



**WESTERN CANADA
COMPUTER INDUSTRY ASSOCIATION**

August 20, 2007

Hu Wallis,
Director,
Environmental Management Branch
Ministry of Environment

Thank you for your letter of July, 2007. Attached are the amendments to the Western Canada Computer Industry Association's (WCCIA) Stewardship Plan for your review. Please contact Mr. Colin McKean at 250-216-3664 if there are any questions or additions you would like to see in the Stewardship Plan. I can assure you that the members of the WCCIA and the British Columbia companies that will be collecting and recycling electronics are committed to developing a stewardship program that will be a leader in North America – a program that emphasizes reuse and recycling.

One of the issues that you raised was the plan did not adequately consider the other stewardship program in the same product category. With regard to your concerns we have undertaken the following actions:

- 1) Initiated discussions with Mr. Jay Illingsworth and ESBC to determine ways to resolve issues, but more importantly, ways in which the two stewardship agencies can co-operate to ensure the public has a seamless recycling program. For the record, Mr. Illingsworth has indicated a desire to co-operate especially in the area of public awareness with a goal to prevent confusion in the public.
- 2) The collection, transportation and recycling system for electronics collected by the WCCIA was designed to ensure that there is no overlap with the program managed by Encorp. As such, only contractors that were not being used by Encorp will be used by the WCCIA. In this way, the two programs are operated independently. This point does not preclude co-operation between the two programs with respect to a seamless communication program to the public as outlined above.



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- 3) Developed a financial management system that will allow for the clear identification of where eco-fees are to be remitted. From the WCCIA's perspective, the eco-fees will only be collected from the Tier 2 Producers as outlined in our Stewardship Program. Our system is simple, auditable and will prevent eco-fees from being remitted by Producers to the wrong stewardship agency.

Finally, our overarching principle is convenience to the public. As such, our return collection facilities will accept all electronics at no charge. The electronics will then proceed through our collection, transportation, disposal system and no attempt will be made to determine which stewardship agency is responsible for the product. Because the WCCIA has a large ICI component in the stewardship plan, we expect our initial recovery rates to exceed 100%. We will work co-operatively with ESBC in the event that should they approach the WCCIA to balance the flow of electronics and raise their recovery rates.

In summary, two successful programs will provide the public with many more return points throughout the province that will improve consumer choice and convenience. We are fully committed to working cooperatively with ESBC to provide British Columbians with a simple and successful electronics stewardship program.

Sincerely Yours,

John Crocrock
President,
Western Canada Computer Industry Association

ELECTRONICS STEWARDSHIP PLAN FOR BRITISH COLUMBIA

**Updated July 5, 2007
Amended: August 15, 2007**

**The Western Canada
Computer Industry Association**



**WESTERN CANADA
COMPUTER INDUSTRY ASSOCIATION**

....Where Technology Becomes Reality

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1.0 Introduction

Purpose of this document is to outline the electronics stewardship program prepared by the Western Canada Computer Industry Association. Producers, as defined by the Recycling Regulation, are submitting this product stewardship plan to the Director for approval.

The Producers (as defined by the Recycling Regulation) that will be signatories to this stewardship plan are listed in Appendix 1.

The objectives of the Stewardship Program prepared by the WCCIA will ensure that:

- electronics are diverted from landfills;
- consumers have adequate access to return-collection facilities at retail stores;
- electronics are reused, recycled and dismantled in British Columbia creating local jobs and sustainable solutions.

2.0 About the Western Canada Computer Industry Association

Formerly known as The Western Canada Computer Distributor Society, The Western Canada Computer Industry Association (WCCIA) is a not-for-profit Society aimed at providing valuable services to its members and to the community. The WCCIA provides a variety of services including the preparation and implementation of the electronic stewardship plan for its members.

The Association's Constitution outlines the rules and bylaws of the Association and a copy of the constitution is available at www.wccia.comT. The membership and Board of Directors of the Association is also available on that web site.

For more information on the Western Canada Computer Industry Association please contact:

Mr. John Crocock
Tel: 604-244-9645
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2.1 Membership

The Western Canada Computer Industry Association (WCCIA) has 27 Producers that are voting members (see Appendix 1) and will be signatories to the stewardship plan. The Producers represents the majority of computer and electronic distributors in Western Canada with a combined product market share estimated at approximately 70%.

Associate memberships in the WCCIA will be open to all levels of organizations involving in the retail, reclaiming and recycling of computer hardware, software and consumer electronics.

One of the conditions of membership is that the WCCIA can conduct an audit of each member by an independent auditor to determine the number of electronics sold in British Columbia and ensure that the appropriate payments have been made to the WCCIA.

2.2 Governance

The Board of Directors of the WCCIA is made up of a minimum of 5 and a maximum of 9 Producers. The purpose of the Board of Directors is to ensure that the stewardship program is operating efficiently, effectively and legally.

The Executive Director of the WCCIA reports to the Board of Directors and is responsible for all aspects of the development, implementation and evaluation of the Stewardship Program. The majority of the Board of Directors must approve all changes to the stewardship plan prepared by the Executive Director.

The Advisory Committee comprised of a cross section of interested parties and independent community members will report to the Board of Directors. The purpose of the Advisory Committee is to review issues with the stewardship program, assist in the development of policy and procedures and make recommendations on improving the effectiveness and efficiency of the stewardship program. The Advisory Committee will meet quarterly and will include:

- representatives of retailers, transporters, reclaimers, and recyclers;
- representative from the Environmental Plastics Advisory Society;
- representative from the Environmental Community;
- representative from the Community at Large;
- representatives from the Local Government.

2.3 Administration

The Executive Director of the WCCIA will be responsible for administering and managing the policies and operational procedures that are referred to in the electronics stewardship plan and approved by the Board of Directors.

The majority of the administration and management of the stewardship plan will be contracted to one or more organizations or companies that are arm-length to the WCCIA and its members.

The WCCIA has appointed an Executive Director, Operations Manager, Financial Manager and Communications Manager to develop and implement the electronics stewardship program. The people delivering these services and their biographies will be summarized at www.wccia.ca.

3.0 The Electronics Stewardship Program

There are three primary goals of the WCCIA stewardship program. The first is to divert regulated electronic products away from landfills. The second is to minimize the footprint of the stewardship program through an efficient and effective collection, recycling and residuals management program. The third is to ensuring that future regulated products are designed and built in accordance to the principles of (a) reducing the environmental impact by means of eliminating hazardous materials, (b) improving prolonged usability and (c) producing electronic products as well as packaging that can be better recycled.

In achieving these three goals, it is the commitment of WCCIA to promote the use of best business practices within the electronics industry from the manufacturing to the de-manufacturing phases of the product life cycle. Additional goals of the stewardship plan are to:

- be fiscally responsible in the ongoing administration of the electronics stewardship plan,
- be transparent and accountable in its activities and reporting,
- increase public awareness and education on the use, reuse and recycling of electronic products,
- promote and increase awareness in the design of more environmentally sound products,
- provide convenient access to the public for product drop-offs,
- improve the effectiveness of the collection and recycling of electronics.

There are two predominant users of computer technology. The first group of users is institutions (private enterprise use and public enterprise use) and they comprise approximately 40% of the market. The second user group of computer technology is the general public. The distinction between user groups is less meaningful for televisions as the majority of television sales are for personal use.

The basic stewardship program for the stewardship of electronics is summarized in Figure 1. Producers will serve as the central point to levy the Advanced Disposal Fee (ADF) to fund the program. Where the producer chooses to sell electronics over the internet, they will be deemed to be the retailer and required to collect the ADF.

Retailers are critical in the stewardship program by providing the communication materials at the time of sale and then taking back electronics at the end of its life. This convenient “return-to-retail” style program will afford a high recovery rates and acceptance by the public. A review of the Standard Industry Classification data, Industry Canada statistics and membership feedback estimates the number of computer retailers in British Columbia to be 1000 and the number of computer retailers with physical storefront to be between 380 and 750.

Consumers will likely pay the retailer for the ADF levied on the electronic product; however, this is at the discretion of the retailer. The retailer maintains the option of providing incentives for consumers to return electronics to their store (see Figure 1).

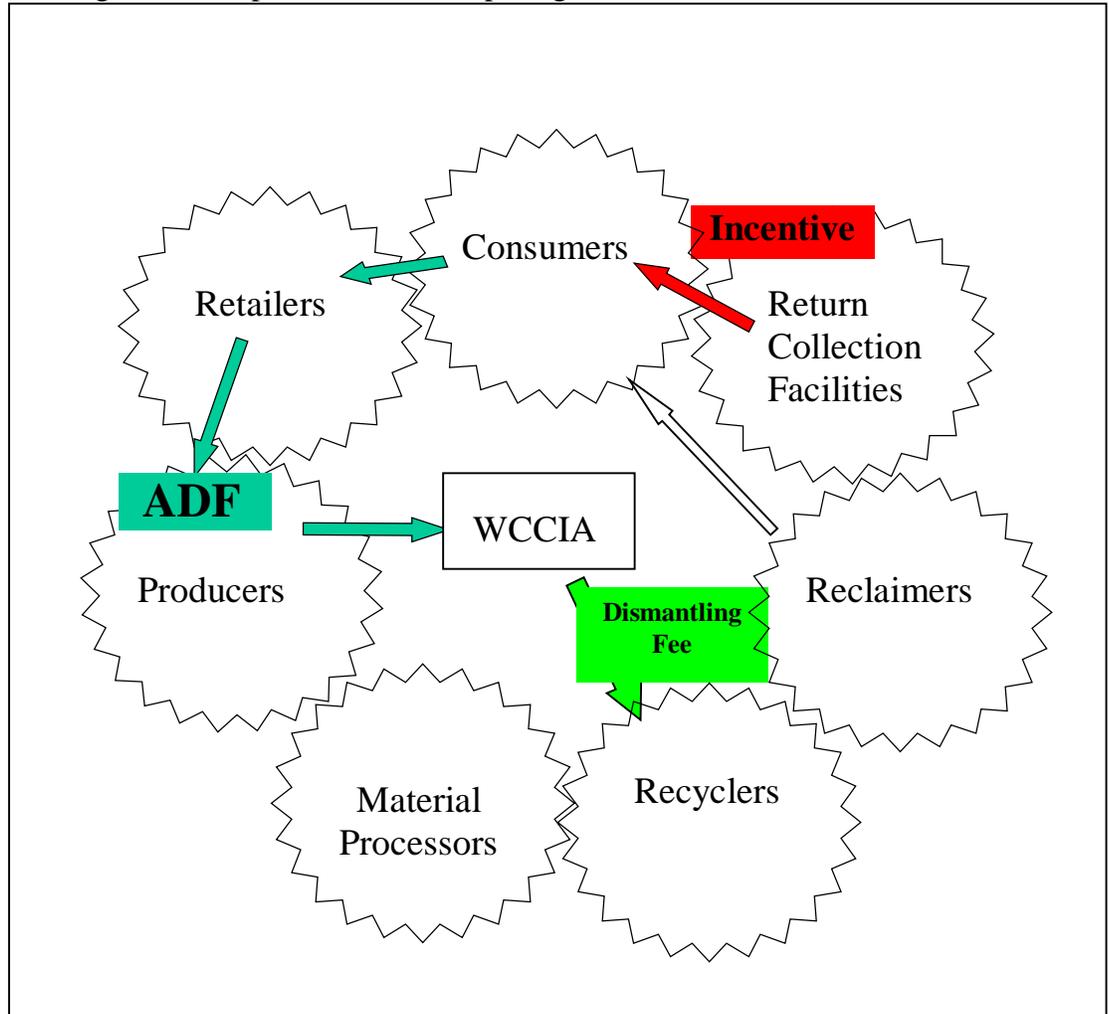
Once electronics are collected through the retail outlets, the consumer will be asked to indicate if the electronics are (1) in working condition, (2) not working or (3) unknown. In the initial phase of the program, products that are classified as “in working condition” are directed to approved Reclaimers and the not working electronics directed to Recyclers.

Approved Reclaimers will be responsible to determine whether or not the electronics are functional and can be reintroduced for public use. Products that are reusable will be introduced back to the marketplace. The process of how the public can obtain these reused products will be left to the approved Reclaimer to determine. Reclaimers will be responsible to provide monthly reporting on the number of products that were collected, and the quantity of those that were reclaimed for reuse.

Approved Recyclers will be responsible for the dismantling process and residual management and will be eligible for a dismantling fee from the WCCIA. Recyclers are expected to adhere to the requirements of the electronics stewardship plan, the recycling regulation, local and international regulations, as well as any applicable regulations. In addition, Recyclers will be responsible to produce monthly performance reports such as mass balancing reports and cost containment strategies reports.

When implemented, 100% of materials from collected electronics will be diverted from landfills.

Figure 1: Simplified Stewardship Program for Electronics



3.1 Product Recovery Rates

In theory, product recovery rates are calculated on the retail sales of electronics and the recovery rates reported by retailers, reclaimers and recyclers.

The WCCIA recognizes that this is a difficult number to calculate initially because of the backlog of electronics held by the public. Further, the calculation is more complicated by the fact that the average electronic has a 5 to 7 year life. Televisions can have much longer life spans.

As such, the WCCIA is concerned that product recovery rates based on the number of electronics recovered by a stewardship program divided by the number of electronics sold may not give a meaningful number because the:

- extent of the backlog of electronics is unknown;
- sales of electronics is growing every year;
- electronics have a long life span – some have a very long life span.

See Section 3.6 for more discussion on Performance Measures.

3.2 Stakeholder Consultation

In preparation of the stewardship plan, an comprehensive consultation program was initiated by the WCCIA.

During the pre-consultation process, the website was updated with locations of the consultation process, and Frequently Asked Questions. In addition, a power-point presentation summarizing the main elements of the stewardship plan prepared.

On January 30, 2007, an electronic invitation was sent to 240 recipients. Subsequent notices were sent on February 1 and February 2. A third invitation was sent to the Director of Environmental Services, Regional District of Kootenay Boundary, and the President of the Recycling Council of BC. The email recipients categorized by groups are listed below:

Producers, Retailers	187
Recyclers	26
Government	25
Others	3

Email recipients categorized by organizations:

Associations (RCBC, CFS, etc)	5
Private Enterprises	159
Government	24
Professional Bodies	1

Consultation Workshops

The consultation workshops were carried out in three cities, as well as in the webinar format. The exact time and location of workshops were posted on WCCIA's website, and passkeys for internet access were distributed to registered participants prior to the start of the consultation.

The consultation workshop began with a brief introduction and summary of the proposed electronics stewardship plan, and then followed by interactive discussions. The average time for the consultation workshops were one and a half hours, where some workshops were shorter than others.

The consultations were conducted as follows:

February 7 th , 2007	Kamloops	3 attendees
February 10 th	Victoria	5 attendees
February 13 th	Richmond	10 attendees
February 15 th , 16 th & 17 th	Webinars	8 attendees
April 30 th to May 8 th	Email	2 recipients

Subsequent to these formal consultation processes that ended in March 2007, the WCCIA met with 10 city representatives from the Fraser Valley Regional Districts (Chilliwack, Mission, Abbotsford, etc) and presented our plan and opened the floor to Q&A. In addition, the WCCIA made a presentation to 50 people in Whistler at the Recycling Council of British Columbia Conference. Finally, the WCCIA have been in contact via telephone with some 100 computer retail dealers and consultants about our return-to-retail model and our stewardship plan.

Throughout the consultation workshops numerous questions were raised and discussed. Good and constructive points were raised and overall, there was a sense of optimism and positive anticipation of the implementation of the stewardship plan and support for the return-to-retail model as well as an alternative model to the Electronic Product Stewardship Program being implemented by Encorp. A few participants were anxious to sign up as Recyclers, while others requested copies of the presentation.

A summary of the questions is summarized in Appendix 2.

3.3 Collection, Recycling and Residuals Management Program

The key elements of the WCCIA's stewardship program is a:

- return-to-retail system in urban areas, round-ups in rural areas and individual contracts for the ICI sector;
- reclaimers repair and resell electronics where possible;
- recyclers dismantle the recovered electronics and residuals are processed in accordance with the Pollution Prevention (P2) Hierarchy.

To facilitate the Province-wide coverage of the Stewardship Program, the Province was divided into 7 management zones. The management zones are: Vancouver Island, Lower Mainland, Chilkotin, Okanagan, Kootenays, Prince George and the Peace. For each of the management zones, the WCCIA will contract with one or more companies to deliver the Stewardship Program described below.

The details of the Stewardship Program for each management zones are described in more details in the WCCIA's Operational Controls for the Collection and Transportation System. The Operational Controls describe the current contractors and systems used by the WCCIA to deliver the stewardship program described below. The Operational Controls are available to the Ministry and the public upon request.

3.3.1 Collection Processes

Return-to-Retail in Urban Areas:

There are over 58 retail locations in British Columbia that have agreed to be return-collection facilities for the WCCIA stewardship program (see website for current list of return-collection facilities). The goal is to have over 100 return-collection facilities.

Round-Ups in Rural Areas:

Companies and organizations will be contracted by the WCCIA to organize and collect electronics from rural areas.

Institutions:

Reclaimers and recyclers will be given an incentive to enter into a contract with institutions collect, recycle and dismantle their electronics.

See the WCCIA's Operational Procedure for the Collection and Transport System for more details on the network of collection facilities and transporters for the 7 management zones.

3.3.2 Reclaiming and Recycling

Reclaimers and recyclers will pick up returned electronics from return collection facilities and institutions and:

- inventory the returned electronics and input into the data WCCIA's internet data base;
- either repair, part or rebuild the electronics; and,
- dismantle electronics and prepared residuals for recycling..

The Reclaimers will sell repaired computers or parts that have value. If the electronics have no residual value, the electronics will be forwarded to recyclers for dismantling. Frequently, the reclaimers and recyclers are the same company; however, the companies will be required to make a genuine effort to determine if the electronic can be repaired and resold.

Where reusable electronics are shipped internationally for resale or donation to a local charity, the WCCIA must review and approve the practice.

The approved Reclaimers and Recyclers are summarized on the WCCIA's website. The criteria for approving the reclaimers and recyclers are:

- They are following the relevant Operational Controls approved by the WCCIA;
- They have gone through an inspection by the WCCIA and any non-conformances have been addressed in a timely manner;
- They are a member in good standing within the WCCIA.

3.3.3 Residuals Management

Once an electronic has undergone the dismantling process and recovered materials need to be managed according to all International, Federal and Provincial regulatory requirements. At no time will any residual materials be discarded in landfills. The regulatory requirements of materials from electronics are summarized in the Operational Controls for the Sale, Transportation and Dismantling of Electronics.

Recyclers will dismantle the electronics to the following materials:

- Cables.

Cables and wiring will be removed and sold to non-ferrous metal recyclers for recovery of copper. Plastic coatings will be incinerated in smelting process and the intrinsic energy will be recovered.

- **CRT Tubes.**
CRT tubes will be shipped to an approved smelter or processor for recovery of lead, silica and other metals.
- **Plastics.**
Recyclable Plastics will be shipped to plastic processors for recycling.
- **Non-Recyclable Plastics**
Non-recyclable Plastics will be shipped to furnaces (e.g., Burnaby Incinerator) where the intrinsic energy is recovered.
- **Printer Cartridges**
Will be removed, sorted and returned to the manufacturer.
- **Steel in Dismantled Computers**
The residual steel within electronics will be crushed and recycled.
- **Batteries**
Batteries will be collected and sent to approved processors for recycling.

See the Operational Controls for the Sale, Return and Dismantling of Electronics prepared by the WCCIA for more information on the processing of electronics by recyclers.

3.4 Awareness

The WCCIA has prepared a detailed Communication Strategy that summarizes its short and long-term communication strategies. The Communication Strategy is updated quarterly and is available to the Ministry and the Public upon request.

Key elements of the Communication Strategy are:

- Designing and maintaining a website that will list information including but not limited to the most updated electronic product stewardship plan, location and directions to active collection

sites, and fact sheet on applicable hazardous materials, including Material Safety Data Sheet relating to affected toxic chemicals, direct link to WorkSafeBC's website, organized seminars for the industry, emergency contact, and FAQs,

- Designing and publishing advertisements in local newspapers and encouraging the retailers to promote and provide incentives to return electronics.
- Posters and pamphlets that advertise the recycling of electronic product program at retail stores, and provide Material Safety Data Sheet (MSDS) for electronic products that contain high levels of hazardous materials,
- Provide product labels (see below) that Producers must affix when selling new or used electronic products. These labels include an identifier code for the Producer, which is verifiable online. They also contain the website address that consumers can visit to obtain more information regarding the proper use and disposition of their newly purchased product.
- Encourage retailers to do direct mail promotions with customers that provided recycling information to the consumer as well as provide incentives to return unwanted electronics.

A Producer adopting the stewardship program is given a Producer member identification code. Furthermore, the retailers place a unique serialized identification labels on each electronic product sold. Each label would contain a unique serial number to be used as reference and audit. Producers, Recyclers and Dismantlers must record this identification tag for record keeping.

The serial numbers will be used to track the origin of the product, which Producer/assembler sold the product containing the label, when the tag was issued, and when it was disposed or recycled. Other functions of the label include:

- Informing the consumer that the purchased product conforms to the Recycling Regulation,
- Informing the consumer that the components used in the product conform to the requirements of the electronics stewardship plan,
- Allowing identification of the product at time of disposal by the consumer – it is a way to know whether the product is an *orphan*

- product,
- Knowing that the computer unit is made/assembled in BC, useful for data collection,
 - Allowing the consumer to verify the status of a local Producer by providing the serial number to the Association for verification.
 - Allowing WCCIA to conduct reviews and audit on the Producer periodically in order to assess compliance to the product stewardship plan.

A sample label and the suggested method of affixing is provided below.



3.5 Funding

The Advance Disposal Fees listed in Table 1 will be implemented when the Stewardship Plan is approved by the Director.

Electronics	Advanced Disposal Fee
Desktop Computer	\$10
Portable Computer	\$5
Printer	\$8
Monitors	\$12
Televisions	\$15 to \$45

The WCCIA will collect the Advanced Disposal Fee (ADF) from the Producers listed in the Appendix 1. The retailer can choose to waive or discount the ADF as part of a retailer-sponsored promotion with customers. Special arrangements between large retailers and Producers will be considered on a case-by-case basis.

The ADF will be submitted to the WCCIA on a monthly basis by the Producers based on their sales of product in British Columbia. The ADF will apply as well to all internet sales.

In addition, the WCCIA will retain the services of an independent accounting firm to undertake a financial audit of the stewardship program as required by the Recycling Regulation. The auditor will be appointed within 30 days of the approval of the Stewardship Plan.

3.6 Performance Measures

The WCCIA is committed to developing and implementing an electronics stewardship plan that:

- ensures high participation by providing convenient access for the public to drop off their electronic units,
- cost effectiveness by providing a competitive business environment for participants, and
- compliance with the Pollution Prevention Hierarchy which includes design of more environmentally sound products, reclamation of units by promoting reuse, proper recycling of salvageable materials, and appropriate residual management.

There are seven general performance categories that follow the Performance Measure and Reporting Guidelines prepared by Environment Canada. The WCCIA have prepared a more detailed report on its Performance Measures including a description of the assumptions behind each Performance Measure and the methodology used to track each Performance Measure. In addition, the WCCIA has quantified the performance measure and set long-term goals and short-term targets to support each Performance Measure.

3.6.1 Awareness

The percentage of population over the starting baseline that are aware they can (and should) recycle their end-of-life electronics.

Spring 2008 – baseline plus 10%

Fall 2008 – baseline plus 20%

Fall 2009 – baseline plus 30%

The long-term goal is to achieve a 90% awareness rate amongst British Columbians regarding this program, but a timeframe for reaching that goal and short-term targets can only be established once a baseline is determined.

3.6.2 Accessibility

3.6.2.1 *Percentage of Population Served*

The WCCIA will provide close to 100% coverage of the Province by operating approximately 100 to 125 return collection in the mid and large population centres and round-up type recycling programs in the smaller communities.

3.6.2.2 *Population within a Certain Proximity of the Return Collection Facility:*

The WCCIA expects to have at least one depot in all British Columbia cities with a population of 5,000 or more. That will translate into a minimum of between 100 and 125 return collection facilities in the Province.

3.6.2.3 *Average Travel Distance to Drop-off Depot*

The objective of this performance measure is to determine if the current system of return-collection facilities and round-up events is adequate for the rural population in British Columbia.

3.6.3 Product Recovery Performance Measures

3.6.3.1 *Absolute Recovery*

Absolute Recovery is simply the number of units recovered by the WCCIA measured as the number of computers, printers and televisions that are recovered by the program.

The Absolute Recovery Rate Per Capita will also be measured as it can be easily calculated from the collected data by simply adding the number of electronics recovered in a city and dividing by the number of persons in that community.

3.6.3.2 *Recovery Rate:*

The Recovery Rate can be calculated simply by dividing the number of electronics sold by the number of electronics recovered.

The WCCIA, through its bar coding system for new electronics, will eventually be able to determine the actual recovery rates and product life time for electronics sold after the initiation of the bar coding system (November 2007 start). Statistics for this more complex recovery rate calculation will not be recovered until 3 to 5 years from the point of initiation because of the long lived nature of the electronics product type.

3.6.4 Post – Collection Management

The following metrics will be used to determine the fate of the electronics collected by the WCCIA.

Reuse:

this metric will be based on the number of electronic units that are refurbished and resold (data source: reclaimers that resell and refurbish electronics). Note that reusable parts will not be tracked – only refurbished computers, printers and televisions will be tracked.

Recycling:

this metric is based on the tonnage of sorted materials recovered by recyclers in the following categories (data source; recyclers material shipping records):

- leaded glass;
- non-ferrous metals;
- ferrous metals;
- plastics;
- batteries;
- other components

Energy Recovery:

This metric would be measured in tonnes of plastic and converted to BTUs. In addition, the volume of air contaminants would be estimated based on the volume of electronics material incinerated.

Landfill

This metric is not an option in the WCCIA stewardship plan but in the event of an error by a recycler and materials are landfilled (in error), the metric would be measured in tonnes.

3.6.5 Operational Efficiency

3.6.5.1 *Cost per Unit of Recycled Material:*

The WCCIA program will track the following metrics on an annual basis:

- Cost per unit;
- Transportation Cost per unit;
- Recycling Cost per unit;

3.6.5.2 *Natural Resource Consumption and Efficiency:*

The ecological footprint of the WCCIA's stewardship plan is divided into two areas: 1) the upstream transportation system and 2) the downstream recycling system.

For the purpose of this stewardship plan the downstream recycling system is considered complete when the recycled material is no longer processed and used as a raw material input into another product life cycle.

To measure the efficiency of the stewardship program, the following metrics will be tracked:

- 1) Miles per unit
- 2) Miles per tonne
- 3) Total Miles and GHG equivalent

3.6.6 Quality of Service

Quality of Service will be measured by the number of complaints received by the Stewardship Program and the number of Service Disruptions.

Number of Complaints:

The WCCIA will track the number of complaints by the public and report them on the quarterly report. Each complaint will include a description of the complaint and corrective actions the WCCIA have undertaken as part of the programs Management Review.

Number of Service Disruptions:

The WCCIA will track the number of non-weather related service disruptions at the return-collection facilities that resulted in the public not being able to drop off electronics.

3.6.7 Management Performance

3.6.7.1 *Progress against Business Plan Goals and Targets:*

The WCCIA will publish on its website, its performance measures, long-term goals and short-term targets as well as the historical and current data on those metrics.

In addition, the WCCIA will publish the:

- recommendations of its Advisory Committee,
- priorities, goals and targets set by the Board of Directors and
- WCCIA's strategic priorities, goals and targets for the next 3 months and 12 months.

3.6.7.2 Non-Compliances

The WCCIA's stewardship program sets out a variety of inspections of return-collection facilities, transporters, reclaimers and recyclers to ensure the WCCIA's Operational Controls are being followed.

A summary of those inspections will be published in its quarterly report along with the corrective actions taken by the WCCIA to ensure compliance with all Federal, Provincial and WCCIA policies and procedures.

3.7 Dispute Resolution

There are two types of disputes that generally arise in a stewardship program. The first is a dispute between different the different stewardship programs or sectors of the stewardship program (e.g., dispute between recyclers and retailers). These issues will be resolved through the Advisory Committee and policies and procedures that are approved by the Board of Directors. The Advisory Committee will be key to the resolution of many of the issues as the Committee will provide a peer-review system to resolve issues.

In addition, the WCCIA has committed to enter into an agreement with other electronics stewardship programs to ensure that issues are resolved in a proactive manner where possible and that a dispute resolution system is in place. Should a resolution of issues not be achieved, the WCCIA will seek mediation and arbitration if necessary.

The second type of dispute is a specific complaint with respect to a member not adhering to a policy of procedure outlined in the stewardship program. This dispute mechanism has a two-level process. The first level process deals with disputes that are easily rectified and would be adjudicated by the WCCIA. The second tier process deals with more

complicated and escalated disputes. It is in the second level process that mediation or arbitration may be required to resolve a dispute.

Throughout the dispute process, documentation of the progress of the dispute is produced for future audit and record reference purposes. On the WCCIA website, the process of dispute resolution will be outlined. Contact information will be provided so that any party that wishes to initiate a dispute will have little or no difficulty in doing so.

The first step in the dispute resolution process is to submit a **Contest Notification Form**. The Contest Notification document includes information such as names, nature of the dispute, and so on. The entire dispute decision and resolution will be audited on an annual basis, and may be done more often if the number of disputes is large. Once the dispute has been resolved, a close out letter acknowledging the resolution will be sent to all concerned parties.

If any of the concerned parties are not satisfied with the outcome of the dispute, it may submit a **General Appeal Form** to appeal a decision. Upon receiving the appeal, the Board of Directors of WCCIA will review the appeal. In the event the Board determines that the dispute has been handled satisfactorily, it will not take further action on the matter. Thus, the resolution is considered final. Appendix 3 illustrates the Dispute Matrix.

3.8 P2 Hierarchy and Environmental Impacts

The ROHS Directive stands for “the restriction of the use of certain hazardous substances in electrical and electronic equipment”. The ROHS Direction came into effect in July 2006 in Europe, sets the maximum levels of Lead, Mercury, Hexavalent Chromium, Polybrominated Biphenyl (PBB) and Polybrominated Diphenyl Ether (PBDE) or Flame Retardants in an electronic product to 0.1% weight by homogeneous material (1000ppm). The maximum level for Cadmium is 0.01% homogeneous (100ppm).

The ROHS Directive is applied to an extensive list of product categories including large and household appliances, computer and general Information Technology equipment, telecommunications equipment, consumer equipment, lighting equipment (including light bulbs), electronic and electrical tools, toys, leisure and sports equipment, and automatic dispensers.

The electronics stewardship plan requires Producers that sell new electronics to use ROHS approved electronic components. Producers are required to incorporate ROHS approved components in 4 major stages as described below:

Stage 1	Initial	25/25
Stage 2	Intermediary	50/50
Stage 3	Advanced	75/75
Stage 4	Fully Compliant	100/100

During the *initial* stage (2007 to 2009) of the program, Producers are committed to produce/assemble desktop computers that contain at least 25% ROHS compliant materials, on 25% of their total annual computer units that are assembled and sold. The typical category of components of a desktop computer include Computer Case, Power Supply Unit, Mainboard or Motherboard, Video Card, Optical Drives, Hard Drives, Network Card, Sound Card, Memory Modules, and Central Processing Units.

During the *Intermediary stage*(2010 to 2011), Producers adopting this stewardship plan must produce/assemble desktop computers that contain at least 50% ROHS compliant materials, on 50% of their total annual computer units that are assembled and sold.

The same requirements are imposed on the *75/75* (2012 to 2013) and *100/100* (2014 to 2015) stages. Once the 100/100 stage is achieved by the Producer, it is said to be 100% compliant with the FLD principle. A 100% compliant Producer would also fulfill the mandate set forth by the first 3 levels of the pollution prevention hierarchy in the Recycling Regulation.

WCCIA anticipates that the majority of Producers that will adopt this electronics stewardship plan, and as such, it will be necessary to implement a specific schedule that will be applicable to all general business types. Through extensive discussions, the electronics stewardship plan proposes that Producers that adopt this plan must achieve at least stage 2 or *50/50* by the end of the first review period by the Director. The long-term target of the proposed plan is for Producers to achieve 95% compliance in 8 years from the time the program is first implemented.

3.9 Reporting

Part 2 Section 8 of the Recycling Regulation requires that annual reports

be completed and submitted on or before July 1 in each year, for one-period ending no later than March 31 of that year, or December 31 of the previous year. The report will be available to the public, and will be posted online for download. The annual report produced for the Director shall include:

- (a) a description of educational materials, consumer awareness and educational strategies used,
- (b) Quantity and location of its collection facilities. Changes to the number of locations are noted,
- (c) Efforts taken to reduce environmental impacts throughout the product life cycle, and increase reusability or recyclability at the end of the life cycle,
- (d) a description of how a recovered electronic product was managed in compliance with the pollution prevention hierarchy,
- (e) the total amount of the Producer's product sold and collected and, where applicable, the Producer's recovery rate,
- (f) an independently prepared financial statements by an independent accounting firm detailing all revenues received, expenditures and associated fees,
- (g) a comparison of the plan's actual performance for the year in comparison with its targets and regulatory requirements,
- (h) other information as required by the Director.

Appendix 1: List of Producers Associated with the Electronics Stewardship Plan

ALC Micro
Advance Micro Solutions
Allway Technology
Amax Engineering
Anitec
AMS Distribution Inc
Compucon Information Technologies
Compuvision Technologies
Comtex Micro
Daiwa Distribution
Elco Systems
Evetek Computers
I.O. Express
Jetview Electronics
Kamloops Computers
LCF Advanced Technology
LCH Resouces
Netlink (NCIX)
Northern Computers
NW Tech Video & Monitor Canada
Patch Computers
Peripheral Express
Seanix Technologies (A&B Sound)
Synapsis Technical Services
Taknology
Techwave Distribution Inc
Vmax Technology (A.T.I.C.)

Appendix 2: Summary of Questions and Answers during Consultation Process

QUESTIONS	SUMMARY OF DISCUSSIONS AND RESPONSES
What is the status of a Dealer?	The status of a Dealer will be determined by the definition outlined in the Recycling Regulation.
<p>Can a Dealer only be a Producer, and not both a Producer and a Reclaimer?</p> <p>Can a Recycler also be a Reclaimer?</p>	A Producer can be both a Producer and a Reclaimer. In fact it is encouraged since a Producer that is also a Reclaimer will further improve efficiency to the overall process since it removes an additional level from the process. Furthermore, a Producer operating as a computer retail store would be better equipped to handle and test the reusability of a unit that has been dropped off. Note that Producers are not automatically qualified as Reclaimer. They will have to qualify for the status.
<p>What will happen to a Producer who is not part of a stewardship plan?</p> <p>As a Producer, what if I do not participate in this plan? What will happen?</p>	Producers may be represented by an agent that is administering an approved electronic stewardship plan, as outlined in Section 2(2) of the Recycling Regulation, or seek to have their own electronic stewardship plan approved. A Producer who has not complied with the Recycling Regulation is deemed to have violated the requirements of the Recycling Regulation.
<p>What are the logistical processes to handle dropped off regulated electronic products?</p> <p>As a Producer, what do I do with the products after they are collected from the user?</p>	Regulated units that are dropped off are identified by their respective owners as reusable, not working or unknown. For these products to be pickup up from their respective collection facilities, CEWM is contacted. Upon receiving the pickup notification and verifying all relevant information, an online bid is sent to participating Recyclers and Reclaimers. The successful tender will carry out the tasks outlined in the bid, which includes pickup of the units from the collection facilities. Note that the collection facility can drop off these units on their own to approved recycling / reclaiming stations if they so wish to.
I am an Encorp Bottle Return-it depot. How much will WCCIA/CEWM pay me to collect your labeled electronic products?	At the present moment, the collection of regulated units by the various collection facilities are not compensated by volume, size or weight of units collected.
What happens to used and orphan eligible computer products that are returned for recycling?	These units are classed as either reusable or to be recycled. In the former, further tests will be conducted to verify reusability. In the latter, these units are systematically de-manufactured and recycled appropriately.
Where are these electronic products	They are returned to collection facilities across the

returned?	province. These collection facilities are your neighborhood computer retail stores.
Can products that are purchased under a different approved stewardship plan be returned to an authorized collection depot under this plan? Will our producers accept electronic products from consumers who purchased the electronic products from producers signed under the other stewardship plan?	Yes
As a Producer, what are my responsibilities under this plan?	Your primary responsibilities as a Producer under this plan are to (1) adopt the ROHS plan into your materials, and (2) to be a collection facility. Should you choose to become a Reclaimer aside from being a Producer, you would need to meet the requirements of being a Recycler.
As a Recycler, what are my responsibilities under this plan?	A Recycler must demonstrate its ability to handle the de-manufacturing process of regulated electronic products that is in compliance with the Pollution Prevention Hierarchy and local and other regulatory requirements. In addition, a Recycler's procedures and processes must be complementary to the Standard Operating Directives of CEWM.
Can a Recycler accept electronic product drop offs directly by the public? What if a small computer shop does not have the storage space? How do we work with Recyclers? How do our Producers work with primary Recyclers? What is the relationship of the retailer and Recycler? How will they work together?	Yes but on a limited scale. This due largely to the fact that this plan recognizes the limitation of some computer retailer in accepting unusually large or odd sized drop offs, and therefore offer the collection facility to have the drop off handled directly by CEWM, which may rely on the approved Recycler that has won the contract to handle the drop off from the public directly.
Why do your member's electronic products have labels on them? Stickers - How do they work? How do we track and audit? How are they recorded? Manually or electronically? Are stickers put in front or the back? Stickers - How do they work? Are stickers put in front or the back? Are they put on the outside box? Who puts on the stickers?	Labels are an integral part of this plan as it distinguishes this plan from others in that our member's products are readily identified, are used for statistical tabulation, they provide a method of tracking the movement of electronic products including the verification of the de-manufacturing process, they provide a website link for consumers / users to obtain important information regarding the use of their computers, maintenance and disposal which promotes longevity of use and proper recycling. Labels contain serial numbers that are tracked. We anticipate the recordkeeping process to first be manual as it is first recorded by Producers. The verification

<p>How does the tracking system with labels work?</p> <p>How about computers from manufacturers out of province or country? How will the labels work then?</p>	<p>process is done electronically as it will be available on the internet for public access.</p> <p>We encouraged labels to be affixed in a location that will be noticed by the user.</p> <p>For out of country manufacturer, we allow the affixation of labels to be delegated to the first line importer, which is defined as a Producer in the Recycling Regulation.</p>
<p>As a Producer subscribing to this plan, am I subject to audit?</p>	<p>Producers, Reclaimers and Recyclers are all subject to ongoing random audits to ensure compliance.</p>
<p>What guarantee does this plan have in preventing export of hazardous materials?</p> <p>Will we ship e-waste to an incinerator in California? USA is not Basel Action Network.</p> <p>How do we ensure that reclaimers do not ship or export e-waste to other countries?</p>	<p>This plan promotes reuse of verifiable good working units. Reclaimers must be approved before they are eligible to reclaim regulated electronic products. Remaining units are disposed in a regulated manner. Recyclers must be approved before they are eligible to recycle these products.</p>
<p>As a Producer, how do I administrate or ensure that the appropriate fees are collected and remitted?</p>	<p>Good recordkeeping is key to ensure that the appropriate fees have been collected and remitted. In addition, the task to remittance may be delegated to another party by means of a memorandum of understanding between the two parties. Note that the responsibility of remittance lies with the Producer and any memorandum or agreement between the Producer and other parties will not supersede this liability.</p>
<p>As a member of this plan, can I be part of another approved stewardship plan?</p>	<p>This stewardship plan does not restrict a party from participating in other stewardship programs.</p>
<p>What is the BASEL Convention? Who is affected?</p>	<p>The BASEL Convention or Basel Action Network is an international organization that focuses on eliminating toxic waste from being transported from one country to another.</p>
<p>What's your stance on giving access to charity for these recycled products?</p> <p>What about charities?</p> <p>How about donations to charities?</p> <p>Please clarify the Computers for Schools. How will our plan work with charitable or non-profit organizations to reclaim products?</p>	<p>Since this program strongly encourages reuse of regulated electronic products, any organization that is committed to this cause is supported.</p>
<p>How will our plan work with the other</p>	<p>Multiple stewardships promote a higher rate of public</p>

<p>plan?</p> <p>How will WCCIA / CEWM work with EPSC / Encorp?</p> <p>Is there overlap? Redundant? Where's the value?</p> <p>With 2 plans (rival plans), how are they different? How will they work together?</p>	<p>participation, effectiveness and efficiency. Since this plan does not overlap in its processes, there is little risk of redundancy. For example, we differ in our collection facilities, and transportation of these goods. In addition, we have always advocated the need to reuse as an integral part of a successful stewardship plan to divert units from entering the landfill. The value for British Columbian is that the regulation of selected electronic products will be more efficient, effective and the cost will be lowered in an economic environment of multiple stewards</p>
<p>How will we advertise and market our plan?</p>	<p>Various marketing campaigns will be undertaken including but not limited to press interviews, labels, pamphlets and so on. In addition, we will have a website where consumers can seek various information relating to the stewardship plan, use of product, recycling, disposal and so on.</p>
<p>How does our plan work?</p>	<p>The plan calls for the commitment to use ROHS materials during the production phase, it allows products to be returned to a local computer retailer as a means of disposal, it requires evaluation of these units to assess the possibility of reuse, and it requires the proper recycling of unusable units.</p>
<p>How do we qualify Recyclers, Reclaimers, and downstream sub-processors?</p> <p>What are our criteria to qualify recyclers and reclaimers?</p> <p>How do we qualify them? Will the details of the RFP be made public?</p> <p>RFP?</p> <p>How will we be sure that our electronic products will be Recycled fully by our downstream Recyclers?</p> <p>How will we be sure that our downstream Recyclers and Reclaimers don't export the e-waste?</p> <p>How do we qualify downstream Recyclers / Reclaimers?</p>	<p>Recyclers and Reclaimers are invited to submit our RFP for review. Successful candidates will demonstrate their ability to adhere to the mandate of the stewardship plan, including full recycling of collected products. This includes extrusion of recoverable and reusable raw materials such as plastics, metals and so on. Furthermore, once all raw materials are recovered, the waste residual must be appropriately disposed by means of incineration. Export of hazardous waste shall not be permitted to other countries unless conducted in a manner that is in full compliance with local, national and international regulations, such as the BASEL Convention, and it is exported to a specialized foreign smelter solely for the purpose of immediate waste incineration. The Recycle must be able to provide supporting documents and evidence in the case of exporting waste that the intended smelter has incinerated the materials.</p> <p>RFP applications will be made available for download once the stewardship plan has been approved.</p>
<p>How do we deal with products purchased on-line at E-Bay?</p> <p>How does our plan deal with on-line orders from out of country / province?</p>	<p>There are several governing factors: (1) is the Seller based in British Columbia? (2) Are the products being sold new or used? (3) Is the Buyer a consumer or a Dealer? For example, if the Seller is based in British Columbia and fits the definition of a Producer, the responsibility of the Seller is no different than a</p>

	conventional computer retailer. Likewise, if the Seller is out of province but is selling to a Buyer that is a Reseller, then the Reseller is considered a first line importer, and thereby fits the definition of a Producer.
How do we deal with rural and remote areas? How will we deal with electronic products in smaller communities? Example, 100 Mile House. Under our stewardship plan, how are the products recycled? Who will pickup? Is this a waste of resources? Redundant?	In cases where the proposed infrastructure plan does not completely service certain communities alternative arrangements can be made such as arranging seasonal roundups with local municipalities as means to collect drop offs on a larger scale.
What about products that re-enter the market? Will our plan allow electronic products to be re-used / reclaimed and re-entered into the market?	These products are reused in order to prevent them from entering the landfill or are unnecessarily recycled without ever reaching their intended lifecycle.
Under our stewardship plan, will we re-invest money into R&D to look for new technology / solutions to recycle up to 100% of e-waste?	Our commitment to the Pollution Prevention Hierarchy ensures that there will be ongoing efforts to improve the design of future technology to be more environmentally sound.
Will we work with only 1 recycler in BC if in fact that 1 Recycler is capable of doing that job?	This plan calls for approved and registered Recyclers to tender their bids to win a job contract. If in fact that with every tender one particular Recycler can best undertake the job, then the answer is yes. However, it is highly unlikely that that would be the outcome as the purpose of a tender process is to encourage competing firms to be more effective and efficient in their performance.
Based on our stewardship plan, what is the recovery rate that we are hoping to achieve? How will we measure that? How long? What is our target for recovery rate after launch of stewardship plan? 75% within 5 years?	We anticipate our recovery rate to be approximately 80%. We will compare the recovery rate to the existing data of the number of computers that are being dropped off in landfills and received by Recyclers. We expect to reach the target within 3-5 years.
What if electronic products purchased from our producers are rejected from depots from the other stewardship plan?	We have no control over what policies are being exercised by participants in other stewardship plans. With this plan, we do not intend to any public drop offs.
How do we know that computer components from overseas manufacturers in fact ROHS compliant?	Verification of ROSH compliance can be obtained from the appropriate ROHS certification organizations
What is ROHS?	An abbreviation that stands for Restriction of Hazardous Materials.

Didn't we copy the other plan? EPSC / Encorp?	No. However, because both electronics stewardship plans are achieving common goals, similarities are inevitable.
How do we deal with other products - fridges, stoves, etc. that are not part of the stewardship plan? Who takes them?	This plan only applies to selected electronics products that are outlined in the Recycling Regulation. Other products may be regulated by their own stewardship plan that may contain its own procedures.
What is the target for our producers? 50 / 50 after 5 years?	We expect Producers to reach 100/100 as a long-term goal.
Liability Insurance for Hazardous Substances?	All regulatory requirements are to be met in order to be eligible for approved Recycler or Reclaimer status.
How much lead in CRT?	Roughly 2kg.
Recycling fees - are they the same as the other plan?	Not necessarily. At the moment it is modeled after the Alberta recycling fees.
Will we cooperate / partner with the Recycling Council of BC (RCBC)? List recycling depots at WCCIA / CEWM web site?	Yes
What is the status of ROHS compliance now in the marketplace? For desktops? For notebooks?	Since the requirement of the use of ROHS is not mandatory in Canada, and in the USA (except for the state of California), there are no formal statistics compiled to answer your question.
If an end-user / consumer buys a computer on-line from Dell, does Dell have to collect and remit the recycling fee?	It would depend on which stewardship program Dell belongs to.
Can labeled electronic products be re-sold back into the marketplace by a Producer / collection depot? Or Reclaimer? Or Recycler? Will the recycling fee be collect again?	If the approved Reclaimer has deemed the unit suitable for reuse, then yes. The Recycling fee is collected only once when the product was first made and sold as brand new condition.
Will there be reports made available to the regional districts for recovery rates, estimated tonnage of e-waste, etc. Example, data is broken down to specific regional districts?	The reports that are generated are ones that are required by the Recycling Regulation. Additional reports are generated based on purpose, priority and availability of resources.
If our stewardship plan will also accepts electronic products purchased under the other plan, will our plan then be incurring extra costs to recycle and dispose, extra administration costs?	No.
What is our audit plan? Details?	An Audit Committee will be formed to carry out routine

	audit functions to ensure compliance with the requirements of the stewardship plan. We plan to audit every participating organization at least once every 3 years.
What are the details for our vendor qualification?	It would require the applicant to demonstrate by providing a written account on how it can, for example, perform certain functions.

COMMENTS	SUMMARY OF DISCUSSIONS AND RESPONSES
On page 8 you have a nice diagram of the Pollution Prevention Hierarchy. Unfortunately the labels on the diagram are not the same as the first three items listed in the electronics schedule in the Recycling Regulation. I understand the intent but accuracy is important.	The diagram has been updated.
In the first paragraph you also refer to "(c) reducing the unusable sections of regulated electronic products". I'm not sure what you mean by that. Are you talking about redesigning products so that they are completely recyclable, as opposed to having parts that become garbage? I think some clarity is needed there.	One of the goals of the electronics stewardship plan is to work with manufacturers to design products that are better recycled. That also includes the products' respective packaging materials. The section has been edited for clarity.
The fourth bullet in the Goals section says: "To increase awareness of designing more environmentally sound products,"... Are you really just going to increase awareness or are you actually going to encourage Design for Environment? I would suggest that the latter is more to the point and more in keeping with the principles of EPR.	The goal is to increase awareness which leads to the design of more environmentally sound products. The section has been edited for clarity.
On page 10 you show sample labels. Why use the word "WARNING"? There's no danger related to the label or the product. Perhaps NOTICE would suffice, and I would add "Do not remove this label."	The label has been updated with the word "Attention" instead of "Warning". It also contains "Please Do Not Remove" as suggested.
In section 3.5 you refer to marketing funds for public awareness campaigns. Can you attach a dollar value to this initiative to give us an idea of the scope of	WCCIA is committed to increase public awareness through various campaign strategies as outlined in the proposed electronics stewardship plan. Specific dollar value will be based on a percentage of the ARF

<p>the effort? Will it be a percentage of the ARFs received by WCCIA or some other formula? I'd sure like to know so that I have some comfort that there will be adequate funds to carry out the task. I believe your plan (and all stewardship plans) should commit to reaching a high level of public awareness of the program (at least 80% of the general public) within 5 years. Whether or not you have reached the goal would be determined by independent third party polling.</p>	<p>received, and the exact percentage will be determined once the program is implemented.</p>
<p>You are to be complemented for commitment to use of ROHS approved components. This is a big step toward better Design for Environment.</p>	
<p>On page 12 at the end of section 4.2 you talk about reaching 50% compliance within 5 years. How long do you expect it will take to be close to 100%? Including that information will lend more credibility to the plan.</p>	<p>The long-term target is to reach 95% in 8 years from the start of the program.</p>
<p>Transportation Matrix (page 14). I am concerned about your proposed method for getting materials moved from collection points to processors. Under the proposed system I can imagine delays that will eventually result in angry collectors who will then withdraw from the system, resulting in headaches for you and the consumer. This has happened with the used oil collection system. An unstable collection network can easily be the downfall of an otherwise good program.</p>	<p>The proposed transportation matrix will be reviewed and weak areas determined once the program goes into effect. Through a process of continuous evaluation and improvement, we are confident this transportation matrix will result in the most efficient and cost effective way to moving electronics.</p>
<p>From the perspective of a local government, we will not participate in any collection system that does not provide full compensation for the use of public land and infrastructure. I realize that your proposed collection network does not include local government facilities and I am fully supportive of that, but I don't want to see us being the fall back position should your proposed system fail due to lack of adequate compensation for the work.</p>	<p>We are committed to working with all parties in reaching an amicable resolution in situation specific instances where third party infrastructure is used to supplement our own infrastructure.</p>

<p>I would be more comfortable with your plan if there were an independent third party audit of compliance with the Status Qualification Programs rather than having it done by CEWM.</p>	<p>We plan to consult with independent third party experts throughout the Status Qualification Program.</p>
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Appendix 3: WCCIA Dispute Resolution Matrix

