



BC Nature Comments on Metro Vancouver's Draft Integrated Solid Waste Resource Management Plan

BC Nature is interested in supporting a better use of limited resources in order to lessen human impacts on the natural world. In particular, we support initiatives to reduce greenhouse gas emissions to limit the impacts of our society on global warming. We are also concerned with any potential increase in the release of air pollutants, including the persistent organic pollutants, identified in the Stockholm Convention (an International Treaty adopted in 2001 and ratified in 2004) to which Canada is a signatory.

Summary of Comments

1. To properly guide management decisions, more information should be provided on the composition of residual waste (i.e., the solid waste that remains after reduction, reuse, recycling, etc.) and how the proportion of these components is anticipated to change as waste management improves over the next few years..
2. Support is requested for backyard composting by single family households.
3. Additional analysis, pilot programs and adequate public consultation are requested with regard to food waste composting and biodigestion of organics.
4. A decision on additional waste-to-energy (WTE) facilities should be deferred pending the provision of additional information of residual waste components and outcome of the pilot biofuel projects.

General Comments on Draft Plan

The draft plan proposes to increase the diversion rate from 55% to 70% by 2015 and, very commendably, suggests an aspirational target of 80% diversion by 2020. In order to fully support the Integrated Solid Waste Resource Management Plan (ISWRMP), additional information should be provided regarding how achievement of these goals would affect the ratio of the various components remaining in the residual waste stream.

The draft plan states the overall 70% diversion rate will be achieved by reaching a 30% diversion rate in multifamily households, 65% in single family, 70% in the ICI (industrial, commercial and institutional) sector and 80% in the DLC (demolition, land-clearing and construction) sector. However, the draft plan is silent on how such increased diversion rates would affect the proportion of the various components remaining within the residual waste stream (e.g., wood, food wastes, plastics, etc.). This is important information which is needed to guide decision-making on residual waste management. In our view, this data should be a key component of the ISWRMP.

Goal 1 – Minimize Waste Generation

We support all the strategic actions listed under Goal 1 to minimize waste generation but query why the support of backyard composting by single family householders is not specifically mentioned and why it does not receive more emphasis. Additional support and encouragement for composting by single family householders, i.e., those in a position to compost their own food waste and grass clippings, has the potential to considerably reduce waste that otherwise would require handling by various levels of government. Increased backyard composting would also eliminate the greenhouse gas emissions associated with transport of this waste to processing facilities. While many municipalities subsidize the purchase of backyard composters and several NGOs offer information on the composting of food waste, we feel a greater focus on such initiatives could be, potentially, beneficial.

Composting of suitable food/yard waste generates approximately 0.5-1 cubic metres of soil per year, an amount which can be easily utilized in a single family yard. Have surveys been conducted to indicate what percentage of single family home owners currently compost food and recycle grass clippings? What potential exists to reduce waste generation if this proportion could be significantly increased? What mechanisms have been considered to encourage or provide incentives to support additional backyard-based composting?

Goal 2: Maximize Reuse, Recycling and Material Recovery

A major and recent change in solid waste management has been the collection and composting of kitchen waste and food-contaminated paper within the yard waste stream. Several municipalities in Metro Vancouver have already successfully introduced such programs; more are underway. This program has outstanding potential to cause a profound decrease and compositional change in residual waste. However – and especially with regard to proposals to generate biofuels from organic wastes - we feel additional studies, analysis, pilot programs and adequate public consultation are required in order to examine the full potential and deal with issues of emerging but, possibly, problematic technologies.

While the composting of kitchen and yard waste to generate a soil amendment is generally viewed as a straight-forward and beneficial service, questions have arisen with regard to scaling this process up if all food waste from Metro Vancouver is to be composted. In addition, the large-scale digestion of organic waste to generate biofuel appears to hold much promise but many questions remain to be answered with regard to the development and choice of technologies, the siting of facilities as well as the potential generation of odours and harmful air emissions. In addition, issues of worker safety in closed-containment facilities and the need for additional regulatory oversight have also arisen. Questions have also been raised with regard to what other components of the residual waste stream as well as, possibly, liquid waste and animal manures might be suitable for biofuel generation. Because the composting and biodigestion of kitchen, yard and, possibly other organic waste has potential to become a game-changer in waste management, we recommend detailed analyses and public consultation be conducted prior to any decisions being made. In particular, we recommend Metro Vancouver develop an organic waste hierarchy to provide some guidance on the most appropriate technologies, their relative costs, greenhouse gas emissions, carbon budgets and merit of end products, etc.

Metro Vancouver recently undertook a thorough examination in their AECOM Report (2009) of best options for residual waste management. However, this report did not address technologies for biofuel generation from kitchen, food and other organic wastes. Similarly, the province recently released the excellent Stantec Report (2010) which evaluated a number of WTE technologies but, again, did not examine biofuel options from green waste. We recommend a first priority should be a more thorough examination of potential for biofuel generation along with information-sharing with the public. Biofuel production could become a major thrust of the new ISWRMP but it must be backed up with appropriate studies and consultation. Biofuel production (which overlaps into Goal # 3, Energy Recovery) has the potential to become an exciting new initiative which could mesh well with the provincial government's goals on climate change. However, public support could be undermined if this initiative proceeds without adequate study and pilot programs - especially if liquid waste and animal manures are to be considered as potential sources of biofuel.

Goal 3: Recover Energy from the Waste Stream after Material Recovery

During the extensive public consultation throughout Metro Vancouver, the proposal to build a new WTE facility either in the lower mainland or elsewhere was the most controversial and costly aspect of the ISWRMP. BC Natures believes a justification for a new 500,000 tonne per year incinerator remains to be proved.

Given the absence of a detailed analysis regarding how the various components of the residual waste stream will be reduced as the Goals in Tier 1 and 2 are accomplished, it remains unclear if the

remaining residual waste stream would be sufficiently carbon-rich to justify a new incinerator. According to the Stantec Report (Table 2-1), the main components in Metro Vancouver's residual waste stream in 2007 were organics (i.e., food and yard waste) (30.2%), paper (16.7%), building renovations (13.3%), plastics (10.2%), wood (9.5%) and glass (4.5%). If organics, paper and wood (a total of 56.4%) were removed from the residual waste stream and diverted instead to recycling and/or biofuel production, would there remain a sufficient amount of carbon-rich material to supply a new large incinerator? If, for example, some wood cannot be recycled, what is its most appropriate and climate-friendly use - biofuel production or mass-burn to generate electricity and heat? Surely, some comparative analysis is required before a decision can be made to proceed with a new incinerator in the lower mainland or elsewhere in BC.

Another concern is with regard to the source of the carbon in residual waste that would fuel a new mass-burn facility. If it were to be mostly fossil fuel-derived (e.g., from plastics), does it make sense in BC (where our electricity production will soon be fossil-fuel free) to use a mass-burn facility to generate electricity? Would the use of a mass-burn facility be consistent with the government's Clean Energy Act? We do not purport to have answers to such questions but we believe they require some analysis before a decision can be made to construct a new incinerator for residual waste.

Another concern with an increased reliance on WTE is with regard to the release of harmful air pollutants. We recognize emissions from a new incineration facility would fall within allowed provincial limits for volatile heavy metals and dioxins. However, these emissions are permitted by the cubic meter of the emissions released so a new facility would, in fact, increase such emissions in BC. Under the Stockholm Convention (to which Canada was the first signatory) we have agreed to seek to avoid all processes which emit the key so-called "dirty dozen" of persistent organic pollutants (POPs). After such chemicals are emitted into the atmosphere, they enter the food chain and become a harmful contaminant in all living matter especially in animals at the top of the food chain including humans and orcas. Thus, we hope that the provincial government will respect the Stockholm Convention and seek to avoid processes which would create and release more of these contaminants into the atmosphere. Incineration of garbage is of particular concern because dioxins are created during incineration that arise from precursors present in plastics such as polyvinyl chloride (which cannot be recycled). In our view, burial of such plastic in a stable landfill (which could serve as a form of long-term carbon storage) would be preferred over incineration.

We appreciate the opportunity to comment.