost full
 - The main use for source-separated “dirty” wood waste is hog fuel and the long-term viability of this market is tenuous
 - If food waste composting is implemented, there will be a need to source additional clean wood waste as a carbon source

Options

- 1) Policy related options
 - a) Continue to use variable tipping fees to encourage source separation and diversion
 - i) Ensure that there is an incentive for generators to source separate clean and dirty wood waste (e.g. variable tipping fees)
 - b) Require all construction and demo projects to develop a solid waste management plan (with defined recycling targets), e.g. San Jose, CA, Santa Monica, CA
 - c) Mandate the recycling of specific materials at all construction and demolition sites (reinforced by disposal bans)

- d) Set recycling targets to be met by all CD projects (e.g. 65% diversion), e.g. Chicago requires 50%, Santa Monica requires 60%
 - e) Require a deposit to be posted on all construction and demo jobs that is redeemed when scale tickets or receipts are provided at the end of the job, e.g. San Jose, CA. This could be used to ensure that proper facilities are used and that recycling targets are met.
 - f) Vary permit fees to encourage deconstruction over demolition
 - g) Prohibit demolition without some element of deconstruction
 - h) Develop model municipal bylaws in consultation with municipal staff for initiatives to be implemented at the municipal level, e.g. Metro Vancouver
 - i) Encourage Regional District and Municipal Planning and Permits Departments to adopt green building policies, e.g. Ucluelet
- 2) Service related options
- a) Identify new recycling processors and markets for additional CD waste materials
 - b) Provide readily accessible drop off depots for source-separated CD waste throughout the CSWM area
 - c) Build a centralized processing facility for mixed and source-separated CD waste
 - d) Set the tone for private sector CD waste recycling capacity to be developed
 - i) Put or pay contract (guaranteed provision of materials)
 - ii) Policies (disposal bans, collection bans, tipping fees, mandatory recycling or deconstruction)
 - iii) Collection program (e.g. drop off depots/transfer sites)
- 3) Develop a targeted promotion/education campaign
- i) Develop a construction/demo industry toolkit e.g. Metro Vancouver, Portland, OR
 - (1) Provide a CD waste recycling directory on the website
 - (a) Send a hard copy of the directory to members of local construction associations
 - (2) Contractors Guide to Reuse and Recycling
 - (3) Work with local industry associations to provide education and outreach
 - ii) CD recycling seminars
 - iii) Have a dedicated staff person to work on CD waste diversion and proper management

Promotion/Education Options

Background

- Education programs are the main tool for waste reduction and are critical to the success of waste diversion programs. Education supports long-term positive behaviour change.
- Promotional activities increase awareness of services and programs and can be used to generate enthusiasm for a program.
- There is good access to promotion and education related to waste management in the CSWM area, including on-line resources, brochures and the Power of R program. No significant issues have been identified with current services.

Options

- 1) Expand promotion and education activities for solid waste management and zero waste. Tools can include:
 - Branding
 - Web-based information, including a searchable database
 - Sponsor the RCBC Telephone “hotline”
 - Brochures/print based information
 - Social media, e.g. Facebook
 - TV and Radio campaign
 - Newspaper advertising
 - Newspaper column
 - Newsletter
 - Calendar
 - Booklets
 - Community Outreach
 - Speakers bureau
 - Participation in community events
 - Displays at community locations
 - Contests
 - Facility tours
 - Workshops and seminars
 - School program
- 2) Incorporate more social marketing as a tool for long term behaviour change
 - a) Identify tools for specific audiences (youth, seniors, businesses, etc.)

General Policy Options

Background

- Policies can define the conduct of a local government as it relates to its approach to solid waste management, and policies can be the key supporting element to a waste diversion program.
- One of the main policy mechanism current in use by CSWM is variable tipping fees which act as an incentive for source-separation

Options

- 1) Continue and expand disposal bans for products and materials that become readily recyclable and compostable, including EPR products
- 2) Maintain variable tipping fees as a financial incentive to source separate and divert waste and review fee structure on a regular basis to ensure that the intended effect is being realized
- 3) Work with regional district and municipal planning departments to develop land use planning policies that support waste management infrastructure and a “green economy” through local resource recovery and reuse., e.g.
 - creating zoning that supports and protects waste management services/infrastructure (needs municipal involvement)
 - do not exclude waste management services from Official Community Plans, but consider how they can be appropriately sited (needs municipal involvement)

- consider the applicability of resource recovery parks and how to encourage their development and on-going success(reduced taxes) (may need municipal involvement), e.g. California
- 4) Market development
 - a) Develop a preferential purchasing policy for locally recycled/composted content, then recycled/composted content, before non-local, virgin material content
 - b) Promote local green businesses (“eco-leaders”)
 - 5) Implement Waste Stream Management Licensing bylaw – generally used to define and maintain a quality standard of operations required by local waste management facilities. Not used for flow control or to fix bad land use planning decisions, e.g. RDN, Cowichan Valley Regional District

MW:mw