



HOUSEHOLD HAZARDOUS WASTE MANAGEMENT

Project Description

Federation of Canadian Municipalities / CH2M HILL
2006 Sustainable Community Awards
Submitted by Capital Regional District

EXECUTIVE SUMMARY AND BACKGROUND



September 2004 – May 2006

The Capital Regional District (CRD) owns and operates Hartland landfill, the only municipal waste disposal facility within the capital region, serving over 340,000 people and receiving approximately 150,000 tonnes of solid waste annually. The CRD also operates a recycling facility at Hartland which collects all household hazardous waste (HHW). HHW products are typically described as those goods that contain toxic substances that are harmful to human health or the environment. In order to ensure proper collection and disposal of HHW, the Ministry of Environment initiated product stewardship programs for products such as paint, solvents and pesticides. The Ministry of Environment estimates that over 90% of HHW products are effectively managed through product stewardship. However, there are no practical methods for consumers to properly dispose of the remaining 10% of HHW products not covered by the stewardship regulations (termed orphan products).

As a result, HHW was abandoned at the Hartland recycling depot or disposed of in the garbage. Surveys highlighted the fact that a large amount of HHW is stockpiled in the basements and garages of residents because there is no central, accessible and safe place to collect and dispose of orphan products. Waste stream analyses conducted at Hartland also indicated approximately 700 tonnes of HHW are disposed at the landfill each year.

Abandoned orphan products also raised potential health and safety issues for landfill staff. The Hartland facility had established safe storage and staff were trained in safe handling of product stewardship items; however, orphan products meant establishing new policies and procedures for safe handling and including more training for safe practices.

The CRD took a leadership role to address the gap in product stewardship programs. By expanding the existing service, the CRD sought to achieve the following goals and objectives:

- protect the environment by providing a secure alternative and reducing products from being disposed at Hartland landfill or into the backyards and kitchen sinks of residents
- protect the health and safety of residents by providing a central, accessible facility to dispose of all HHW
- ensure the health and safety of landfill staff by providing proper storage facilities and training in safe handling practices

This program is now an integral component of the CRD source control program to ensure that HHW does not end up in the landfill, and, by default, in the leachate.

INNOVATION AND EXCELLENCE

As the only region/municipality in BC that operates a full household hazardous waste facility, the CRD is demonstrating innovation and excellence by providing safe and convenient residential collection and disposal of the 10% HHW left by product stewardship programs. Moreover, while the communications strategy for advertising the service used traditional newspaper advertising, the innovative use



of an ad card ensured all residents, both single family dwelling and apartments/condominiums, received notice of the service (approximately 150,000 units). An example of the ad card is included in the Supporting Documentation. As well, by staggering the notice of the service by manageable municipal areas, the CRD integrated the service region-wide without overwhelming the depot with product and incurring extra staff and disposal costs. After operating the program for a year, the CRD has now moved to formalizing the tender process for transportation and disposal of HHW. This service contract will provide an innovative model that other regions and municipalities can utilize should they choose to steward the remaining 10% of their household hazardous waste. Finally, the CRD uses the innovative funding approach of paying for all its waste diversion programs, including household hazardous waste, through the tipping fee levied at Hartland landfill. All solid waste programs are funded without any municipal requisition. This is unique to BC and, possibly, Canada.

By providing residents with the opportunity to divert household hazardous waste, the CRD is also helping to prevent residents from pouring HHW down drains or storing products in their households. The next step is to raise residential awareness of alternatives to many common household hazardous wastes and to encourage residents that if they have to buy HHW to buy only the amount and type of product they need. Step two of the HHW communication strategy will include partnering with retail businesses, better integration of programs and branding.

IMPLEMENTATION, RESULTS AND LESSONS LEARNED

Through building on the existing structure, the CRD has maximized the environmental, social and financial benefits to our residents. The CRD Household Hazardous Waste Program has quantifiable environmental benefits measured by the tonnage diverted. In, 2004 approximately 10.5 tonnes of HHW were processed by the hazardous waste disposal company retained by the CRD. This amount was received without advertising the service. In 2005, with advertising the service, this amount increased by 100%. This tonnage includes both solids and liquids and product containers. Diverting this waste keeps HHW products out of the landfill and the backyards and kitchen sinks of residents.

Socially, the CRD has seen a beneficial impact on the community as indicated by the increased calls to the CRD recycling hotline, both inquiring about the household hazardous waste and commending the CRD for providing

the convenient service at no charge. The program has raised residential awareness of the potential dangers of household hazardous waste and the need for safe storage and disposal. Initially, the intent was to charge residents a fee for orphan products (non-stewardship program). However, this would cause confusion with residents trying to differentiate between stewardship and non-stewardship products. For this reason, a fee is not charged for any household hazardous waste brought to the Hartland depot by residents in residential-size loads.



Through developing the infrastructure at Hartland, the CRD has increased the efficiency of the program in a cost-effective manner. To begin with, rather than building a new depot at another site or creating mobile depots, both of which would require residents to travel elsewhere to dispose of their orphan products, expanding the service at Hartland provided a convenient, one-stop service that capitalizes on existing consumer habits. Residents were already bringing materials to Hartland (e.g., garbage, recyclables and compostables) so building the infrastructure to safely and properly receive the products was a natural progression that provides residents with a central place to dispose of their HHW. Moreover, because of the infrastructure development, staff became more efficient and able to safely handle the often unidentified orphan products arriving at the landfill. Financial costs were minimized as no additional staff

costs were added to an existing service. The steady increase in the amount of HHW received is a clear indicator of increased effectiveness. With the increased diversion of HHW products from the landfill, backyards and streams, the environment is being more effectively protected.

Benchmarking for the Household Hazardous Waste program began in 1995 so the program can be evaluated based on the tonnage received to date and by the next wastestream analysis. Success will be indicated by higher tonnages at the depot and lower tonnages in the wastestream. In addition, feedback from the public, particularly through the CRD hotline will provide an indication of whether the CRD education efforts are reaching residents.

The most successful elements of the Household Hazardous Waste Management program are:

- diverting the household hazardous waste from the wastestream
- providing residents with a convenient service and the opportunity to safely dispose of household hazardous waste products at no cost to them
- creating a cost-effective model for managing orphan products through building on existing infrastructure
- implementing the program in a stepped manner to avoid being overwhelmed with product
- establishing a baseline of type and quantity of product before moving to public tender in order to give tenderers accurate information
- Salt Spring Island and the Southern Gulf Islands will be serviced with a HHW mobile unit twice per year

Elements that need improvement/development:

- The second phase of the communication plan is needed to continue educating residents about household hazardous waste and alternatives. For many residents, if they can buy a product in a grocery store, they assume the product is safe and does not present a hazard. Moreover, many residents are unaware of alternatives that are effective and better protect human health and the environment. This second phase will be conducted in the summer of 2006.

PROJECT SUSTAINABILITY AND POLICY FRAMEWORK

Externally, the CRD's Household Hazardous Waste Management program takes its lead from the extensive product stewardship framework of the provincial government. The product stewardship programs effectively manage 90% of HHW. The CRD has shown leadership in managing the remaining 10%.

The CRD has shown considerable commitment to sustainability and best practices through other projects, such as the landfill gas plant, and other programs, such as regional source control and stormwater. Through these initiatives, the CRD seeks to control waste at source and thereby prevent harmful products from entering the liquid and solid wastestream. The CRD Household Hazardous Waste Management program takes the same approach by advocating safe and responsible disposal. This is in keeping with the mandate of the Environmental Services department which is to maintain and improve the quality of life for residents, in the

capital region by providing services which protect human health and the environment.

The goal is to reduce the amount of HHW being landfilled by December 2006. As well, the CRD is currently working on the ISO 14001 for the Hartland facility, which includes the HHW area, with the goal of being ISO compliant by December 2006 and certified by December 2007.

The work of the CRD Solid Waste division is guided by two documents: the Solid Waste Management Plan (SWMP) and the draft Solid Waste Strategic Plan.

The provincial *Environmental Management Act* (formerly the *Waste Management Act*) requires that all regional districts have a SWMP. The purpose of the CRD SWMP is to satisfy the requirements of the *Environmental Management Act* and provide



an outline of the plan for managing solid waste in the region. The CRD's solid waste management strategy is to provide residents of the capital region with cost-effective solid waste management services, including residual disposal and landfill conservation, in an environmentally-sound manner. The draft Solid Waste Strategic Plan provides the Solid Waste division with a living document that can be amended and updated as needed. One of the primary goals of the draft strategic plan is to achieve a 60% reduction in the amount of solid waste landfilled by using the waste management hierarchy of reduce, reuse and recycling (the 3Rs) by 2010, 90% by 2030 and never having another landfill.

The CRD Household Hazardous Waste Management program will continue as a core program offered to residents of the capital region and represents a holistic approach to planning and decision making by addressing:

- the environment through diverting the HHW from the solid and liquid waste stream
- the health and safety of CRD staff and residents by providing training for safe handling to staff and by providing a convenient, one-stop service to residents
- cost-effective and efficient implementation and improvement to existing programs

Moreover, because legislated industry stewardship programs only cover 90% of HHW products, municipalities and districts across BC face the same issue of managing the remaining 10% until such time as a stewardship program is brought in force for these remaining products. The expansion at Hartland depot and subsequent advertising campaign provides an effective model for dealing with orphans and environmental stewardship.

COMMUNICATION/PARTNERSHIPS



The CRD has a Solid Waste Advisory committee (SWAC) comprised of representatives from local municipalities, industry, community groups and members-at-large. SWAC is mandated by the CRD Board to review and evaluate solid waste initiatives. SWAC recommended that the CRD Environment committee and Board proceed with the expanded Household Hazardous Waste program and is engaged in any ongoing discussions about its progress.

The CRD Board is kept informed of the project via regular staff reports. The Board is made up of representatives from all 13 CRD municipalities and three electoral areas and meets monthly. Regular monthly liaison meetings with local municipal engineers ensure communications between municipalities and the CRD.

Every resident within the capital region has been informed of the service through a direct mail ad card as well as through other communications such as a “Hartland Happenings” newsletter, media releases and media coverage.

Within the Environmental Services department, Solid Waste staff worked with staff from Scientific Programs to implement the Household Hazardous Waste program. Scientific Programs staff provided technical expertise with respect to the HHW products, assisted in the management and handling of HHW at the recycling depot and provided input into the communications strategy.

In the future, as the CRD moves into educating residents about HHW and alternatives, the Solid Waste division hopes to partner with the CRD Roundtable on the Environment to work on reducing pesticides, a common HHW, within the region.

FCM RELATED INITIATIVES

The CRD Household Hazardous Waste Management program has not received funding from the Green Municipal Fund (GMF) and/or the Affordability and Choice Today (ACT) program. The Capital Regional District has not submitted a related Awards submission in the past.

OTHER RELEVANT INFORMATION

Please see the Supporting Documentation for the following documents:

- A listing of all household hazardous waste products (including Product Care) collected at the Hartland HHW recycling area
- A copy of the ad card informing residents of the expanded service