

talk RESPONSIBILITY  
 paper INSTITUTIONS regulation children  
 reduce challenge sustainability education ma  
 municipalities rethink multi family TRASH plan pricin  
 plastic ZERO NEW ideas change REUSE inve  
 waste groups organics RESOURCE garbage  
 wood food scraps landfill future REUSE me  
 complex construction generations REUSE reinv  
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 beyond action include business  
 strategy



metro vancouver  
**zero WASTE**  
**CHALLENGE**  


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**STRATEGY**

*Metro Vancouver's proposed new management plan for garbage (currently with the Provincial Government for approval) commits the region to increase the proportion of waste diverted from disposal from the current 55 percent to 70 percent by 2015 and 80 percent by 2020. The Zero Waste Challenge Strategy represents a range of actions that, subject to further consideration by the Metro Vancouver Board of Directors, are available to meet the region's aggressive waste diversion targets. The strategy served as a discussion guide at the Metro Vancouver 2011 Zero Waste Challenge Conference.*

## Priority Actions

### 1. Implement a disposal ban on food scraps and soiled papers

#### a. Single-family residents

Metro Vancouver will ban the disposal of organics from single-family homes when all member municipalities have single-family organics collection in place. This is expected to occur in the next 12 to 18 months.

The cost to comply with a ban will depend on the transition from a municipality's existing method and frequency of collecting yard trimmings to the collection of all organics. Food scraps collection uses the same containers and vehicles that are already in place for collecting yard trimmings, and the cost per tonne to process mixed organics at the regional composting facility is much lower than the cost per tonne to dispose of garbage. As food scraps are increasingly diverted from garbage, municipalities will be able to further reduce costs by switching garbage to a bi-weekly collection.

#### b. Multi-family residents and businesses

Metro Vancouver will announce a ban on commercial and multi-family organics, to take effect by 2015. Private companies have been slow in investing in new processing facilities primarily because of the lack of an assured supply of feedstock. Other reasons include the regulatory environment, technology, and siting. This announcement will provide investors with the desired assurance of future feedstock, and provide advance notice to the business sector so that they can prepare infrastructure to separately collect, deliver and process their organic material.

#### c. Enforcement of disposal bans

At waste disposal sites, Metro Vancouver will strengthen the enforcement of disposal bans using methods such as increasing the frequency of disposal ban inspections, increasing fines for infractions, and barring repeat offenders from accessing regional waste facilities.

To ensure effectiveness of the disposal bans, the waste generators must be affected by the enforcement. This is achieved by enforcing bans



not only at the disposal sites, but also at the source, through ticketing of violators by municipalities, or by using hauler licenses or franchised contracts to require haulers to inspect and refuse loads that are in violation of bans.

### 2. Mandate the separation and collection of organics from multi-family homes and businesses

#### a. Mandating space and access for recycling organics

Metro Vancouver member municipalities have the legal authority to enact bylaws requiring sufficient space for recycling organics in multi-family and commercial buildings.

Municipalities and key stakeholders have developed a sample municipal bylaw and specifications for new building construction and major renovations which municipalities can customize and implement. Municipalities will begin implementing their municipal bylaws within 2011.

For existing buildings, Metro Vancouver will work with stakeholders to develop a sample municipal bylaw and performance specifications for multi-family and commercial buildings. Existing buildings will have options such as reallocating existing spaces currently used for garbage collection or parking, increasing the frequency of waste removal service, collecting organics from within tenant suites, managing organics through on-site composting/digestion, or arranging with nearby buildings to share a neighbourhood collecting/processing facility. This bylaw will take about a year to develop.

### *b. Mandating organics collection and recycling*

Metro Vancouver will add organic waste to the list of banned materials when the organics processing capacity is established.

Municipalities will in turn need to enact bylaws that require businesses and multi-family residences to collect organics separately and transport them to a processing facility for recycling, or alternatively, to manage organics on-site.

Metro Vancouver will work with stakeholders to develop an appropriate sample municipal bylaw.

In the event that further regulatory and pricing incentives are still needed, a specific requirement for the collection and transportation of organics could be included in hauler contracts.

The annual business licence renewal process will require existing businesses to prove that adequate recycling infrastructure or appropriate collection service is in place for organics and other recyclables by 2013.

To a degree, municipalities will be able to enforce these new bylaws using existing bylaw enforcement staff. However, there will be an incremental increase in the municipal enforcement costs.

### **3. Ensure that appropriate infrastructure for processing organics is established**

Existing organics processing facilities in the region are a mix of private and publicly owned contracted facilities. Metro Vancouver has contracted for a regional composting facility owned and operated by Fraser Richmond Soil and Fibre, the City of Vancouver operates its own yard trimmings composting site, and a few private companies also provide composting services to the region. Several private companies are also actively building or planning to build new composting and biofuel facilities within Metro Vancouver.

Organics processing facilities can produce compost or biofuels, and it is best to have both types of facilities serving the region. Biofuel production has a better future market potential, and is better suited for pure food scraps of the type generated by businesses. Composting is better suited for pure yard trimmings and is still required for processing

the residues from biofuel production.

Metro Vancouver is developing a regional framework for organics processing facilities that will provide greater detail on criteria and a proposed business model for establishing future capacity.

### **4. Ensure that the price of processing organics is significantly lower than disposal**

There will be a cost for most businesses and multi-family residences to collect organics separately from their garbage and in particular a cost to transport them to a processing facility. However, once materials are received at an organics processing facility, the tipping fee will be significantly lower than the fee charged at waste disposal facilities (currently \$97 per tonne).

A strong differential between the garbage and organics tipping fee is a significant driver. It will result in an overall saving for many businesses, like restaurants, food processors, and supermarkets for which a large part of their waste is food scraps, as well as providing processing facilities with additional assurance of future supply of feedstock.

### **Other Actions**

- Engaging the food industry to modify products and marketing so as to reduce over purchasing and other habits that generate food waste by vendors and consumers.
- The largest fraction of the multi-family waste stream is food, of which several studies in large cities have found 30%-40% is "over purchased" and thrown away without ever being used. The UK's Waste and Resources Action Programme (WRAP) implemented a successful "Love Food, Hate Waste" campaign that encouraged the food industry to modify products, packaging, and storage to reduce food waste generation. Metro Vancouver will work with major food processors and retailers to undertake similar initiatives.
- Local government may provide equipment, training, and operational support for composting in or near multi-family complexes.



## 2. Multi-Family Sector

The multi-family sector has a diversion rate of only 16%, compared to about 55% for the region as a whole. Furthermore, as the region densifies, the majority of the population will live in multi-family households.

Multi-family household recycling has unique challenges to overcome. Residents in multi-family complexes share garbage bins, which reduces the incentives for individual residents to divert wastes. This sharing also provides anonymity to those who choose not to recycle. In addition, many multi-family complexes have limited space for adding containers to collect recyclables or organics, and limited access for recycling collection vehicles.

### Priority Actions

#### 1. Mandate sufficient and accessible space for recyclable materials and organics at multi-family complexes

A major barrier to increased recycling from multi-family homes and businesses is a lack of space assigned for recycling and the limited access available to recycling collection vehicles and tenants.

For new buildings and major renovations, the Management Plan calls for municipal bylaws to set minimum standards for space and

access for recycling. Metro Vancouver, member municipalities and key stakeholders have already developed a sample municipal bylaw and specifications, which municipalities can customize and implement. Member municipalities will begin implementing their municipal bylaws by 2012.

For existing buildings, Metro Vancouver will work with stakeholders to develop a sample municipal bylaw template and performance specifications for multi-family and commercial buildings. To meet the recycling performance specifications, existing buildings will have options such as reallocating existing spaces currently used for garbage collection or parking to collect organics, increasing the frequency of waste removal service, collecting recyclables from within tenant suites, managing organics through on-site composting/digestion, or sharing facilities with nearby buildings. Municipalities may also consider allocating public space for these purposes.

#### 2. Mandate the separation and collection of organics from multi-family homes

Metro Vancouver will mandate recycling of all banned materials, and will add organic waste to the list of banned materials when the organics processing capacity is established. Mandatory organics recycling bylaws will coincide with the start of the regional disposal ban on organics.

Municipalities will need to enact bylaws that require multi-family residences to have organics collected separately and transported to a processing facility, or alternatively, to be managed onsite. This bylaw will work in unison with the municipal bylaws that establish minimum requirements for recycling space and access, as well as interim performance specifications.

In the event that further regulatory and pricing incentives are still needed, a specific requirement for the collection and transportation of organics could be included in hauler contracts.

Metro Vancouver will work with stakeholders to develop an appropriate municipal bylaw template that will take effect at the same time as the regional disposal ban on organics (2015).

### **3. Increase the effectiveness of material disposal ban enforcement**

Despite the fact that materials such as paper, cardboard and plastics and other “blue box” materials are already banned from disposal, they continue to be disposed as waste.

Metro Vancouver will strengthen the enforcement of disposal bans at disposal sites, using methods such as increasing the frequency of disposal ban inspections, increasing fines for infractions, and barring repeat offenders from accessing regional waste facilities.

To ensure effectiveness of the disposal bans, the waste generators must be affected by the enforcement. This is achieved by enforcing bans not only at the disposal sites, but also at the source, through ticketing of violators by municipalities, or by using hauler licenses or franchised contracts to require haulers to inspect and refuse loads that are in violation of bans.

#### **Other Actions**

- New waste reduction regulations from the provincial and federal levels, such as opt-in programs for unsolicited mail and industry stewardship programs.



### **3. Construction and Demolition Waste**

Construction, renovation and demolition activities are the source of over 1.3 million tonnes of waste materials generated in Metro Vancouver each year. Waste from these activities consists of, in order of magnitude: wood, concrete, carpet, asphalt roofing and plastic. Because the material is relatively homogeneous compared with typical mixed solid waste, the recovery and recycling of useable materials is well developed through private sector initiatives. Nearly 900,000 tonnes of the waste generated annually is recycled – a diversion rate of almost 70%. An additional 155,000 tonnes annually of construction and demolition materials – primarily wood – has been targeted to reach the 2015 diversion goal identified in the Management Plan.

Reuse and recycling of clean wood has been very successful within the private sector due to the high commodity value associated with wood. This strategy builds upon this success by increasing the supply of wood for reuse and recycling by the private sector. This will be achieved through increasing the processing capacity for large quantities of mixed materials, and establishing convenient collection facilities for small loads of source separated wood. Demand for recycled materials is well established at market prices well below the cost of disposal.