

Environmental Resource Management Annual Report

Capital Regional District | 2010



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.

The CRD became responsible for solid waste disposal for the region 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.

Overview of Hartland landfill.





The active face area and gas utilization area at Hartland landfill.

Continued from previous page

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 serviced 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 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 2011/2012 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 Highest 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 six core strategies. It also establishes a new strategic waste diversion goal of 60% by 2013 and 90% by 2020.

Environmental Resource Management Division

With a mandate of focusing on the environmental future, Environmental Resource Management is responsible for planning, developing, and applying 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, landfill gas capture, utilization of other energy from waste initiatives, compost and organics processing initiatives and other emerging opportunities.

Strategic Plan Core Strategies

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



Media, politicians and staff look out over the landfill at the waste stream analysis media event.

The solid waste function of the CRD reports to the Environmental Sustainability Committee. The Environmental Resource Management division is part of the CRD Environmental Sustainability department and consists of:

Hartland Operations

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

Waste Diversion Programs

- Recycling Programs
- Waste Diversion Programs and New Waste Reduction Initiatives
- 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 typically reviewed by SWAC prior to being sent to the Environmental Sustainability 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.

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 site and is the only sanitary landfill in the Capital Region, serving just over 366,000 people. The operation is a multi-purpose facility providing: recycling, household hazardous waste (HHW) collection, a 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. In 2010, the CRD received four (4) awards for our safety initiatives, including the prestigious National Award for Best Safety Week Program in Canada, in which Hartland landfill played a major role. Awards received for 2010 are:

1. National North American Occupational Safety and Health (NAOSH) Week Award – Best Overall in Canada
2. Regional NAOSH Week Award – Best Overall in BC/Yukon Region
3. Regional NAOSH Week Award – Best in Regional Government
4. Canadian Society of Safety Engineering (SSE) Outstanding Achievement Award – Organizations with 500+ Employees

A section of Phase 1 that has been reforested with funds received through the provincial government's Trees for Tomorrow funding program.





Pictured left: house purchased from Langford for use as a learning centre at Hartland landfill.

Pictured right: house being installed at Hartland.

Capital Works

Since 1985, over \$30 million has been invested in capital works, 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. 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. Following are achievements made in 2010:

- Construction of a new Educational Centre by renovating an old recycled house. This building will enable better educational opportunities for school children and the general public.
- Installation of a new leachate monitoring well in Phase 2 and a new south leachate purge well to improve the capture of leachate.
- Installation of additional horizontal landfill gas and leachate collection lines in the Phase 2 basin.
- Completion of the design and tendering of a new, larger maintenance contractor's workshop that will allow all landfill equipment to be better serviced.
- Completion of the design of the Cell 1 Final Closure which includes a final cover complete with a new wetland sedimentation pond in addition to gas, leachate and road upgrades.

Leachate Management

In 2009, Golder Associates (consultant) completed a comprehensive review of Hartland’s current leachate management infrastructure and its ability to manage leachate, particularly during peak winter storm events. Findings concluded that the active landfilling area should be reduced to less than 20.5 hectares to minimize the amount of leachate being generated so that it will not exceed the existing storage and conveyance capacity.

Consequently, covers have been installed on the southwest and northwest faces of the landfill and perimeter ditches have been lined to divert more surface water away from the landfill. Furthermore, the Cell 1 Final Closure design was completed in 2010 and the 3.5 hectare final (impermeable) cover will be installed in 2011. This will reduce the total leachate generation area to around 17.5 hectares.

Additional leachate drains have also been installed in Cell 2, as well as a new leachate purge well at the south end of the landfill to further improve leachate capture.

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 uses a number of control measures to prevent or



reduce effects on groundwater, surface water 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 2010, the monitoring program confirmed that the landfill gas collection system worked effectively and reduced greenhouse gas emissions from closed areas of the landfill. Additional planning is underway to improve gas collection from the active areas. Water quality monitoring indicated that landfill leachate is effectively contained and controlled on site. Leachate quality monitoring confirmed that leachate discharged from the site was in compliance with CRD's Sewer Use Bylaw regulating discharges to the sanitary sewer. Surface water issues associated with an aggregate stockpile are being mitigated by reducing stockpile size and covering the pile.

Trees for Tomorrow

In 2008, 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 closed. Phase 1 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 closed landfill. Over ten thousand trees and bushes have been planted over Phase 1 of Hartland landfill.

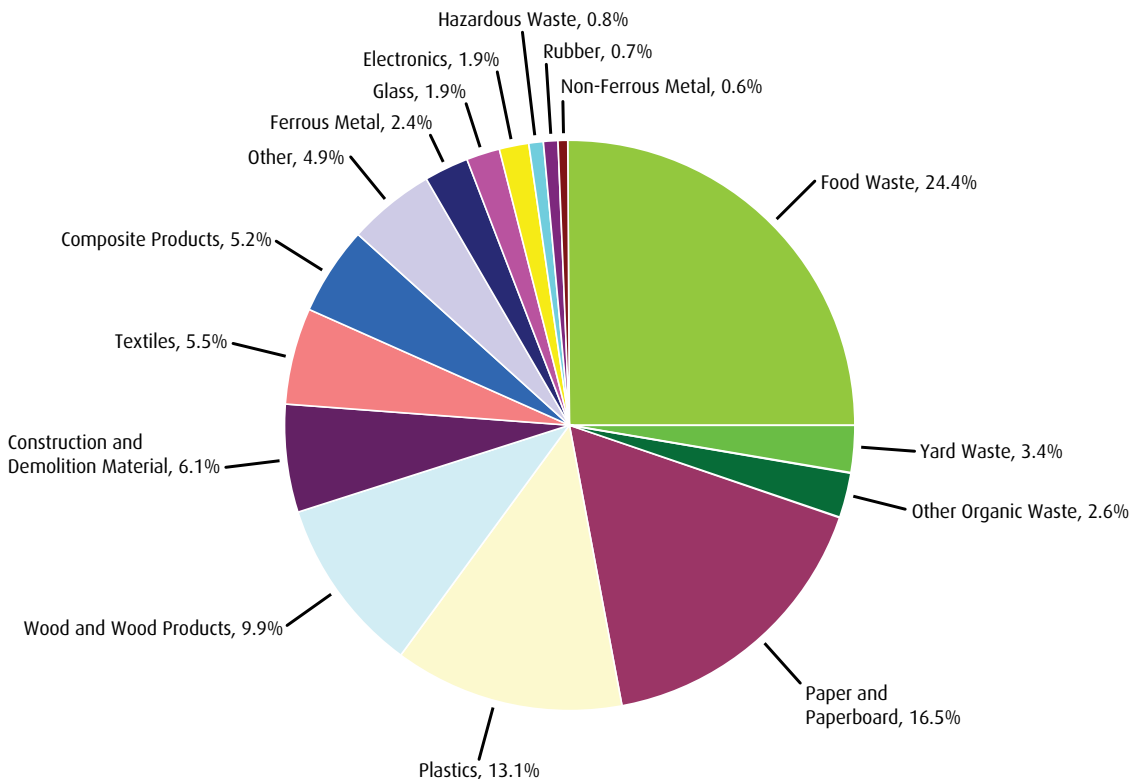
Trees for Tomorrow is a provincial program funded by the Ministry of Community Development and designed to support urban and rural communities in the planting of over four million trees by 2012. The goal of the program is to reduce greenhouse gases in the atmosphere by at least 33% below current levels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

Waste Stream Analysis

Since 1990, the CRD has commissioned five studies to assess the composition of waste being landfilled at Hartland. These studies provide valuable benchmark data and analysis for evaluating the success of solid waste management programs. The studies also provide information on waste streams to target, for example, household hazardous waste in 2001 and, most recently, organic materials such as yard and garden waste and kitchen scraps.

The fifth waste stream analysis took place in 2009/2010, with one phase conducted in the fall of 2009 and the second phase conducted in the spring of 2010. The study is conducted in two phases to allow for seasonal variance. A detailed statistical evaluation was completed as part of the final report that was published in 2010. Objectives of the study included determining the overall waste composition by material type, characterizing the waste by generation sector (residential, ICI and DLC), and reviewing trends from different areas of the Capital Region.

2009/2010 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				5,207				1,667					
Victoria				2,161				720					
Oak Bay				979				294					
Esquimalt				729				246					
Central Saanich				1,104				368					
Langford				1,117				361					
North Saanich				677				260					
Colwood				773				249					
Sidney				406				156					
Sooke				448				147					
View Royal				354				117					
Metchosin				245				80					
Highlands				121				38					
Juan de Fuca EA				352				114					
Total				14,673				4,817					
Other Recycling													
Apartment Containers								597					
Oak Bay Recycling Depot		155	115				24						
Total		155	115	0			24	597					
Hartland Recycling Operations													
Recycling Depot		158	172					54			70	462	217
HHW									5	50			
Total		158	172					54	5	50	70	462	217
Electoral Area Recycling Depots													
Salt Spring Island Depot		281	138		140	43	56			3		12	30
Pender Island Depot	57		42		17		12			5			3
Mayne Island Depot		35	16		29		10						
Galiano Island Depot	7	19	23		39	3	7						
Saturna Island Depot	5	18	16		4	2	2						
Port Renfrew				22				6					
Total	69	353	235	22	229	48	87	6		8		12	33
GRAND TOTAL	69	666	522	14,695	229	48	111	5,474	5	58	70	474	250

¹ Includes newspaper, cardboard and mixed paper

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

³ Product Care includes paint at all depots, pesticides/solvents and fluorescents/CFLs at Hartland and Salt Spring depots.

⁴ Includes: telephone books and cooking oil at Hartland, milk cartons and batteries on Salt Spring; deposit containers on Pender and Mayne; milk cartons on Saturna

Food Waste	HHW	Mattresses	Metals	Metal Appliances	Oil, Filters and Containers	Plastic (large rigid)	Plastic Film	Product Care ³	Propane Tanks	Tires	Toilets	Wood Waste	Yard Waste	Miscellaneous ⁴	Total
															6,874
															2,881
191															1,464
															975
															1,472
															1,478
															937
															1,022
															562
															595
280															751
															325
															159
															466
471															19,961
															597
							4								298
							4								895
		119	946	208		123	3			53	89	1,538	945	55	5,212
	52				33			181	19						340
	52	119	946	208	33	123	3	181	19	53	89	1,538	945	55	5,552
			75	49			0	33		0				8	868
			41				5	7		1				36	226
			28											32	150
			2				9								109
							1							>1	48
			35		2										65
			181	49	2		15	40		1				76	1,466
471	52	119	1,127	257	35	123	22	221	19	54	89	1,538	945	131	27,874

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 restricted from landfilling) to encourage its diversion for composting. In 2010, the disposal fee for general refuse was \$100/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.

CRD residents packed the house at the screening of the Clean Bin Project at an Open Cinema event.



2010 SOLID WASTE DISPOSAL AND DIVERSION COSTS

Solid Waste Disposal Costs¹			
Program	Tonnage	Cost	Cost/Tonne
Landfilling of Standard Refuse	143,669	\$6,564,254	\$43.16
Landfilling of Controlled Waste	8,422		
Waste Diversion Costs²			
Program	Tonnage	Cost	Cost/Tonne
Curbside Collection			
Blue Box/Bag Recycling	19,490	\$3,347,105	\$166.63
Apartment Containers	597		
Household Organics (Food Waste)	471	\$54,856	\$116.47
Other Recycling			
Oak Bay Recycling Depot	298		N/A
Hartland Recycling Operations			
Recycling	5,231	\$351,489	\$67.44
Household Hazardous Waste	340	\$542,201	\$1,594.71
Electoral Area Recycling Depots⁴			
Salt Spring Island ⁴	868	\$207,034	\$238.52
Southern Gulf Islands ⁴	533	\$229,229	\$430.07
Port Renfrew	65	\$15,913	\$244.82
Total Quantitative Diversion	27,874	\$4,747,827	\$170.33
Diversion Support Programs			
3Rs 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	78,448	\$1,821,189	\$23.22
Community Outreach ⁵	106,322	\$170,000	\$1.60
Total Diversion Costs for 2010	106,322	\$6,739,016	\$63.38

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 Funding is provided to local recycling depots in lieu of blue box recycling service

⁴ Community outreach programs contribute to both total quantitative and qualitative diversion



CRD Blue Bag, CRD Blue Box, and Cardboard bundle.

Recycling Programs

Curbside/Depot/Apartment Recycling

CRD residential recycling programs consist of the blue box curbside collection program for more than 113,000 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 2010, CRD residents purchased 10,453 blue boxes and 22,349 blue bags.
- Staff administered the apartment recycling program, with a total of 1,038 buildings participating and a total of 38,285 apartment recycling tote bags being delivered since 2006.

In 2010 a Request for Proposals was issued for provision of curbside recycling service beyond 2012. The proposal call included options for collection areas, collection methods, tote supply and term of contracts as well as alternatives for addition of materials including polycoated cartons, film plastic, polystyrene and a new service for kitchen scraps. In December 2010, the CRD Board voted to delay the implementation of a kitchen scraps collection program until 2013. Options for provision of the curbside recycling service beyond 2012 will be pursued by staff in early 2011.

Hartland Recycling

The CRD also operates the Hartland recycling facility which accepts over 80 items from 25 product categories. This depot is intended for residential quantities only for vehicles with a maximum GVW of 5,500 kg. In 2010, the electronics Phase II stewardship program was expanded to include telecommunications, audio/video equipment, now also accepted at Hartland recycling.

Telephone Books

In 2010, 16 participating local non-profit organizations collected 37,411 telephone books for recycling. That's nearly 53 tonnes of phone books diverted from the landfill. In addition to diverting materials from the landfill, this program provides a fundraising opportunity for local non-profit organizations, with a total of \$7,482.20 paid out in 2010.

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 Restriction

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 restriction came into effect. The restriction 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 2010, 944 tonnes of material were 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, a quarterly newsletter and maintains the GVCEC Hotline and website.

In 2010, the GVCEC gave 153 presentations to school and community groups and delivered 84 on-site workshops with over 4,776 participants. Over 2,230 residents visited the GVCEC demonstration site or participated in one of its educational community events and compost demonstrations. The GVCEC hosted two major events: The Organic Plant Sale and the Pumpkin Smash, where over 8 tonnes of pumpkins were diverted from the landfill. Staff answered 3,717 enquiries from the public and had over 14,799 visitors to the website. The GVCEC reached a total of 37,740 residents in 2010, an increase of 112% from 2005! Since 1992, the GVCEC has made over 312,825 contacts with Capital Region residents.



Residents participating at a community workshop during the kitchen scraps consultation period.

Residential Organics Management

Since 2007, over 4,000 residents in the District of Oak Bay and Town of View Royal have been separating their kitchen scraps from their garbage. This program, which originally began as a CRD pilot, involves curbside collection of kitchen scraps 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.

In December 2010, the CRD Board voted to delay the collection of residential kitchen scraps as part of the curbside recyclables collection program by 18 months (to the end of 2013). Kitchen scraps include meat, bones, grains, dairy products, eggs, vegetables, fruits and soiled paper products.

Through lessons learned from the pilot, and extensive municipal and industry stakeholder feedback, a region-wide program is being considered for 2013.

myrecyclopedia.ca

knowledge you can reuse.

Education & Outreach Programs

The Environmental Resource Management division, with support from Environmental Partnerships and 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.

Myrecyclopedia.ca

In August of 2010, myrecyclopedia.ca, a new education and reference tool to encourage sustainable behaviour across the region, was launched. [Myrecyclopedia.ca](http://myrecyclopedia.ca) contains a comprehensive online listing of household products and items—from aluminum to zinc—and includes the environmental story behind each item, recycling facility listings and tips on how to reduce and reuse in daily living. [Myrecyclopedia](http://myrecyclopedia.ca) was developed to encourage sustainable practices and to reinforce the 3Rs of reduce, reuse and recycle.

Education & Outreach Achievements

- Hosted the 5th Annual Hartland Open House, with over 900 attendees
- Conducted 13 Hartland school tours
- Delivered 48 school program presentations and workshops
- Delivered 8 community presentations and 7 community tours
- Provided ERM messaging at 24 community displays
- Provided event recycling bins at 42 community events
- Received 55,000 Hotline calls

Child playing in the sandbox at the 5th annual Hartland Open House.



Product Stewardship Programs

British Columbia's industry-led product stewardship programs require producers of designated products to take Extended Producer Responsibility (EPR) for the life cycle management of their products, including collection and recycling. The BC Recycling Regulation, under authority of the Environmental Management Act, sets out the requirements for product stewardship in B.C. The CRD supports industry-led product stewardship with participation in the following provincial programs:

Beverage Containers



Glass, plastic, aluminum, tin and metal beverage containers are accepted in the curbside blue box recycling program, apartment recycling program, Hartland recycling facility, Southern Gulf Islands recycling depots and drop boxes. Polycoated cartons, bags and pouches are currently not included in CRD programs.

Electronics, Electrical Products, Batteries and Light Bulbs

In 2010, the CRD partnered with four stewardship agencies for the collection of electrical items at the Hartland recycling facility:



- Electronics Stewardship Association of BC (computers, monitors, printers, TVs, audio visual equipment)
- LightRecycle (residential fluorescent lamps)
- Switch the 'Stat (thermostats)
- Call2Recycle (batteries and mobile phones)

Lead-acid Batteries

Lead-acid batteries have been accepted at the Hartland recycling facility since 1992, shortly after the BC Lead Acid Battery Collection Program was introduced. This 'first generation' program, which provides financial transportation incentives, is being replaced with an EPR program in 2011.





The E-Waste drop-off area at Hartland recycling facility.

Paints, Solvents and Flammable Liquids, Gasoline and Pesticides

Since 1994, the CRD has worked with the Product Care Association (PCA) to provide the region with waste paint collection at the Hartland recycling facility. Since then, the program has expanded to include solvents, flammable liquids, gasoline and pesticides and, at Hartland, the region's only paint exchange. PCA also funds paint collection at eight other depots and collection of solvents, flammable liquids, gasoline and pesticides at two additional depots in the region.



Pharmaceuticals

The pharmaceutical EPR, Medication Return Program, is promoted regionally through the CRD Hotline, CRD website, myrecyclopedia.ca as well as in CRD Source Control messaging. Print advertising specifically targeted at safe pharmaceutical disposal through return to pharmacy was conducted in 2010.



Tires

Tires have been accepted at the Hartland recycling since the depot opened in 1992 in conjunction with the province's Financial Incentives to Recycle Scrap Tires ("FIRST") program. In 2007 this provincial initiative was replaced with an EPR program operated by Tire Stewardship BC.



Used Lubricating Oil, Filters and Containers

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.



Household Hazardous Waste

In 2005, the number of items collected at the Hartland recycling facility was expanded to include non-stewardship household hazardous wastes (HHW). 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 2010, HHW events were held on Pender Island and Salt Spring Island.

Landfill Material Restrictions

Landfill restrictions have been part of the CRD waste diversion strategy since 1991 and are only implemented when viable and sustainable recycling alternatives exist. Recyclable materials restricted 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).

In 2010, the Hartland Tipping Fee Bylaw was revised and a restriction for product stewardship materials was scheduled to take effect January 1, 2011.

Pender Island Chipping Event

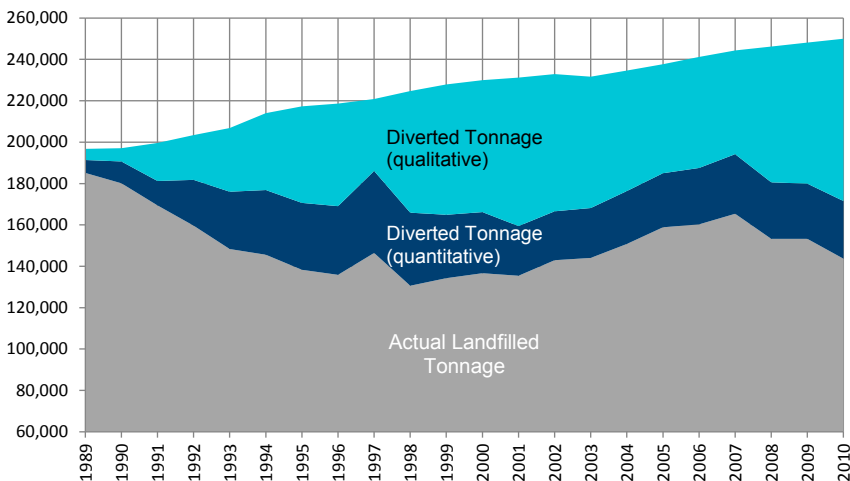
In 2010, the CRD hosted a woody debris, yard brush and invasive plant drop-off pilot event on Pender Island. The purpose of the pilot was to investigate alternatives to outdoor burning of difficult-to-compost yard materials on the Southern Gulf Islands. With a total of 50 vehicles attending the two day event, staff received material that would later be chipped up and offered to residents for use in their yards. One tonne of invasive material was removed and taken to a high-heat composting facility for disposal.

Total Refuse by Type

Type of Waste Declared	2009 Annual Total (tonnes)	2010 Annual Total (tonnes)	% Change from 2009
General Refuse	153,263	143,669	-6%
Controlled Waste			
Miscellaneous	1,317	1,017	-26%
Liquid Waste	364	464	27%
Asbestos	572	1,313	130%
Screenings	5,555	5,512	-1%
Contaminated Soils	66	87	32%
Sub-Total	7,931	8,393	-6%
Total	161,194	152,062	-6%

- Controlled waste tonnages for 2009 have been revised to be consistent with new coding practices
- Miscellaneous includes spoiled food, contaminated drywall, dead animals, food processing waste, health hazardous waste, soot and animal feces. Liquid waste includes pumpings from catch basins, car wash sumps and other sumps containing non-hazardous waste
- Asbestos also includes material from outside of region
- Screenings includes sewage screenings and sludge

Solid Waste Diversion



Diversion Rates (1989-2010)

Year	CRD Population ¹	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%
2010	372, 565	249,991	143,669	27,874	78,448	0.285	43%

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



Students in School District 61 collecting litter to clean up their school yard as part of the CRD Community Clean-up funding program.

Community Clean-Up Funding

The CRD Community Clean-up program financially supports non-profit groups that make visible environmental improvements to their community through organized clean-ups. In 2010, the CRD provided funding to 10 non-profit groups. This funding provided support in the areas of:

- Collection, processing and marketing of recyclables recovered during clean-up
- Container rental for transportation and disposal of non-recyclable material
- Supplies, such as rubber gloves and collection bags.

Diversion Funding for Non-Profits

Since 1992, the CRD has provided funding to non-profit organizations involved in recycling clothing and used household goods. The funding assists with their garbage disposal costs at Hartland, in recognition that some donated goods are unusable and destined for the landfill. Six organizations received funding in 2010.

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