

Solid Waste Annual Report

Capital Regional District | 2009



CRD

Making a difference...together

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Overview of CRD Solid Waste

Background

The Capital Regional District (CRD) is the regional government for the 13 municipalities and three electoral areas located on the southern tip of Vancouver Island. The urban centre of the Capital Region is the City of Victoria, and the regional district also includes many of the Gulf Islands, a number of rural municipalities and a vast tract of wilderness that lies along the south-western coast of Vancouver Island. The CRD is generally recognized by the services it provides to the Capital Region.

The CRD **creates partnerships** between any combination of municipalities and electoral areas for services or projects that are specific to only part of the region. The CRD provides **regional governance and services** for the entire Capital Region, including regional parks, regional planning and solid waste management.

Aerial of Hartland Landfill





The newly re-designed household hazardous waste collection area at Hartland landfill

Continued from previous page

The CRD became responsible for solid waste disposal in 1973 when the Province of British Columbia directed all regional districts to take control of solid waste disposal within their borders. Hartland landfill, which had been operated as a private facility since the early 1950s, was acquired by the CRD in 1975. The facility continued to be operated by a private contractor until January 1985, when the CRD assumed direct operation of the site.

The CRD is not responsible for garbage collection. Garbage collection services in the region are provided by municipal crews or contractors in six municipalities. The remaining ten areas are services by private haulers.

All solid waste programs are funded with revenue generated from tipping fees from Hartland landfill and from the sale of recyclable materials. No funding is drawn from the municipal tax system.

Solid Waste Management Plan

The original CRD Solid Waste Management Plan (SWMP), which was approved in 1989, called for a 10% waste diversion by 1993 and 15% by 1998. The SWMP was revised in 1991 and again in 1995 to establish a 50% solid waste diversion goal and confirm the need to develop Phase 2 of Hartland landfill. Revision 2 of the SWMP was approved by the Province in 1995. The SWMP will be revised again in 2010 and will incorporate the following seven amendments:

1. Regulating Composting Facilities
2. Regulating Transfer Stations on Salt Spring Island
3. Buffering for Hartland Landfill
4. Public Review Process for Amendments to SWMP
5. Conflict Resolution Mechanisms for the Hartland Site
6. Inclusion of Highwest Waste Management Facility in the CRD SWMP
7. Hartland Capital Works Projects 2008 to 2012

Solid Waste Strategic Plan

In 2004 staff identified a need for a working plan. The first strategic plan for the division was endorsed by the Environment committee in 2006 and in October of 2008 the plan was updated.

The Solid Waste Strategic Plan is divided into the strategic statement and outlines six core strategies. It also establishes a new strategic waste diversion goal of 60% by 2013 and 90% by 2020.

Core Strategies

- Key Issues Management
- Operational Excellence
- Technology Innovation
- Policy Development
- Stakeholder Engagement, Education and Communication
- Performance Measurement and Reporting

Strategic Plan Core Strategies

- Key Issues Management
- Operational Excellence
- Technology Innovation
- Policy Development
- Stakeholder Engagement, Education and Communication
- Performance Measurement and Reporting

Solid Waste Division

The solid waste function of the CRD reports to the Environment committee. The Solid Waste division is part of the CRD Environmental Services department and consists of:

Hartland Operations

- Landfill Operations
- Recycling and Bin Areas
- Household Hazardous Waste Collection

Waste Diversion Programs

- Recycling Programs
- Waste Diversion Programs
- New Waste Reduction Initiatives
- Outreach/Education Programs
- Regulatory and Financial Management
- Planning and Policy Development

Solid Waste Advisory Committee

The Solid Waste Advisory committee (SWAC) is a 23 member committee comprised of representatives from municipalities, private enterprise and the community at large. All work related to the solid waste function, except for budgetary and contractual matters, is reviewed by SWAC prior to being sent to the Environment committee for decision making. SWAC also acts as the Plan Monitoring Advisory committee to monitor the implementation of the SWMP, as required by the Ministry of Environment.

International Paper Industries (IPI) curbside recycling truck in the Victoria Day parade



CRD Hartland Facility

Hartland landfill and recycling facility is owned and operated by the CRD and is located about 14 km northwest of Victoria. It is a multi-employer work site and is the only municipal solid waste disposal facility in the Capital Region, serving just over 366,000 people. The operation is a multi-purpose facility providing: recycling, household hazardous waste (HHW) collection, salvage area, yard and garden waste collection and processing, controlled waste disposal and landfill services to commercial and residential customers.

Awards

Hartland is a state-of-the-art, award-winning facility receiving the Silver Landfill Management Excellence Award from the Solid Waste Association of North America in 2005 as well as other awards for leadership and innovation in gas utilization and best practices for household hazardous waste collection.

Trees for Tomorrow

In 2008, the CRD's Hartland Landfill received a \$50,000 Trees for Tomorrow grant to plant thousands of native trees, seedlings and bushes over top of the first phase of the landfill, which was filled to capacity in 1997 and capped. Phase one of the landfill has been capped and sealed with a plastic liner and layer of soil, allowing vegetation to grow as a top cover. Because landfill areas can settle and shift over time, a green space or a park is an ideal end use for a capped landfill.

A section of Phase 1 that has been reforested with funds received the Provincial Government's Trees for Tomorrow funding program



Trees for Tomorrow is a provincial program funded by the Ministry of Community Development and designed to support urban and rural communities in the planting of over four million trees by 2012. The goal of the program is to reduce greenhouse gases in the atmosphere by at least 33% below current levels by 2020. New trees will clean the air and lock away carbon dioxide that would otherwise contribute to global warming.

To date, over ten thousand trees and bushes have been planted over phase one of Hartland landfill, and many more will go into the ground in an on-going effort to reforest the landfill. Plantings include Douglas-fir, broad leaf maple, alder, ocean spray, Oregon grape and salal, which will help to create new habitat for birds such as the winter wren and varied thrush and other wildlife at the landfill.

Capital Works

Since 1985, over \$30 million has been invested in service infrastructure upgrades, environmental controls and general site improvements.

In 1997, Phase 1 of the landfill site was closed and the filling of Phase 2 (Heal basin) was initiated. Since the Phase 1 closure, significant efforts have gone towards site rehabilitation of the closed Phase 1 area. A long-standing vision for Hartland landfill is to restore the land to a condition that will blend in naturally with the surrounding forest. Planting began in 2004 and includes Douglas fir, bigleaf maple and arbutus, as well as ocean spray, Indian plum and mock orange (all of which are native to the area). It is expected that Phase 2 will continue to receive landfill materials until about 2040, at which time it will have reached its design capacity and will need to be closed. In following achievements were made in 2008:

- Completion of an expanded residential waste drop off area, household hazardous waste facility and recycling depot
- Construction of a series of freshwater diversion works
- Continued with progressive closure of inactive landfill areas
- Installation of additional horizontal landfill gas and leachate collection lines in the Phase 2 basin

Hartland staff applying a drilling technique to recover intact cores of garbage. The garbage is extruded from the drill stem into the plastic sleeve.

Leachate Management

Golder Associates (consultant) was engaged in 2008 to undertake a comprehensive review of Hartland's current leachate management infrastructure and its ability to manage leachate, particularly during peak winter storm events and in consideration of potential long term changing local meteorological conditions. A final report is expected in the spring of 2009.

Gas Utilization Facility

The gas utilization facility continues to produce about 1.6 megawatts of "green" electricity which is enough to supply power to approximately 1,600 homes.

Environmental Monitoring

The operation of a landfill can result in potential environmental effects and health and safety issues, specifically to surface water and groundwater, and the production of landfill leachate and landfill gas. Hartland landfill has control measures in place to reduce and control effects to groundwater, surface water, leachate and air. An environmental monitoring, assessment and management program is in place to measure the effectiveness of these control measures, and to identify potential impacts of landfill operations and solutions.

In 2009, the monitoring program confirmed that the landfill gas collection system effectively reduced greenhouse gas emissions. Water quality monitoring indicated that landfill leachate is effectively contained and controlled onsite. Leachate quality monitoring confirmed that leachate discharged from the site was in full compliance with CRD's Sewer Use Bylaw regulating discharges to the sanitary sewer.



Waste Stream Analysis

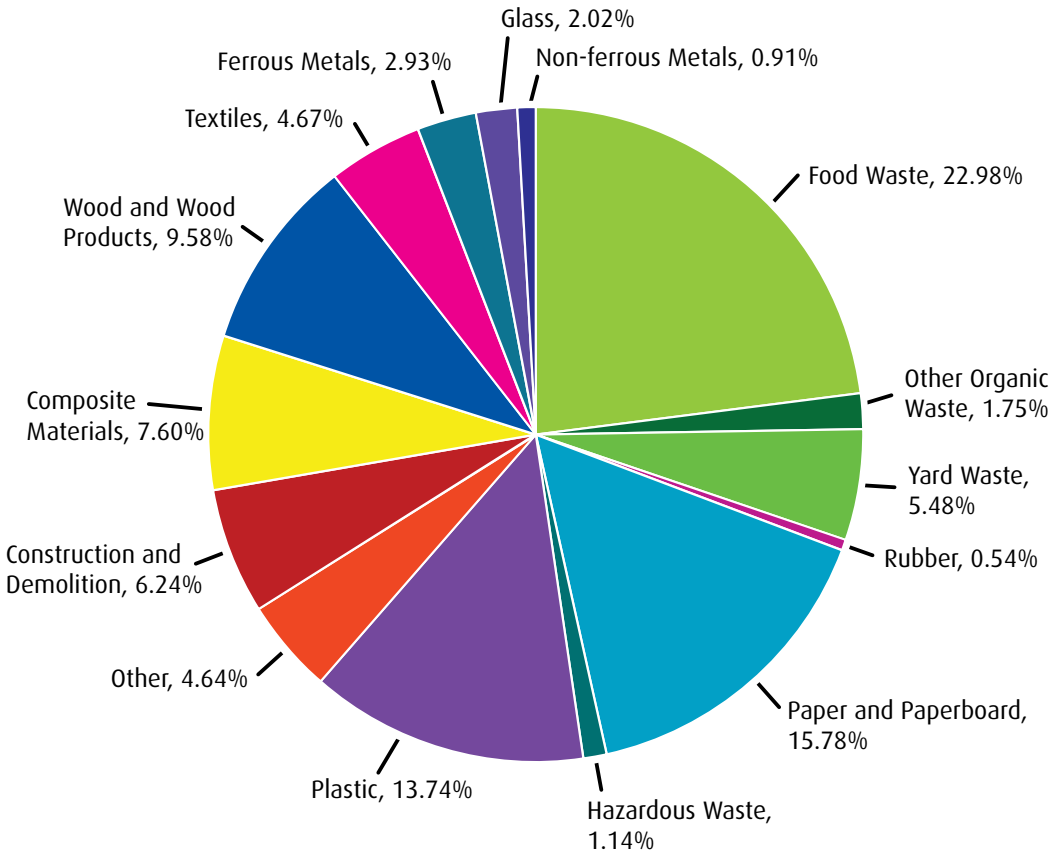
Since 1990, the CRD has commissioned four studies to assess the composition of waste being landfilled at Hartland. These studies provide valuable benchmark data and information for evaluating the success of solid waste management programs. These studies also provide information on waste streams to target items such as household hazardous waste (in 2001) and, most recently, organic material such as yard and garden waste and food scraps.

Sampling for Phase 1 of the 2009-2010 waste composition study took place from 19 October to 17 November 2009. A detailed statistical evaluation will be completed as part of the final report that will be published after completion of Phase 2 in the spring of 2010. The study is conducted in two phases to allow for seasonal variations.

International Paper Industries (IPI) curbside recycling truck in the Victoria Day parade



2005 Solid Waste Stream Composition Study



DIVERSION BY PROGRAM (TONNES)

Program	Newspaper	Mixed Paper	Cardboard	Mixed Fibres ¹	Glass Containers	Metal Containers	Plastic Containers	Mixed Containers ²	Antifreeze	Batteries (auto)	Books	Drywall	Electronics
Blue Box & Bag Curbside Recycling/Organics Diversion													
Saanich				4,967				1,612					
Victoria				1,995				692					
Oak Bay				901				298					
Esquimalt				673				237					
Central Saanich				1,102				359					
Langford				990				344					
North Saanich				702				233					
Colwood				699				241					
Sidney				421				140					
Sooke				374				133					
View Royal				317				109					
Metchosin				204				72					
Highlands				124				40					
Juan de Fuca EA				306				106					
Total				13,775				4,616					
Other Recycling													
Red Barn Drop Box				49				25					
Apartment Containers								1,025					
Oak Bay Recycling Depot		157	108				22						
Total		157	108	49			22	1,050					
Hartland Recycling Operations													
Recycling Depot		200	192					58			71	337	197
HHW									4	64			
Total		200	192					58	4	64	71	337	197
Electoral Area Recycling Depots													
Salt Spring Island Depot		272	135		129	50	62			>1		9	29
Pender Island Depot	57		43		19		12			3			3
Mayne Island Depot		47	23		28		15						
Galiano Island Depot	6	20	21		43	6	8						
Saturna Island Depot	2	9	6		1	2	2						
Port Renfrew				18				5					
Total	65	348	228	18	220	58	99	5		3		9	32
GRAND TOTAL	65	705	528	13,843	220	58	121	5,729	4	67	71	346	229

¹ Includes newspaper, cardboard and mixed paper

² Includes metal cans, glass bottles and jars and plastic containers and packaging

³ Includes: milk cartons and batteries on Salt Spring; deposit containers on Pender and Mayne Islands; telephone books at Hartland

Food Waste	HHW	Mattresses	Metals	Metal Appliances	Oil, Filters and Containers	Plastic (large rigid)	Plastic Film	Product Care	Propane Tanks	Tires	Toilets	Wood Waste	Yard Waste	Miscellaneous ³	Total
															6,579
															2,687
192															1,391
															910
															1,461
															1,334
															935
															940
															561
															507
209															635
															276
															164
															412
401															18,792
															74
															1,025
							3								290
							3								1,389
		12	1,055	300		106	3		23	74	98	1,146	734	62	4,668
	52				31			184							335
	52		1,055	300	31	106	3	184	23	74	98	1,143	734	62	5,003
			81	64			25	31		11				9	907
			41				5	5		>1				36	224
			28											31	172
			2												106
															22
			36												59
			188	64			30	36		11				76	1,490
401	52	12	1,243	364	31	106	36	220	23	85	98	1,146	734	138	26,674

CRD Solid Waste Diversion Strategies

The CRD follows the waste management hierarchy of reduce, reuse and recycle (the 3Rs) to work towards its strategic goal of 60% solid waste diversion by 2013. The key strategies used to help divert waste from Hartland landfill are briefly described below.

Landfill Disposal Charges

Landfill tipping fees provide a financial incentive to reduce the quantity of solid waste being brought to the landfill for disposal. The tipping fee structure includes a reduced fee for separated yard and garden waste (which is banned from the landfill) to encourage its diversion for composting. In 2009, the disposal fee for general refuse was \$95/tonne and the yard and garden waste fee was \$55/tonne.

Residential User Pay Garbage Collection

The six municipalities in the region that offer residential garbage collection utilize a user pay system. This system limits the amount of refuse each household may place out for collection to the equivalent of one can/bag per week. Additional cans or bags are only collected if residents purchase and attach garbage tags. Households using private garbage collection are on a full user pay system.

2009 SOLID WASTE DISPOSAL AND DIVERSION COSTS

Solid Waste Disposal Costs¹			
Program	Tonnage	Cost	Cost/Tonne
Landfilling of Standard Refuse	153,263	\$6,136,643	\$38.42
Landfilling of Controlled Waste	6,454		
Waste Diversion Costs²			
Program	Tonnage	Cost	Cost/Tonne
Curbside Collection			
Blue Box/Bag Recycling	18,391	\$3,443,329 ³	\$176.67
Red Barn Drop Box	74		
Apartment Containers	1,025		
Household Organics (Food Waste)	401	\$100,796	\$251.36
Other Recycling			
Oak Bay Recycling Depot	290		N/A
Hartland Recycling Operations			
Recycling	4,668	\$264,714	\$56.71
Household Hazardous Waste	335	\$419,606	\$1,252.56
Electoral Area Recycling Depots⁴			
Salt Spring Island ⁴	907	\$225,821	\$248.98
Southern Gulf Islands ⁴	524	\$251,614	\$480.18
Port Renfrew	59	\$15,530	\$263.22
Total Quantitative Diversion	26,674	\$4,721,410	\$177.00
Diversion Support Programs			
3R's Education			
Home Composting			
Solid Waste Advisory Committee			
Community Clean-up Program			
Landfill Material Bans			
Compost Demonstration Grants			
Non-Profit Organization Grants			
Municipal Environmental Educators			
User Pay Refuse Collection			
Event Recycling			
Apartment Recycling Funding Program			
Total Qualitative Diversion	68,193	\$1,838,704	\$26.96
Community Outreach ⁵	94,867	\$170,000	\$1.79
Total Diversion Costs for 2009	94,867	\$6,730,114	\$70.94
¹ Cost per tonne of landfilling includes operating, administration, overhead and debt amortization costs			
² Net of revenues received from the sale of recyclables and compost and includes administration and overhead costs			
³ Costs include materials received through Red Barn drop box and apartment containers			
⁴ Funding is provided to local recycling depots in lieu of blue box recycling service			
⁵ Community outreach programs contribute to both total quantitative and qualitative diversion			

Recycling Programs

Curbside/Depot/Apartment Recycling



Apartment recycling tote bag

CRD residential recycling programs consist of the blue box curbside collection program for more than 111,000 households, a funding program for recyclables collection from multi-family dwellings (apartment program), and drop boxes or depots in areas not serviced by the curbside program.

- In 2009 CRD residents purchased 17,585 blue boxes and 33,785 blue bags during the year.
- Staff administered the apartment recycling funding program, added 42 buildings and distributed 4,172 apartment tote bags.

Hartland Recycling



CRD Blue Bag and CRD Blue Box

The CRD also operates the Hartland recycling facility which accepts over 80 different material types from 25 product categories. This depot is intended for residential quantities only for vehicles with a maximum GVW of 5,500 kg. In 2008, the following programs were added to the facility:

- Permanent e-waste recycling depot in partnership with Encorp Pacific
- Pilot film plastics collection program
- Pilot mattress collection and recycling program

CRD Blue Bag, CRD Blue Box, and Cardboard bundle



Telephone Books

In 2009, 44,719 old phone directories were collected from 30 local non-profit organizations. The recycling of those old phone directories was the equivalent of diverting 61,810 kg from the landfill. In addition to diverting materials from the landfill, this program provides a fundraising opportunity for local non-profit organizations.

Organics Management

Compost Facilities Bylaw

The CRD Board adopted the regional composting bylaw in December 2005. The bylaw came into effect immediately for new facilities and 12 months thereafter for existing facilities.

Yard & Garden Material Ban

A number of private facilities in the area accept the region's yard and garden material. In June 2006, a yard and garden material landfill ban came into effect. The ban excludes invasive, infectious and noxious plants. Source-separated yard and garden material is accepted for a fee at Hartland, where it is ground and used on-site. In 2009, 1,146 tonnes of material was received.

Greater Victoria Compost Education Centre



The Greater Victoria Compost Education Centre (GVCEC) was established in 1992 to educate local residents about composting and conservation. Under contract to the CRD the GVCEC annually offers presentations, workshops, educational compost demonstrations, volunteer training, quarterly newsletters and maintains the GVCEC Hotline and website.



Household organics
collection tote



In 2009 the GVCEC gave 137 presentations to school and community groups and delivered 36 onsite workshops with over 4,600 students and participants. Over 2,200 residents visited the GVCEC demonstration site or participated in one of the 27 educational compost demonstrations. The GVCEC hosted two major events: The Organic Plant Sale and the Pumpkin Smash, where over 13 tonnes of pumpkins were diverted from the Hartland landfill. Staff answered over 3,200 enquiries from the public and had over 15,000 visitors to the web site. The GVCEC reached a total of 37,373 residents in 2009, an increase of 11% from the previous year, and an increase of 110% from 2005! Since 1992, the GVCEC has made over 275,085 contacts with CRD residents.

Residential Organics Management

Since 2007 over 4,000 residents in the District of Oak Bay and Town of View Royal have been separating their food scraps from their garbage. This program, which originally began as a CRD pilot, involves curbside collection of household organics which together with curbside recycling and yard and garden material programs has these residents diverting upwards of 75% of their household waste from the landfill.

Work towards a complete landfill ban on organic material in 2012 is conducted in consultation with industry representatives and municipalities.

Update Photo Caption



Education & Outreach Programs

The Solid Waste division, with support from Corporate Communications, has a number of education programs that support all solid waste diversion services in addition to promoting behaviour changes based on the 3Rs in general. These behaviour changes contribute significantly to the “unmeasurable diversion” of waste from landfill. Education services include:

- Education and outreach for all solid waste programs
- Communication planning and research
- Advertising, promotional and educational materials
- Media relations (print, radio and television)
- Presentations, landfill tours and outreach displays
- Hartland Landfill annual open house

CRD Hotline

The CRD Hotline (250.360.3030) is an essential part of education and outreach programs. Callers can access an automated voice messaging service 24 hours a day or speak with a Hotline clerk during office hours of 8:30 a.m. to 4:30 p.m. (closed 12 noon to 1 p.m.). The CRD Hotline can be reached by e-mail at Hotline@crd.bc.ca. Information can also be obtained on the CRD website at www.crd.bc.ca.

2008 Achievements

- 4rd Annual Hartland Open House, over 2,000 attendees
- Conducted 40 Hartland school tours
- Delivered 84 school program presentations and workshops
- 12 community presentations
- Hosted 23 solid waste community displays
- Provided event recycling bins at 51 community events
- Received 55,000 Hotline calls
- Received over 5,313 pledges for the Plastic Bag Reduction Campaign



Child at the arts and crafts table at the Hartland Open House

Education & Outreach Achievements

- 3rd Annual Hartland Open House, over 1,650 attendees
- Conducted 32 Hartland school tours
- Delivered 145 school program presentations and workshops
- Delivered 9 community presentations
- Hosted 15 solid waste community displays
- Provided event recycling bins at 50 community events
- Received 55,000 Hotline calls
- Received over 3,800 pledges for the Plastic Bag Reduction Campaign



Product Stewardship Programs

The CRD supports industry led product stewardship programs, which place the responsibility for life cycle management on the producers and consumers of a product. The CRD works with the Product Care Association to provide the region with waste paint and other product stewardship collection. The CRD collects waste paint, solvents, flammable liquids, gasoline and pesticides at its Hartland recycling depot. Part of the paint collection program includes the region's only paint exchange. The program is 100% industry-funded. The Product Care Association also funds paint collection at eight other depots and collection of solvents, flammable liquids, gasoline and pesticides at two additional depots in the region.

The BC Used Oil Management Association (BCUOMA) manages an oil product stewardship program that provides financial incentives for the collection and recycling of used oil, oil filters and oil containers. The products are accepted at the Hartland depot and are picked up for recycling by a BCUOMA registered processor at no cost to the CRD.

The Return-It Electronics stewardship program, a province-wide electronics recycling program, commenced in 2007. Encorp Pacific funds the collection of end-of-life electronics at eight locations in the Capital Region, including the Hartland recycling area, where a pilot program is underway. E-waste collected at Hartland under this program includes: end-of-life computers, including desktop servers, CPUs, monitors, mice and keyboards; printers; fax machines; photo printers and TVs. As with all other items collected at Hartland under stewardship programs, there is no charge for these items.

Other product stewardship programs in the region include refundable beverage containers, pharmaceuticals, tires and lead acid batteries. There are also voluntary product stewardship programs for milk cartons, rechargeable batteries and cell phones.



Update photo caption

Household Hazardous Waste (HHW)

In 2005, the number of items collected at the Hartland recycling facility was expanded to include non-stewardship household hazardous wastes. This expansion provided the region's residents with a 'one-stop' drop for virtually all of their HHW and is the only program of its kind in British Columbia. The material is accepted in residential quantities only at no charge for recycling (where feasible) or disposal at a special waste management facility.

Salt Spring and the Southern Gulf islands are serviced by means of mobile HHW collection events held on the islands. Initial events were conducted on these five islands during 2006/2007 with subsequent events scheduled for every two years. In 2009, HHW events were held on Mayne, Saturna and Galiano Islands.

Landfill Material Bans

Landfill bans have been part of the CRD waste diversion strategy since 1991 and are only implemented when viable and sustainable recycling alternatives exist. Recyclable materials banned from disposal include drywall (1991); corrugated cardboard, white goods, tires, directories (1993); scrap metal, aggregate, concrete, asphalt, rubble, clean soil (1995); paper fibers (1998); and yard and garden waste (2006).

Proposed Landfill Bans

In 2009, staff recommended that two additional materials (wood waste and product stewardship materials) be considered for banning from Hartland landfill in 2010.

It is estimated that more than 8,000 tonnes of materials could be diverted from Hartland landfill by banning these materials. The 2004/2005 waste composition study showed that clean wood waste comprises 4% and treated wood 5% of the waste stream and product stewardship materials 2% (based on 165,000 tonnes of refuse a year).

A landfill ban would maximize reuse, recycling and material/energy recovery of these products. Wood waste and product stewardship materials are not garbage. They are resources that can be reused to create other materials. Banning these materials would conserve landfill space and contribute to reaching the CRD's waste diversion goal of 60% by 2013.

Other Programs

Other CRD waste diversion programs include:

- Diversion funding for registered non-profit repair and reuse organizations
- Municipal Environmental Educators' grants
- Community Clean-Up Funding (6 clean-up events were funded in 2009)



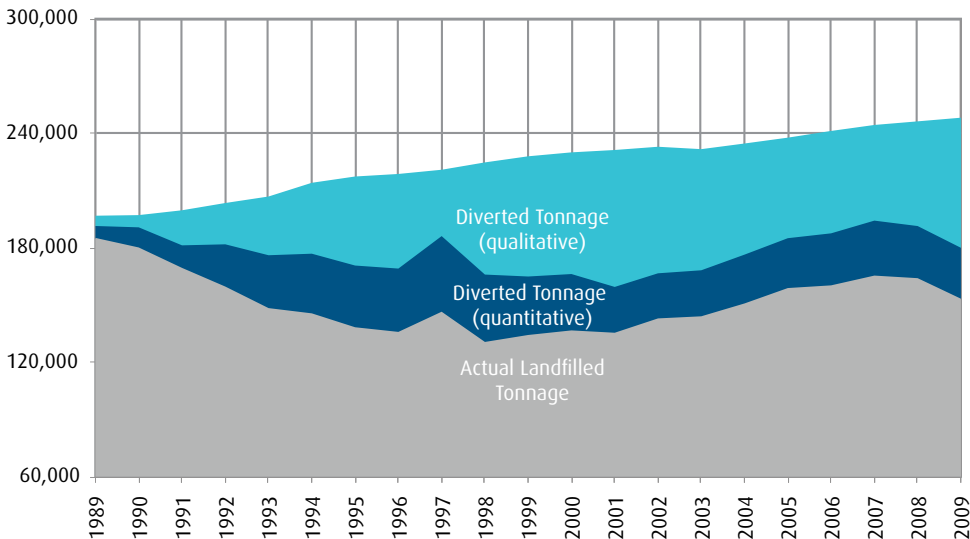
One of the display boards used at the open houses for the proposed ban consultations

Total Refuse by Type

Type of Waste Declared	2008 Annual Total (tonnes)	2009 Annual Total (tonnes)	% Change from 2008
General Refuse	154,881	153,263	-1%
Controlled Waste¹			
Miscellaneous	3,776	927	-75%
Liquid Waste	267	56	-79%
Asbestos	601	561	-7%
Screenings	5,371	4,781	-11%
Biosolids	1,628	124	-92%
Contaminated Soils	198	5	-97%
Sub-Total	11,841	6,454	-45%
Total	166,722	159,717	-4%

¹ 1 Controlled waste includes dead animals, condemned food waste, food processing waste, liquid waste, sewage screenings (including sludge), asbestos and contaminated soils.

Solid Waste Diversion



Diversion Rates (1989-2009)

Year	CRD ¹ Population	Projected Tonnage ²	Actual Landfilled Tonnage	Diverted Tonnage ³ (quantitative)	Diverted Tonnage ⁴ (qualitative)	Diversion Per Capita (tonnes)	Diversion Rate
1989	284,730	196,763	185,128	6,243	5,392	0.041	6%
1990	291,880	197,076	180,118	10,549	6,409	0.058	9%
1991	299,133	199,608	169,419	11,809	18,380	0.101	15%
1992	304,200	203,416	159,634	22,134	21,648	0.144	22%
1993	308,720	206,826	148,341	27,700	30,785	0.189	28%
1994	321,585	214,017	145,585	31,263	37,169	0.213	32%
1995	326,010	217,310	138,303	32,342	46,665	0.242	36%
1996	328,880	218,643	135,869	33,190	49,584	0.252	38%
1997	329,135	220,850	146,442	39,634	34,774	0.226	34%
1998	334,871	224,698	130,604	35,310	58,784	0.281	42%
1999	339,643	227,900	134,257	30,643	63,000	0.276	41%
2000	342,718	229,964	136,654	29,537	63,773	0.272	41%
2001	344,567	231,204	135,425	24,010	71,769	0.278	41%
2002	347,095	232,901	142,940	23,636	66,325	0.259	39%
2003	345,223	231,645	144,043	24,116	63,486	0.254	38%
2004	349,638	234,607	150,787	25,580	58,240	0.240	36%
2005	354,206	237,672	158,848	26,132	52,692	0.223	33%
2006	359,439	241,184	160,260	27,261	53,663	0.225	34%
2007	364,121	244,325	165,381	28,802	50,142	0.217	32%
2008	366,934	246,213	154,881	27,315	64,107	0.249	37%
2009	369,791	248,130	153,263	26,674	68,193	0.257	38%

¹ Population data provided by CRD Regional Planning Services

² Projected annual waste based upon the 1989 waste generation rate of 0.671 tonnes per capita

³ Diversion tonnage as per Table 2

⁴ Qualitative tonnage diverted = actual material landfilled at Hartland - quantitative tonnage diverted

Service Delivery Review: Solid Waste Transition to Environmental Resource Management

In 2009 a service delivery review was conducted involving Water Services and Environmental Services. Under the new environmental model Environmental Services has been renamed Environmental Sustainability as a result of a comprehensive look at our environmental resources, evaluates the stressors, develops guidelines and protocols for regional protection, and aligns functions to best ensure high level, comprehensive approaches. This new organization is strategically aligned to take advantage of initiatives such as recycled commodities, green energy initiatives, environmental health, and regional carbon neutrality. As such, the newly restructured Environmental Sustainability department has five key areas of focus, which are all closely aligned: Environmental Protection, Water Quality, Environmental Partnerships, Environmental Resource Management, and Environmental Engineering.

The basic concept for a regional environmental service delivery perspective is to integrate responsibilities for high performance environmental monitoring, testing, source control, engineering, social awareness, and waste reduction. The CRD's Strategic Plan sets out goals and strategies to improve the services and operations of the organization. Three of the five strategic priorities identified in the 2009-2011 Strategic Plan are directly related to Environmental Sustainability and include: Climate Action, Environmental Protection and Waste Management.

Environmental Resource Management

With a mandate of focusing on the environmental future, Environmental Resource Management is responsible for the planning, developing, and application of systems that will best ensure an integrated and beneficial use and reuse of our resources, some of which may now be seen as waste. For example, rather than looking at waste to be disposed, the CRD is focused on looking at waste as a commodity for beneficial reuse. This includes a focus towards zero waste in our landfill, biosolids recycling, methane gas capture and alternative energy from waste initiatives, compost and organics processing initiatives, and other emerging opportunities.

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