



BC Electronic Equipment Stewardship Interim Annual Report



Submitted by

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Calgary, Alberta, Canada

2 July 2013

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1.0 INTRODUCTION

1.1. Requirement for Stewardship Plan

In response to the increasing necessity to minimize and account for environmental impacts, Shaw Communications Inc. (Shaw) has partnered with the BC Ministry of the Environment for the development and review of our BC Environmental Stewardship Plan. Leading our recycling planning initiatives, the BC Electronic Equipment Stewardship Plan has been prepared by Shaw in accordance with the requirements set out in the BC Recycling Regulation.

The plan outlines Shaw's program elements to plan for the collection, recycling, refurbishing or re-use of our products. It encompasses our responsibilities for managing our end-of-life for electronic equipment sold in BC and is in accordance with the requirements set out in the BC recycling Regulation - Electronic and Electrical Product Category.

Shaw has assembled various work groups to examine areas of opportunity to recover potentially reusable equipment. These efforts are broken into the following areas:

- Sustainable Models
 - Operational Model for ARU blast (DCT700 non-responders)
 - Tech Blitz
 - All Stats – Next Day Returns
- Additional Landfill Divert
- Bullfrog Powered
- NDC Energy Efficiencies

1.2. Stewardship Planning Process

The following comprises a list of product types in reference to the requirements provided for in the BC Recycling Regulation – Electronic and Electrical Product Category.

- Modems
- Routers
- Set-top boxes
- Personal Video Recorders (PVRs)
- Remotes
- Satellite Receivers
- Batteries used in these devices

The following represent Shaw's internal equipment that will be included in our recycling program:

- Modems
- Routers
- Set-top boxes
- Personal Video Recorders (PVRs)
- Batteries used in these devices
- Phones

2.0 PROGRAM PERFORMANCE AND RECOVERY RATE

2.1. Equipment Recovery and Program Metrics

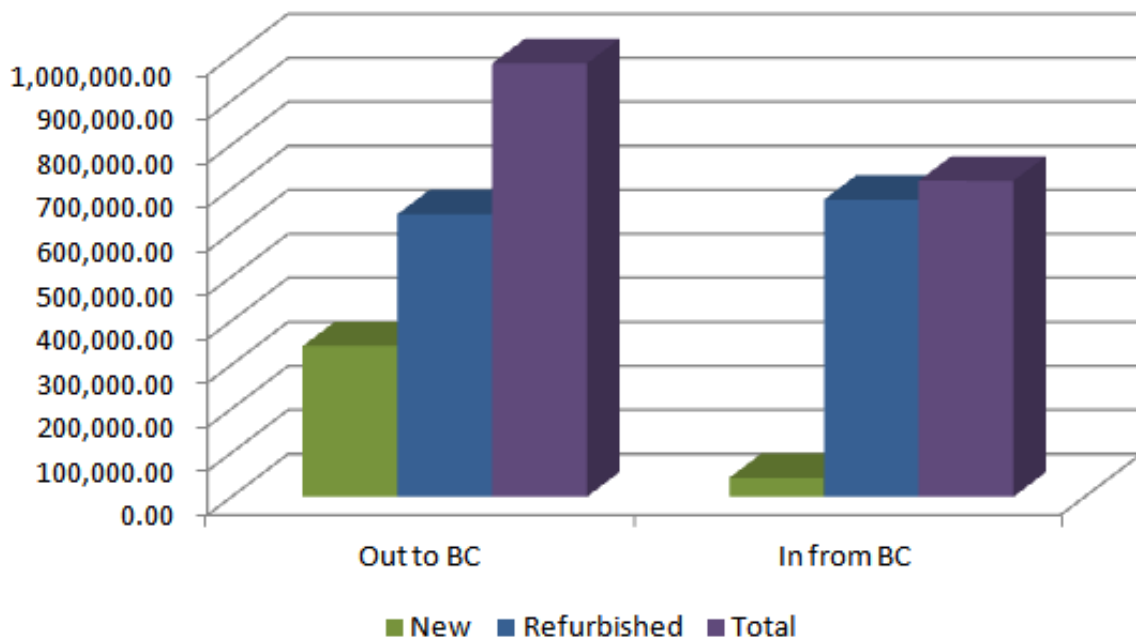
The National Distribution Centre (NDC) of Shaw in Calgary is regarded as the flagship of Shaw's environmental management practices. It has been deeply invested in environmental conscientiousness for decades and is always looking to additionally decrease environmental impacts through the continued improvement of our existing environmental focus. Through efforts at the NDC, equipment lifecycle extension aims at utilizing every piece of equipment for its maximum potential. We have been able to extend our average electronic equipment lifecycle from the standard 18 months, to in some cases, well over a decade.

As this is the first annual report for our self managed stewardship program under the plan, we are still in the start-up phase of the overall program and continuing to build our corresponding baseline data. In this respect, we are providing data herein that is currently available and are opting to provide visibility in lieu of targets, with actual data to quantify our metrics and that we can track over time to monitor our performance into the future.

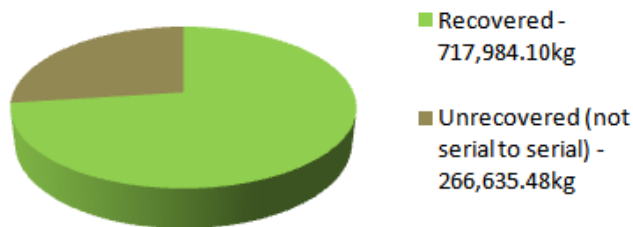
Some challenges were also presented in the reporting of data over different time periods, varying from a calendar year to a fiscal year. With a quite different fiscal year of Shaw, we are presenting a six month snapshot of actual data on equipment that was distributed vs. equipment that was recovered.

Shaw has pulled the aggregate weight of Customer Premise Equipment sent to BC for sale and compared this with the weight of recovered equipment for the same time period (Figure 1). Our baseline measurements for this process are based on the total volume of equipment that is shipped out of the NDC to BC, and the total volume that is recovered from the province to BC. The equipment shipped in each direction includes both new and refurbished equipment. A total of 984,619 kg of equipment was shipped out to BC from the NDC over the period of 1 July 2012 to 31 December 2012. In the same period, some 717,984 kg was shipped back from BC to the NDC, accounting for a recovery rate of 73%.

Figure 1 Equipment Recovery Comparison



Recovery Rate = 73%



During July 1 to December 31, 2012, 984,619.58kg of equipment was sent to BC from our National Distribution Centre from. Shaw had collected 73% of this weight back.

2.2. Recovery Summary

Accountability Metrics for Customer Premise Equipment from the NDC (July 1 - December 31, 2012)			Targets				
Metric	Description	Statistic (01JUL-31DEC12)	2013	2014	2015	2016	2017
Aggregate weight shipped out to BC for sale / lease	As all products for sale in BC are shipped from our National Distribution Centre in Calgary, we are tracking the weight that is shipped for sale and gauging this against the amount returned to the NDC	342,541kg (New), 642,077kg (Refurbished), 984,619kg (Total)	Provide visibilities in lieu of targets				
Aggregate weight shipped in to NDC from BC		42,912kg (New), 675,072kg (Refurbished), 717,984kg (Total)	Provide visibilities in lieu of targets				
Recovery Rate	Out for sale vs. in from BC (by volume out and volume in - not serial to serial)	73%	Maintain above 70%				
Extended Lifecycle	Sample Data demonstrating the average extension of CPE lifespan						
CPE sold to reseller	Equipment that can be repaired, but is deemed not useful, can be sold to resellers	No units were sold during 01JUL13-31DEC13, however, 35,037kg on SB5XXX's were sold on 25JAN13	Provide visibilities in lieu of targets				
CPE and peripherals, broken down and sold for scrap	Coax	Shaw maintains a relationship with <i>Westcan</i> for the recycling of our end-of-life CPE and peripherals (weights are pending update)	Provide visibilities in lieu of targets				
	Electronics	35,405 kg					
	Aluminum	297,240 kg					
	Steel	4,619 kg					
	Batteries	15,845 kg					
		35,895 kg					
Customer Awareness	Knowledge-share through our many passive and active touch-points to customers in possession of end-of-use equipment	All touch points in end-of-use equipment scenarios accommodate equipment return knowledge-share	100%	100%	100%	100%	100%
Customer return options	Maintain at least two of the current three recovery options (Retail Drop off, Service Call, Mail back) readily accessible to the entire province.						

Note: As setting targets to increase certain recycling / write off volumes may be contradictory to our reduction / reuse goal, we are opting to provide tracking visibilities in lieu for some future targets.

3.0 EDUCATION MATERIALS AND STRATEGIES

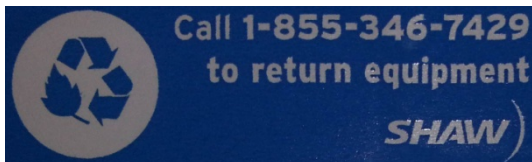
Customer Awareness

Shaw employed several methods for ensuring our customers are aware of the options available to them for returning equipment. These will include:

- Information on Shaw's external website;
- Call Centre staff advising customers how they can return old equipment;
- Shaw is a partner with the Recycling Council of BC's – Recycling;
- Shaw technicians and installers provide customers information on the disposal of old equipment, and will at all times accept old equipment from customers;
- Stickers on Shaw equipment will have information to assist the customer in ensuring equipment is returned to Shaw.

The majority of equipment is returned to Shaw in the normal course of customer interaction. Shaw has four regional call centres in BC, and most customers engage with Shaw through this medium.

All of our customer facing employees are educated with our equipment practices and mandated to continue the knowledge-share to all of our customers whom advise us they are no longer in use of the equipment. Shaw also attaches one of our return stickers, which includes our toll-free contact number, to near all new and refurbished Customer Premise Equipment that passes through our National Distribution Centre. Shaw is currently developing practices to account for tagging the remaining equipment in the field upon install.



4.0 EQUIPMENT COLLECTION PROCESS AND FACILITIES

As the lifecycle processing for our Customer Premise Equipment, including collection, testing, refurbishing, and redistribution, is handled directly through Shaw, the cost is borne therein and at no additional cost to our customers. Existing options in the collection process include retail/store, UPS mail back, and service call pick-up.

Equipment no longer needed is returned to Shaw by several different methods:

- In most cases, customers call Shaw for a free service pick up for old equipment;
- Customers may drop equipment off at one of our retail locations;

- Customers may call Shaw and receive a box with a pre-paid way bill to ship their old equipment directly to our National Distribution centre in Calgary (NDC).

Shaw Direct:

- When upgrading equipment, Shaw Direct mails the new equipment to the consumer, which includes a pre-paid way bill, and the customer may mail the old equipment directly to our NDC;
- Customers may exchange old equipment with new equipment during a service call;
- Customers who no longer require service may call Shaw Direct to receive an empty box with a pre-paid way bill and return old equipment directly to our NDC.

Shaw Business Customers:

Generally, all equipment used to provide services to businesses is leased from Shaw. Thus, when equipment needs replacing a Shaw technician will collect the old equipment and replace it with newer equipment. Should a customer cease needing services, a Shaw technician would come to the customer to take all leased equipment back to one of our operations centres.

Current Collection Locations for Customers and/or Shaw Staff:

To facilitate equipment drop off, Shaw operates and maintains more than 20 retail outlets and store fronts in BC that ensure 80% of our customer are within one hour. For our customers who may be unable to access these facilities, Shaw has the ability to dispatch our field technical group for assistance with collection. Additionally, Shaw maintains a partnership with UPS to allot customers a (no charge to customer) mail back option. Details of the facilities are presented in Appendix 2.

- | | |
|--------------------------|-----------------------|
| ■ North Vancouver | ■ Metrotown (Burnaby) |
| ■ Surrey | ■ Duncan |
| ■ Shaw Tower – Vancouver | ■ Port Alberni |
| ■ Whistler | ■ Courtenay |
| ■ Victoria | ■ Cranbrook |
| ■ Nanaimo | ■ Saltspring Island |
| ■ Kelowna | ■ Sorrento |
| ■ Chilliwack | ■ Kamloops |
| ■ Castlegar | ■ Salmon Arm |
| ■ Grand Forks | ■ Campbell River |
| ■ Prince George | ■ Richmond Center |

These centres are collection sites and ensure over 80% of our customers are within one hour of a Shaw collection point.

As Shaw collects all our equipment directly from customers, Shaw has not added any fees onto equipment sold or leased to customers. All costs for collections, refurbishment, reselling or recycling are borne by Shaw.

5.0 ENVIRONMENTAL IMPACTS AND MANAGEMENT

5.1. Environmental Management Framework

We are in the early, start-up phase of developing our environmental program and building an environmental baseline. As part of this program, we have recently developed an Environmental Management Framework, which provides structure around water use and management; energy consumption and best practices; and waste reduction and recycling.

We are proud of our sustainability efforts - in terms of the initiatives we have undertaken thus far and in identifying areas of focus for improvement. We continue to pursue sustainability interests that range from major projects to engaging our employees at the local level. This reflects our belief that real benefits in sustainability arise from the ongoing actions that we take in many parts of our business and the results we achieve.

5.2. Product Lifecycle Analysis and Management

Shaw's Customer Premise Equipment (CPE) lifecycle begins with receipt at our National Distribution Centre (NDC) located in Calgary, Alberta and flows through our many warehouse / retail locations throughout BC for sale or lease to our customers. Following completion of usefulness to our customers, it is collected and managed congruent to our environmental commitments until its ultimate end-of-life sale from our NDC to our recycling partners. Figure 2 outlines the lifecycle process for Shaw customer premise equipment

Shaw works with our manufacturers and suppliers to ensure there are no toxic or hazardous materials in either the electronic equipment or the packaging. The majority of our suppliers are RoHS compliant.

Shaw's triage of recovered equipment includes a multiple stage assessment of the reparability and reusability of both whole products and components. In BC, when a product is recovered it is assessed to determine reparability or reusability. If it is useable again, it is placed back within the local area's distribution stream. If it is not deemed locally repairable or reusable it is returned to the NDC in Calgary.

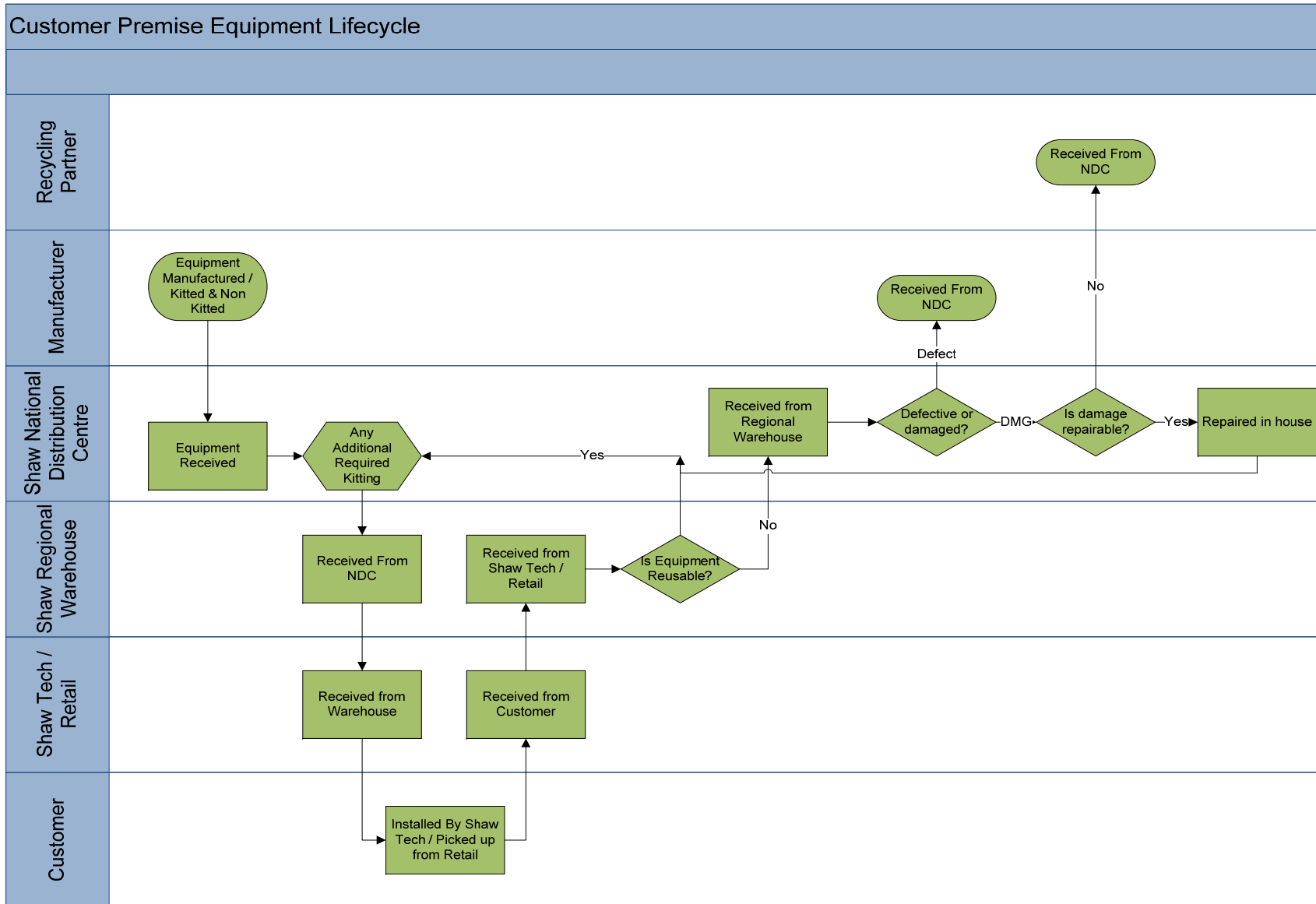
Shaw is considering equipment and training to increase the capacity to repair more equipment locally. This is to improve deployment efficiency, thus reducing environmental impacts associated with shipping equipment to the NDC and back into BC.

In Calgary, if the unit can be repaired it is done and then returned back in to the distribution stream. If it can be repaired, but is not deemed useable in Canada, we look to other opportunities to have the product reused in other jurisdictions. We use only Canadian resellers of our equipment, with their markets generally being in the US.

If a product cannot be repaired it is either harvested for any reusable components or returned to the manufacturer under warranty. The last stage is for any unusable portions to be recycled by Westcan in Alberta. Westcan manages the recycling of this equipment as follows:

- Modems: units removed from boxes, baled and shipped to shredder for downstream metal recovery;
- DCT: units removed from boxes, baled and shipped to shredder for downstream metal recovery;
- Cardboard; baled and shipped to end user;
- ACB – Aluminum Cable boxes: disassemble, segregate and repackage, Aluminum Cast shipped to Secondary Aluminum Smelter;
- USB cables: units removed from boxes, baled, sheared and granulated for copper recovery;
- Equipment racks (Steel): sheared and shipped to steel mills

Figure 2 Equipment Lifecycle



Future Improvements

Since Shaw submitted our Environmental Stewardship Plan in 2012, we have taken several steps towards continuous improvement in the area of product stewardship and environmental responsibility.

We have appointed a Director of Environment to provide specific focus to all aspects of sustainability for Shaw. We embarked on designing an equipment tracking system to be able to track equipment returns and disposition nationally, considering BC Regulatory requirements.

Shaw engaged focus groups comprising both staff and customers, to gauge the environmental responsibility issues important to these 2 key stakeholders for Shaw.

Our introduction of route optimization software for our fleet vehicles has resulted in a reduction of at least 25% in distance travelled per service order, which in turn has helped to reduce fuel consumption and greenhouse gas emissions.

Shaw is committed to ensuring we meet and indeed exceed the targets set out by our Environmental Stewardship Plan. We will work with the Ministry, other stakeholders, and the industry at large to ensure best practices for the management of our electronic equipment sold or leased to consumers, or used internally by Shaw staff.

Shaw's near future initiatives for increased equipment recovery and reducing environmental footprint include the following:

Equipment Recovery Technician (FAS – Phase 1)

- Disconnect / Equipment team pilot complete in NAN and rolled out to VIC
- Data scaled up to match customer base in remaining regions
- Capture entire sales / collection stats for ROI analysis for NAT rollout

Canada Post

- CP to open all outlets in CGY for equipment drop off
- CP currently unable to charge directly for packaging – aiming for March
- Reassess and build business case to maximize Operational savings

Cost to Recover

- Accounting for the cost to recover equipment to apply throughout the various initiatives
- Samples for return avenues captured

DCT 700, 6416, 3400 Buyback

- Revising current buyback options
- RFO ready for signing

Port out Requests

- Customers porting out services are not currently being actively pursued for Equipment Recovery
- Operations Delivery to provide call out lists to our CSE group for active pursuits

Additional Stewardship Development

- Approvals for proprietary information share to Third Party
- Third Party Auditor selection
- Statistic refinement
- Customer Awareness Survey
- Assemble Environment Support work group for regular meeting to evaluate the future environmental direction

Appendix A Website Information



- Together is Amazing
- [Community Initiatives](#)
- Shaw Companies
- Shaw History

Shaw keeps getting greener

Our home is Canada. Keeping our country beautiful by making smarter environmental choices is just one way we're reducing our overall ecological impact.



Water: Building facility upgrades and retrofits to reduce water consumption are being installed. Site management practices to control and monitor water use are in place and being tested.



Energy: Shaw is one of Canada's largest users of Bullfrog Power; 100% renewable energy source. Our introduction of route optimization software for our fleet vehicles has resulted in a reduction of at least 25% in distance travelled per service order, which in turn has helped to reduce fuel consumption and greenhouse gas emissions.



Waste: The National Distribution Centre (NDC) is at the forefront of our waste reduction initiatives. In 2012 almost 1.5M lbs of material was redirected from landfills for recycling or reuse by the NDC. Planning for electronic stewardship is a key step in our waste management activities.

[Shaw's Electronic Stewardship Plan \(August, 2012\)](#)



Go paperless, sign up for Easy Bill

For your convenience, Shaw offers many simple and secure ways to pay your bill, including the option of switching from your monthly paper bill to Easy Bill. With Shaw Easy Bill, your monthly bills are delivered right to your email inbox, how you pay is up to you. Switching to Shaw Easy Bill is fast, convenient and great for the environment. [Sign up for Easy Bill today](#)

Recycle your used Shaw equipment

Help Shaw continue to reduce our environmental footprint. Simply drop off your used Shaw electronics for recycling at any Shaw retail location. Any electronics issued for use with Shaw services can be returned: Modems, routers, television set-top boxes, PVRs, remotes, satellite receivers, and batteries used in these devices.

Share your environmental ideas with Shaw at environment@sjrb.ca



Appendix B
BC Equipment Drop-off Locations



BC Equipment Drop-off Locations

Shaw's BC CPE drop off locations (retail and store front)					
Location	Hours of Operation	Address	Location	Hours of Operation	Address
Campbell River	Mon-Fri: 8:30am-4:30pm Sat-Sun: Closed	500 Robron Road	Prince George	Mon-Fri: 9:00am-5:00pm Sat: 12:00pm-4:00pm Sun: Closed	2519 Queensway Street
Castlegar	Mon-Fri: 9:00am-5:00pm (9:00-2:00 until Jan. 23) Sat-Sun: Closed	1951 Columbia Avenue	Surrey	Mon-Sat: 9:00am-5:00pm Sun: Closed	10445 138 Street
Chilliwack	Mon-Fri: 9:00am-5:30pm Sat-Sun: Closed	9275 Nowell Street	Vancouver	Mon-Sat: 8:00am-5:00pm Sun: Closed Sun: Closed	1067 W Cordova St
Courtney	Mon-Fri: 8:30am-5:00pm Sat-Sun: Closed	1591 McPhee Avenue	Victoria	Mon-Fri: 8:30am-6:00pm Sat: 8:30-5:00pm Sun: Closed	861 Cloverdale Ave
Cranbrook	Mon-Fri: 8:00am-5:00pm Sat-Sun: Closed	720 Kootenay Street	Whistler	Mon-Fri: 9:00am-5:00pm Sat: Closed Sun: Closed	214-4368 Main St
Duncan	Mon-Fri: 8:30am-5:00pm Sat-Sun: Closed	35 Queens Rd	Salt Spring	Mon-Fri: 8:30am-5:00pm Sat-Sun: Closed	316 Lower Ganges Rd
Grand Forks	Mon-Fri: 9:00am-4:30pm Sat-Sun: Closed	7474 19th ST	Salmon Arm	Mon-Fri: 7:30am-4:00pm Sat-Sun: Closed	10 Harbourfront Dr NE
Kamloops	Mon-Sat: 9:30am-5:30pm Sun: Closed	23-700 Tranauille RD	Sorrento	Mon-Fri: 9:00am-5:00pm Sat-Sun: Closed	1-1257 Trans Canada Hwy
Kelowna	Mon-Fri: 8:00am-5:00pm Sat: 8:30am-5:00pm Sun: Closed	2350 Hunter Rd	Richmond Centre	Mon/Tue 9:30a-7:00p Wed-Fri 9:30a-9:00p Sat 930a-700p Sun 11:00a-6:00p	6060 Minoru Blvd, Richmond
Nanaimo	Mon-Fri: 8:30am-5:30pm Sat: 9:00am-5:00pm Sun: Closed	4316 Boban Drive	Guildford Town Centre	Mon/Tue 10:00a-6:00p Wed-Fri 10:00a-9:00p Sat/Sun 10:00a-6:00p	2695-10355 152nd St, Surrey
North Vancouver	Mon-Sat: 9:00am-5:00pm Sun: Closed	1471 Pemberton Ave N			