

Metro Vancouver Sample Bylaw for Increased Recycling of Demolition Materials

Metro Vancouver, BC



Population¹: 2,451,783 (Metro Vancouver 2013)

Land Area²: 2,882.55 km²

Density²: 802.5 persons/km²

Median Age²: 40.2

Housing Mix² – Single: Multi-Family – 60:40

Average persons per household²: 2.6

2012 Regional District disposal rate (all sources)³:
561 kg per capita

Program Highlights / Summary

Construction, renovation and demolition activities produce about a quarter of the waste disposed annually in the region. Demolition waste comprises 90% of all CR&D waste directly disposed to landfill. Clean wood is the predominant recyclable material in demolition waste.

Metro Vancouver consulted extensively with stakeholders from the construction and demolition industry and municipalities in the development of a sample municipal bylaw to encourage demolition waste recycling. The sample bylaw was created to avoid the need for municipalities to develop their own bylaws and to support the Region's waste diversion goals.

The sample bylaw directs all recyclable materials from demolition projects to licensed processing facilities. On-site sorting is not required. The bylaw would be enforced by member municipalities through demolition permits. The sample bylaw includes:

- A Waste Disposal and Recycling Plan (Checklist);
- A Refundable Fee – an optional enforcement mechanism;
- Hazardous materials reporting; and
- A Compliance Report template.

¹ BC Stats data (<http://www.bcstats.gov.bc.ca/StatisticsBySubject/Demography/PopulationEstimates.aspx>)

² Statistics Canada census data
(<http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E&MM>)

³ Environmental Reporting BC
(http://www.env.gov.bc.ca/soe/indicators/waste/municipal_solid_waste.html?WT.ac=LU_Municipal-Waste)

Program Details

Metro Vancouver estimates construction and demolition activities generate approximately 1.4 million tonnes of waste annually, with 1.1 million tonnes being recycled and the remainder being disposed. The two main CR&D disposal facilities in the region, which receive large commercial loads, are the Vancouver Landfill and the privately owned Ecowaste Landfill. CR&D waste in smaller loads is dropped off at public transfer facilities, then hauled commingled with garbage to a public disposal facility (Vancouver Landfill, Metro Vancouver Waste to Energy Facility, or Cache Creek Landfill).

Metro Vancouver initially worked with a group of government and industry stakeholders to develop a regulatory approach to require recycling on construction and demolition sites. Based upon their feedback, it was determined that a simpler approach that targeted only demolition waste was required. The sample bylaw is intended to direct demolition waste containing recyclable materials to go to licensed processing facilities. The bylaw encourages more reuse and recycling through a refundable fee applied to demolition permits. The bylaw underwent extensive consultation and was approved by the Metro Vancouver Board in 2012. Municipalities are now adapting the sample bylaw to their local circumstances.

The sample bylaw requires that demolition permit applicants meet the following requirements:

- Submit a “Waste Disposal and Recycling Services Plan”, which is a Checklist of materials present on site and those that will be reused
- Submit copies of WorkSafe BC documentation about hazardous materials present on site
- Pay a refundable Waste Disposal and Recycling Services Fee
- Submit proof that waste and recyclable materials were taken to licensed or authorized facilities in order to claim a refund of the Waste Disposal and Recycling Services Fee

The bylaw gives applicants a complete refund upon providing documentation that an authorized facility was used for the demolition waste. Refunds can be withheld for use of any unauthorized disposal facility or for unauthorized dumping).

Program Results

Financial Data

Capital Costs

No capital costs incurred.

Operating Costs

Minor operating costs related to outreach efforts (website / publications) and consulting costs covered within current operating budget.

Staffing Implications

No additional staffing was provided for the



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development of the strategy and sample bylaw development. Work was integrated into the regular duties of the Solid Waste Services staff as part of the Integrated Solid Waste and Resource Management Plan (ISWMP) implementation.

Metro Vancouver acknowledges that at the municipal level, the bylaw could require additional staffing resources for administration and compliance review, depending on the number of demolition permits processed per year. Other jurisdictions that have implemented such policies in BC have observed an increase of 15 minutes to 2 hours of administration time per permit, which decreases as permit holders become more familiar with the requirements.

Cost Recovery

Each municipality will need to determine how it will recover any costs associated with the administration of the bylaw. Municipalities could potentially recover costs through permit fees and forfeited Waste Disposal and Recycling Services fees.

Environmental

Reduction and Diversion

CR&D waste accounts for about a quarter of the waste disposed in Metro Vancouver (1.4 million tonnes in 2012). When Metro Vancouver was developing policies for construction and demolition recycling in early 2012, available data from 2010 showed that 15% of CR&D waste was going directly to disposal at private and public landfills in the Metro Vancouver region as well as disposal facilities outside the region. Of the CR&D waste sent to disposal, an estimated 90% was from demolition projects.

The sample bylaw is intended to support Metro Vancouver's 2015 diversion goals of: 80% CR&D waste diversion and 70% overall diversion of the region's municipal solid waste.

Disposal Impact / Landfill Space Savings

The CR&D sector disposed of about 360,000 tonnes of material in 2012. Demolition activities are the source of over 90% of this waste.

If 80%–90% diversion is realized on the 360,000 tonnes disposed annually (based on the current diversion rate successes of permit-based initiatives in Vancouver, North Vancouver and Port Moody), a potential 287,000–323,000 tonnes per year could be recycled and reused. Metro Vancouver's target for 2015 is to divert 155,000 tonnes of building materials, primarily wood waste, beyond what is currently recycled.



GHG Reduction:

Not calculated

Social

Political Acceptability

Metro Vancouver's Board approved the sample bylaw in 2012. The development of the bylaw was done with extensive consultation with member municipalities. The bylaw can be modified to suit each municipality's needs, should they choose to adopt it.

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Community / User Acceptability

Municipalities are using the sample bylaw and its components, integrating and adapting these for their own needs. To date, City of Vancouver, City of Port Moody and City of North Vancouver have initiated mechanisms (both voluntary and mandatory) linked to permits requiring demolition waste management and recycling.

The resources are not available in many municipalities to administer the requirements proposed in the Sample Bylaw. The need for additional staffing was noted in the Metro Vancouver Board report presented on October 25, 2012. Metro Vancouver and member municipalities are exploring the possibility of using waste management tracking software and/or independent review services as a means to reduce the compliance review effort and associated staffing needs.

Community Economic Development

Use of the sample bylaw has the potential to increase private sector waste processing and create market opportunities for recycled demolition materials. Opportunities also exist for independent review services and software providers to support municipalities with implementation and compliance review.

Lessons Learned

The following challenges have been identified through municipal feedback:

- Processing capacity for commingled loads needs to be considered for current licensed facilities to determine if they can accept greater quantities.
- Staffing for compliance review is a challenge for many local governments.
- If participation in diversion is voluntary and no refundable fee is required, a greater differential between tipping fees for loads of mixed and source-separated CR&D waste will be required to incent contractors to separate materials.



The following next steps are being considered by Metro Vancouver to support municipal implementation:

- Assess the feasibility of introducing standardized recycling receipts from licensed facilities
- Require electronic submission of recycling receipts from licensed facilities
- Train demolition contractors on the completion of the forms
- Identify options for third-party review: private, non-profit, or Metro Vancouver
- Work with municipalities to reduce barriers to siting new and expanded processing capacity for CR&D waste.

In response to suggestions from member municipalities, Metro Vancouver is currently conducting an “Independent 3rd Party Review of Products and Services for Demolition and Construction Reuse”. Web-

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based software and tracking tools are being considered as part of an integrated licensing program for all the municipalities, providing a possible means to ensure compliance and reduce staffing challenges.

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