



Thinking
beyond
the box

Stewardship Ontario

**FINAL CONSOLIDATED
Municipal Hazardous or Special Waste**

Program Plan

Volume I

This document includes information on the methodology that was used by the planning team to forecast program costs, including the key assumptions, and the sources of data and expertise that were used for the analysis. While the aggregated results of the analysis are included, specific details are confidential. This confidentiality is necessary to maintain the integrity of tendering and negotiation for future service contracts, and ensure that Stewardship Ontario obtains full value for money from these contracts.

July 30, 2009

The Final Consolidated MHSW Program Plan is presented in two volumes:

Volume I provides an overview of the overall program design; how stewards may discharge their legal obligations under the Waste Diversion Act; preliminary program cost estimates; how Stewardship Ontario proposes to recover these costs; and how the program will be delivered.

Volume II provides a break-out of key information related to each of the twenty MHSW material categories established under the Consolidated MHSW Program Plan.

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List of Acronyms

B.U.D	Buy what you need, Use it all up, Dispose properly
BBPP	Blue Box Program Plan
BOL	Bill of Lading
C of A	Certificate of Approval (issued by MOE)
CCCR	Consumer Chemical and Container Regulations (2001)
CSA	Canadian Standards Association
CVMA	Canadian Vehicle Manufacturers' Association
DiB	Depot in a Box
DIY	Do-It-Yourself
EIHWHRMR	Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations
EIS	Enterprise Information System
EOL	End-of-Life
EPR	Extended Producer Responsibility
HWIN	Hazardous Waste Information network
IC&I	Industrial, Commercial & Institutional
IFO	Industry Funding Organization
ISP	Industry Stewardship Plan
MHSW	Municipal Hazardous or Special Waste
MNR	Ministry of Natural Resources
MOE	Ministry of the Environment
MTS	Material Tracking System
NHP	Natural Health Product
O. Reg	Ontario Regulation
OES	Ontario Electronic Stewardship
P&E	Promotion and Education
PCPSA	Post-Consumer Pharmaceutical Stewardship Association
R&D	Research and Development
R.R.O	Revised Regulations of Ontario
R.S.O	Revised Statute of Ontario
RBRC	Rechargeable Battery Recycling Corporation
RtR	Return to Retail
SC	Steering Committee
SO	Stewardship Ontario
SQG	Small Quantity Generators
SSC	Specialty Services Channel
TDGA	Transportation of Dangerous Goods Act
Te	Tonne
TT	Toxic Taxi
VAS	Value Added Services
WDA	Waste Diversion Act
WDO	Waste Diversion Ontario
WEEE	Waste Electrical and Electronic Equipment
WG	Working Group

Glossary

Accessibility

A measure of the ease with which Ontarians can dispose of their Municipal Hazardous or Special Waste. Accessibility is measured by the frequency of service, the distance which participants have to travel, and the materials they are able to drop off.

Accessibility targets

Standards set under the approved Consolidated MHSW Program Plan that will be continuously monitored to ensure that all Ontarians are provided with an adequate level of service to effectively manage their MHSW, including those living in high density, rural and northern communities.

Automotive Incentive Payments

Weight based payments offered by Stewardship Ontario to approved transporters and processors to collect designated Phase 1 automotive MHSW under the Program.

Available for Collection

The estimated quantities of designated MHSW potentially available for collection in Ontario. The estimated quantities available for collection are based upon the estimated life span of the original product and the subsequent quantity of waste remaining after consumption.

Brand Owner or First Importer

- A person in Ontario who is the owner or licensee of a trademark under which Municipal Hazardous or Special Materials (MHSM) are sold or otherwise distributed in Ontario, whether registered or not, or
- A person who brings into Ontario MHSM for sale or other distribution in Ontario

Certificate of Approval (C of A)

A Certificate of Approval is a control document issued by the Ontario Ministry of the Environment that sets out operating conditions for a waste management system or a waste disposal site. C of As are required under the authority of s. 27 of the *Environmental Protection Act*.

Collection Channel

Refers to the different types of venues through which MHSW is returned for end-of-life management. Collection channels include Return to Retail (RtR), Municipal Depots, Event Days, Depot in a Box (DiB), and Toxic Taxi (TT)), and the Specialty Service Channel.

Collection Rate

Collection rate refers to the proportion of quantity collected over quantity available for collection, expressed as a percentage.

Collection Targets

The projected quantities of designated MHSW to be collected on an annual basis under the Program.

Consolidation Centre(s)

A location used to receive and bulk MHSW from collection agents for subsequent transport to a primary processor.

Contingency for Forecasting Risk

A margin built into fee estimates, and each material cost estimate, to protect the IFO from the high likelihood that there will be variances from exact forecast amounts. Each margin is estimated based on analysis of likelihood and probable degree of variance.

Datacall

The online reporting program, administered by WDO, to which municipalities are required to report the annual quantities of MHSW collected by their program.

Depot

Refers to a permanent facility where residents can drop off MHSW. Hours and periods of operation may vary from one facility to another.

Diversion

The management of designated MHSW, through reuse and/or recycling instead of disposal into landfills or incinerators.

Downstream Processor

An entity that receives material from a primary processor for additional processing and/or disposal.

End-of-Life (EOL) Management

The physical process of permanently altering MHSW, such that it can no longer be re-used in its original form.

Event Days

Collection events offered by municipalities at which residents can drop-off MHSW for EOL management. Event Days range in frequency from one to several events per season.

Extended Producer Responsibility (EPR)

The Minister of the Environment has directed that the Consolidated MHSW Program Plan incorporate EPR, which requires that stewards of obligated materials be financially responsible for all elements of the management of MHSW. Under Phase 1 of the MHSW Program, the financial obligation of stewards was limited to post-collection costs.

Fee-setting methodology

The calculations used to determine the fees to be charged to stewards for each MHSW category and where applicable, sub-category.

Generator

The final user of designated MHSM that makes the product(s) available for reuse, recycling or disposal. The two main categories of generators are residential and IC&I generators. The Minister's Program Request Letter dictates the waste categories to be handled from different generators (e.g. waste batteries from residential and all IC&I generators; pharmaceutical and sharps and syringes waste from residential generators only, the rest of the waste categories from residential and small quantity IC&I generators).

Industry Funding Organization (IFO)

Refers to the organization with designated responsibility for implementing the diversion plan for the designated material. The IFO has the ability to recover fees from Stewards to cover the costs of implementing and operating the diversion program and to contribute to associated costs of WDO and MOE.

Industry Stewardship Plan (ISP)

Following approval by the Minister of a Program Plan developed by an IFO for a designated waste, an industry Steward for the designated material may elect to submit an Industry Stewardship Plan (ISP) to WDO. Upon approval of the ISP by WDO, the industry Steward is then responsible to implement the ISP and is exempt from the obligation to submit fees to the IFO responsible for implementation of the diversion program for the designated waste.

Labpack

A standard container used by many service providers for collecting MHSW. It is roughly equivalent to a 360L drum

Lifespan

The estimated period of time during which designated MHSM will be in productive use and therefore not available for collection under the Program.

Material Categories

Refers to the groupings of MHSW that form the basis of cost estimates, including the allocation of common costs. There are twenty (20) MHSW material categories under the Consolidated MHSW Program Plan. In general, the MHSW material categories reflect the categories of material designated under Regulation 542 and referred to in the Minister's Program Request Letter.

Material Sub-Categories

Refers to sub-groupings of MHSW to reflect different properties or size and/or different patterns of consumption or return that cause waste products within a category to be managed differently and/or to incur different management costs. In some cases, although limited or no information is currently available on the different management requirements, return rates and costs, the creation of sub-categories nonetheless allows for separate tracking, which in turn allows for the setting of differential fee rates in the future.

MHSM

MHSM refers to goods and products which are sold or delivered for use in Ontario to consumers, or consumed/used by designated IC&I businesses, that result in the generation of municipal hazardous or special waste.

MHSW

Materials designated as Municipal Hazardous or Special Waste as per O. Reg 542/06, which defines “municipal hazardous waste” according to two regulations and a Canadian Standards Association (CSA) Standard. These are:

- Consumer Chemical and Container Regulation (2001)
- CSA Standard Z752-03 “Definition of Household Hazardous Waste”
- O. Reg. 347

MHSW is identified by the Minister’s Program Request Letter to be included in a Program for which Stewards must report and pay fees to Stewardship Ontario according to the Program Rules.

O. Reg. 542/06 defines “municipal special waste” as

- Batteries
- Pressurized containers
- Aerosol containers
- Portable fire extinguishers
- Fertilizers, fungicides, herbicides, insecticides or pesticides, and containers in which they are contained
- Paints and coatings, and containers in which they are contained
- Containers that have a capacity of 30 litres or less and that were manufactured and used for the purpose of containing lubricating oil
- Oil filters, after they have been used for their intended purpose
- Fluorescent light bulbs or tubes
- Pharmaceuticals
- Sharps, including syringes
- Switches that contain mercury
- Thermostats, thermometers, barometers or other measuring devices, if the thermostats, thermometers, barometers
- Other measuring devices contain mercury
- Antifreeze, and containers in which it is contained
- Solvents, and containers in which they are contained

Obsolete MHSW

MHSW that are no longer supplied or sold for consumer use.

Ontario Regulation (O. Reg) 542/06

The Regulation made under the Waste Diversion Act that designates Municipal Hazardous or Special Waste and that designates Stewardship Ontario as the Industry Funding Organization for MHSW.

Orphan waste

Orphan waste is MHSW that results from MHSW sold or otherwise distributed in Ontario where the brand owner or first importer is not identifiable,

Processing

The processing of MHSW by manual or mechanical means for the purpose of resource recovery.

Processor

An organization that receives one or more MHSW, is registered with Stewardship Ontario to process MHSW into new products. Processing requires that the receiver have the demonstrated capability to manufacture value-added recycled products that meet one of the following:

- Delisting of material as hazardous waste
- Approved industry standards (e.g., ASTM, CSA)
- Regulatory standards or code of practice.

Program Request Letter

A letter sent by the Ontario Minister of the Environment to Waste Diversion Ontario requesting the development of a waste diversion plan in co-operation with an Industry Funding Organization and in accordance with the WDA, 2002.

Recycling Efficiency Rate

Measured as a percentage of the quantity of material available for collection; refers to the ratio of quantities recycled over quantities available for collection

Recycling Performance Rate –

Measured as a percentage of the quantity of material collected; refers to the ratio of MHSW processed to that of MHSW collected.

Reuse

The provision of MHSW to another user for its intended purpose

Service Providers

Entities engaged by Stewardship Ontario to collect, transport and manage MHSW.

Shared Responsibility Agreement(s)

An agreement between Stewardship Ontario and municipalities established under the MHSW Phase 1 Program and under which Stewardship Ontario agreed, for purposes of the Phase 1 Plan, to reimburse the municipality for post-collection costs incurred on its behalf for Phase 1 material. In response, municipalities agree to report collection totals online, undertake P&E activities and use only SO-approved service providers.

Small-Quantity Generator

The Minister's Program Request Letter defines small quantity MHSW waste from industrial, commercial and institutional (IC&I) businesses as waste being returned for EOL management by a business that generates MHSW and is not required to submit a generator registration report with respect to the waste under subsection 18(1) of Regulation 347 under the Environmental Protection Act and that does not return more than 100 kg per month of MHSW through the program.

Specialty Service Channel

Refers to those MHSW collection points that are not easily accessible to the public. They include the service centers generating automotive waste and the existing Switch the Stat and Switch Out programs, which collect material through contractors and automotive dismantlers, respectively. Also included in this channel are the OES-approved WEEE processors that handle batteries and fluorescents. Also refers to those MHSW materials collected through the Blue Box Program (i.e. aerosols)

Steering Committee

The MHSW Steering Committee was set up to oversee the planning of the Consolidated MHSW Program Plan and resolve technical, policy, legal and broad stakeholder issues. The Steering Committee is made of representatives from affected industry associations.

Steward Fees

Fees assessed by an IFO on Stewards under an approved waste diversion program as set out in the approved Program Rules.

Stewards

Under the MHSW Program, Stewards include brand owners and first importers of products designated as MHSW for sale and use in Ontario that result in MHSW. Stewards are obligated to pay fees under an approved waste diversion program.

Stewardship Ontario

A not-for-profit corporation incorporated under the Ontario Corporations Act and continued under the Waste Diversion Act, O.Reg. 542/06, as amended by O.Reg. 28/08. Stewardship Ontario is designated as the IFO for the Municipal Hazardous or Special Waste. Stewardship Ontario is also the IFO for Blue Box Waste.

Transportation of Dangerous Goods (TDG)

Refers to the regulated transportation requirements as defined in the *Transportation of Dangerous Goods Act* (TDGA).

Transporter

Means any person or firm duly registered with Stewardship Ontario as authorized to transport MHSW.

Vendor Standards

The minimum operating standards that MHSW service providers must meet and maintain in order to contract for collection, transportation or end-of-life processing services under the Program. The standards for each type of service provider include both common and type-specific requirements.

Waste Diversion Ontario

A non-crown corporation created under the Waste Diversion Act, 2002 to develop, implement and operate waste diversion programs for a wide range of materials.

Working Group

During the Consolidated MHSW Program Plan development process, Stewardship Ontario set up working groups for 14 material groupings for the purposes of consulting affected stewards in the acquisition of data, the formation of program targets and accuracy of estimates.

PART I – The Stewardship Ontario MHSW Program

1.0 Introduction

This document is the Stewardship Ontario Final Consolidated Municipal Hazardous or Special Waste (MHSW) Program Plan and will replace the Phase 1 MHSW Program Plan, if approved by Waste Diversion Ontario (WDO) and the Minister of the Environment. This plan is intended to provide for the end-of-life management of all MHSW materials specified under the Minister's Program Request Letter (PRL), prioritizing diversion from disposal where possible, and will build upon the work already completed under the approved Stewardship Ontario Phase 1 MHSW Program Plan.

Included in this plan are all materials that are currently managed under Phase 1 of the program, as well as all materials that were intended for inclusion in Phases 2 and 3 (See Sections 1.1 and 1.2 for the identification of materials by phase).

The Consolidated MHSW Program Plan includes significant revisions to the existing MHSW program, among which are:

- Establishing MHSW material groupings for the broad range of materials included under the revised program
- Improved program accessibility for consumers and small quantity generators
- Revised projections for material sales, generation, collection and diversion
- New research and development initiatives to improve program cost effectiveness and to address identified barriers to increased diversion
- Enhanced promotion and education initiatives
- Revised steward reporting requirements
- Proposed revisions to Stewardship Ontario governance

Furthermore the Rules of the Consolidated MHSW Program Plan specify that stewards are obligated under the revised program on the day of plan approval by the Minister of the Environment.

More extensive information on Stewardship Ontario, the MHSW Phase 1 Program Plan and an overview of the current MHSW Program operations and requirements can be found at <http://www.stewardshipontario.ca/>.

Additional information on Waste Diversion Ontario and both the Phase 1 and the Consolidated MHSW Program Plan can be found at <http://www.wdo.ca/>.

1.01 MHSW Program Background

On June 27, 2002, the Province of Ontario passed the *Waste Diversion Act* (WDA), with the aim of promoting the reduction, reuse and recycling of waste generated in Ontario. Simultaneously, the *Act* established a non-crown corporation under the name of Waste Diversion Ontario, for the purpose of managing waste diversion programs in conjunction with industry funded organizations.

As stipulated by O. Reg. 273/02, amended by O. Reg. 255/06, Stewardship Ontario was designated as the Industry Funding Organization (IFO) for Blue Box Waste, which was the first waste diversion program requested by the Minister of the Environment.

On December 11, 2006, the Minister of the Environment filed O. Reg. 542/06 under the *Waste Diversion Act*, designating the specified waste materials as Municipal Hazardous or Special

Waste (see Appendix 1). The full list of materials included in the definition of the Regulation may be found in Section 1.3.

On December 12, 2006, in a Program Request Letter (PRL) to the WDO Board of Directors, the Minister of the Environment directed WDO to develop a waste diversion program for MHSW and stipulated that Stewardship Ontario act as the IFO for the program. The initial PRL outlined a three phase approach to implementation of the program.

Products included under Phase 1 of the program were:

- Paints and coatings, and the containers in which they are contained;
- Solvents, and the containers in which they are contained;
- Used oil filters;
- Containers that have a capacity of 30 litres or less and that were manufactured and used for the purpose of containing lubricating oil;
- Single-use dry cell batteries;
- Antifreeze, and the containers in which it is contained;
- Pressurized containers;
- Fertilizers, fungicides, herbicides, insecticides, or pesticides, and the containers in which they are contained.

The PRL required that the program provide for increased MHSW diversion by utilizing incentives, financial or otherwise, to encourage reuse, reduction and recycling of the designated Municipal Hazardous or Special Material (MHSM) supplied into Ontario. Further requirements included the expansion of collection infrastructure for all Phase 1 MHSW throughout Ontario.

The PRL defined program stewards as brand owners and/or first importers into Ontario of products that result in the generation of municipal hazardous or special waste.

The MHSW Program Plan for Phase 1 was submitted to the Minister of the Environment on December 6, 2007. On February 19, 2008, the Minister approved the program plan and the program commenced on July 1, 2008.

1.02 Amending the Phase 1 MHSW Program

On July 22, 2008, in a Program Request Letter (PRL) to the WDO Board of Directors (see Appendix 2), the Minister provided further direction on the development of the subsequent phases of the MHSW program and requested the development of an amended MHSW program, to include all MHSW designated under Phase 2 and Phase 3, in addition to materials currently included in Phase 1.

In an addendum to the Minister's PRL, the following three key amendments to the initial plan were requested:

1. The program shall incorporate extended producer responsibility, under which the stewards will bear the full cost of management, inclusive of collection through to final diversion or disposal of MHSW. In the initial plan approved February 18, 2008, stewards were only responsible for post-collection costs.
2. The program shall include considerations of a range of collection options in order to increase access for consumers.
3. The program shall incorporate certain wastes from all industrial, commercial and institutional (IC&I) sources, as these wastes are generally indistinguishable from those produced from residential sources and are similarly not commonly diverted from disposal.

The addendum further designated the following wastes as Phase 2 MHSW:

From Residential and all IC&I Generators: <ul style="list-style-type: none">• All batteries (excluding lead acid batteries from vehicles)
From Residential Generators and IC&I Small Quantity Generators: <ul style="list-style-type: none">• Aerosol containers• Portable fire extinguishers• Fluorescent light bulbs and tubes (limited to generators of no more than 5kg/month)• Switches that contain mercury• Mercury-containing measuring devices
From Residential Generators Only: <ul style="list-style-type: none">• Pharmaceuticals• Sharps, including syringes

All other remaining wastes that meet the definition of “Municipal Hazardous or Special Waste”, as set out in O. Reg. 542/06 were intended for inclusion in Phase 3 of the program, are included in this Consolidated MHSW Program Plan.

The Minister’s PRL initially specified a date of March 2, 2009 for submission of the Phase 2 plan and August 31 for submission of the Phase 3 plan. At the request of WDO, however, the Minister subsequently agreed, in a letter dated January 14, 2009, to receive a single Consolidated MHSW Program Plan to be submitted by July 31, 2009.

1.03 Materials Obligated Under MHSW Program

The materials obligated under the MHSW Program are specified in the Minister’s Program Request Letter for Phase 1 and his subsequent Program Request Letter for Phases 2 and 3.

The overlap in the various regulations and standard referenced in the regulation is intentional and is meant to ensure that the scope of the regulation is as comprehensive as possible. Consequently, a number of designated wastes are captured under this program because of characteristics or criteria that meet one, two or all three of the regulations or standard referenced below.

O. Reg. 542/06 defines “municipal hazardous waste” according to two regulations and a Canadian Standards Association (CSA) Standard. These are:

- Consumer Chemical and Container Regulation
- CSA Standard Z752-03 “Definition of Household Hazardous Waste”
- O. Reg. 347

For the purposes of this plan, the “municipal hazardous waste” has been broken out into five material categories. These are:

- Flammable Materials
- Corrosive Materials
- Toxic Materials
- Reactive Materials
- Leachate Toxic

O. Reg. 542/06 defines “municipal special waste” as

- Batteries
- Pressurized containers
- Aerosol containers
- Portable fire extinguishers
- Fertilizers, fungicides, herbicides, insecticides or pesticides, and containers in which they are contained
- Paints and coatings, and containers in which they are contained
- Containers that have a capacity of 30 litres or less and that were manufactured and used for the purpose of containing lubricating oil
- Oil filters, after they have been used for their intended purpose
- Fluorescent light bulbs or tubes
- Pharmaceuticals
- Sharps, including syringes
- Switches that contain mercury
- Thermostats, thermometers, barometers or other measuring devices, if the thermostats, thermometers, barometers, or other measuring devices contain mercury
- Antifreeze, and containers in which it is contained
- Solvents, and containers in which they are contained

Although the initial PRL requested the MHSW program target only residential waste and small quantity waste from IC&I businesses, subsequent direction was provided by the Minister to expand the scope of the program to include batteries from all IC&I generators, and to limit the scope for pharmaceuticals and sharps to residential generators only.

While O. Reg. 542/06 broadly defines MHSW, Stewardship Ontario, as the IFO responsible for developing the program plan, is required to define the specific products to be included under the program and for which stewards will be required to report sales and pay fees. These definitions are provided in Appendix A of Section 10, Schedule A.

1.04 Program Plan Development and Consultation Process

In the development of Phase 1 of the MHSW Program Plan, the program planning team implemented the public consultation program as outlined by WDO in a MHSW Consultation Plan approved by the WDO Board.

A full description of the consultation program for Phase 1 plan development, the comments received and whether and how these comments were addressed in the Phase 1 program plan are provided in the companion document "Municipal Hazardous or Special Waste Consultation Document" which is available on the WDO web site¹.

Stewardship Ontario has implemented a detailed planning and consultation program for developing the Consolidated MHSW Program Plan. The consultation process followed a similar process as under Phase 1. The WDO requirements for consultation on Phase 2/3 components of the program can be found on the WDO web site at www.wdo.ca. Key components of the public consultation program include the following:

- Three public consultation meetings with simultaneous web-casts.

1 <http://www.wdo.ca/files/domain4116/MHSW%20Consultation%20Document%20-%20May%2023%2007.pdf>

- Review meetings with MOE and WDO staff throughout the program planning process to seek clarifications related to the WDA and PRL and to review key program elements as required.
- Meetings with key stakeholders to review key program elements.

In addition to the public consultation program, Stewardship Ontario has implemented a comprehensive process to facilitate steward input into the planning process. This includes the creation of fourteen material specific Working Groups. Finally, Stewardship Ontario has established a MHSW Steering Committee to review the work of the program planning team. More information pertaining to the consultation process is available in the companion document entitled “Final Report on Consultation to Support the Development of the Consolidated MHSW Program Plan” which is being submitted to the WDO along with the Final Consolidated MHSW Program Plan.

1.05 Key Lessons Learned From Phase 1

Implementation of the MHSW Phase 1 Program Plan has revealed structural weaknesses in the original plan which undermine the sustainability of the existing program and which are addressed under the revised Consolidated MHSW Program Plan:

4. **Management and Systems Infrastructure:** The program budget must make adequate provision for the necessary management and systems infrastructure required for Stewardship Ontario to effectively implement and manage a program of this complexity.
5. **Cash Flows:** Timing of steward’s fee payments (revenues) must be closely aligned with cash outflows associated with Stewardship Ontario program delivery costs. In addition, the deficit from Year 1 of the existing Phase 1 Program must be recovered.
6. **Performance monitoring systems:** Successful implementation of the Consolidated Program Plan will depend on acquiring automated systems to track program performance, and thereby:
 - a. Identify material variances from plan forecast, and undertake remedial just in time action to course correct.
 - b. Determine which implementation approaches generate the best collection and diversion results at the lowest possible cost.
 - c. Establish a process of continuous improvement that will optimize the effectiveness and efficiency of the overall program.
7. **Implementation planning:** Decisions on the timing of plan commencement must be based on sound implementation planning that sets out in detail the key activities required for Stewardship Ontario to effectively launch and operationalise the Consolidated MHSW Program Plan. Implementation planning will take place once the program plan has been submitted to the WDO.

2.0 Program-Wide Objectives

The Ontario Minister of the Environment has directed that Stewardship Ontario, as the designated Industry Funding Organization, develop an amended program for MHSW which will:

- Include all Phase 1, 2 and 3 wastes designated under O. Reg. 542/06.
- Address all costs inclusive of collection through to final diversion or disposal.
- Assign all program costs to the designated stewards of MHSW.
- Provide financial or other incentives to encourage reduction, reuse and recycling.
- Encourage the establishment of facilities with sufficient reuse and recycling capacity to maximize management of MHSW.

- Include provisions to expand the availability of MHSW collection sites and to make these convenient and accessible to all Ontarians.
- Include a range of collection options including residential collection, collection arranged on an individual basis, incentives to encourage material recovery, and retail take back programs.
- Promote the adoption of best practices and encourage the development of innovative diversion techniques.

In order to meet the specific MHSW program requirements set out by the Minister and to ensure that the amended program is sustainable, three over-arching considerations have shaped this amended MHSW program design:

8. *Critical lessons learned from the development and implementation of the MHSW Phase 1 program must be incorporated into the revised program to improve diversion performance, to minimize overall program costs and to ensure the continued financial integrity of the program.*
9. *To be truly sustainable, the MHSW program must be grounded within the broader policy framework set out by the Ministry of Environment in its discussion paper: Toward a Zero Waste Future: Review of Ontario's Waste Diversion Act, 2002:*

“In order to move from “cradle-to-grave” to “cradle-to-cradle”, governments, businesses, and citizens will need to rethink the way resources are used and will require tools that drive innovation, technological development, and shift societal behaviour.”

10. *Stewardship Ontario believes that this can best be achieved through the design and implementation of a comprehensive, integrated MHSW program management structure which closely links together material specific management needs and also maximizes synergies with other WDO approved waste diversion programs*

Ten specific objectives have been established for the Consolidated MHSW Program Plan and for each of the material specific action plans:

1. Manage multiple materials under the umbrella of one comprehensive plan that provides scale and synergies.

Objective: To maximize accessibility infrastructure, sustain critical communications efforts and strengthen the economic sustainability of the program by sharing costs across 20 material categories.

2. Maximize opportunities for Ontarians to divert all of their MHSW through “one-stop-for-all” collection services wherever possible, while accommodating unique collection approaches for certain materials where program performance can be demonstrably enhanced.

Objective: To encourage higher participation (by consumers, small quantity and other IC&I generators), greater diversion of MHSW and minimize the negative environmental effect of operating multiple, overlapping collection programs.

3. Use proven social marketing approaches to ensure consumers understand how to minimize the environmental impacts of consumables v. durables, why proper end-of-life management is important, and how to make proper use of the collection system

Objective: To minimize wasting behaviours for consumables and maximize collection of durables.

4. To make investments in and to give priority when contracting for processing services to operations which maximize the recycling rate of collected materials.

Objective: To maximize the recycling of materials from the MHSW that is collected.

5. To undertake research and development activities to identify additional opportunities to reduce, reuse and recycle MHSW

Objective: To identify and overcome barriers to the 3Rs and to improve program performance.

6. Track designated materials from their supply for sale or use in Ontario through to final diversion or disposal

Objective: To ensure that we can verify that the program fulfills the objectives for which it has been created.

7. Establish a comprehensive performance tracking system

Objective: To provide for continuous improvement - retaining what works with the current system, while introducing new innovations that will enhance accessibility, collection and recycling performance and cost effectiveness.

8. Ensure transparent and consistent reporting of all material supplied, collected, transported, processed and disposed.

Objective: To ensure a level playing field, promote transparency, assess effectiveness and foster accountability for all stakeholders.

9. Identify costs to manage each of the designated materials and to reflect, over time, the differential economic and environmental costs of managing products with similar functions but different designs and characteristics.

Objective: To provide an ongoing price signal to stewards to promote continuous improvement in product design.

10. Allocate total program costs to stewards fairly and transparently.

Objective: To ensure that all direct and indirect program costs are allocated to the stewards of MHSW in a fair and transparent manner.

3.0 Groupings of MHSW

The definition of the materials and groups of materials designated under the Consolidated MHSW Program Plan are found in Appendix A of Section 10, Schedule A – Rules for Stewards with Respect to Payment of Fees.

It is important to highlight the unique generation and handling characteristics associated with each of these. The full universe of materials captured in the MHSW program can be broken out into three main groups, as outlined below:

3.01 Products designed to be consumed in use

MHSM whose contents (excluding the container) are intended to be fully used up by the consumer, and ideally, would not result in a waste requiring management (e.g. paint, pesticides, fertilizers). The challenge with this group of MHSM is to estimate how much of the product is actually consumed versus how much is not consumed and therefore available for management as a waste. One of the objectives of the MHSW program is to reduce the quantity or volume of this type of material that is available for collection and management by educating consumers to purchase only what they need, to use the product up as intended and to store unused product properly to extend its useful life.

A sub-set of this group is those MHSM for which no stewards have yet been identified. This is the case for the toxics, reactives, and to a certain extent, the leachate toxic category. In addition to the lack of information pertaining to the stewards, the products in these material categories are, in great majority, captured under other MHSM categories. The MHSW program has not allocated any direct cost to these material categories at this time. Rather, some common costs have been allocated to those categories to undertake research and analysis of whether there are any products and stewards unique to those categories.

3.02 MHSW which remains largely in its original form after use

MHSM that is intended to be discarded in its original form after its useful life expires (e.g. oil filters, oil containers, batteries). These products (and in some cases their containers) are typically available for collection on a one-for-one basis (i.e. the discarded battery is replaced with another battery).

Some products within this group have a long lifespan. This includes fluorescent bulbs and tubes (average lifespan of 8 to 10 years) and batteries (different lifespan depending on the chemistry). This has been taken into consideration when estimating the quantities of these materials projected to be available for collection. For example, in the case of fluorescents, the quantities available for collection in 2010 take into account sales figures from 2003 to 2007.

3.03 Obsolete and Orphan Products

Some MHSW that is managed under the program is produced from MHSM that is no longer supplied (or that may not be supplied in future) for use into Ontario, including:

- Mercury switches previously used in auto manufacturing (discontinued after 2003).
- Mercury switches in some large appliances (discontinued in chest freezers from 2000; discontinued in gas pilot-light ranges from 2008 and discontinued in clothes washers since 1972).
- Mercury switches in other products (e.g. bilge pumps) (discontinued in 2006).
- Mercury thermostats (discontinued as of January, 2009).
- Mercury containing measuring devices (phased out over the last few years).
- Certain pesticides that have been banned from sale in Ontario effective April 21st, 2009.

For the purposes of the Consolidated MHSW Program Plan these materials will be referred to as obsolete MHSW - material that is no longer supplied or sold for use in Ontario.

In some cases it will be possible to identify the steward of the obsolete products captured under the program and to assign an appropriate share of these costs to a designated steward.

In other cases, it may not be possible to identify the brand owner or first importer of the product; the company may no longer be in business, or may no longer have an economic presence in Ontario. Alternately, it may not be possible to identify the particular product.

Under these circumstances, these products will be considered by the program as “orphan products”. That is, the cost incurred by Stewardship Ontario to manage these waste products under the program could not be assessed against a steward - the brand owner or first importer into the province.

In order to determine whether the costs of managing orphaned products are significant and material, Stewardship Ontario will receive and manage any orphaned products during Year 1 and track the quantities and associated costs. Such costs incurred during Year 1 will be allocated to the corresponding material category.

In subsequent years, if the cost of managing orphan wastes was shown to be not material, it will be allocated to the corresponding material category. If the cost was material, Stewardship Ontario will not accept responsibility for the orphaned MHSW and their related costs under the program given that a commercial connection cannot be established between the costs incurred and stewards designated under the Consolidated MHSW Program Plan and required to pay fees.

4.0 Baseline MHSW Management System

The Program Request Letter requires that the Consolidated MHSW Program Plan provide a description of any material diversion and recovery infrastructure in place. Since the start of the Phase 1 MHSW Program Plan, Stewardship Ontario has established:

- An extensive and informative web site to educate stewards, municipalities, consumers, collectors, transporters and processors on how to participate in the program;
- 103 Municipal Shared Responsibility Agreements in order to provide for Phase 1 collection services;
- Over 313 commercial collection sites that are able to collect automotive MHSW, paint and/or batteries from the public;
- An incentive system to promote the collection and processing of automotive MHSW that is integrated with the existing automotive waste management system;
- Processing contracts:
 - Two for the recycling of paints and coatings and their containers,
 - Two for the recovery of propane contents and the recycling of the containers, and
 - One for primary battery processing;
 - Twenty one for the processing of automotive related wastes
- A basic tracking and monitoring system to track collection and diversion activities of Phase 1 MHSW;
- A registration and approval process for collection sites, transporters and processors;
- A payment system for incentives to automotive MSHW transporters and processors who service an estimated 7,500 auto MHSW generators; and
- A Waste Management System Certificate of Approval for automotive MHSW issued to Stewardship Ontario by the Ministry of the Environment for approved auto MHSW generators to act as public collection sites.

The sections that follow describe the current municipal and non-municipal MSHW collection and management infrastructure.

4.01 Collection

4.01.1 Municipal Collection

Currently, municipally-delivered hazardous or special waste programs represent the largest component of the Ontario MHSW collection infrastructure. With a few exceptions, these

programs provide residents, and in some cases small IC&I companies, with access to diversion opportunities for the full range of designated MHSW under the Consolidated MHSW Program Plan.²

The level of access to MHSW collection services provided by Ontario municipalities ranges from annual or semi-annual single-day collection events, to year round depots that close only on statutory holidays. Although year round depots are located in many areas of the province, the majority are located in south west and central Ontario, with the greatest concentration in the Greater Toronto Area (GTA). Outside of the GTA, many depots operate seasonally (for example, May through October). A number of depot-based programs, particularly those that serve large geographical areas, supplement their depot collection operations by hosting single day events.

a) Permanent MHSW Depots

A permanent depot is a permitted facility which typically operates all year long and accepts a broad range of MHSW. It is either operated by a municipality or a private waste management company contracted by the municipality and can be located in an industrial zone, at a landfill, at a transfer station or as a component of a community recycling centre. All permanent depots have common characteristics such as trained staff, fencing, secure waste storage, defined storage capacity, site signage, health and safety equipment, and spill containment. Infrastructure varies widely and can range from a simple breezeway design open on all sides with a roof for basic protection from the elements to a fully enclosed, climate controlled centre. In some cases the facility may not have a purpose-built structure and will store waste in secure walk-in containers.

Currently, the only MHSW depots that accept the full range of MHSW from consumers are those operated by municipalities. While private waste management companies may have the permits and facilities to receive a broad range of MHSW, there are no known companies operating a permanent MHSW depot for consumers on a commercial basis. Table 4.1 provides a summary of municipal seasonal and year round depots operated in 2008.

Table 4.1: Municipal Seasonal and Year Round Depots Operated in 2008

Region	Depots: open year round	Depots: open seasonally
South West	5	2
Central	29	1
East	10	16
North	11	3
Total	55	22

b) Special Event Collection Days

An event day typically involves a licensed waste management company setting up to receive MHSW in a large area such as a parking lot or public works yard. As with permanent depots, all event days will have common characteristics such as trained staff, site signage, health and safety equipment, spill containment, and traffic control. There is usually no ability to store waste overnight. The convenience of public access to an event day is determined by the mode and distance of travel required to attend the event, and the hours of operation. An important aspect of an event day is the ability to move users through the system in a timely fashion. Events have historically been held either on weekends for half or full days when organized by a municipality

² Some municipal programs operate depots that accept specific materials only – for example, batteries, propane tanks, oil.

or during a work day when an event is held by a private company for its staff. In many cases, users can experience line-ups upon arrival. Table 4.2 provides a summary of municipal events and one known commercial event held in 2008.

Table 4.2: Municipal and One Known Commercial Event Held in 2008

Region	Municipal Events	Commercial
South West	50	1
Central	111	-
East	71	-
North	20	-
Total	252	1

c) "Toxic Taxi" Collection Service

The toxic taxi service is a variation in which MHSW is collected directly from residential homes. This service is delivered by two municipalities (Toronto and Greater Sudbury) and provides direct personal access using an appointment system to arrange for pick-up. The service requires licensed vehicles, trained staff and is based at an MHSW facility which stores the waste at the end of each day. The convenience of access is determined solely by the hours that the service is operated as there is no requirement for a consumer to transport their waste to a depot or facility. Convenience may also be affected by minimum and/or maximum quantities that are accepted. Table 4.3 provides a summary of the municipal toxic taxi operations in 2008.

Table 4.3: Municipal "Toxic Taxi" Operations In 2008

Region	Toxic Taxi Services
South West	-
Central	1
East	-
North	1
Total	2

In summary, in 2008 there were 103 municipally-delivered programs in the province offering single or multiple options for collecting MHSW. Table 4.4 provides detail on the general location, program type and frequency³.

Region	Programs	Permanent Depots			One day collection events	Other (Toxic Taxi)	Total # access days ¹	Population served
		Open year round	Open seasonally	Limited materials				
S.West	21	5	2	-	50	-	1,299	1,431,062
Central	16	29	1	7	111	1	6,796	8,140,700
East	42	10	16	11	71	-	3,271	2,010,812
North	24	11	3	-	20	1	1,343	605,764
Total	103	55	22	18	252	2	12,709	12,188,338

³ Sources: MHSW Phase 1 Shared Responsibility Agreement schedules, municipal program data.

Table 4.4: Summary of 2008 Municipal Hazardous or Special Waste Programs

Table 4.4 Notes

1. Refers to the total equivalent days that the facility is open for resident use. Operating days for Toxic Taxi were calculated as 5 days/week x 52 weeks per year. Days were assumed to be 8 hours.

It should be noted that the above table does not adequately highlight the disparity in municipally-delivered MHSW program access levels across the province. With few exceptions, municipal programs serve only taxpayers in that municipality. If a local municipality does not provide an MHSW program, residents in that community have no outlet for MHSW other than any operating commercial collection sites that receive automotive MHSW, paint, fluorescent lights, sharps, pharmaceuticals or batteries.

4.01.2 Commercial and other Non-municipal Collection

The following section presents an overview of current non-municipal collection options, including return-to-retail programs, other MHSW collection locations, and commercially operated depots.

a) Return-to-Retail Programs

Return-to-retail MHSW collections generally allow a single type or limited range of MHSW to be returned to the store location. Return-to-retail sites can include privately owned stores, larger chain stores or not-for-profit organizations such as the Salvation Army or St. Vincent de Paul.

In Ontario, the following MHSW may be collected for the purposes of recycling without a Ministry of the Environment permit:

- Paints and coatings
- Common mercury containing devices (such as thermometers)
- Fluorescent light bulbs (CFLs) and tubes
- Oil filters
- Oil containers
- Antifreeze and antifreeze containers
- Batteries

To accept a wider range of MHSW products, the retailer would be required to apply for and receive Ministry of the Environment approval through the issuance of a Certificate of Approval (C of A).

Accessibility for the consumer is determined primarily by the retailer's hours of operation and location (i.e. distance to travel). While this approach provides an important adjunct, it should not be considered as an alternative to the wider range of MHSW services available through a comprehensive depot or collection event day service.

Table 4.5 provides a summary of return to retail locations that receive paints and coatings, single-use dry cell batteries and auto MHSW. These locations are comprised of all The Home Depot locations, participating RONA stores and Oil Changers and Jiffy Lube locations.

Table 4.5: Number of Return to Retail Locations That Receive Paints and Coatings, Single-Use Dry Cell Batteries and Auto MHSW

Region	Paint	Single-Use Dry Cell Batteries	Auto MHSW
South West	46	18	26
Central	89	50	14
East	36	15	1
North	13	6	-
Total	184	89	41

In addition to the 41 auto MHSW collection sites where consumers can return their automotive waste, there are approximately 7,500 locations throughout Ontario that generate auto MHSW from onsite operations. These locations are the service centres that provide oil changes and radiator services to private vehicles as well as commercial sites that manage fleet vehicles.

Figure 4.1 below illustrates a current return to retail option for paint, batteries and fluorescents.

Figure 4.1: Return to Retail Option for Paint, Batteries and Fluorescent Bulbs



It should be noted that existing MHSW stewardship organizations that have been operating in Ontario independently of Stewardship Ontario also provide specific MHSW collection services. In particular, the Rechargeable Battery Recycling Program of Canada reports that it collects rechargeable consumer batteries from some 1,902 collection sites in Ontario. Similarly, an estimated 2,863 pharmacies in Ontario accept unused medications and several accept sharps.

b) Other MHSW Collection Locations

As of June 15, 2009, an additional 90 retail locations have signalled their interest to register with Stewardship Ontario to accept a variety of MHSW and are in the process of being approved. Further, 15 waste management firms have registered to be collection sites and are being considered for approval and implementation.

Aside from those operating under the MHSW program plan, there are an unknown number of other collection programs in operation across Ontario which service and/or collect MHSW at government offices, office towers, medical clinics, factories and commercial locations including:

- Batteries collected by independent collection operators such as Raw Materials Company, Detox Environmental and the Battery Broker which are all Ontario based companies;
- A wide range of industrial, stationary and hybrid automotive batteries collected and managed directly by users, manufacturers and installers;
- 195 auto dismantlers and recyclers which remove mercury switches from automobiles under the Switch Out program under the auspices of the Canadian Vehicle Manufacturers Association and the Clean Air Foundation;
- Over 1,300 contractors and wholesalers in Ontario have registered with Clean Air Foundation's "Switch the Stat" program to collect mercury containing thermostats;
- The Take Back the Light program operated by the Recycling Council of Ontario; and
- Other retailers (such as IKEA, Mountain Equipment Co-op, etc.) that have not registered with Stewardship Ontario as MHSW collection sites.

c) Commercially Operated Return Depots

While commercial return depots do not currently exist in Ontario, there are return depots in other provinces that handle a variety of MHSW. Typically, these depots were established to handle other high volume waste streams such as waste electrical and electronic equipment (WEEE) or beverage container redemption programs. As additional WDO programs that include collection services are approved, commercially operated depot return centres could become viable business opportunities.

4.02 Transportation

As part of the Phase 1 MHSW program implementation, Stewardship Ontario has established a registration and approval process for transporters. In order to participate in the program and receive either transport incentives or be eligible to service associated municipal programs, companies must first register with Stewardship Ontario and receive approval. To date, 39 companies are approved to transport some or all Phase 1 MHSW from municipal, commercial and automotive collection sites.

More extensive information on Stewardship Ontario's registration process for transporters of Phase 1 MHSW and an overview of the current MHSW program operations and transporter requirements can be found on the Stewardship Ontario website⁴.

4.03 Processing

Stewardship Ontario has approved 30 companies to receive and process Phase 1 MHSW. Twenty-one of these companies are approved to process some or all automotive Phase 1 MHSW and another nine are approved to process other Phase 1 MHSW such as paints and coatings, solvents, batteries or pressurized containers. The list of approved processors is available on the Stewardship Ontario website⁵. More extensive information on Stewardship Ontario's registration process for processors of Phase 1 MHSW and an overview of the current MHSW program operations and processor requirements can also be found on the website.

4.04 System Performance

4.04.1 Performance of Phase 1 materials

⁴ See http://www.stewardshipontario.ca/mhsw/transporters_processors/transporters_processors.html

⁵ See http://www.stewardshipontario.ca/mhsw/transporters_processors/registered_lists.html

Table 4.6 below indicates the quantities of Phase 1 MHSW material collected by the following channels: municipal, automotive, and retail.

Retail channel: To date, Stewardship Ontario has established 184 paint and 89 battery collection sites. This service is currently provided by RONA and The Home Depot. The quantities identified in the following table are a combination of calculated tonnages based on transport containers and actual weights.

Automotive Channel: There are currently 41 MHSW collection sites that accept automotive waste from consumers (i.e. Do-it-Yourself). Stewardship Ontario estimates that approximately 7,500 locations (i.e. service centres) participate in the current MHSW Phase 1 program. The quantities of automotive material collected reflect collection from DIY and service centres.

Note: In the following two tables – Table 4.6 and Table 4.7 – two different sets of data were used to generate the collection numbers below. Stewardship Ontario receives collection data from two different sources:

1. Municipalities report MHSW collections – on which they base their claims for post-collection reimbursement - via the MHSW Quarterly Reporting System, maintained by WDO and modeled on the WDO Datacall system.
2. Waste management service providers report collection across all channels (municipal, commercial, and automotive) via the Material Tracking System (MTS) maintained by Stewardship Ontario.

Claims filed through the MHSW Quarterly Reporting System are verified against reported collection on the MTS. As evident from the following tables, however, quantities reported on one system vary greatly when matched against quantities reported on the other system. Stewardship Ontario is currently working on reconciling these variances. Until such time, both sets of data are presented in the interest of transparency.

In Table 4.6, the Municipal Collection data is from the MHSW Quarterly Reporting System, while the automotive and retail collection data is from the MTS. In Table 4.7, the quantities collected and transported, and processed are from the MTS.

Table 4.6: Phase 1 MHSW material collected under the Phase 1 MHSW Program Plan

Phase 1 material	2007	July 2008 to March 2009			2008/09 Total (Tonnes)
	Municipal Channel (Tonnes) Source: 2007 Datacall ¹	Municipal Collection (Tonnes) ² Source: MHSW Quarterly Reporting System	Automotive Channel (Tonnes) Source: MTS	Retail Channel (Tonnes) Source: MTS	

Paints and Coatings ³	6,242	2,711	-	781 ⁴	3,492
Solvents	1,266	684	-	-	684
Oil Filters ⁵	302	39	5,090	-	5,129
Oil Containers	-	-	258	-	258
Single Use Dry Cell Batteries	220	175	-	5	180
Antifreeze	161	94	691	-	785
Antifreeze Containers	-	-	8	-	8
Pressurized Containers	686	396	-	-	396
Fertilizers	186	38	-	-	38
Pesticides	53	19	-	-	19
Total	9,116	4,156	6,047	786	10,989

Table 4.6 Notes:

- Refers to Phase 1 materials only. Because the 2007 Datacall reporting categories did not exactly match the Phase 1 material categories, assumptions were made to estimate the quantities of Phase 1 material collected by municipalities in 2007
- Municipalities report quarterly via the MHSW Quarterly Reporting System administered by Waste Diversion Ontario. The number of municipalities (out of a total of 103 with whom Stewardship Ontario has shared responsibility agreements) reporting for each quarter as of May 8, 2009 is: Q3 2008 - 88; Q4 2008 - 60; Q1 2009 - 19. Large municipal programs that have not yet reported their information for Q1 include Region of Durham, Essex-Windsor, City of Hamilton, City of Kingston, City of Ottawa, Peel Region, City of Toronto and Region of York
- Note that aerosols are included in all quantities for Paints & Coatings.
- The quantity of paint that has been collected through the retail channel is greater than what is shown here, as one of the participating retailers has not yet filed its collection numbers.
- An unknown number of oil filters were diverted from disposal in Ontario before launch of the Phase 1 MHSW program.

Table 4.7 presents further information on the performance of Phase 1 materials by comparing the quantities that have been collected, as reported by waste management service providers, to the quantities that have been supplied into the market, as reported by stewards.

Table 4.7: Phase 1 Material Collection as reported by Service Providers through the Material Tracking System (MTS) and Calculated Diversion Performance¹

Material Group	Total Sales into Ontario Market (Tonnes) Source: Stewards' Reports	Estimated Available for Collection ² (Tonnes) Source: Phase 1 assumptions	Reported Collected and Transported (Tonnes) ³ Source: MTS	Estimated Collection Rate ⁴	Reported Processed via MTS (Tonnes) ³ Source: MTS	Estimated Recycling Efficiency Rate ⁶	Estimated Recycling Performance Rate ⁷
Paints & Coatings ⁵	78478	7848	2847	36%	3401	43%	119%
Solvents	2862	1002	1600	160%	1	0.1%	0%
Oil Filters	8535	10823	5091	47%	2235	21%	44%
Oil Containers ⁸	2211	2211	265	12%	253	11%	95%

Material Group	Total Sales into Ontario Market (Tonnes) Source: Stewards' Reports	Estimated Available for Collection ² (Tonnes) Source: Phase 1 assumptions	Reported Collected and Transported (Tonnes) ³ Source: MTS	Estimated Collection Rate ⁴	Reported Processed via MTS (Tonnes) ³ Source: MTS	Estimated Recycling Efficiency Rate ⁶	Estimated Recycling Performance Rate ⁷
Single-Use Dry Cell Batteries	5231	5231	246	5%	20	0.4%	8%
Antifreeze ⁸	13578	12692	690	10%	92	0.7%	13%
Pressurized Containers - Non-Refillable	440	440	113	26%	56	13%	50%
Pressurized Containers - Refillable	980	294	200	68%	173	59%	87%
Fertilizers	1245	22	110	506%	0	0	0%
Pesticides	194	49	83	171%	0	0	0%
Total			11,143		6,231		

Table 4.7 Notes:

7. All data are for the period spanning July 2008 (program inception) until the end of March 2009.
8. The "available for collection" quantities were estimated using the assumptions used in the Phase 1 MHSW Program Plan for each material.
9. Waste Management Service Providers report via the Material Tracking System (MTS) administered by Stewardship Ontario. To date, the number of service providers (out of a total of 39 approved transporters and 30 approved processors) reporting for each quarter is: Q3 2008 - 30 transporters, 15 processors; Q4 2008 - 27 transporters, 15 processors; Q1 2009 - 25 transporters, 12 processors
10. The collection rate expresses the ratio of MHSW reported collected to that of MHSW estimated to be available for collection. Availability for collection was determined by utilizing steward reported sales into Ontario and applying the Phase I MHSW Program Plan assumptions governing availability for collection figures. Several possible explanations exist for the rates exceeding 100%: a) success of program P&E efforts has encouraged residents to return product stored over the course of several years; b) Phase I Plan assumptions underestimated the availability for collection of the materials; c) the ban on sale of some pesticides and province-wide communications efforts encouraging consumers to return unused materials to MHSW depots; (d) a combination of the above.
11. The recycling rate as a percentage of what is available for collection for paints and coatings exceeds the collection rate due to the fact that paint collected commercially has been reported online as processed, but has yet to be reported online as collected. It is anticipated that this situation will be corrected shortly.
12. The Recycling Efficiency Rate is measured as a percentage of the quantity of material available for collection and expresses the ratio of MHSW processed to that of MHSW assumed to be available for collection
13. The Recycling Performance Rate is measured as a percentage of the quantity of material collected and expresses the ratio of MHSW processed to that of MHSW collected.
14. As antifreeze containers are not handled separately from oil containers during end-of-life management, collected and diverted quantities of antifreeze containers are included under the category of oil containers despite the fact that sales of antifreeze containers are included under category the antifreeze.

The above calculations demonstrate in part the difficulties inherent in trying to calculate the percentage of materials diverted for recycling against theoretical estimates of what is available for collection.

4.04.2 Performance of other (non Phase 1) materials

Table 4.8 below indicates the quantities of non Phase 1 materials collected through the municipal channel in 2007 according to the WDO's Datacall, as well as through other channels

Table 4.8: Quantities of Non-Phase 1 MHSW Material Collected By Municipalities and by Other Channels

Material Group	Quantities collected by municipalities (2007 Datacall) (tonnes)	Quantities Collected through Other Channels ⁴ (tonnes)	Total Quantities Recycled (tonnes)
Flammables	1,907	-	-
Corrosives	503	-	-
Toxics ¹	605	-	-
Reactives ²	<1	-	-
Leachate Toxic ³	158	-	-
Rechargeable Batteries	90	125 ⁵	75 ⁶
Aerosol Containers	354	2550 ⁷	2850
Portable Fire Extinguishers	19	-	16
Fluorescents – User Removed	71	14 ⁸	85
Fluorescents – Embedded in Electronics	-	5	5
Pharmaceuticals	42	250 ⁹	-
Sharps including syringes	28	175 ¹⁰	-
Switches that Contain Mercury – Automotive	-	0.08 ¹¹	0.08
Switches that Contain Mercury – White Goods	N/A	0.24 ¹²	0.24
Thermostats that contain mercury	0.049	1.33 ¹³	1.379
Total	3777	3121	3033

Table 4.8 Notes:

15. The value reported here for toxics is the sum of the estimated amounts of non Phase 1 paints and coatings, fertilisers and pesticides. Under the Consolidated MHSW Program Plan, it is assumed that all toxic materials collected by municipalities are captured under an existing category (i.e. paints, pesticides, or fertilizers)
16. Estimate only, actual quantity not known
17. The value reported here for leachate toxic is the sum of the Datacall category ballasts/transformers and the estimated amount of fertilizers that would potentially meet leachate toxic criteria. Under the Consolidated MSHW Program Plan, all fertilizers collected by municipalities will be assumed to meet the expanded definition of fertilizers.
18. The Baseline Year for the Other Channels is the most recent year for which information was available
19. Reported quantities of rechargeable batteries collected through RBRC's program in 2008. In effect, a much greater quantity of batteries are collected through the Other Channel (e.g. private battery recycling initiatives and commercial sector collection programs)
20. The actual quantity of batteries recycled is not available. Estimate obtained assuming 60% recycling efficiency.
21. Quantity of aerosol containers collected through the Blue Box system in 2007
22. Estimated quantity of fluorescents to be collected through the retail channel for 2009, based on current monthly performance
23. Estimated quantity of pharmaceutical waste collected from pharmacies in 2008, based on information provided by SteriCycle
24. Estimated quantity of sharps and syringes waste collected from pharmacies in 2008, based on information provided by SteriCycle
25. Estimate derived from total quantity of automotive switches collected nationally under the Switch the Stat, pro-rated yearly (2008) for Ontario
26. Estimate derived from the total quantity of white goods switches collected through the Great Refrigerator Roundup Program, and pro-rated to 12 months
27. Quantity of thermostats collected through the Switch the Stat program from April 1st, 2008 to March 31, 2009.

4.05 Current MHSW Management Practices and Opportunities for Increased Diversion

Information on current MHSW management practices and opportunities for increased diversion was gathered from municipalities, service providers and downstream processors compiled through Phase 1 implementation activities and general industry knowledge.

As reported in the Phase 1 MHSW Program Plan, many service providers have indicated that they were prepared to expand existing capacity if there was sufficient volume of diverted materials available. Since commencement of the Phase 1 MHSW Program, the following developments in the private sector have taken place:

- Some transporters are checking the quality of consumer solvents for the possibility of diversion;
- A municipal transporter is investigating the diversion of returned pesticides and fertilizers through a larger scale local reuse initiative for recreational soccer pitches;
- An existing paint processor is expanding its processing capacity and is expected to double its production capacity in 2009;
- Current approved transporters and processors are undertaking market research into establishing additional processing capacity for a variety of MHSW to be managed under the SO program.

While recycling options currently exist for some MHSW, some types and quantities of these wastes will continue to require disposal. For example, solvents collected from residents since MHSW Phase 1 implementation are not of sufficient quality to be refined into new solvent, unlike commercial and auto service sources. In these instances, waste solvents undergo one final step for end of life management, blending for use as fuel (which is considered disposal under the MHSW Program Plan). In all cases, where diversion opportunities exist, MHSW is segregated and bulked properly in order to meet end market specifications. MHSW that cannot be recycled or is not of sufficient quality to meet end market specifications is directed to disposal.

Table 4.9 provides information on the management practices for MHSW that is currently being collected.

Table 4.9: Current MHSW Management Practices (both Phase 1 and non-Phase 1 MHSW)

Material Group	Current MHSW Collection Channels	Current Management Practices	Notes
Flammables	All municipal programs	Less than 1% is reused: some product types set out for “use it up/reuse” programs at participating municipal sites; Less than 1% is recycled: predominantly blended for fuel; Limited recycling of containers – majority are landfilled.	Many flammables are solvents; Over 20 approved Phase 1 solvent transporters; Five approved for disposal of solvents.
Corrosives	All municipal programs	Less than 1% is reused: some product types set out for “use it up/reuse” programs at participating municipal sites; Neutralised, solidified and landfilled or sent to water treatment facilities; Containers landfilled.	Many Phase 1 service providers licensed to transport and process for disposal.

Material Group	Current MHSW Collection Channels	Current Management Practices	Notes
Toxics	All municipal programs	Less than 1% is reused: limited reuse: some product types set out for "use it up/reuse" programs at participating municipal sites; Various depending on waste type: some incinerated, some to secure landfill.	Many Phase 1 service providers licensed to transport and process for disposal.
Reactives	All municipal programs	100% disposal; Various treatments depending on waste type.	Many Phase 1 service providers licensed to transport and process for disposal.
Leachate Toxic	3 municipal programs	100% disposed; PCB ballasts incinerated; Other leachate toxic wastes: various treatments.	Three facilities permitted for ballast destruction; metal recovery from the ballasts.
Batteries (portable consumer type)	All municipal programs; Return to retail programs for single-use drycell batteries	As of July 1 st , 2008, single-use drycell batteries collected under Phase 1 Program are diverted to recycling; Secondary batteries collected under RBRC program are diverted to recycling.	One recycling facility approved under Phase 1; other battery processing capacity exists based on past RFP process for which several responses were received.
Pressurised Containers	All municipal programs; Return to retail programs	Contents variously vented, reclaimed, incinerated; Refillable: gas evacuated, containers retested and refilled or recycled as scrap metal; Some single use containers recycled as scrap metal; Some cylinder types may be returned to supplier e.g. acetylene, oxygen; Over 99% of refillable pressurized cylinders recycled when no longer suitable for refilling.	Consumer cylinders: two approved processors under Phase 1 for 'propane' recovery, no other gas recovery service provider is known. Industrial cylinders: closed loop – most waste management companies have access to recyclers for the large cylinders. Freon tanks sent for reclamation (one company).
Aerosol Containers	All municipal programs	Limited reuse: set out for "use it up/reuse" programs at participating municipal sites; <1% reuse, rest of contents is disposed; Majority of aerosol contents blended for fuel; Metal containers recycled; Plastic caps disposed.	No known recycling processors for the contents of containers, all metal containers are recyclable upon evacuation.
Portable Fire Extinguishers	19 municipal programs	These are handled mostly for disposal. The containers are sent for metal reclamation (steel & aluminum, some brass); Halon can be reclaimed.	Contents of the dry chemical not recycled (although potential use for those that contain ammonium phosphate as fertilizer). One company licensed for halon reclamation.

Material Group	Current MHSW Collection Channels	Current Management Practices	Notes
Fertilizers	All municipal programs	Limited reuse: set out for “use it up/reuse” programs at participating municipal sites; small proportion of fertilizers given to sod farms, other agricultural operations, etc.; Majority of fertilizers and containers (>99%) are landfilled.	Several companies licensed to transport; no known recycling processor.
Fungicides, Herbicides, Pesticides	All municipal programs	Incinerated; secure landfill; Containers landfilled.	Approximately 20 approved transporters under Phase 1. No approved recycling/reuse processors at this time.
Paints and Coatings - Phase 1	All municipal programs; Return to retail programs.	Reuse: Paints and coatings set out for “use it up/reuse” programs at participating municipal sites (~5% reused); Majority of paints (90%) are recycled back into paint; Limited recycling (<5%) for some stains and coatings ; Non-recyclable latex paints and coatings are solidified and landfilled; pilot projects on use of solids in concrete and finishes; Non-recyclable alkyd paints are blended for fuel; Majority of metal containers are recycled; Majority of non-metal containers are landfilled.	Two licensed operating facilities recycle paints and coatings with diversion rates exceeding 80% of container contents. Both companies are able to recycle empty metal containers.
Lubricating Oil Containers	Most municipal programs; A contract with Jiffy Lube (39 sites) and Pro Oil Change (2 sites) for collection of oil containers	Oil containers at municipal operations typically are returned containing oil which may be bulked. In the past, oil containers were typically disposed; municipal operations are transitioning to diversion with phase 1 program implementation; Automotive channel oil containers are transitioning to diversion options.	Eight approved processors for Phase 1 oil containers.
Antifreeze	All municipal programs; a contract with Jiffy Lube (39 sites) and Pro Oil Change (2 sites) for collection of antifreeze	Antifreeze at municipal and automotive operations has historically been bulked and sent for recycling subject to quality control.	Four approved antifreeze recycling processors under Phase 1.

Material Group	Current MHSW Collection Channels	Current Management Practices	Notes
Oil Filters	All municipal programs; a contract with Jiffy Lube (39 sites) and Pro Oil Change (2 sites) for collection of oil filters	Oil filters from municipal and automotive operations are typically drained to recover oil then sent for metal recycling; Some operations may send oil filter without draining to recyclers providing service to recover oil.	Over 35 approved transporters and 11 approved processors under Phase 1.
Fluorescent lights and tubes	60 municipal programs; Several Return-to-Retail programs (e.g. Rona, Home Depot, IKEA) RCO's Take Back the Light program	Mercury recovered, glass and metal recycled; Technology exists for on-site 'tube' crusher to recover mercury and glass for disposal and metal for recycling which may be used by general facility operations (subject to number of lights).	One recycling facility in Ontario One additional facility consolidates and ships to Pennsylvania for recycling.
Pharmaceuticals	72 municipal programs; An estimated 2860 return to retail locations (90% of total pharmacies) across Ontario;	Incineration/landfill.	Several transporters permitted to transport.
Sharps including syringes	32 municipal programs; Return to retail (pharmacy) programs	Autoclave and landfill; Incineration.	Several Phase 1 transporters and processors are licensed to manage sharps for disposal.
Switches that Contain Mercury	4 Municipal programs; Clean Air Foundation/CVMA Switch Out Program	Mercury reclaimed.	One Ontario based recycling facility.
Measuring Devices that Contain Mercury	Municipal programs (number not available); Clean Air Foundation Switch The Stat program	Mercury reclaimed.	One Ontario based recycling facility.
Solvents - Phase 1	All municipal programs	Limited reuse for some solvent product types: set out for "use it up/reuse" programs at participating municipal sites; Very limited recycling (<1%); Most sent for fuel blending; Metal containers recycled; non-metal containers landfilled.	Five facilities approved for management of solvents for fuel blending under Phase 1; one of these may be able to recycle with better segregation of solvent types.

5.0 Making MHSW Collection More Accessible & Overall Program Approaches

The MHSW Program Request Letter states that the program shall include provisions that aim to expand the availability of MHSW collection sites to make diversion more convenient and accessible to all Ontarians, including high-density urban areas, rural and northern Ontario. Specifically, in order to increase access to collection for consumers, the program shall include a range of collection options including but not limited to: residential collection, residential collection arranged on an individual basis ('toxic taxi'), incentives to encourage material recovery, and retail take-back programs.

5.01 Accessibility Principles

The guiding principles for the Consolidated MHSW Program Plan's accessibility strategy include:

11. Scope: maximize opportunities to receive the widest possible range of MSHW at collection points.
12. Proximity: minimize the distance that the generator must travel to divert obligated MHSW from disposal.
13. Frequency: provide collection services which reflect the life span of the obligated products;
14. Coverage: provide collection services which meet the needs of all Ontarians.
15. Cost Effectiveness: meet program collection and recycling targets in the most cost effective manner possible.
16. Incorporate all program costs: full program costs should be borne by the stewards and users of the obligated products.

One of the underlying principles of the Consolidated MHSW Program is to maximize opportunities to accept the widest range of obligated MHSW in a manner that is convenient and accessible for all Ontarians – including access to service for high density urban, rural and northern Ontario. To do this, the program, wherever possible, will operate in conjunction with the current municipal waste management infrastructure and with the evolving Waste Electrical and Electronic Equipment (WEEE) collection system. The program will promote awareness through comprehensive Promotion and Education (P&E) programs that address the full range of MHSW. Ontarians will be educated on what MHSW is included in the program, collection options available and where approved collection points are located.

Collection opportunities should be reasonably convenient to generators of MHSW whether they are residents or small quantity IC&I establishments. The program will deliver collection events managed directly by Stewardship Ontario through a regional service provider delivery model. In making collection service more convenient for generators, the program will minimize unnecessary travel and thus personal vehicle use. For example, in high density urban centres and housing areas where car ownership is low and travel distance to existing collection points is high, service will be delivered directly to householders in that community.

To make the MHSW program as convenient and accessible as possible to all Ontarians, Stewardship Ontario intends to provide service through an integrated program of:

- Permanent depot facilities
- Collection events
- Depot In a Box
- Return to Retail
- Toxic Taxi

Underscoring the program's accessibility principles is the requirement to view access from the perspective of service frequency. Collection services will be calibrated to include products with highly variable life-spans. These include short life consumable products, longer life durable products, and obsolete products (some with very long life spans). Handling and storage capacity available through collection events and Depot In a Box will be sized to handle both high volume materials (i.e. paints) and less frequent, long-life materials (i.e. mercury containing devices).

The program should provide a reasonable opportunity to divert MHSW rather than dispose of it in local landfills or down the drain. Stewardship Ontario will test and adapt its range of collection services to meet the needs of individual communities with highly variable needs. Given the differing patterns of consumption and disposal in each region of the province, not all communities require permanent operating depots, but the challenge is to identify a level of service that maximizes diversion without sacrificing cost efficiency. To that end, a revised Consolidated MHSW Program Plan target of 400 Stewardship Ontario-managed collection events and 110 Depot In a Box events will be scheduled and implemented in Year 1 to provide access in areas of the province that do not currently experience sufficient service through MHSW depots, events or return to retail options. A year-end analysis of the success and efficiency of these events will enable Stewardship Ontario to more effectively allocate collection resources in subsequent years of the program.

The MHSW Program must be efficient and cost effective. In order to achieve these goals, Stewardship Ontario intends to organize the program from a regional perspective and share resources with other WDO approved programs. Some examples include:

- Establishing collection standards that minimize dependence on collection sites with limited storage capacity. The collection standard will require a pick up frequency of once per week or longer based on the projected quantity of MHSW to be received at each location;
- Developing Stewardship Ontario branded and directly managed services, increasing MHSW service capacity and establishing common storage and shipping containers according to common characteristics shared across waste classes;
- Developing regional partners and service contracts to add MHSW service capacity to existing businesses and reducing the need to service the entire province from the Golden Horseshoe region;
- Integrating activities such as promotion and education, material tracking and reporting and other shared services with other WDO approved programs.

5.02 Accessibility Strategy and Approach

As noted above, a variety of tools will be required to improve accessibility and increase program performance. However, since circumstances vary throughout the province, it is not yet clear which of these tools will be most effective in improving program performance in different areas of the province.

The following sections provide an overview of how Stewardship Ontario currently foresees the rollout of the Consolidated MHSW Program Plan, including the various collection strategies that will be employed in the first year.

Program performance will be evaluated on an ongoing basis as services are expanded and new innovations are introduced, in order to retain the best aspects of the existing system, identify the most effective innovations, replicate these as appropriate throughout the province, and ensure that program performance improves continuously and cost-effectively.

Stewardship Ontario is confident that its accessibility strategy will be effective in achieving program targets, relying on a collective desire to “do the right thing”. Consumer participation will continue to grow as barriers are eliminated and services are made more convenient. Private sector commitment to Corporate Social Responsibility will help to ensure that retailers and other commercial entities continue to see a benefit in offering collection services to Stewardship Ontario, particularly if they receive due recognition for their efforts.

A collection incentive for automotive and white good mercury switches has been budgeted for the first year of the plan. Judicious use of other targeted collection incentives for consumers (such as loyalty rewards) and the private sector (such as material bounties) will also be considered in future if necessary to overcome barriers to program performance.

The segments of the Ontario population that are considered to lack adequate MHSW collection service under the program are presented in Appendix 3. The map in Appendix 3 identifies the areas where no known collection service exists.

5.02.1 Municipal and Private Sector MHSW Depot Collection Channel

Municipally-administered year-round and seasonal depots are the backbone of Ontario MHSW collection programs and it is anticipated that these depots will continue to play an important role in MHSW service delivery. To date, municipal depots have generally limited access only to residents of their own communities⁶, as program costs have been borne by the municipal tax base. With the advent of the Consolidated MHSW Program Plan and the requirement to address collection costs, going forward the opportunity exists for:

17. Municipalities to provide MHSW collection services for all designated wastes under the program to any consumer (irrespective of where they live or whether it is residential or IC&I MHSW); and,
18. Private waste facilities to expand into the depot collection service business area for all designated waste in the MHSW program.

An advantage of this latter approach is that private sector depots are typically approved to receive waste from larger areas than a single municipality and can therefore be accessed by residents and/or small quantity IC&I from a much broader geographic area. Depots, whether municipally or privately operated, provide full service (i.e. all MHSW) access on a regular basis, and therefore appear to be most effective for mid to larger sized communities (as opposed to smaller communities). Table 5.1 below shows the current and projected number of permanent waste depots.

Table 5.1: Current and projected number of permanent waste depots

	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Number of permanent waste depots	100	104	110	120	135	150

⁶ There are some exceptions to this – for example, the City of Orillia HHW depot is open to residents of surrounding townships, and the City of North Bay has a similar arrangement with some of its neighboring communities.

Increase	-	4	6	10	15	15
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The increase in depots will be accomplished by working with existing private waste facilities and municipalities to establish new depots. The projected variable increase year over year is due to a number of factors. In the first year of the consolidated program, Stewardship Ontario will solicit new depot service providers. Existing facilities may require amendments to their current Ministry of the Environment Certificate of Approval to reflect changes in operation, service area and other modifications. While private service providers and municipalities may have the infrastructure in place, the certificate of approval process is an important and necessary component to enable the system to operate. Securing four appropriate depot locations and completing the approvals process for these four depots may require significant effort and time. However, once these four new depots are in place, it is anticipated that the experience gained will help to streamline the process and expedite establishing additional facilities. Therefore, a steeper growth curve is projected for subsequent years.

Considerations in determining geographic priority for establishing permanent depot locations will include, but are not limited to the following:

- Northern cities and communities requiring year round access
- Existing unused permanent depots such as the City of Ottawa Trail Road Facility
- Urban centres without permanent depots such as the City of Sarnia
- Large urban centres with only one depot
- Counties and population areas without permanent depots such as Bruce County and areas of south west and eastern Ontario

Stewardship Ontario appreciates that municipal and private sector participation in this program is voluntary, and that attracting municipalities and private companies as willing service providers will be important to the success of the MHSW Consolidated Program. Stewardship Ontario also recognizes that it will therefore need to offer a compensation package that is financially attractive. In considering this issue during the development of the Consolidated MHSW Program Plan, Stewardship Ontario has determined that the wide variety of conditions faced by individual municipalities and private companies makes it impossible to offer a compensation package that could be universally applied to all collection sites and the most appropriate service solution must therefore be tailored to local circumstances.

Stewardship Ontario is planning to construct a compensation package that promotes improvements and financially rewards service providers for superior accessibility and performance. However, due to the overlapping objectives of the program (e.g. reduction vs. reuse vs. recycling) and the need for geographic accessibility, a compensation package based solely on paying collection service providers on a weight or volume collected basis has been rejected.

Instead, Stewardship Ontario intends to work with individual municipalities and private companies to determine the nature and type of services that are appropriate to serve the local marketplace (such as location, hours of service, time of service, convenience. etc.), and determine the form of compensation (such as a per-hour compensation rate) that both Stewardship Ontario and the participating collection site operator consider financially attractive.

In addition, Stewardship Ontario intends to encourage collection service providers to adjust their service offering (such as operating hours) to ensure that these facilities represent a more viable alternative for working families and others unfamiliar with or unaccustomed to travelling to waste facilities. Including a premium rate for “Preferred Accessibility” in the compensation offer will be integral to this effort. Table 5.2 below presents an example of “Preferred Accessibility” based on hours of service. The provision of preferred accessibility will not be a requirement for collection

service providers, rather the compensation offered to service providers will reflect the level of accessibility offered by the service provider.

While studies have suggested that to date depots operating with extended afternoon hours have not promoted greater participation, the long-term success of these facilities will depend on attracting consumers who do not currently travel to municipal waste facilities. Accordingly, further public survey research is being conducted to identify and overcome barriers to increasing use of these facilities (see section 5.5 – Promotion and Education). This research will inform Stewardship Ontario’s service expectations for depot operators.

Table 5.2: Preferred Accessibility Hours Example

Days	Preferred Operating Hours	Maximum Preferred Hours
Monday to Friday	6:00 a.m. to 8:00 a.m. 4:00 p.m. to 9:00 p.m.	6 per weekday
Saturday, Sunday	Any	10 per weekend

In preparation for this revised approach to collection service delivery, Stewardship Ontario will begin the process of transitioning to full program responsibility with those municipalities that have already entered into a shared responsibility agreement with Stewardship Ontario.

These agreements allow for the assignment of current waste collection, transportation and processing contracts to Stewardship Ontario. Stewardship Ontario will likely begin approaching selected municipalities in the summer of 2009 to discuss the transfer of transportation and processing services to Stewardship Ontario, and (pending approval by the Minister of the Consolidated MHSW Program Plan) will at this time explore potential terms for collection services.

In preparation for these discussions, Stewardship Ontario encourages each municipality to review its unique circumstances – the accessibility and quality of current facilities and services, cost structure, resident behaviour and expectations – and consider the terms under which it would be open to providing collection services on behalf of Stewardship Ontario to residents and small quantity IC&I businesses in their population area.

At the same time, as part of Stewardship Ontario’s strategy to augment program accessibility, private sector waste management companies that currently operate approved facilities or may consider operating new facilities will be approached in order to explore the terms under which they might be interested in providing collection services.

It is anticipated that the following points will make up the components of a contract:

- Fixed-period Term of Agreement and Amendments (e.g. 5 Year)
- Work scope
- Performance measures
- Promotion and education
- Current collection services
- Future improvements
- Collection performance standards
- Staffing and training requirements
- Financial arrangements
- Reporting requirements
- Regulatory and compliance requirements
- Indemnity and insurance
- Dispute resolution
- Termination;

- General provisions.

5.02.2 Collection Events

Traditional MHSW collection events typically cover all MHSW and can be considered a “turnkey” option for providing a day or two of access to MHSW collection. They can be used alone or in addition to permanent depots to provide access. Events will continue to be used in order to increase coverage and frequency of access across the province. The use of consolidation centres, additional trucking services, regionally located trained staff, etc., will be developed in order to stage the event and haul material in a cost efficient manner. A key change in the delivery of the event will be to optimize the supply chain by coordinating and splitting out services for empty lab pack delivery, MSHW collection and MSHW transport. It is anticipated that over time, significant cost savings will be achieved for province-wide delivery of collection events.

Stewardship Ontario will plan for, and develop a coordinated regional schedule of events. Stewardship Ontario will welcome the participation of municipalities in these events, and will be contacting municipalities that currently offer event services in advance to gauge their interest and to determine their preferred level of involvement. A key challenge with implementing the mobile events will be establishing and servicing new communities that have never held an event or had any access to an MHSW program. These include areas in Northern Ontario along Highway 11 north of North Bay, communities on or near the north shore of Lake Superior, communities in north western Ontario, and in Unorganized Territories operated under the Ministry of Natural Resources Policy PL.3.04.01: MNR Waste Management Activity. The main obstacle to overcome will be in managing the anticipated volumes of MHSW that currently are being stored in homes. Other challenges include ensuring timely service at an event to avoid long delays for those wishing to participate and locating events with consideration of travel distances in remote areas.

Table 5.3 provides a summary of the Consolidated MHSW Program Plan target number of collection events to be held over the first five years of the program. The locations of these collection events will be coordinated based on the locations of other MHSW collection services.

Table 5.3: Mobile Collection Events

Current (2009)	Year 1	Year 2	Year 3	Year 4	Year 5
252	400	425	450	475	500

The increase in events will be accomplished by tendering for services on a regional basis and, as noted previously, in cooperation with municipal programs. In Year 1, the major obstacle is to ensure there is system capacity to provide an additional 148 events over the baseline of 252. This obstacle will be exacerbated if those municipalities that have staffed events in the past do not continue this service as there are a limited number of companies with the required mobile permits to operate these events. In order to mitigate this risk, Stewardship Ontario will issue a request for expressions of interest to municipalities and private waste companies in order to gauge the time required to increase system capacity to provide these mobile collection event services.

Considerations in determining geographic priority for establishing collection events will include, but are not limited to, the following:

- Northern cities and communities that have never had service;
- Population areas on the north shore of Georgian Bay and proximal to Algonquin Park that have never had service; and
- Continuing service in existing collection event areas while balancing the number of events with permanent depots.

5.02.3 Depot in a Box (DiB)

A “Depot in a Box” (DiB) is a new concept that has not yet been tested in Ontario. It is essentially a mobile depot which can function year-round and accepts a broad range of MHSW. Unlike a toxic taxi and event day, the flexibility of the DiB is enhanced by the ability to set up a portable unit which opens and expands to create greater service and storage space. This approach can be used to target specific areas linked to a request for service in communities with a high population density and also potentially in remote communities. In its most sophisticated form, consumers could request this service to come to their area through the existing www.dowhatyoucan.ca website, thereby reducing the need for personal vehicle use and meeting the need for MHSW collection services exactly where there is demand for it. Figure 5.2 below provides an example of a depot in a box from Austria.

Figure 5.1: Depot in a Box seen at the Mirabelle Platz, Salzburg, Austria



Upon submission of the Consolidated MHSW Program Plan, Stewardship Ontario will oversee the development and design of an appropriate unit design for the revised program. Upon Plan approval, Stewardship Ontario will commission the production of a number of units which will be tied to actual program revenues and the success achieved in initial program trials. Depending upon the unit production schedule SO will deploy the unit in Year 1 using contracted service providers with qualified collection crews.

While it is anticipated that this approach will be primarily used for high density urban residential areas, the concept will be tested in northern and rural areas as well. Some benefits of this system are that:

- Containers can be dropped off in advance of an event or collection period;
- Containers can be closed and sealed after the event and then picked up the next day or a few days later, lowering operating costs;
- Staff teams can be regionally based;
- The units can be painted with Stewardship Ontario branding and messaging thereby extending the communications reach of the program.

Collected waste will be transported to regional consolidation centres for greater efficiency. The northern depot in a box will make efficient use of the same type of waste management containers (roll off boxes) and transport equipment – for greater flexibility of the system and consistency of messaging and branding.

The following table provides a summary of the Consolidated MHSW Program Plan projected target DiB events to be held over the first five years of the program. The locations of these

events will be coordinated based on the locations of other MHSW collection services. A target of 110 DiB events has been set for Year 1 to thoroughly assess the functionality of this approach and unit. Upon review and analysis, this option may require the modification or addition of units. The number of DiB events in subsequent years will be set toward the end of Year 1 of the approved consolidated program once consumer acceptance and operational effectiveness are determined.

Table 5.4: Number of Depot In a Box Events

Current	Year 1	Year 2	Year 3	Year 4	Year 5
0	110	TBD	TBD	TBD	TBD

Considerations in determining the geographic priority for establishing Depot In a Box events will include, but are not limited to, the following:

- Urban locations with high density population centres such as multiple high rise complexes, and
- Northern cities and/or communities with low populations and a common focal point between population areas.

5.02.4 Return to Retailer (RtR)

Return to retail options are currently limited to the following specific material types:

- Automotive MHSW (oil filters, oil containers, antifreeze, antifreeze containers);
- Sharps/syringes, pharmaceuticals, and mercury thermometers returned through pharmacies;
- Paints, fluorescent lamps and batteries returned through, for example, hardware stores.

Since the return to retail option typically provides consumers with convenient and accessible diversion opportunities, the existing 184 non-auto retail take back locations will be increased where additional retail locations are identified which meet Stewardship Ontario collection standards and storage requirements.

In implementing the paint collection system in Phase 1, the response by the consumer has been exceptional. While this is a positive aspect, it poses a key operational challenge for commercial site retailers with limited storage space. To address this issue, the minimum volume that a retailer will be required to manage between collection pick ups must equal the projected quantities of materials that the location is anticipated to receive during one week of operation. Some retailers may have opportunities to use their own existing transportation networks to backhaul paint to their own or Stewardship Ontario consolidation centres or warehouses. Stewardship Ontario could then service these larger centres more cost effectively on a regularly scheduled basis.

Table 5.5 below provides a summary of the expected number of return to retail locations under service provider contracts over the first five years of the program. The locations of these sites will be coordinated and streamlined based on the locations of other MHSW collection services including other retail collection locations. Included in this projection are those that currently collect non-Phase 1 MHSW through an existing program. Options for including these existing programs under the Consolidated MHSW program include contracting with the existing program operators to continue the services they currently provide (with Stewardship Ontario taking financial responsibility for the operations); working in partnership with these organizations to improve performance, expanding the scope of services and range of materials collected; and providing collection, transport and processing services in the event that the existing program

managers/sponsors choose to discontinue their efforts upon approval of the Consolidated MHSW Program Plan with the attendant transfer of legal responsibility for these materials to Stewardship Ontario. This includes some 2,863 pharmacies that currently accept sharps and pharmaceuticals from the public⁷, and some 2,400 commercial battery collection sites (this includes the Rechargeable Battery Recycling Corporation's 1,902 collection sites which may overlap in some cases with Stewardship Ontario collection points established under the Phase 1 program) that currently manage materials that would come under the Consolidated MHSW Program Plan if approved by the Minister.

Table 5.5: Return to Retail Locations¹

	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Pharmaceutical and sharps	-	2,863	2,943	3,023	3,103	3,181
Consumer-Type Portable Batteries ²	89	2,170	2,240	2,320	2,380	2,410
Paint and coatings	184	360	400	425	450	475
Fluorescents	-	360	400	425	450	475
Antifreeze, oil filters, oil containers	41	75	200	500	1000	2000

Table 5.5 Notes:

28. These estimates include all reported return to retail locations for the materials listed here currently operating independently but which would become the responsibility of Stewardship Ontario upon Plan approval, plus Stewardship Ontario growth projections.
29. Note that battery collection sites include all non-municipal collection sites, such as retail, commercial, and industrial sites.

The geographic priority for establishing return to retail locations will include considerations such as:

- Rural locations with seasonal service for MHSW collection (i.e. seasonal depots or collection events)
- Northern locations with limited and/or seasonal service
- Available retail locations and their operational capacity to manage selected MSHW from the participating community

5.02.5 Toxic Taxi

As part of the program development and continuous improvement process, collection services such as the Toxic Taxi provided by the City of Toronto will be evaluated for cost effectiveness and the potential for implementation in other areas of the province based on a minimum population density (to be determined).

It is known that only two MHSW collection programs of this nature are in operation in the province. Material collection rates are reported to be very low based upon the limited experience to date. Careful consideration will be given to the effectiveness of continuing with this service as the Stewardship Ontario Depot In a Box and online notification systems are put in place.

5.02.6 Automotive MHSW and Incentive Model

It is estimated that the total number of Ontario automotive locations that provide vehicle services and generate auto MHSW is 12,500. Based on this estimate, Stewardship Ontario is currently providing transportation and processing services for auto MSHW to 60% of these (7,500 generator sites). As per the return to retail section, there are 41 auto MHSW sites that accept this waste from the public.

⁷ According to the primary industry collection and disposal service provider (Stericycle), 90% of all pharmacies in Ontario provide a take back service for biomedical (sharps and syringes). According to IMS Health, 3,181 pharmacies operate in Ontario.

As per the MHSW Phase 1 Program Plan, Stewardship Ontario is growing the public accessibility of auto MHSW as well as increasing the recovery of waste from auto generation sites. It is estimated that the DIY consumer represents approximately 10 to 20% of the quantities available for collection. In order to ensure these Ontarians have access to the program, the number of collection sites accepting auto MHSW from the public will be grown according to the figures presented in Table 5.6 below. The number of commercial auto locations (i.e. garages generating automotive MHSW through service changes and auto maintenance) will also be increased.

Table 5.6: Auto MHSW Public Sites and Commercial Sites

Site Type	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Public	41	75	200	500	1000	2000
Commercial	7500	8500	9500	10500	11500	12500

The goal Stewardship Ontario has set over the next five years is to have all auto MHSW generator sites incorporated into the program as well as have approximately 15% of these sites open to the do-it-yourself (DIY) consumer. To track the sites that are open to the public, the auto MHSW generators are required to register as collection sites with Stewardship Ontario. As these locations will manage public MHSW in the same manner as their own waste, however, it may not be possible to track quantities of residential and commercial auto MHSW separately.

The incremental increase year over year will be achieved by contacting interested generators and providing instruction and information on the benefits of being part of the program. Based on other programs' experience and Stewardship Ontario's waste system Certificate of Approval, it is not anticipated that there will be any barrier to incorporating auto waste generated by the public into existing operations,

Stewardship Ontario will continue the incentive system for transportation and processing of automotive materials under the Consolidated Plan. Stewardship Ontario reviews these incentives periodically and will make adjustments as necessary to promote program performance. Increases of varying degrees are anticipated in the near future for each automotive category, and these are reflected in the proposed Consolidated Program budget.

5.02.7 Collection Options for IC&I Small Quantity Generators

Given that the majority of municipal depots do not accept MHSW from small quantity IC&I generators (SQG) and that return to retail locations for MHSW such as paint may not be able to service SQG due to space constraints, Stewardship Ontario will look to private waste management facilities (as discussed above) to assist with increasing service accessibility for this sector. Small quantity generators that have sufficient quantities of waste may receive direct collection service or, subject to transportation regulations, be allowed to utilize consolidation centres or private waste management depots that are currently licensed to receive commercial waste. As well, there may be the ability to service SQG at Stewardship Ontario-run collection events and DiB.

5.02.8 Regional Consolidation Centres

In its efforts to implement an efficient and cost effective MHSW collection and transportation system, Stewardship Ontario will establish a regional network to consolidate MHSW from multiple collection points. The collection points feeding into any one centre can be a combination of any and all collection accessibility approaches identified in this section. It is envisioned that MHSW brought to currently licensed facilities located across Ontario can be categorized and stored until enough waste has been accumulated, at which point it can be shipped to a specific recycling or disposal facility. For waste that does not require MOE permits

such as paints, batteries and mercury switches, consideration will be given to operations with appropriate logistical capability that meet Stewardship Ontario vendor standards as an alternative to a licensed waste management site. Further, subject to capacity and necessary approvals, each consolidation centre may be able to act as a collection site for IC&I small quantity generators. The cost of the regional consolidation system has been accounted for in the overall design and operation of the Consolidated MHSW Program Plan and the selection of sites will be undertaken through a competitive selection process.

5.02.9 Current Self- Managed Programs

Some self-managed programs for specific MHSW materials currently exist. In some cases, these programs are funded by the stewards of these materials, including:

- Switch Out, the program to remove mercury switches from end of life vehicles, funded by automobile manufacturers
- The Rechargeable Battery Recycling Corporation's program for the collection and recycling of rechargeable batteries, funded by rechargeable battery stewards
- The Post Consumer Pharmaceutical Stewardship Association (PCPSA)'s Medications Return program, that manages product stewardship initiatives for pharmaceutical and self-care health products on behalf of its members across Canada

Programs funded by other stakeholders include:

- Switch the Stat, funded by the Ontario Power Authority, Enbridge, and Union Gas
- Take Back the Light, run by the Recycling Council of Ontario and funded by manufacturers

Those involved in operating these programs have gained considerable expertise in the management of these materials, and as with municipally operated depot services, Stewardship Ontario considers these operators to be preferred suppliers of materials management services. Accordingly, Stewardship Ontario will be contacting the operators of these programs to determine if they would be interested in altering their existing business model to offer services on mutually attractive terms that will help Stewardship Ontario achieve or surpass its performance targets.

5.02.10 Accessibility Targets

Table 5.7 below summarizes the Year 1 accessibility targets (number of collection points) for all materials.

Table 5.7: Year 1 Material Specific Accessibility Targets (number of collection points)

	Depots	Events	Depot In a Box	Return to Retail	Specialty Service Channel ¹	Totals
Aerosols	104	400	110		105 Blue Box Programs	719
Antifreeze (incl. containers)	104	400	110	75 ²	8500	9114
Batteries - Consumer Type Portable	104	400	110		2,170 ³	2784
Batteries - Industrial Stationary and Non-Lead Acid Motive	n/a ⁴	n/a	n/a	n/a	n/a	n/a
Corrosives	104	400	110			614
Fertilizers	104	400	110			614
Fire Extinguishers	104	400	110			614
Flammables	104	400	110			614

	Depots	Events	Depot In a Box	Return to Retail	Specialty Service Channel ¹	Totals
Fluorescents – Removed by User	104	400	110	360		974
Fluorescents – Embedded in Electronics					4 ⁵	4
Leachates	104	400	110			614
Measuring devices	104	400	110	TBD ⁶		614
Mercury Switches - Automotive					236 ⁷	195
Mercury Switches - White Goods					27 ⁸	27
Oil Containers	104	400	110	75 ²	8500	9114
Oil Filters	104	400	110	75 ²	8500	9114
Paint & Coatings	104	400	110	360		974
Pesticides	104	400	110			614
Pharmaceuticals	104	400	110	2863		3477
Pressurized Containers – Refillable	104	400	110			614
Pressurized Containers – Non-Refillable						614
Reactives	104	400	110			614
Sharps and Syringes	104	400	110	2863		3477
Solvents	104	400	110			614
Thermostats	104	400	110	TBD ⁹	1,432 ¹⁰	2,046
Toxics	104	400	110			614

Table 5.7 Notes:

- 1) Specialty Service Channel refers to those collection points that are not easily accessible to the public. They include the service centers generating automotive waste and the existing Switch the Stat and Switch Out programs, which collect material through contractors and automotive dismantlers, respectively. Also included in this channel are the OES-approved WEEE processors that handle batteries and fluorescents. Also refers to those MHSW materials collected through the Blue Box Program (i.e. aerosols)
- 2) Refers to the number of automobile service centers that accept waste antifreeze from the general public (Do-it-Yourselfers). The 75 locations are included in the 8500 target locations under the Specialty Service Channel
- 3) Includes return-to-retail sites, specialty channel (e.g. WEEE Processors) as well as other commercial collection activities such as property management groups, and institutions.
- 4) To address the limitations of available information for Industrial Stationary and Non-Lead Acid Motive Batteries, for Year 1 of the Consolidated MHSW Program Plan, Stewardship Ontario will accommodate partial Program management that will include services to discharge steward obligations such as reporting, and to undertake substantial research and development (R&D) activities. No physical management of Industrial Stationary and Non-Lead Acid Motive batteries will take place in Year 1.
- 5) Based on number of OES-approved processors
- 6) Consideration will be given to the implementation of a pilot program for the return of mercury thermometers at retail locations (pharmacies) in conjunction with pharmaceuticals and sharps
- 7) Refers to the number of automobile dismantlers currently participating in the Clean Air Foundation's Switch Out Program
- 8) Refers to the number of white goods dismantlers that Stewardship Ontario expects to enter into an agreement for the removal of mercury switches
- 9) Consideration will be given to the implementation of a pilot program for the return of mercury thermostats at retail locations
- 10) Refers to the targeted number of contractors participating in Switch the Stat programme in Year 1

5.03 Overall Diversion Approaches & Targets

The PRL specifies that the Consolidated MHSW Program Plan set out the anticipated collection and diversion targets for each MHSW material for the first five years of the Program, taking into account reduction of the quantity of MHSW available for collection as a result of the Program.

Establishing robust five year targets for diverting any type of waste is challenging given uncertainties regarding future generation estimates, product life span and hoarding assumptions, available for collection estimates, potential product reformulations and the response of consumers and services providers to the Program. These uncertainties are further exacerbated by the particular characteristics of the wide range of MHSW included under the program as outlined in Section 3.0. Furthermore, the program has several objectives and intersecting program elements that simultaneously encourage reducing the quantity of MHSW generated and diverting the MHSW which remains to recycling in addition to operating in a cost effective manner that ensures the program is sustainable.

For operational planning purposes, Year 1 targets have been established on the basis of the detailed accessibility targets set out above, existing performance results from similar programs already in operation in Ontario and by drawing on experience from other jurisdictions considered to be transferrable to Ontario. Stewardship Ontario will establish future year targets on the basis of the results of the preceding program year and submit these to WDO on an annual basis. In order to meet the requirements for five year material specific targets as required by the PRL, the following factors were taken into consideration within each of the following MHSW material groupings.

Products designed to be consumed in use (i.e. paint, pharmaceuticals)

- Quantities of materials supplied into Ontario based upon current baseline data and projections for future years based upon industry projections or available commercial forecasts
- Industry estimates of quantities of residuals likely to remain after use and experience from other jurisdictions to estimate total quantities available for collection
- Annual growth estimates for collection and recycling rates based upon improving accessibility, province wide P&E campaign and continuous improvement initiatives under the program

Products which remain largely in their original form as MHSW (i.e. batteries, fire extinguishers, containers)

- Quantities of materials supplied into Ontario based upon current baseline data and projections for future years based upon industry projections or available commercial forecasts
- Estimates of product life span and hoarding assumptions for durable products, used to make estimates of the quantities of these materials available for collection
- Estimates of short life products such as containers that remain available for collection
- Annual growth estimates for collection and recycling rates based upon improving accessibility, province wide P&E campaign and continuous improvement initiatives under the program

Obsolete products (i.e. mercury switches from autos and appliances)

- Estimates of previous supplies into the Ontario market by year, if available
- The date when these materials were no longer supplied into Ontario
- The projected life span of the product
- The existing number of collection/processing sites that currently remove these materials (i.e. auto dismantlers, municipal white goods collection programs)
- Assumed annual growth rates based upon increasing the number of participating collection/processing sites, and annual increases in collection and recycling rates based

upon improving accessibility, province wide P&E campaign and continuous improvement initiatives under the program

- A levelling off in collection targets in future years as the existing reservoir of these materials is depleted through these operations

It must be emphasised that the confidence level in the targets outlined for Years 2 – 5 is lower for each successive year. Improved forecasting can only be achieved by establishing effective steward and service provider reporting procedures; by accurately tracking program performance after implementation; by identifying and adopting best practices; and through operational experience.

5.03.1 Collection

a) Year 1 Collection Targets

The Year 1 collection targets have been established using the quantities of each material category collected by municipalities as reported through the 2007 WDO Datacall as a baseline, and by projecting an increase in these quantities according to the proposed growth in accessibility, as outlined in the section above. In the case of Phase 1 materials, the baseline information has been replaced by the annualized quantities collected to date under the Phase 1 program. Finally, some materials are currently collected, or are expected to be collected, through channels other than the municipal channel (e.g. Return to Retail). This has been taken into consideration in setting the Year 1 target for those materials. Year 1 targets are outlined in Table 5.8 below. More detailed information is available in the individual material-specific plans, presented under separate cover.

Table 5.8: Year 1 MHSW Collection Targets by Channel

Material Category	Sub-category	Collection Channel			Total Collection Target (tonnes)	Year 1 Collection Rate (%) ²
		Depots, Events, DIB, Toxic Taxi (tonnes)	Return to Retail (tonnes)	Specialty Service (tonnes) ¹		
Aerosols		485		2,550	3,035	49
Antifreeze		232		2,955	3,187	25
Batteries - Consumer-Type Portable	Single-use					
	Rechargeable	425	791	236	1,452	20
Batteries - Industrial Stationary and Non-Lead Acid Motive		-	-	-	-	-
Corrosives	Corrosives	511			511	63
	Irritants	65			65	63
Fertilizers	Containing banned pesticides					
	Synthetically derived					
	Naturally derived	616			616	n/a
Fire Extinguishers		25			25	15
Flammables & Solvents	Flammables					
	Solvents	4176			4176	46
	User-removed	98	28		126	10

Material Category	Sub-category	Collection Channel			Total Collection Target (tonnes)	Year 1 Collection Rate (%) ²
		Depots, Events, DIB, Toxic Taxi (tonnes)	Return to Retail (tonnes)	Specialty Service (tonnes) ¹		
Fluorescents	WEEE-embedded			7	7	44
Leachates		13			13	n/a
Mercury devices	Measuring devices	0.17			0.17	n/a
	Mercury Switches - Automotive			0.25	0.25	70
	Mercury Switches - White Goods			0.29	0.29	65
	Thermostats	0.07		1.43	1.5	n/a
Oil Containers		141	914		1,055	32
Oil Filters		414	10,273		10,687	65
Paint & Coatings		6696	1600		8296	37
Pesticides	Banned	243			243	n/a
	Not banned					
Pharmaceuticals	Prescription	58	254		312	47
	Non-prescription					
	Natural Health Products					
Pressurized Containers	Refillable	628			628	83
	Non-Refillable	104			104	14
Reactives		-	-	-	-	-
Sharps and Syringes		38	175		213	93
Toxics		-	-	-	-	-
Totals		14,969	19784		34,753	

Table 5.7 Notes:

30. Specialty Service Channel refers to those collection points that are not easily accessible to the general public. They include the service centers generating automotive waste and the existing program Switch the Stat and Switch Out programs, which collect material through contractors and automotive dismantlers, respectively. Also included in this channel are the OES-approved WEEE processors that handle batteries and fluorescents. Also refers to those MHSW materials collected through the Blue Box Program (i.e. aerosols)
31. Collection Rate refers to the proportion of quantity collected over quantity available for collection, expressed as a percentage
32. Return to Retail (RtR) Collection channel for batteries includes both Return-to-Retail sites, as well as other commercial collection activities such as property management groups, and institutions.

b) Five-Year Collection Targets

While the material collection targets for Year 1 of the program are driven by the proposed accessibility targets and approach outlined previously in this section, subsequent collection targets have been set largely under the assumption of continuous improvement, and taking into account the unique generation and handling characteristics associated with each MHSW group. Five-year target collection rates are presented in Table 5.9 below.

Products designed to be consumed in use (i.e. paint, pharmaceuticals)

For products designed to be consumed in use, an average yearly increase in collection ranging between 2-5% has been assumed. It is also assumed that specific promotion and education messaging targeted at these consumable products will eventually result in a gradual reduction or flat-lining in the quantity available for collection (see section 5.3.2 below). It is assumed that this will in turn result in an increased collection percentage rate calculation over time, as more quantities are being collected from an overall diminishing “available for collection” quantity.

Products which remain largely in their original form as MHSW (i.e. batteries, fire extinguishers, containers)

For MHSW that is intended to be discarded in its original form after its useful life expires, the same yearly growth in collection as for consumable products has been assumed (2-5%).

Obsolete products (i.e. mercury switches from autos and appliances)

For obsolete products, Years 2-5 collection targets have been set according to the specific handling infrastructure associated with each of these (for example, by growing the number of white goods dismantlers collecting mercury switches).

Table 5.9: MHSW Material Five-year Target Collection Rates (%)

Material Category	Sub-category	Year 1 Target Collection Rate	Year 2 Target Collection Rate	Year 3 Target Collection Rate	Year 4 Target Collection Rate	Year 5 Target Collection Rate
Aerosols		49	50	54	59	64
Antifreeze		25	35	40	45	50
Batteries - Consumer-Type Portable	Single-use	20	25	30	35	40
	rechargeable					
Batteries - Industrial Stationary and Non-Lead Acid Motive		-	96	96.5	97	97.5
Corrosives	Corrosives	63	64	66	68	70
	Irritants	63	65	67	69	71
Fertilizers	Containing banned pesticides	n/a	n/a	n/a	n/a	n/a
	Synthetically derived					
	Naturally derived					
Fire Extinguishers		15	17	19	24	32
Flammables & Solvents	Flammables	46	49	52	56	60
	Solvents					
Fluorescents	User-removed	10	15	20	25	30
	WEEE-embedded	44	45	49	54	70
Leachates		n/a	n/a	n/a	n/a	n/a
Mercury devices	Measuring devices	n/a	n/a	n/a	n/a	n/a
	Mercury Switches - Automotive	70	90	91	92	94
	Mercury Switches - White Goods	65	73	81	90	100

Material Category	Sub-category	Year 1 Target Collection Rate	Year 2 Target Collection Rate	Year 3 Target Collection Rate	Year 4 Target Collection Rate	Year 5 Target Collection Rate
	Thermostats	n/a	n/a	n/a	n/a	n/a
Oil Containers		32	37	42	47	52
Oil Filters		65	70	75	80	85
Paint & Coatings		37	47	57	67	77
Pesticides	Banned	n/a	100	55	56	57
	Non banned					
Pharmaceuticals	Prescription	47	54	61	68	74
	Non-prescription					
	Natural health products					
Pressurized Containers	Refillable	83	88	93	97	98
	Non-Refillable	14	16	26	36	46
Reactives		-				
Sharps and Syringes		93	93	94	96	97
Toxics		-				
Total		42	49	55	61	68

Table 5.9 Notes

33. "n/a" indicates that the information is not available at this time. In the case of some consumable products such as fertilizer and pesticides, it is not possible at this time to estimate the quantity that is left over and available for collection. Similarly, in the case of obsolete waste, it is not possible to determine the quantity that remains in circulation and is available for collection. Without this information, it is not possible to calculate a collection rate
34. No Year 1 collection target has been assigned to Industrial Stationary and Non-Lead Acid Motive Batteries as there is currently no information on the quantities sold and available for collection. In Year 1 of the Consolidated MHSW Program Plan, research will be carried out to determine this information. Year 2-5 targets reflect industry sources and information on current collection rate of Vehicle Lead Acid batteries.
35. No collection rate target has been set for the following material groups: fertilizers, leachate, measuring devices, pesticides, reactives and thermostats. In some cases (reactives and toxics), no products have yet been identified under these categories, and it is anticipated that the products in these categories are, in great majority, captured under other MHSM material categories. In Year 1 of the program, research and analysis will be undertaken to determine whether there are any products and stewards unique to those categories. In the case of the other materials, while tonnage-based target s have been set, it has not been possible to estimate the quantity available for collection.

Five-year collection targets will be reviewed and adjusted on a yearly basis as more information becomes available.

5.03.2 Reduction and Reuse

An objective of the program is to reduce the quantity of MHSW generated. However, Reduction and Reuse targets can only be applied to certain MHSW. For example, it is not possible to assign a reduction or a reuse target to obsolete products. Similarly, it is not desirable or technically feasible to reduce use of or reuse certain materials, such as pharmaceuticals, sharps and syringes.

Reduction opportunities are generally only relevant to consumable MHSM products and potentially to containers. In this case, program activities will promote reduction alternatives through material-specific Promotion and Education that will convey a B.U.D. message (buy what

you need, use it all up, dispose of it properly). These reduction opportunities nonetheless need to be balanced with natural increases in population growth. For this reason, the Consolidated MHSW Program Plan will aim to offset the expected increase in quantities available for collection due to population growth by encouraging consumers to use up the entire product to reduce the quantities available for collection. It should be noted, however, that experience in other jurisdictions has not seen measurable reductions in the quantities of MHSW residuals (such as paint) to date.

Reuse of MHSW will be applicable to specific MHSW. The following reuse parameters will be followed when establishing reuse activities:

- promote localized reuse through neighbourly sharing or donating usable MHSW to community events or projects;
- Encouraging MHSW reuse activities at collection sites for MHSW still in the original container with legible labels and where reuse is not prohibited by individual Certificates of Approval or other permit restrictions.

Currently, under the Phase 1 MHSW Program Plan, Stewardship Ontario provides compensation to collection sites that operate a reuse program for the following MHSW:

- Paints and coatings (aerosol and non-aerosol)
- Solvents
- Antifreeze
- Fertilizers
- Pressurized containers

In order to qualify for reuse compensation, Stewardship Ontario requires that service providers adhere to specific standards related to determining whether a product is eligible for reuse, to the operation of a reuse program and to tracking users. For MHSW to be reused it must be contained in the original container, be half full or more and have the original label still in a legible state⁸. With respect to tracking, specific user documentation must be recorded and collection sites must affix container stickers, as specified by Stewardship Ontario. Finally, reporting protocols must be followed when claiming compensation.

Under the MHSW Phase 1 Program, 21 municipal programs have claimed reimbursement for reuse programs. The main issue constraining reuse initiatives is the risk associated with accepting and passing along harmful or contaminated MHSW.

As part of the Consolidated MHSW Program Plan, Stewardship Ontario will evaluate opportunities for reusing new MHSW streams and where reasonable expand its list of materials eligible for reuse compensation. Stewardship Ontario will also work with service providers to increase the uptake of reuse services.

Finally, as outlined in section 5.6.3, Stewardship Ontario will conduct waste audits to track and measure program performance and improvements. This will enable Stewardship Ontario to accurately determine the quantities available for collection in each of the MHSW categories, to establish appropriate reuse opportunities, and ultimately to measure the effectiveness of reuse messaging and activities.

5.03.3 Recycling

⁸ More information on reuse standards under the Phase 1 MHSW Program Plan is available at http://www.stewardshipontario.ca/mhsw/pdf/municipal/mhsw_standards.pdf

For MHSW which remains after reduction and reuse efforts, the program aims to divert those materials from disposal where technically feasible. Where barriers to increase diversion have been identified, research and development resources and priorities have been identified within the relevant material-specific plans to address these barriers.

In the case of some MHSW products (such as pharmaceuticals and pesticides) no known options have been identified for recycling. In these cases, these materials will be directed to secure disposal. The key principles used for setting recycling targets under this plan include:

- Preference should be given to processing options that achieve the highest material recycling rates (using Ontario definitions of recycling);
- Calculation of the material recycling rate should exclude materials converted to energy through thermal treatment or directed to disposal at landfill;
- Material recycling rates must be based on the verified quantity of materials diverted to economic uses, including the primary and downstream processing stages.

a) Year 1 Recycling Targets

In the case of Phase 1 materials, Year 1 recycling targets have been set based on current system performance. In the case of non-Phase 1 materials, recycling targets have been set using best available information. Year 1 recycling targets are presented in Table 5.10.

Table 5.10: Year 1 MHSW Material Recycling Targets

Material Category	Sub-category	Collection Target (tonnes)	Recycling Target (tonnes)	Recycling Efficiency Rate (%)	Recycling Performance Rate (%)
Aerosols		3,035	2,580	42	85
Antifreeze		3,187	3,187	25	100
Batteries - Consumer-Type Portable	Single-use	1,452	1,039	14	71
	rechargeable				
Batteries - Industrial Stationary and Non-Lead Acid Motive		-	-	-	-
Corrosives	Corrosives	511	-	-	-
	Irritants	65	-	-	-
Fertilizers	Containing banned pesticides	616	-	-	-
	Naturally derived				
	Synthetically derived				
Fire Extinguishers		25	21	13	85
Flammables & Solvents	Flammables	4176	-	-	-
	solvents				
	User-removed	126	126	10	100

Material Category	Sub-category	Collection Target (tonnes)	Recycling Target (tonnes)	Recycling Efficiency Rate (%)	Recycling Performance Rate (%)
Fluorescents	WEEE-embedded	7	7	44	100
Leachates		13	-	-	-
Mercury devices	Measuring devices	0.17	0.17	-	100
	Mercury Switches - Automotive	0.25	0.25	70	100
	Mercury Switches - White Goods	0.29	0.29	65	100
	Thermostats	1.5	1.5	-	100
Oil Containers		1,055	1,055	32	100
Oil Filters		10,687	10,687	65	100
Paint & Coatings		8,296	4,978	22	60
Pesticides	Banned	243	-	-	-
	Non banned				
Pharmaceuticals	Prescription	312	-	-	-
	Non-prescription				
	Natural Health Products				
Pressurized Containers	Refillable	628	628	83	100
	Non-Refillable	104	104	14	100
Reactives		-	-	-	-
Sharps and Syringes		213	-	-	-
Toxics		-	-	-	-
Total		34,752	24,414	30	70

Table 5.10 Notes

- 1) The recycling rate presented here for Consumer Type Portable is a weighted average of the recycling rate for Alkaline-manganese, zinc-carbon and zinc air batteries (80%), other Single-Use Consumer-Type Portable Batteries (37%) and Rechargeable Consumer-Type Portable Batteries (60%)
- 2) A dash (-) indicates that no collection target or recycling target or both have been set for Year 1 of the program

b) Five-Year Recycling Targets

Subsequent recycling targets have been set under the assumption of continuous improvement, where applicable, and are presented in Table 5.11 and 5.12 below.

Table 5.11: Five Year Target Recycling Performance Rates (%)

Material Category	Sub-category	Year 1 Target Recycling Performance Rate	Year 2 Target Recycling Performance Rate	Year 3 Target Recycling Performance Rate	Year 4 Target Recycling Performance Rate	Year 5 Target Recycling Performance Rate
Aerosols		85	87	89	91	93
Antifreeze		100	100	100	100	100
Batteries - Consumer Type	Single-use	71	71	71	71	71

Material Category	Sub-category	Year 1 Target Recycling Performance Rate	Year 2 Target Recycling Performance Rate	Year 3 Target Recycling Performance Rate	Year 4 Target Recycling Performance Rate	Year 5 Target Recycling Performance Rate
Consumer-type Portable	rechargeable	77	77	77	77	77
Batteries - Industrial Stationary and Non-Lead Acid Motive		n/a	97	97.5	98	98.5
Corrosives	Corrosives	-	-	-	-	-
	Irritants	-	-	-	-	-
Fertilizers	Containing banned pesticides	-	-	-	-	-
	Synthetically derived	-	-	-	-	-
	Naturally derived	-	-	-	-	-
Fire Extinguishers		85	87	89	91	93
Flammables & Solvents	Solvents	-	-	10	10	10
	flammables	-	-	10	10	10
Fluorescents	User-removed	100	100	100	100	100
	WEEE-embedded	100	100	100	100	100
Leachates		-	-	-	-	-
Mercury devices	Measuring devices	100	100	100	100	100
	Mercury Switches - Automotive	100	100	100	100	100
	Mercury Switches - White Goods	100	100	100	100	100
	Thermostats	100	100	100	100	100
Oil Containers		100	100	100	100	100
Oil Filters		100	100	100	100	100
Paint & Coatings		60	65	70	75	80
Pesticides	Banned	-	-	-	-	-
	Non banned	-	-	-	-	-
Pharmaceuticals	Prescription	-	-	-	-	-
	Non-prescription	-	-	-	-	-
	Natural Health Products	-	-	-	-	-
Pressurized Containers	Refillable	100	100	100	100	100
	Non-Refillable	100	100	100	100	100
Reactives		-	-	-	-	-
Sharps and Syringes		-	-	-	-	-
Toxics		-	-	-	-	-

Material Category	Sub-category	Year 1 Target Recycling Performance Rate	Year 2 Target Recycling Performance Rate	Year 3 Target Recycling Performance Rate	Year 4 Target Recycling Performance Rate	Year 5 Target Recycling Performance Rate
Total		70	72	75	76	77

Table 5.11 Notes:

1) The recycling performance rate presented here for Consumer Type Portable is a weighted average of the recycling performance rate for Alkaline-manganese, zinc-carbon and zinc air batteries (80%), other Single-Use Consumer-Type Portable Batteries (37%) and Rechargeable Consumer-Type Portable Batteries (60%)

2) A dash (-) indicates that no collection recycling target has yet been set

Table 5.12: Five Year Target Recycling Efficiency Rates (%)

Material Category	Sub-category	Year 1 Target Recycling Efficiency Rate	Year 2 Target Recycling Efficiency Rate	Year 3 Target Recycling Efficiency Rate	Year 4 Target Recycling Efficiency Rate	Year 5 Target Recycling Efficiency Rate
Aerosols		42	44	48	54	60
Antifreeze		25	35	40	45	50
Batteries - Consumer-Type Portable	Single Use	14	18	21	25	28
	Rechargeable					
Batteries - Industrial Stationary and Non-Lead Acid Motive		n/a	93	94	95	95.5
Corrosives	Corrosives	-	-	-	-	-
	Irritants	-	-	-	-	-
Fertilizers	Containing Banned Pesticides	-	-	-	-	-
	Naturally Derived Synthetically Derived					
Fire Extinguishers		13	15	17	22	30
Flammables & Solvents	Flammables Solvents	-	-	5	6	6
Fluorescents	User-removed	10	15	20	25	30
	WEEE-embedded	44	45	49	54	70
Leachates		-	-	-	-	-
Mercury devices	Measuring devices	n/a	n/a	n/a	n/a	n/a
	Mercury Switches - Automotive	70	90	91	92	94
	Mercury Switches - White Goods	65	73	81	90	100
	Thermostats	n/a	n/a	n/a	n/a	n/a
Oil Containers		32	37	42	47	52
Oil Filters		65	70	75	80	85
Paint & Coatings		22	31	40	50	62

Material Category	Sub-category	Year 1 Target Recycling Efficiency Rate	Year 2 Target Recycling Efficiency Rate	Year 3 Target Recycling Efficiency Rate	Year 4 Target Recycling Efficiency Rate	Year 5 Target Recycling Efficiency Rate
Pesticides	Banned	-	-	-	-	-
	Non banned	-	-	-	-	-
Pharmaceuticals	Prescription	-	-	-	-	-
	Non prescription	-	-	-	-	-
	Natural health products	-	-	-	-	-
Pressurized Containers	Refillable	83	88	93	97	98
	Non-Refillable	14	16	26	36	46
Reactives		-	-	-	-	-
Sharps and Syringes		-	-	-	-	-
Toxics		-	-	-	-	-
Total		30	35	41	47	52

Five-year recycling performance and efficiency targets will be reviewed and adjusted on a yearly basis as more information becomes available.

5.03.4 Summary Five-Year Collection and Recycling Targets (tonnes)

Table 5.13 and 5.14 below summarize the five-year collection and recycling targets in tonnes and percentage under the Consolidated MHSW Program Plan.

Table 5.13: Five-Year Collection and Recycling Targets

	Year 1	Year 2	Year 3	Year 4	Year 5
Available for Collection (tonnes)	82,160	81,037	81,439	81,193	81,158
Collection Target (tonnes)	34,752	39,630	44,572	49,765	54,992
Collection Performance (%)	42	49	55	61	68
Recycling Target (tonnes)	24,414	28,581	33,311	37,797	42,552
Recycling Performance (%)	70	72	75	76	77
Recycling Efficiency (%)	30	35	41	47	52

Table 5.14: Five-Year Collection and Recycling Targets (tonnes)

Material Category		Target	Year 1 (tonnes)	Year 2 (tonnes)	Year 3 (tonnes)	Year 4 (tonnes)	Year 5 (tonnes)	
Aerosols		Collection	3,035	3,160	3,470	3,829	4,196	
		Recycling	2,580	2,749	3,088	3,484	3,902	
Antifreeze	Bulked and Packaged	Collection	3,069	4,110	4,462	4,769	5,034	
		Recycling	3,069	4,110	4,462	4,769	5,034	
	Antifreeze Containers	Collection	118	156	170	181	192	
		Recycling	118	156	170	181	192	
Batteries - Consumer-Type Portable	Single-Use	Collection	1,020	1,298	1,620	1,965	2,337	
		Recycling	778	989	1,235	1,498	1,781	
	Rechargeable	Collection	432	550	686	832	989	
		Recycling	261	332	415	503	598	
Batteries - Industrial Stationary and Non-Lead Acid Motive		Collection	To be identified in Year 1					
		Recycling						
Corrosives	Corrosives	Collection	511	525	539	555	570	
		Recycling	To be identified in Year 1					
	Irritants	Collection						65
		Recycling	To be identified in Year 1					
Fertilizer	Containing Banned Pesticides Naturally-derived	Collection						616
	Synthetically-derived	Recycling/Reuse	To be identified in Year 1					
Fire Extinguishers		Collection	25	29	33	41	56	
		Recycling	21	25	29	38	52	
Flammables and Solvents	Assorted Flammable Materials	Collection	2,825	3,086	3,372	3,822	4,288	
			Automotive Additives	7	8	8	9	11
			Automotive Additives Containers	70	75	81	90	100
			Windshield Washer Fluid	91	99	108	121	134
			Windshield Washer Fluid Cont.	333	353	383	429	477
			Solvents	754	729	708	686	663
			Solvent Containers	77	80	84	90	94
			Gasoline	19	22	24	27	29
	Solvents	Recycling	--	--	477	518	570	
Fluorescents	User-removed	Collection	126	90	215	210	167	
		Recycling	126	90	215	210	167	
	WEEE-embedded	Collection	7	8	9	11	14	
		Recycling	7	8	9	11	14	
Leachates		Collection	13	14	15	15	15	
		Recycling	To be identified in Year 1					
Mercury Devices	Measuring Devices	Collection	0.17	0.17	0.18	0.18	0.18	
		Recycling	0.17	0.17	0.18	0.18	0.18	
	Mercury Switches - Automotive	Collection	0.25	0.30	0.27	0.25	0.23	
		Recycling	0.25	0.30	0.27	0.25	0.23	
	Mercury Switches - White Goods	Collection	0.30	0.31	0.33	0.34	0.34	
		Recycling	0.30	0.31	0.33	0.34	0.34	
	Other Mercury Switches	Collection	To be identified in Year 1					
		Recycling						
	Thermostats	Collection	1.50	1.63	1.78	1.93	2.10	
		Recycling	1.50	1.63	1.78	1.93	2.10	

Material Category		Target	Year 1 (tonnes)	Year 2 (tonnes)	Year 3 (tonnes)	Year 4 (tonnes)	Year 5 (tonnes)
Oil Containers	Collection		1,055	1,161	1,265	1,359	1,444
	Recycling		1,055	1,161	1,265	1,359	1,444
Oil Filters	Collection		10,687	11,279	11,843	12,380	12,890
	Recycling		10,687	11,279	11,843	12,380	12,890
Paint & Coatings	Collection		8,296	10,573	13,079	15,681	18,381
	Recycling		4,978	6,872	9,155	11,761	14,705
Pesticides	Banned	Collection	243	100	19	20	20
	Non Banned	Recycling	-	-	-	-	-
Pharmaceuticals	Prescription	Collection	312	379	450	526	601
	Non Prescription Natural Health Products	Recycling	-	-	-	-	-
Pressurized Containers	Non-Refillable	Collection	104	122	198	280	365
		Recycling	104	122	198	280	365
	Refillable	Collection	628	686	747	802	835
		Recycling	628	686	747	802	835
Reactives	Collection		To be identified in Year 1				
	Recycling		To be identified in Year 1				
Sharps and Syringes	Collection		213	241	273	309	349
	Recycling		-	-	-	-	-
Toxics	Collection		To be identified in Year 1				
	Recycling		To be identified in Year 1				
TOTAL		Collection	34,752	39,630	44,572	49,765	54,992
		Recycling	24,414	28,581	33,311	37,797	42,552

5.03.5 Comparison of Consolidated MHSW Plan Targets Against Phase 1 Plan Targets

Table 5.15 provides a comparison between the five year collection and recycling efficiency targets set in the Phase 1 MHSW Program Plan and the Consolidated MHSW Program Plan.

As explained in section 5.3.1, while the Year 1 collection targets in the Phase 1 MHSW Program Plan were not set in accordance with the accessibility strategy proposed in the Phase 1 plan, the targets set in the Consolidated Plan directly relate to the accessibility strategy proposed in this plan, and are therefore likely to be more realistic and meaningful. In the case of Phase 1 materials, the baseline information has been replaced by the annualized quantities collected to date under the Phase 1 program. Finally, the Promotion and Education campaign under the Consolidated MHSW Program Plan will support the proposed accessibility and aim to drive generators to the various collection channels. This has been taken into consideration in setting the Year 1 collection targets under the Consolidated MHSW Program Plan.

Rationale for changes in targets from Phase 1 to the Consolidated Plan is provided below.

Paints and Coatings: The collection target and recycling efficiency target under the Phase 1 did not take into account of quantity of paint containers available for collection, while the targets under the Consolidated MHSW Program Plan assume that 100% of paint containers are available for collection. This is why the Year 1 collection target and recycling efficiency target for paints and coatings are lower in the Consolidated MHSW program plan than in the Phase 1 MHSW plan. In Years 2-5, Stewardship Ontario will focus its effort on collecting paint containers, thereby resulting in substantial increases in targets year over year.

Moreover, assumptions pertaining to the recyclability of paint in the Phase 1 plan have been re-assessed. Given the broadening of the paint definition under the Consolidated MHSW program plan, it is assumed that about 70% of the products captured by the paints and coating definition are alkyd and latex paint, and are therefore recyclable. Under the current phase 1 plan, service providers recycle 85% of the material collected. The paint recycling efficiency rate for Year 1 has therefore been set at 60% of what is collected, compared to 80% under Phase 1.

Batteries: The collection and recycling efficiency targets have been increased mainly as a result of the proposed increased in accessibility, in particular the return to retail sites and the specialty service channel (see Volume 2 for more details).

Table 5.15: Comparison of Consolidated Program Plan Targets Against Phase 1 Program Plan Targets

Phase 1 Materials	Current Baseline ^{e1}	Year 1		Year 2		Year 3		Year 4		Year 5		
		Phase 1	Cons. Plan	Phase 1	Cons. Plan	Phase 1	Cons. Plan	Phase 1	Cons. Plan	Phase 1	Cons. Plan	
Paint & coatings	Collection Rate ²	36%	53%	37%	55%	47%	57%	57%	59%	67%	61%	77%
	Recycling Efficiency Rate ³	43% ⁴	46%	22%	48%	31%	50%	40%	51%	50%	53%	62%
Solvents ⁵	Collection Rate	160%	37%	46%	39%	46%	41%	46%	43%	46%	45%	46%
	Recycling Efficiency Rate	0.1%	-	-	-	-	10%	10%	10%	10%	10%	10%
Oil filters	Collection Rate	47%	65%	65%	74%	70%	78%	75%	81%	80%	84%	85%
	Recycling Efficiency Rate	21%	60%	65%	69%	70%	73%	75%	75%	80%	78%	85%
Oil containers ⁶	Collection Rate	12%	30%	32%	35%	37%	40%	42%	45%	47%	50%	52%
	Recycling Efficiency Rate	11%	15%	32%	28%	37%	40%	42%	45%	47%	50%	52%
Single Use Drycell Batteries ⁷	Collection Rate	5%	6%	20%	7%	25%	10%	30%	15%	35%	25%	40%
	Recycling Efficiency Rate	0.4%	1%	14%	2%	18%	4%	21%	7%	25%	13%	28%
Antifreeze ⁶	Collection Rate	10%	25%	25%	35%	35%	40%	40%	45%	45%	50%	50%
	Recycling Efficiency Rate	0.7%	24%	25%	33%	35%	38%	40%	43%	45%	47%	50%
Press. Cont. – Refillable	Collection Rate	68%	92%	83%	94%	88%	95%	93%	97%	97%	98%	98%
	Recycling Efficiency Rate	59%	92%	83%	94%	88%	95%	93%	97%	97%	98%	98%
Press. Containers - NonRef.	Collection Rate	26% ⁸	14%	14%	16%	16%	26%	26%	36%	36%	46%	46%
	Recycling Efficiency Rate	13%	14%	14%	16%	16%	26%	26%	36%	36%	46%	46%
Fertilizers	Collection Rate	506%	32%	n/a	34%	n/a	37%	n/a	40%	n/a	45%	n/a
	Recycling Efficiency Rate	-	-	-	-	-	10%	-	20%	-	30%	-
Pesticides	Collection Rate	171%	51%	n/a	52%	100%	53%	55%	54%	56%	55%	57%
	Recycling Efficiency Rate	-	-	-	-	-	-	-	-	-	-	-

Table 5.15 Notes:

- 1) All data are for the period spanning July 2008 (program inception) until the end of March 2009. Collection tonnages reported by Service Providers through the Material Tracking System (MTS). Waste Management Service Providers report via the Material Tracking System (MTS) administered by Stewardship Ontario. To date, the number of service providers (out of a total of 39 approved transporters and 30 approved processors) reporting for each quarter is: Q3 2008 - 30 transporters, 15 processors; Q4 2008 - 27 transporters, 15 processors; Q1 2009 - 25 transporters, 12 processors.
- 2) Collection Rate calculated using stewards' reports for that time period (July 08 to March 09) and estimated quantity available for collection using Phase 1 assumptions. Several possible explanations exist for the rates exceeding 100%, see table 4.7 for explanations.
- 3) Recycling Efficiency Rate calculated using collection tonnage and estimated quantity available for collection using Phase 1 assumptions.
- 4) The recycling efficiency rate for paint exceeds the collection rate for paint due to the fact that paint collected commercially has been reported online as processed, but has yet to be reported online as collected. It is anticipated that this situation will be corrected shortly.
- 5) Under the Consolidated MHSW Program Plan, solvents are now a sub-category of the Flammables & Solvents category
- 6) As antifreeze containers are not handled separately from oil containers during end-of-life management, collected and recycled quantities of antifreeze containers are included under the category of oil containers despite the fact that sales of antifreeze containers are included under the antifreeze category.
- 7) While under the Phase 1 plan only single use dry cell batteries were included, under the Consolidated MHSW Program Plan the category has been expanded to include all portable consumer type batteries. The targets presented here under the Consolidated Program Plan therefore pertain to both single use and rechargeable batteries.
- 8) While the current baseline performance for non-refillable pressurized containers indicates a 26% collection rate and a 13% recycling rate, adjustments for seasonality and to account for discrepancies with the municipally-reported numbers results in a current performance around 12% collection.

5.04 System Optimization

With the approval of the Consolidated MHSW Program Plan, Stewardship Ontario will need to integrate a wide range of new and diverse material groups into a program that is in the early stages of development, while assuming direct responsibility for material collection.

Simply assuming responsibility for the current collection system, and adding materials and/or additional collection and processing systems will not produce a successful, comprehensive and efficient MHSW program.

There are clear opportunities to realize economies of scale and increase system efficiencies to form a more integrated approach, even if different materials require unique handling and processing post-collection. At the same time, selected materials may require a unique approach to collection, because they present unique challenges (e.g.: biomedical hazards), are not generated by residents (e.g. automotive switches), or for other reasons cannot achieve optimum collection solely via a multi-materials collection system.

There are also opportunities to improve program responsiveness by increasing the involvement of the private sector in efforts to bring services closer to consumers.

As noted earlier in this plan, Stewardship Ontario will be evaluating program performance on an ongoing basis as it expands services and introduces new innovations, in order to retain the best aspects of the existing system, identify the most effective new innovations, replicate these as appropriate throughout the province, and ensure that program performance improves continuously and cost-effectively.

5.05 Promotion & Education

Promotion and education (P&E) is an essential component of translating MHSW program objectives into effective environmental action by consumers and citizens. The goal of P&E is to:

- Inform citizens that a program to manage this category of waste exists.
- Encourage participation in opportunities to dispose of designated MHSW appropriately.
- Motivate consumers to adopt and maintain the desired environmental behaviour.

The P&E activities designed to support this consolidated MHSW program have been developed based on the experience and results of the Phase 1 P&E campaign. While the initial launch campaign succeeded in blanketing the province with information about the program, a sustained strategic campaign wasn't possible within the existing Phase 1 P&E budget.

One of the primary lessons learned was that a P&E budget comparable to the Phase 1 budget of 43 cents per household was insufficient to accomplish the Consolidated Program goals of building broad-based awareness of a program with substantially increased scope designed to motivate citizens to respond to two major messages:

- manage existing MHSW appropriately, and
- buy only the amount needed, use it up, dispose of residue and container properly (referred to as the BUD message).

5.05.1 Findings that Inform Development of the Consolidated P&E Plan

The P&E campaign for Phase 1 grew from a number of consumer insights gained in the pre-launch benchmark research. Solid consumer research is a building block of social marketing campaigns. Some of these findings include:

- People tend to think about dealing with MHSW primarily in the spring and fall during clean-up periods.
- Two-thirds of consumers could name some products that they had around the house that might require special disposal care such as pesticides, herbicides, cleaning supplies, other chemicals, aerosol cans, solvents, paint, oil and gas; however, for the most part people lacked a foundation of knowledge about what constitutes household hazardous waste or where to go to get more information.
- Many admitted they did not know how to manage some designated household hazardous waste properly or what happened to them when they were recycled.
- People who recalled receiving educational material about MHSW were more likely to take materials to a MHSW facility, 65% vs. 48%.

A combination of paid and earned media activities will be used to create awareness of and interest in the program. Strong visual messages, such as those used at the time of the Phase 1 launch (see below), will profile certain materials that need or can benefit from individual exposure.



The interactive, user-friendly website, Do What You Can (www.dowhatyoucan.ca – below), will continue to provide consumers with information about the closest locations to take specific materials to be reused, recycled or disposed of in an environmentally appropriate manner.

DO WHAT YOU CAN

Get with the Program
 Why Bother?
 What's Included?
 Sensible Cautions
 FAQ's
 Teacher Resources
 Who's Involved & Why

Household Hazardous Materials Home
 Electronic Waste

Where do I take this Stuff? Search:

By Material
 ▶ Choose your material from the list

By Postal Code

 Enter your postal code

By Community

 (or select from a list)

Paints colour our world. Petroleum products keep things moving.
 Batteries power the devices we use to remain connected, informed and entertained.

We all have used these products around our homes for decades and we know that when it comes time to dispose of left-over or unwanted materials, special care is needed.

Now the companies that make and market these items are working with municipalities and leading retailers to enhance recovery of potentially hazardous or special wastes by making the process much more convenient.

This website is designed to introduce you to the "Municipal Hazardous or Special Waste" (MHSW) Program and to help you locate places in and near your community where you can take the MHSW materials.

Browse the information to find out what MHSW materials are accepted and search for a municipal location. All we ask is that you "Do What You Can."

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Other tactics that could be employed to promote the objectives of the Consolidated Program include but would not be limited to consumer research, media materials, municipal publications, sponsorship opportunities, collection event promotion, consumer brochure and point-of-purchase materials.

5.05.2 The Next Phase of MHSW: Continuous Improvement Built on Consumer Insights

Prior to the commencement of the Consolidated MHSW Program Plan, Stewardship Ontario will undertake consumer research to establish a benchmark for the new (non Phase 1) materials and to track awareness and reported behaviour concerning Phase 1 materials. The findings will be used to recommend strategic and tactical P&E activities for implementation of the next phase of the program. The pre-commencement research will:

- Test awareness and efficacy of Phase 1 messages;
- Test consumer understanding of what constitutes MHSW and what opportunities exist to participate (collection options);
- Assess understanding of new materials that are being added to the program and how they should be treated at end-of-life;
- Assess perceptions of convenience across various demographic and lifestyle groups and test the proposed accessibility strategy in this plan to understand which collection options appeal to which audiences and why;
- Determine what motivates behaviour among various lifestyle cohorts;
- Understand the barriers to adopting recycling behaviours.

The focus of the upcoming campaigns will centre on motivating and reinforcing behaviours among groups of consumers who are identified as “true believers” and “strivers” (see below) with a view to optimizing results from these cohorts before embarking on more intricate campaigns to modify behaviour among harder-to-reach “doubters” and extremely difficult to reach “deadbeats.”⁹

<i>True Believers</i>	<i>Doubters</i>
 <ul style="list-style-type: none"> • Engages, hold core values • Informed and active • Educators • Enthusiastic • Female Skew • Welcome program improvements 	 <ul style="list-style-type: none"> • Focus on first generation items • Limited core values • Respond to community pressures • Can be motivated • Lack education/facts • Collection problems?

⁹ These categories of consumers were identified in Stewardship Ontario’s Phase 1 MHSW benchmark research conducted by Informa Market Research.

Strivers	Dead Beats
 <ul style="list-style-type: none"> • Believe in recycling/ core value • Want to be good recyclers • Confused, lack information • Can be motivated • Missing tools (bins or lists) • Collection problem? 	 <ul style="list-style-type: none"> • Recycle little or no items • Lack core commitment/ resistant • Motivated by negative 'sticks' • Male skew with hostility • Disenfranchised/ oppositional role

5.05.3 P&E Overview

The overall goal of the P&E program will be to use consumer-oriented communication to support the collection and recycling objectives necessary to realize the environmental benefits of the Consolidated MHSW Program Plan. The campaign will comprise two components.

a) **Branding the behaviour: a macro-campaign approach**

The objective will be to continue building awareness of the program and its goals and to motivate participation to ensure the designated materials are recovered for appropriate 3Rs management. While the number of materials covered under the program is being broadened considerably, the overall social marketing campaign will strive for continuity and consistency under the brand “Do What You Can” which is recognized as urging improved behaviour without being preachy (some Ontarians admit to environmental message fatigue).

The goal is to create a lasting awareness for this environmental brand similar to the “Keep Ontario Beautiful” campaign of the 1970s which continues to boast high recall some 25 years after it ended. Because it will not be possible to get sufficient reach and specificity in mass media channels for each of the MHSW materials, the overall strategic approach will focus the province-wide campaign on the brand message “Do What You Can.” The core concept behind a branding campaign is that by putting a “call to action” or norm appeal out to the public on a consistent basis, the brand will be top of mind when citizens have MHSW they are ready to dispose of. As noted earlier in this section, the limitations of the Phase 1 budget did not permit sustained exposure. In order to obtain satisfactory reach and frequency of message in this Consolidated MHSW Program Plan, a total of \$1 per Ontario household will be allocated for the brand campaign.

b) *Educating about specifics: a micro-campaign approach*

The approach to material specific P&E will depend on whether the product in question is consumable or durable, the point of generation and what end-of-life result is desired. Some consumables may carry a 'BUD' message (buy what you need, use it all up, dispose properly) while durables may need to be provided with a prompt at point-of-sale providing information or incentives for proper end-of-life disposal. Prompts and incentives may include such things as product information stickers advising of proper disposal options/collection locations, point-of-sale information (brochures, shelf-talkers), return bags/pouches for safe storage and transportation of residuals, etc. The goal of using prompts is to describe in positive, clear terms the specific action that is desired by the program.

Material specific P&E will be developed on an individual basis depending on the type of material and the current and anticipated recovery channels. The target audiences for some MHSW are very narrow while others are broad-based necessitating a customized approach for each. An example is a mercury switch found in convenience lighting in certain car models, which is likely to be removed only by auto dismantlers; therefore P&E would be directed to these service providers only. The specific considerations and budget amounts that were allocated to each material category are outlined in Volume 2 of the Consolidated MHSW Program Plan.

5.05.4 *Stages in Development of P&E to Support Consolidated MHSW Program Plan*

- Pre-commencement
 - Qualitative and quantitative research to inform comprehensive communication plan development
 - Preparation of P&E to support program launch
- Program launch
 - Implementation of P&E support
- Comprehensive program
 - Year-long P&E strategically implemented to support plan

5.06 Tracking and Benchmarking

The Minister's PRL requires the Consolidated MHSW Program Plan to:

- Identify a tracking mechanism for MHSW from collection through to its final destination;
- Identify a tracking and audit mechanism to ensure overall program compliance;
- Determine a list of benchmarks and performance measures to encourage the 3Rs, promote best practices and encourage the development of innovative diversion techniques.

5.06.1 *MHSW Tracking*

The implementation of the program will ensure that there is accurate information on MHSW from collection through to final destination to be able to:

- Measure operational and cost performance
- Ensure that the costs can be fairly allocated;
- Ensure that there is progress to move waste from disposal to reuse and recycling in accordance with the Minister's Program Request Letter.

In implementing the Phase 1 MHSW program, Stewardship Ontario was required to create a tracking system for MHSW from collection through to final destination. To that end, an interim paper-based tracking system was created for all Phase 1 MHSW collected under the program. Approved transporters are required to utilize a bill of lading (BOL) that requires the signatures of

the collection site, transporter and processor. Where MHSW is consolidated, a BOL is required to list the source of all wastes prior to shipment to a primary or downstream processor.

Transporters are then required to enter the Bill of Lading (BOL) information into an on-line material tracking system (MTS). The on-line system and paper based systems are then validated through a desk audit procedure and will be further verified through ongoing field audits.

Under the current Phase 1 program, transporters and processors must be approved by Stewardship Ontario. In registering and being approved, these firms agree to comply with Stewardship Ontario policies and MHSW specific guidelines as well as to be subject to audits, both financial and operational. As part of the Phase 1 implementation, audit requirements and interim guidelines have been established¹⁰. Work will continue to enhance and refine these processes, procedures and documents as the program matures. When needed, additional requirements and guidelines will be added to ensure proper program management.

Another tracking mechanism that was implemented under the Phase 1 program was the Municipal MHSW Reporting system administered by WDO. The online Municipal MHSW Report is completed on a quarterly basis by municipalities providing MHSW collection services under a Shared Responsibility Agreement with Stewardship Ontario. These reports are supported by monthly transporter submissions to the MTS, as detailed above.

The BOLs and the Municipal MHSW Reports are utilized by Stewardship Ontario to reconcile reported tonnage data from collection, transportation and processing activities. They form the basis for payments to municipalities, auto service providers and contracted service providers as well as the source documents for Stewardship Ontario's annual audit of its financial statements. To improve the overall tracking and business capabilities, Stewardship Ontario is in the preliminary state of assessing an Enterprise Information System (EIS). As part of the decision making process, the ability for the system to manage increased MHSW information will be accounted for. Key advantages of employing the EIS are:

- Ease of use by collection sites, transporters and processors;
- Eliminating the need for paper BOLs;
- Improving real time reporting capability.

Designing and implementing the EIS will be done in cooperation with other WDO programs, mainly the Waste Electrical and Electronic Equipment (WEEE) program being implemented by Ontario Electronic Stewardship (OES). The anticipated cost of the EIS and the portion of the cost to be allocated to Stewardship Ontario remain to be defined.

5.06.2 Performance Benchmarks and Measures

Stewardship Ontario will continue to use the Phase 1 Program Plan methodology in its year to year comparative analysis to monitor the overall progress compared to targets set out in the plan. Data on public awareness, new processing technologies, the performance of events, depots, depot in a box, and return-to-retail locations, and other factors will be reviewed annually when reconsidering accessibility targets for subsequent years of the program.

Each year, the data for the quantities of material introduced into the Ontario market (from stewards' reports), the quantities of material available for collection, the quantities of material

¹⁰ See http://www.stewardshipontario.ca/mhsw/pdf/transporters_processors/MTS_User_Guide.pdf for a copy of the Interim Guide

collected, and the quantities of materials reused, recycled and disposed will be compared against targets. The relationship between accessibility and collection will continue to be analysed so that accessibility can be adjusted systematically to meet the program targets.

The cost of the program will be monitored and reported in relation to the performance against collection, diversion, and accessibility targets as they are defined in Years 2 through 5 to assess the cost effectiveness of the program. Consideration will be given as to whether alternative operational mechanisms might be tested and implemented to increase the cost-effectiveness of the system in future years. This will include assessing the need for additional research and development investments. Other indicators of performance may be developed during implementation and will be incorporated into annual MHSW program reports.

5.06.3 Measuring Program Improvements

In order to accurately assess how effective the program is at recovering MHSW material it is important to conduct waste audits to track and measure program performance and improvements. Stewardship Ontario has established standard protocols for conducting waste audits based on experience from the Blue Box and MHSW programs. The waste audits will be conducted at a broad range of commercial collection sites (auto and non-auto) and municipalities: high density urban, rural and Northern.

The waste audits will determine the types and quantities of MHSW materials and containers flowing through each collection system – whether municipal programs such as MHSW collection, recycling facilities, curbside/depot recycling and garbage collection programs, or commercial collection channels for other MHSW including retail locations and processors under contract or receiving incentives from Stewardship Ontario. The estimated annual budget for implementing the waste audit program is estimated to be \$500,000. This cost will be shared between the MHSW and BBPP on a basis of a 50/50 given each program must analyze common sources of waste at the curbside and at processing facilities.

5.07 Vendor Standards

The PRL states that the program shall include a set of vendor qualification requirements to ensure MHSW materials are collected, stored, handled, transported, process or disposed in a safe and environmentally sound manner that satisfies local, provincial and national regulations and international obligations, as they may apply.

In order to ensure environmental performance and compliance to Stewardship Ontario's policies and procedures, Stewardship Ontario has developed and used a set of waste specific guidelines as part of MHSW Phase I implementation. Based on the work to date, Stewardship Ontario is continuously improving these with the goal to evolve the guidelines into MHSW vendor standards for collection, transportation and processing. The MHSW Vendor Standards will define the minimum requirements for activities approved under the Stewardship Ontario Consolidated MHSW Program Plan.

In taking the draft waste specific guidelines to the next level and establishing the vendor standards, service providers will be given the opportunity to provide input when required. Once established, vendors will be monitored and the standards enforced through various means. In developing the vendor standards, clear performance criteria will be defined and associated with enforcement criteria. The enforcement of standards will be accomplished by financial penalties, suspension of approval status or termination as an approved vendor.

The following elements will be included in the vendor standards:

a) Common Principle Elements

1. All activities will comply with the Waste Diversion Act's purpose which is to promote the reduction, reuse and recycling of waste and to provide for the development, implementation and operation of waste diversion programs.
2. Vendors will be required to commit to working with Stewardship Ontario to achieve the Consolidated MHSW Program Plan's diversion targets and support Ontario in moving from the current disposal based system to utilizing reduction, reuse and recycling opportunities where they exist and at the lowest possible cost.
3. All collection, transportation and processing will be conducted by registered and approved vendors in good standing.
4. All vendors will be subject to MHSW operational and MHSW financial audits at the discretion of Stewardship Ontario that assess the principle and activity specific elements of the respective vendor standards.
5. Vendors are required to track, monitor and report collection, transportation and processing activities on a monthly basis using Stewardship Ontario's Enterprise Information System. Reporting requirements will include sufficient information to allow for detailed analysis to calculate economic and environmental performance.
6. All vendors operating with the MHSW Program must demonstrate and verify organizational compliance with, but not limited to, the following¹¹:
 - a. Environmental Protection Act, 1990 (including R.R.O. 1990, O. Reg. 347, General – Waste Management)
 - b. Ministry of the Environment, Transfer and Processing Certificate of Approval and waste management system Certificate of Approval
 - c. Provincial Dangerous Goods Transportation Act, R.S.O. 1990, c. D.1
 - d. Hazardous Waste Information Network (HWIN): registration status
 - e. Canadian Environmental Protection Act, 1999 - Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (EIHWHRMR).
 - f. Labour Code of Canada
 - g. Employment Standards Act, 2000
 - h. Occupational Health and Safety Act, 1990
 - i. Workplace Safety and Insurance Act, 1997
 - j. Municipal zoning by-laws or other by-laws such as fire codes, parking and hours of operation
7. Vendors are required to provide an annual statement of compliance as well as provide notification of non-compliance, fines or MOE Provincial Field Orders within 30 days of incurring the non-compliance.
8. Records retention of two years for all bills of lading, manifests or other documentation outlined in this vendor standard

b) Processing Standard

1. All processors must be registered and approved by Stewardship Ontario
2. Insurance requirements will be explicitly stated based on processing activity
3. MHSW processing must occur in accordance with approved operating procedures and can be either indoors or outdoors and always in a secure area.
4. Processing must occur within a specified time frame to prevent any stockpiling of MHSW
5. Downstream markets and processors must be identified and verified to be in compliance with Stewardship Ontario's guidelines as developed and amended from time to time

¹¹ Participating facilities located outside of Ontario must document and demonstrate that they have occupational practices and policies which are comparable in scope and intent to the MHSW Vendor Standards, as well as any other Ontario-specific compliance requirements which apply to Ontario-based facilities. Acceptable documentation and demonstration of comparable compliance requirements must be provided by the vendor and approved by Stewardship Ontario.

6. Provide residual and products management method declarations as requested e.g. certificate of recycling, landfill or destruction.
7. Certificate declaration for MHSW received and processed
8. Reporting of processing activities will include:
 - a. Inbound waste by:
 - i. transporter/generator,
 - ii. weight and waste type
 - b. Outbound waste and products:
 - i. weight and type of waste and processed material sent for further processing or to downstream end-markets,
 - ii. corresponding destination by waste and product; e.g. residuals and disposal locations, product and end user
 - c. The recycling and disposal rates of products and waste;
9. Processing of waste must be done in an economic and environmentally acceptable manner. For example: the management of fertilizers may be best managed by incorporating into composting systems; contaminated post consumer solvents may be fuel blended.

c) *Collection Standard*

1. All collection sites must be registered and approved by Stewardship Ontario
2. Maximize capacity of lab packs or equivalent containers
3. Container packing requirements must be followed to promote and assist with implementing 3Rs and efficient disposal:
 - a. Pack MHSW into specific waste classes
 - b. limiting the use of vermiculite or other packing material,
 - c. Requirements for breakage reduction and
 - d. Specific contamination allowances
4. Value Added Services provided in compliance with the agreement
5. Vendors will report monthly on collection activities and quantities by container type and in accordance with a reporting template provided by Stewardship Ontario
6. Requirement to carry promotion and education material for distribution to the general public

d) *Transportation Standard*

1. All transporters must be registered and approved by Stewardship Ontario
2. All transporters must comply with TDG regulations where applicable
3. Reporting of activities will be carried out using the Enterprise Information System
4. As requested by Stewardship Ontario, transport vendors will supply information such as: driver abstracts, company and driver infractions
5. Adhere to industry or Stewardship Ontario policies governing environmental performance: 3Rs plan, alternative fuels, idling programs

Reuse Standard

1. All reuse activities by collection sites and processors will be required to be approved by Stewardship Ontario and at minimum follow these parameters:
 - a. Container contents appear to be of reasonable quantity and quality
 - b. Containers:
 - i. Are in good condition,
 - ii. Have the original label
 - c. The Collection Site has a defined 'reuse' area
 - d. The vendor shall record the address (house number, street, municipality and postal code) of each reuse customer including summary description of item(s) taken, type, quantity and container size.
 - e. The vendor shall utilize the forms, waiver documents or container stickers specified by Stewardship Ontario.

PART II – Discharging Stewardship Obligations

6.0 How Stewards Discharge their Obligations under the Waste Diversion Act

Stewards of MHSW have two options by which they can discharge their legal obligations under the WDA:

19. Register, report data and pay fees to Stewardship Ontario, which will be used to cover its costs for the management of MHSW, or
20. Make application to the WDO for approval of an Industry Stewardship Plan (ISP)

Upon approval of the Consolidated MHSW Program Plan, all stewards will be required to report and pay fees to Stewardship Ontario. WDO may consider an ISP only after approval of the Consolidated Program Plan by the Minister of the Environment. Therefore for the purpose of this Plan, Stewardship Ontario has assumed that all material will be managed within the Stewardship Ontario Consolidated MHSW Program and all obligated stewards will register and report to Stewardship Ontario.

As noted in Option 2 above, individual brand owners and first importers (or groups of stewards) who wish to take direct responsibility for managing their obligations under the WDA can apply to WDO for approval of an Industry Stewardship Plan (ISP). The requirements and procedural requirements for submitting an ISP have been set out by WDO (www.wdo.ca/content/?path=page81+item38390).

PART III – Program Costing

7.0 Overview of Cost Categories

There are four major categories of costs described in this Consolidated MHSW Program Plan, namely:

- Common Costs
- Material Specific Costs
- Contingency for Forecast Risk
- Deficit Recovery

Common costs. Consist of those costs which are common to all materials and are allocated on the basis of 85/15 cost share formula: 85% in proportion to the direct cost of managing each material; and 15% shared equally across all material categories. Common costs are generally fixed and can be controlled by Stewardship Ontario once they are set and approved.

Material-Specific Costs. Consist of those costs which pertain directly to the following operational activities in respect of each material:

- Collection
- Transportation
- Processing
- Haulage
- Treatment/disposal
- Promotion & Education (P&E)
- Research & Development (R&D)

The first five costs listed above are inclusive of all collection channels. All costs are tracked separately and allocated directly to the material. With the exception of material-specific P&E and R&D costs which are locked down upon plan approval (subject to any subsequent ISP approval which may remove this material from the Consolidated MHSW Program Plan), other material-specific costs may vary upwards or downwards as they are dependent largely upon two factors: consumer return behaviour and the adequacy of estimates made regarding what is available for collection.

Contingency for forecast risk. Consists of a margin built into fee estimates, and each material cost estimate, to protect the IFO from the high likelihood that there will be variances from exact forecast amounts. Each margin is estimated based on analysis of likelihood and probable degree of variance.

Deficit Recovery. Sales-based funding formulas are vulnerable to deficit or surplus accumulation because the IFO's budgeting relies on estimated costs (as opposed to actual costs) and projected sales into the market (as opposed to actual sales into the market). If this relationship is calibrated precisely, break-even occurs. In the event that sales are over-estimated and/or collection (i.e. cost) is under-estimated, a deficit occurs. This event materialized in Year 1 of the MHSW Phase 1 Program Plan. Deficits must be recovered in future plan years in the same way that surpluses must be credited in future plan years.

The various components of costs are described in detail in the following section.

7.01 Common Costs

These include the following seven (7) components:

- Plan Development
- Start-up Costs
- Steward Registration & Compliance Management
- Material & Supplier Management
- Program Management
- Shared P&E
- Phase 1 Costs

Common Costs of \$12.7 million are 17.8% of \$71.5 million total projected Consolidated MHSW Year 1 Program Plan cost.

7.01.1 Plan Development

a) Cost components

As the obligated IFO, Stewardship Ontario developed the MHSW Phase 1 Program Plan and is now responsible for developing the Consolidated MHSW Program Plan. Costs have been incurred during plan development for the following activities:

- Consulting with stakeholders, including stewards, service providers, municipalities, the public and WDO and the MOE
- Research and purchase of data to establish baselines e.g. lab pack analysis, sales into market data, etc.
- Legal opinions on definitions and exemptions
- Legal drafting of program rules
- Consulting fees paid to various professionals for the purpose of:
 - Determining the definition of obligated materials
 - Compiling baseline data on the quantities of Municipal Hazardous or Special Material (MHSM) supplied for sale or use in Ontario available for collection as MHSW, collected, diverted and disposed
 - Defining program metrics for accessibility, collection and diversion and for design of a program to meet those targets
 - Developing, refining and testing of cost models and fee rates
- Drafting the Consolidated MHSW Program Plan
- Unrecovered Phase 1 MHSW Program Plan development costs.

b) Cost Recovery

A period of three years has been provided to recover the Stewardship Ontario Consolidated MHSW Program Plan development costs of \$1.2 million. Given that the Consolidated MHSW Program Plan builds on the previous planning and implementation work completed under the Phase 1 program, Phase 1 MHSW Program Plan development costs have been redistributed to all materials as per the formula below (after accounting for those costs already recovered from Phase 1 materials). A similar period of three years was also provided for the recovery of the cost for development of the Phase 1 MHSW Program Plan and the unrecovered portion of these costs is included in the Consolidated Plan development. Further details on the allocation of Phase 1 plan development costs are provided in Section 7.1.7.

While Stewardship Ontario plan development costs are amortized over three years, WDO plan development costs are amortized over one year.

c) Cost Allocation

Costs for Consolidated MHSW Program Plan development are allocated according to the 85/15 formula described in 7.0 above. Plan development activities attributable to Phase 1 materials

alone will be allocated entirely to Phase 1 materials according to the 85/15 formula and activities attributable to all materials will be allocated to both Phase 1 and new materials under the consolidated Program according to the 85/15 formula. Further details are provided in Section 7.1.7.

7.01.2 Start-up Costs

a) Cost components

Start-up costs relate to those preparatory activities that are necessary to establish the infrastructure to render a program operational on the date of obligation. Plan Start-up costs include:

- Development of an implementation plan
- Development of program communications and notification of stewards
- Development of P&E communications plan and collaterals
- Development of business processes & related systems upgrades
- Audit and registration of vendors/suppliers
- Negotiation of field service contracts
- Unrecovered Phase 1 MHSW Program start-up costs

b) Cost recovery

A period of three years has been provided to recover projected Stewardship Ontario Start-up costs of \$1,800,000. Given that the Consolidated MHSW Program Plan builds on the previous implementation work completed under the Phase 1 program, appropriate Phase 1 plan start-up costs (both deficit in revenue for first 18 months and portion of costs for next 12 months) have been redistributed to all materials as per the formula below (after accounting for those costs already recovered from Phase 1 materials). Further details on the allocation of Phase 1 plan development costs are provided in Section 7.1.7.

While Stewardship Ontario start-up costs are amortized over three years, WDO start-up costs are amortized over one year

c) Cost allocation

Costs for Consolidated MHSW Program Plan start-up are allocated according to the 85/15 formula described in 7.0 above. Start-up activities attributable to Phase 1 materials alone will be allocated entirely to Phase 1 materials according to the 85/15 formula and activities attributable to all materials will be allocated to both Phase 1 and new materials under the consolidated Program according to the 85/15 formula. Further details are provided in Section 7.1.7.

7.01.3 Steward Registration & Compliance Management

a) Cost components

Compliance services enable stewards to register with Stewardship Ontario and comply with the Rules established under the Consolidated MHSW Program for properly discharging their legal obligations under the WDA. These activities are critical to the management of Stewardship Ontario's revenues.

Stewardship Ontario provides the following services to stewards and undertakes the following activities:

- Customer service to facilitate the registration, reporting and payment process
- On-line registration and reporting
- Payment and compliance agreements (where applicable)
- Auditing of steward reports

- Administration of payments system
- Development and maintenance of compliance and enforcement procedures
- Enforcement activities

b) Cost Recovery

Costs are fully recoverable in each program year.

c) Cost Allocation

Steward Registration & Compliance Management costs in the Consolidated MHSW Program Plan are allocated according to the 85/15 formula described in 7.0 above.

7.01.4 Material and Supplier Management

These costs are attributable to managing suppliers who provide services to Stewardship Ontario and for designing and executing key business processes to ensure the integrity of the materials management system. These include costs for:

- Field Operations—Stewardship Ontario shares a regional network of field operators with Ontario Electronic Stewardship who are contracted to oversee the collection, consolidation, transport, processing and proper disposal of MHSW in accordance with standards established by Stewardship Ontario and/or prescribed in the approved Consolidated MHSW Program Plan.
- Processor Audits—auditing of materials processors to verify final disposition of materials and to verify claims for incentive payments and collection cost reimbursement.
- Vendor Standards—establishing standards which transporters and processors must meet in order to provide services pursuant to the approved Consolidated MHSW Program Plan and verifying compliance.

7.01.5 Program Management

a) Cost components

Program management includes a number of activities including:

- IFO administration and governance (including staffing, legal, finance, board expenses, rent, I/T, insurance, office overhead). These costs are shared with the Blue Box program.
- The development of performance management systems to measure and monitor plan performance relative to objectives e.g. waste audits, performance benchmarks/scorecards. These costs are shared with the Blue Box program.
- The development and maintenance of integrated information systems to automate core functions such as finance, steward registration & reporting as well as materials tracking to allow for monitoring of material flow, final disposition and proper cost allocation.
- The coordination of research & development activities.
- WDO costs for overseeing the implementation of the approved Consolidated MHSW Program Plan and ensuring Stewardship Ontario is meeting its obligations under the Plan and program agreement.

b) Cost Recovery

Costs are fully recoverable in each program year with the exception of material tracking and information systems costs which are amortized over a five-year period in accordance with established accounting rules. Given that the Consolidated MHSW Program Plan builds on the previous program management work completed under the Phase 1 program, Phase 1 MHSW Program management costs have been redistributed to all materials as per the formula below (after accounting for those costs already recovered from Phase 1 materials). Section 7.1.7 provides details on the Phase 1 program management costs allocated to Consolidated Program stewards.

c) Cost Distribution

Program Management Costs in the Consolidated MHSW Program Plan are allocated according to the 85/15 formula described in 7.0 above

7.01.6 Shared P&E

a) Cost components

These costs relate to the development and execution of a province-wide P&E campaign designed to motivate appropriate behaviours among generators of MHSW. They include:

- Pre-launch activities
 - Qualitative and quantitative research to test consumer perceptions, awareness of appropriate disposal and consumption behaviours and motivation for “doing what you can”
 - Development, testing and refinement of creative concept
 - Development of advertising & marketing campaign
 - Development of earned media strategy
 - Media buy
 - Development of website and interactive tools
- Launch activities
 - Hold launch event and news conference
 - Respond to media requests for interviews
 - Roll out creative campaign
- Post launch activities
 - Track media coverage and quantify earned media impressions
 - Follow up research to test awareness and gauge behavioural change/shifts
 - Recalibrate advertising & marketing campaigns.

b) Cost Recovery

Costs are fully recoverable in each program year.

c) Cost Allocation

Shared P&E costs in the Consolidated MHSW Program Plan are allocated according to the 85/15 formula described in 7.0 above

7.01.7 Phase 1 Costs

The Consolidated Program Plan has been developed based on many of the activities undertaken during the development and implementation of the Phase 1 Program Plan and thus were deemed beneficial to both Phase 1 and new materials. As a result, costs incurred from

these activities have been allocated equitably to all materials, while the costs for other activities undertaken exclusively for Phase 1 materials have been allocated only to Phase 1 materials.

The allocation of costs for activities undertaken as part of Phase 1 to Phase 1 and non-Phase 1 materials is described below.

a) Plan Development

A portion of the Phase 1 plan development costs has been allocated to all materials as a means to recover costs equitably from all stewards (see Section 8.4 covering issues related to fee setting for further rationale). This would cover activities undertaken as part of the Phase 1 Plan development which do not have to be duplicated for non-phase 1 materials and thus benefit all materials to some extent. Such activities include:

- Development of the corporate website
- Development of the accessibility and infrastructure plan
- Development of public awareness approach, themes and materials
- Development of the fee setting methodology
- Development of the registration, reporting and financial systems
- Development of Program Rules
- Development of Program Agreement
- Corresponding liaison with MOE and WDO.

The remaining costs relating to activities that were entirely duplicated during the Consolidated Plan development and implementation process to incorporate the expanded list of materials, have been allocated to Phase 1 materials alone. These activities include:

- Development of the discussion paper and consultation with stakeholders and the MOE regarding Phase 1 material definitions
- Baseline system description and projections for Phase 1 material recovery
- Plan structure and presentation
- Phase 1 program cost estimates
- Defining the IFO governance

A period of three years has been provided for the recovery of the cost for development of the Phase 1 MHSW Program Plan and the unrecovered portion of these costs is included in the Consolidated Plan development.

It has been estimated that plan development costs attributable to both Phase 1 and new materials under the Consolidated Program accounted for approximately forty percent of the total Phase 1 Plan development cost and have been allocated to all materials according to the 85/15 formula. The remaining sixty percent has been allocated to Phase 1 materials alone according to the 85/15 formula. These costs, along with Phase 1 Start-up Costs, are shown in Column A of Table 7.4

b) Start-Up Costs

As with plan development, a portion of the Phase 1 Program Start-up costs has been allocated to as a means to recover costs equitably from all stewards. This would include:

- Development of vendor standards
- Development of vendor audit procedures
- Development of material tracking systems
- Development of standard contracts
- Registration of vendors which will provide collection and processing services for all materials.

The remaining costs have been allocated to Phase 1 materials alone. These activities include:

- Program launch
- Development of material-specific communications materials
- Communications with Stewards, including development of guidebooks, etc.
- Liaison with WDO

It has been estimated that program start-up costs attributable to both Phase 1 and new materials under the consolidated Program accounted for approximately forty percent of the total Phase 1 Plan development cost and have been allocated to all materials according to the 85/15 formula. The remaining sixty percent has been allocated to Phase 1 materials alone according to the 85/15 formula. These costs, along with Phase 1 Plan Development Costs, are shown in Column A of Table 7.4

c) Program Management

As with plan development, a portion of the Phase 1 Program Management costs has been allocated to as a means to recover costs equitably from all stewards. This would include:

- Waste characterization and recovery studies (e.g. lab-pack analysis)
- Registration and auditing of service providers which will cover materials added in the Consolidated Plan
- Options to incorporate small quantity generators
- Ongoing liaison with service providers and development of standard contracts
- Cost analysis
- A portion of corporate costs.

The remaining costs have been allocated to Phase 1 materials alone. These costs are shown in Column B of Table 7.4 It has been estimated that Phase 1 program common costs attributable to new materials under the consolidated Program accounted for approximately four percent of the total Phase 1 Plan common cost and have been allocated to all materials according to the 85/15 formula. The remaining ninety-six percent has been allocated to Phase 1 materials alone according to the 85/15 formula.

7.01.8 Cost Allocation to Stewards Subsequently Exempted through an ISP Process

Upon Plan approval, the proposed Consolidated MHSW Program Plan Rules specify that all stewards are obligated for:

- an appropriate share of program plan development costs for the Consolidated MHSW Program Plan as well as an appropriate share of the unrecovered Phase 1 MHSW Program Plan development costs
- an appropriate share of the Phase 1 deficit if they participated in the Phase 1 program
- an appropriate share of Consolidated MHSW Program Plan Start-up costs incurred to the date of exemption both for the Consolidated MHSW Program Plan as well as an appropriate share of the unrecovered Phase 1 MHSW Program Plan start-up costs

To the extent that a steward is exempted from the program by Waste Diversion Ontario or by the Minister of the Environment, such steward will be exempted from the per unit service cost as of the date of the exemption. However, within 60 days of exemption each exempted steward must file all outstanding Quarterly MHSM Steward's Reports and report all MHSM supplied for use up to and including the date of exemption and to pay appropriate fees.

7.01.9 Consolidated Common Costs for Year 1

Table 7.1 summarizes the Common Costs for Year 1 of the Consolidated MHSW Program Plan.

Table 7.1: Common Costs for Year 1 of the Consolidated MHSW Program Plan

Cost Category	Budget for Year 1
1. Plan Development	
SO Consolidated Plan Development	\$400,000
WDO Consolidated Plan Development	\$100,000
SO Phase 1 Plan Development Cost Recovery	\$276,000
Deficit in SO Phase 1 Plan Development Cost Recovery for first 18 months	(\$40,500)
Deficit in WDO Phase 1 Plan Development Cost Recovery for first 18 months	(\$78,800)
2. Start-up	
SO Consolidated Start-Up	\$600,000
WDO Consolidated Start-Up	\$100,000
SO Phase 1 Start-Up Cost Recovery	\$750,500
Deficit in SO Phase 1 Start-Up Cost Recovery for first 18 months	\$562,800
Deficit in WDO Phase 1 Start-Up Cost Recovery for first 18 months	(\$85,200)
3. Steward Registration & Compliance Management	\$792,000
4. Material & Supplier Management	
a. Field operations	\$2,753,000
b. Processor audits	\$150,000
c. Vendor standards	\$50,000
5. Program Management	
a. IFO Administration	\$1,402,200
b. Performance tracking systems	\$500,000
c. Material tracking systems	\$280,000
d. WDO Administration	\$650,000
6. Shared Promotion and Education	\$3,500,000
Total	\$12,662,000

7.02 Material-Specific Costs

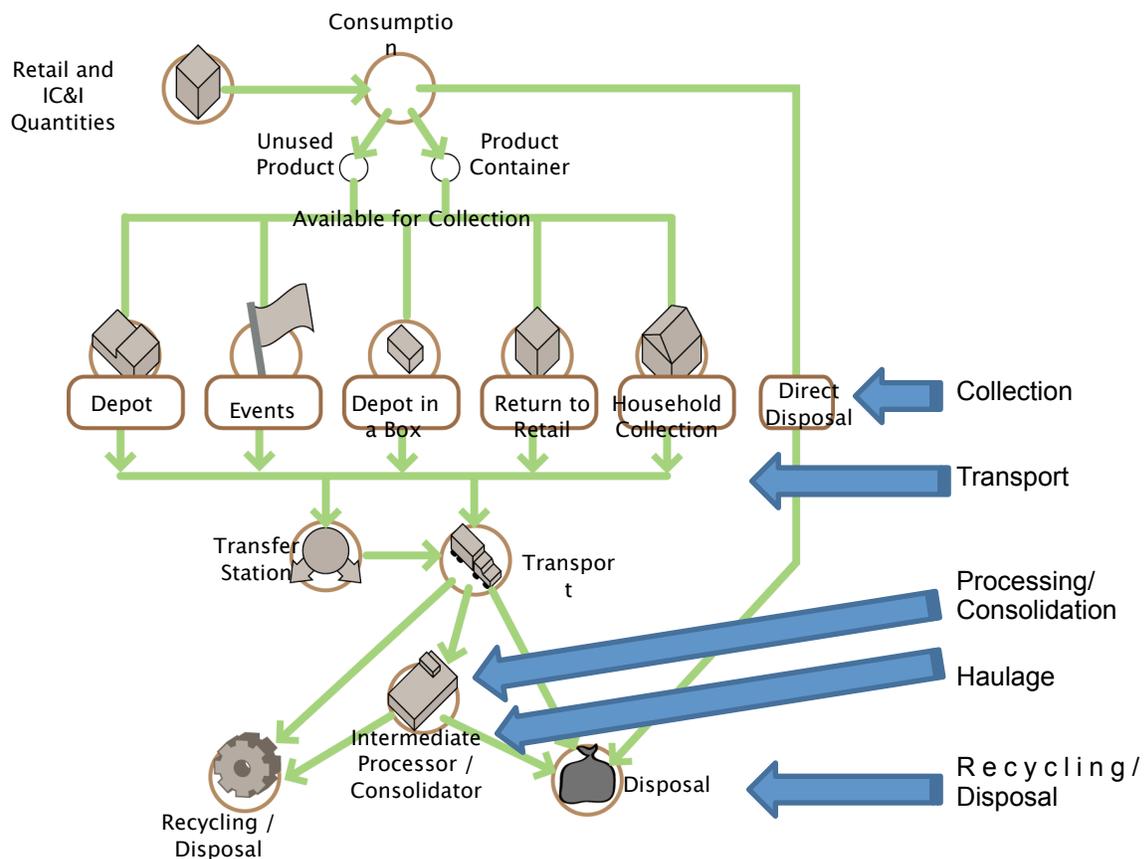
7.02.1 Cost Components

Material specific costs include the following cost components:

- Collection
- Transportation
- Processing/Consolidation
- Haulage
- Recycling/disposal
- P&E
- R&D

The first five material-specific cost components above related directly to the End-of-Life management of MHSW, as presented in Figure 7.1 below.

Figure 7.1: End-of-Life Management Stages of MHSW



7.02.2 Cost allocation

Costs are tracked and allocated on a material-specific basis.

Approach to Allocating Costs for Municipal Channel

Direct operation costs in the municipal channel were estimated by ‘averaged costs allocated by weight to materials’. At the time the Consolidated Plan cost model was developed, this approach was selected for the following reasons:

- Phase I operations were just underway and costing experience was limited. As a result the data and reporting were limited and thus unreliable.
- Phase I costs were highly variable.
- Some material group definitions were not yet finalized and were changing.

- The MHSW Consolidated Plan includes more material categories than are currently managed in most municipal programs.
- Operations and costing data from municipalities was not on a material specific basis.

For other channels, such as return to retail, cost data were typically related to specific materials. As a result Stewardship Ontario commissioned a study of a sample of municipalities with MHSW programs to gather costs reflective of their actual MHSW operations. The results of this study provided the base for estimating the costs across all MHSW materials and the province.

One of the findings of the study was that the municipalities did not collect data on a material-specific basis. As well most municipalities did not have a breakdown of the costs by stage (collection, transport, processing, disposal). Instead these operations were outsourced in a single contract to a service provider. The data were reported on a weight basis. The breakdown of costs by stages, e.g., processing or disposal, is estimated using data from other recycling operations/channels and the experience during Phase I. These other data are on a weight and sometimes unit basis.

It is anticipated that the actual aggregated cost and the allocation of those costs to specific materials will be refined with the implementation of the Consolidated Plan resulting from 1) increased experience and reliability of data from a year or more of Phase I, 2) established material definitions, and 3) increased planning time, to use for determining more accurate allocation of costs to material groups.

Refinement of Allocation of Costs for Municipal Channel in Year 2

Improving the allocation of costs to associated materials requires obtaining data that show individual activities, are more accurate, and provide Stewardship Ontario and MHSW stakeholders with a higher degree of confidence than was available for the initial plan. The data required include recovery rates, quantities collected, collection/processing operations costs, and cost drivers.

The following steps are anticipated to improve the allocation of the operations costing and direct material costing of the municipal MHSW channel and other multi-material channels:

21. Identify representative operations, i.e., type/size of municipality (and other service provider), MHSW collection/processing channel, type of operation, etc. on which to base the allocation of operations and direct costs to appropriate materials province-wide. Stewardship Ontario intends to incorporate the provision to obtain necessary budget data and undertake such studies into the agreements between Stewardship Ontario and the municipalities (and other service providers) to be established during the Consolidated MHSW implementation.
22. Undertake an Activity Based Costing (ABC) study during Year 1. This will identify the specific cost drivers, e.g., weight, volume, unit or specific activity/time and the differences in the cost drivers for different operations/services or municipality types. This study will be initiated as early as possible in Year 1 of the program, once the scope and approach have been established and noting that the operations may be changing to adopt the new Consolidated Program.
23. As a result of the ABC study, the costs of the various operations stages, e.g., transport, will be allocated by material based on its weight, volume, units, and/or other activities that determine the cost. Transport is an example where volume is often the cost driver, i.e., one pays for a truckload regardless of weight (as long as the total load doesn't exceed allowable transport limits). Processing may be based on weight or number of units, depending on the material and how it is handled.

Both direct and common costs are allocated according to the appropriate cost drivers. The allocation of direct costs can be straight forward for single material operations components (e.g., full truckloads of used paint containers from a depot), or require allocating for multi-material components (e.g., truckload of material from an event). Allocation of common costs, e.g., facilities, administration, etc., may be on a different basis.

The allocations are then combined with the material quantity data to determine the improved cost estimates by material for Year 2. The material quantity data will be gathered throughout Year 1, including the data from Phase 1 and will form the basis for the projections for Year 2 and future fees.

7.02.3 Collection

Cost components. Collection of MHSW includes the activities and operations of receiving the material from consumers and small IC&I generators at a collection point or site. Specific tasks include:

- preparation/promotion for collection
- setup
- receipt of material
- classification/organization of material
- storage in shipping containers
- record maintenance
- preparation for transport.

These activities are typical of the collection operations for depots, events, Depot in a Box (DiB), Return to Retail (RtR), Special Service Channels (e.g. office buildings) and Toxic Taxi (TT).

Collection costs represent 37% of direct operating costs

Basis for Cost Projections. Cost estimates were developed on the basis of a number of factors, some of which were specific to certain channels. Channel specific assumptions are listed in Table 7.2: Channel-Specific Assumptions Used as Basis for Collection Cost Projections below.

Table 7.2: Channel-Specific Assumptions Used as Basis for Collection Cost Projections

	Collection Channel				
	Depot	Collection Events	Depot-in-a-box	Return to Retail & Specialty Service Channel	Toxic Taxi
Cost variables & Cost drivers	<ul style="list-style-type: none"> ▪ Facilities ▪ Hours of operation ▪ Staffing levels ▪ Labour rates 	<ul style="list-style-type: none"> ▪ Hours of service ▪ Quantity of material collected ▪ Frequency of events ▪ Staffing levels ▪ Labour rates 	<ul style="list-style-type: none"> ▪ Design and construction ▪ Container costs ▪ Labour rates 	<ul style="list-style-type: none"> ▪ Storage ▪ Size and life expectancy of transport drums/ gaylords ▪ Incentive payments (auto) 	<ul style="list-style-type: none"> ▪ Year 1 to determine cost viability

	Collection Channel				
	Depot	Collection Events	Depot-in-a-box	Return to Retail & Specialty Service Channel	Toxic Tax
Source data for projections	<ul style="list-style-type: none"> ▪ Sampling of 43 depots across Ont representing > 50% of material collected ▪ WDO 2007 Data Call ▪ SO cost data for Phase 1 MHSW ▪ Municipal waste managers 	<ul style="list-style-type: none"> ▪ Sampling of 38 event days across Ont representing 20% of municipal events in 2007 ▪ WDO 2007 Data Call 	<ul style="list-style-type: none"> ▪ Comparable information for existing channels on costs ▪ Contractor estimate based on European design 	<ul style="list-style-type: none"> ▪ SO RtR contracts & RtR data ▪ RtR research in BC ▪ Industry experts 	<ul style="list-style-type: none"> ▪ Costs provided by 2 municipal TT programs i.e. Sudbury, Toronto

Cost control opportunities. Stewardship Ontario will assess collection channels on the basis of which channels attract the greatest volume at the lowest cost/tonne. Once the program’s accessibility infrastructure is established, Stewardship Ontario will look for opportunities to divert materials to higher performing channels.

7.02.4 Transportation

Cost components. The scope of transportation costs include:

- transporting and unloading containers to be used to store MHSW at the collection sites (depots, events, DiBs, retailers and toxic taxi base)
- loading and transporting drums, shipping containers, roll-off containers, etc. containing MHSW from the collection site to the consolidation centre or end recycler/disposal

Transportation comprises 26% of direct operating costs.

Cost variables & drivers. Costs are determined by the following factors:

- volume of material accumulated at a collection site
- proximity of collection sites to each other
- distance between collection sites, consolidation centres and processors

Basis for cost projections. Transport costs are developed by truckload or by weight. Costs were assessed on the basis of distance from processing centres. Transportation costs from north Ontario to consolidators or end recycling/ disposal services are significantly higher than those from central, east and south regions, as recyclers tend to be situated in central Ontario. 5% of the province’s MHSW material is generated from the north. As such, material quantities from the key regional areas - including Thunder Bay, Sault Ste Marie, and Sudbury - were projected and a transport distance factor was applied.

Cost control opportunities. As part of its system optimization strategy, Stewardship Ontario will determine whether it is more efficient to ship directly from a collection site to a processor or whether efficiency is enhanced by consolidating materials at a central location. Stewardship Ontario will investigate the use of regional consolidation centres, especially in the north and will assess whether these centres can be integrated with depots in major regional centres.

7.02.5 Processing/Consolidation

Cost components. Processing or consolidation is also referred to as bulking. This comprises:

- unpacking mixed material drums and repacking the MHSW into drums or gaylords dedicated to specific materials;
- unloading trucks with containers carrying different materials, for shipping to the recycling operation.

Processing/Consolidation comprises 5% of direct operating costs.

Cost variables & drivers. Costs are dependent on the following factors:

- location and number of shipments
- whether consolidation sites are co-located with collection sites and/or processors
- quantity of material consolidated
- packing effectiveness

Basis for cost projections. Costs were based on using the services of 5 consolidators: two in southern Ontario and three in the north. The costs were based on data and estimates provided in the Stewardship Ontario municipal study as well as data from current consolidation contracts.

Cost control opportunities. Stewardship Ontario will assess the viability of consolidation centres on the basis of volume throughput.

7.02.6 Haulage

Cost components. Haulage costs apply to shipping of:

- sorted and/or bulked material being shipped from a processing centre to a treatment/disposal location
- material from a collection site that does not require sorting or bulking

Haulage comprises 0.5% of direct operating costs.

Cost variables & drivers. Cost is driven by the following factors:

- distance shipped: locations of the recycling /disposal service providers vary widely and are located in Quebec, eastern Ontario, Hamilton, south-western Ontario, and the United States
- quantity of material per load: with a few exceptions (notably batteries) the size of a truck load is constrained by volume rather than weight

Basis for cost projections. For the purposes of the Consolidated MHSW Program Plan, cost projections were based on the distance to be travelled from the consolidation centre to the appropriate recycling/disposal service for each material group. The costs for haulage were developed from data and estimates provided from the Stewardship Ontario municipal study, current Stewardship Ontario experience with haulage contracting, the experience of Stewardship Ontario staff and consultants, and industry rates.

Cost control opportunities. Costs may be reduced by developing more efficient processes for separation and packaging at the collection site and/or consolidation centre.

7.02.7 Recycling/Disposal

Cost components. These costs relate to:

- recycling
- treatment of material
- disposal of residual material following recycling/treatment

Recycling/disposal comprises 25% of direct operating costs.

Cost variables & drivers. Cost is driven by the following factors:

- material type
- quantity recycled/disposed

Basis for cost projections. Cost estimates for the purposes of the Consolidated MHSW Program Plan were generated from current Phase1 MHSW costs, the municipal cost study, and the experience of Stewardship Ontario staff and consultants.

7.02.8 Material-Specific P&E

A total amount of \$2,000,000 has been allocated to material-specific P&E. The specific considerations and budget amounts that were allocated to each material category are outlined in Volume 2 of the Consolidated MHSW Program Plan. An amount of \$500,000 has been allocated to consumable MHSW categories, encouraging consumers to buy only as much as they need and to use it up. This amount has been allocated to those consumable MHSW categories on the basis of 85/15 cost share formula outlined below: 85% in proportion to the direct cost of managing each material; and 15% shared equally across those material categories. The remainders of the material-specific P&E budgets have been allocated directly to the respective materials.

7.02.9 Material-Specific R&D

A total amount of \$760,000 has been allocated to material-specific R&D. The specific considerations and budget amounts that were allocated to each material category are outlined in Volume 2 of the Consolidated MHSW Program Plan.

7.02.10 Aggregated Material-Specific Cost Summary

Table 7.3 summarizes aggregated material-specific costs.

Table 7.3: Aggregated Material-Specific Cost Summary

Cost Component	Operating Costs
Collection	\$18,179,900
Transportation	\$12,716,400
Processing/Consolidation	\$2,647,700
Haulage	\$264,800
Recycling/disposal	\$12,365,700
Promotion and Education (P&E)	\$2,000,000
Research and Development (R&D)	\$760,000
Total Direct Operating Costs	\$48,934,500

Note: The values in this table do not include the contingency for forecasting risk applied to each material category described in section 7.3.

7.03 Contingency for forecasting risk

Fee-based funding formulae are vulnerable to deficits (and/or surpluses). Fees are based on combined **estimates** of the following:

- Future sales
- Amount of material available for collection
- Costs of managing waste

None of these factors can be predicted with certainty. In fact, it is reasonable to expect variances from the Plan in each of them.

Because revenues are only peripherally and indirectly related to costs, variances may occur in different directions (e.g. lower sales and higher material returns).

Consequently, an estimate for the size and likelihood of cost variance for each material has been calculated for the purpose of setting fees.

“Confidence levels” of High, Medium, and Low, with corresponding values of 1%, 3% and 5%, respectively were assigned to materials according to criteria for assessing the amount of risk. The criteria as well as the material-specific contingency levels are outlined in Appendix 4. Also, each of the areas of uncertainty has been weighted to reflect the sensitivity of each on the cost estimates:

- Future sales – 1
- Amount of material to be managed (Year 1 target) – 1.5, and
- Cost of managing waste – 2

These confidence levels and weightings result in overall contingency of anywhere from 4.5% to 22.5% depending on the material. The contingency on sales (“Quantity into Market”) is applied to the sales figures when calculating fee rates to provide some protection against the failure of forecast fee revenues to materialize for any reason. The contingency relating to the cost of managing recovered material is applied to the direct material management cost.

In the aggregate, these material contingencies provide protection for the IFO against cumulative negative variances.

In the event that fees are higher than required to cover costs – thereby creating a surplus for that material category – the difference will be returned to stewards through lower fee rates in future years.

7.04 Deficit Recovery for 2008-09

Stewardship Ontario started the MHSW program with no working capital other than a \$4.25 million loan from the Blue Box Program Plan. Even if a deficit had not materialized, the IFO would have had cash flow challenges due to the requirement that it provide up-front cash for start-up costs and investments, to be recovered back from stewards over several years.

In its first 18 months of operation, a deficit did materialize for MHSW. The shortfall is due to a combination of fee revenues being lower than forecast, and costs similar or higher than predicted. The deficits (and surpluses) are tracked on a material by material basis. Certain materials, notably paint and coatings, are incurring costs significantly in excess of estimates.

The total deficit attributable to each MHSW material category is made up of the following elements:

- Deficit (or surplus) in revenues from Phase 1 fees (phase 1 materials only)

- Deficit (or surplus) in Phase 1 direct post collection operating costs (phase 1 materials only)
- Deficit (or surplus) in Common Costs (allocated to all materials according to the 85/15 rule outlined previously)

The allocation of the deficit to each material category is summarized in Table 7.4. In the event that fees are higher than required to cover costs – thereby creating a surplus for that material category – the difference will be returned to stewards through lower fee rates in future years. This was the case for single-use dry cell batteries, which incurred a surplus under the Phase 1 MHSW Program Plan.

Table 7.4: Phase 1 Cost Recovery by Material Category

Category	Sub-Category	Phase 1 SO Plan Development and Start-up 18-month Fee Recovery	Phase 1 Program Management Costs	Deficit in Phase 1 Direct Material Costs	Total
		(A) (\$)	(B) (\$)	(C) (\$)	(D) (\$)
Aerosols		\$55,100	\$48,300	\$0	\$103,400
Antifreeze		\$52,700	\$12,500	\$0	\$65,200
Batteries - Consumer-Type Portable	Single-use	\$69,900	\$33,500	(\$181,700)	(\$78,300)
	Rechargeable	\$79,000	\$69,300	\$0	\$148,300
Batteries - Industrial Stationary and Non-Lead Acid Motive		\$0	\$0	\$0	\$0
Corrosives	Corrosives	\$38,300	\$33,600	\$0	\$71,900
	Irritants	\$11,200	\$9,800	\$0	\$21,000
Fertilizers	Containing banned pesticides			Plus \$162,600 (Phase 1 only)	
	Naturally-derived	\$50,400	\$26,600		\$239,600
	Synthetically-derived				
Fire Extinguishers		\$16,000	\$14,000	\$0	\$30,000
Flammables and Solvents	Flammables	\$253,400	\$222,300	\$0	\$475,700
	Solvents	(\$4,100)	(\$27,500)	\$670,000	\$638,400
Fluorescents	User-removed	\$16,600	\$14,500	\$0	\$31,100
	WEEE-embedded	\$12,700	\$11,200	\$0	\$23,900
Leachates		\$15,300	\$13,400	\$0	\$28,700
Mercury devices	Measuring devices	\$3,800	\$3,300	\$0	\$7,100
	Mercury Switches - Automotive	\$10,800	\$9,500	\$0	\$20,300
	Mercury Switches - White Goods	\$4,700	\$4,100	\$0	\$8,800

Category	Sub-Category	Phase 1 SO Plan Development and Start-up 18-month Fee Recovery	Phase 1 Program Management Costs	Deficit in Phase 1 Direct Material Costs	Total
	Other Mercury Switches	\$0	\$0	\$0	\$0
	Thermostats	\$7,400	\$6,500	\$0	\$13,900
Oil Containers		\$67,100	(\$21,100)	\$0	\$46,000
Oil Filters		\$231,700	(\$40,700)	\$0	\$191,000
Paint & Coatings		\$404,000	\$141,200	\$4,610,500	\$5,155,700
Pesticides	Banned products	\$27,200	\$8,000	Plus \$124,600 (Phase 1 only)	\$159,800
	Non-banned products				
Pharmaceuticals		\$47,400	\$41,600	\$0	\$89,000
Pressurized Containers	Non-Refillable	\$11,500	(\$2,100)	\$178,700	\$188,100
	Refillable	\$10,900	\$2,100	\$26,000	\$39,000
Reactives		\$0	\$0	\$0	\$0
Sharps and Syringes		\$55,800	\$48,900	\$0	\$104,700
Toxics		\$0	\$0	\$0	\$0
Total		\$1,548,800	\$682,800	\$5,590,700	\$7,822,300

Note: Column A includes Phase 1 Plan Development and Start-up costs as allocated to all materials, as well as any deficit recovery related to these costs for Phase 1 materials only. Column B includes Phase 1 Program Management costs as allocated to all materials, as well as any deficit recovery related to these costs for Phase 1 materials only. Column C refers to deficits in fees collected and direct operating costs.

The IFO must recover its shortfall in the upcoming year to remain solvent. Fees have been set to recover the existing operating deficit and to allow for pay-back of the loan from the Blue Box program. The fees reflect the material specific deficits (and credits for any surplus).

7.05 Total Costs

Total Year 1 Consolidated MHSW Program Plan are presented in the two tables that follow. Table 7.5 presents the aggregated total program cost while table 7.6 presents the total program cost by material category.

Table 7.5: Year 1 Consolidated MHSW Program Plan Total Aggregated Costs

Cost Category	Budget for Year 1
Material Specific Costs	\$48,934,500
Common Costs	\$12,386,100
Deficit	\$6,713,700
Contingency	\$3,351,800
Total Costs	\$71,386,100

Table 7.6: Consolidated MHSW Program Plan Total Costs by Material Category

Material Category	Sub-category	Material Management (\$)	Material-Specific R&D (\$)	Material-Specific P&E (\$)	Contingency (\$)	Total Common Costs (\$)	Deficit Recovery (\$)	Total Material - Specific (\$)	Contingency on Sales (\$)	Total Program (\$)	Supplied for Use
Aerosols		\$1,340,100	\$0	\$0	\$100,500	\$477,600	\$0	\$1,918,200	\$59,300	\$1,977,500	54,764,495 units
Antifreeze		\$1,448,700	\$100,000	\$133,333	\$66,700	\$399,500	\$54,200	\$2,202,433	\$22,200	\$2,224,633	25,551,200 kilograms
Batteries - Consumer-Type Portable	Single-use	\$1,921,200	\$69,236	\$67,003	\$259,400	\$561,900	(\$144,000)	\$2,734,739	\$84,600	\$2,819,339	6,739,000 kilograms
	Rechargeable	\$2,379,800	\$85,764	\$82,997	\$321,300	\$685,000	\$0	\$3,554,861	\$110,000	\$3,664,861	1,901,000 kilograms
Batteries - Industrial Stationary and Non-Lead Acid Motive		\$0	\$60,000	\$0	\$0	\$50,000	\$0	\$110,000	\$1,100	\$111,100	100 stewards
Corrosives	Corrosives	\$938,300	\$7,500	\$30,277	\$164,200	\$332,200	\$0	\$1,472,477	\$77,500	\$1,549,977	10,296,243 units
	Irritants	\$119,400	\$7,500	\$14,761	\$20,900	\$97,100	\$0	\$259,661	\$13,700	\$273,361	96,715,581 units
Fertilizers	Containing banned pesticides	\$1,141,300	\$0	\$34,123	\$199,700	\$409,700	Plus \$185,000 (Phase 1 only)	\$1,784,823	\$0	\$1,784,823	
	Naturally-derived										
	Synthetically-derived										
Fire Extinguishers		\$46,700	\$5,000	\$0	\$5,400	\$138,300	\$0	\$195,400	\$10,300	\$205,700	90,228 units
Flammables and Solvents	Flammables	\$7,669,800	\$25,000	\$149,150	\$805,300	\$2,196,200	\$0	\$10,845,450	\$331,200	\$11,176,650	743,385,392 litres
	Solvents	\$0	\$0	\$0	\$0	(\$81,200)	\$719,500	\$638,300	\$21,700	\$660,000	3,682,000 kilograms

Material Category	Sub-category	Material Management (\$)	Material-Specific R&D (\$)	Material-Specific P&E (\$)	Contingency (\$)	Total Commo n Costs (\$)	Deficit Recove ry (\$)	Total Material - Specific (\$)	Continge ncy on Sales (\$)	Total Program (\$)	Suppli ed for Use
Fluores cents	User-remov ed	\$299,400	\$12,500	\$250,000	\$31,400	\$143,600	\$0	\$736,900	\$22,800	\$759,700	13,300,000 units
	WEEE-embed ded	\$175,600	\$12,500	\$0	\$18,400	\$110,200	\$0	\$316,700	\$9,800	\$326,500	23,372,000 units
Leachat es		\$24,100	\$15,000	\$0	\$4,200	\$132,500	\$0	\$175,800	\$0	\$175,800	
Mercury devices	Measur ing device s	\$4,500	\$25,000	\$37,500	\$500	\$32,600	\$0	\$100,100	\$0	\$100,100	
	Mercur y Switch es - Autom otive	\$247,600	\$0	\$37,500	\$8,700	\$94,000	\$0	\$387,800	\$0	\$387,800	
	Mercur y Switch es - White Goods	\$33,300	\$25,000	\$37,500	\$5,800	\$41,000	\$0	\$142,600	\$0	\$142,600	
	Other Mercur y Switch es	\$0	\$15,000	\$0	\$0	\$25,000	\$0	\$40,000	\$0	\$40,000	
	Therm ostats	\$120,400	\$75,000	\$37,500	\$12,600	\$63,900	\$0	\$309,400	\$0	\$309,400	
Oil Contain ers		\$2,214,900	\$100,000	\$133,333	\$77,500	\$439,200	\$144,000	\$3,108,933	\$31,400	\$3,140,333	68,100,000 litres
Oil Filters		\$8,681,100	\$0	\$133,333	\$303,800	\$1,576,700	\$432,400	\$11,127,333	\$112,400	\$11,239,733	18,683,667 units
Paint & Coating s		\$14,275,800	\$100,000	\$250,735	\$499,700	\$3,147,400	\$4,934,700	\$23,208,335	\$234,400	\$23,442,735	115,182,162 kilograms
Pesticid es	Banne d produc ts						Plus \$149,500				
	Non-banne d produc ts	\$446,200	\$0	\$20,954	\$78,100	\$209,000	(Phase 1 only)	\$754,254	\$0	\$754,254	

Material Category	Sub-category	Material Management (\$)	Material-Specific R&D (\$)	Material-Specific P&E (\$)	Contingency (\$)	Total Common Costs (\$)	Deficit Recovery (\$)	Total Material-Specific (\$)	Contingency on Sales (\$)	Total Program (\$)	Supplied for Use
Pharmaceuticals		\$1,030,200	\$0	\$200,000	\$139,100	\$411,300	\$0	\$1,780,600	\$55,100	\$1,835,700	244,040,085 units
Pressurized Containers	Non-Refillable	\$191,000	\$0	\$150,000	\$22,000	\$77,900	\$200,200	\$641,100	\$19,800	\$660,900	1,661,201 units
	Refillable	\$145,100	\$0	\$0	\$21,000	\$81,800	\$38,200	\$286,100	\$8,800	\$294,900	288,452 units
Reactives		\$0	\$0	\$0	\$0	\$25,000	\$0	\$25,000	\$0	\$25,000	
Sharps and Syringes		\$1,280,000	\$20,000	\$200,000	\$185,600	\$483,700	\$0	\$2,169,300	\$114,200	\$2,283,500	186,857,544 units
Toxics		\$0	\$0	\$0	\$0	\$25,000	\$0	\$25,000	\$0	\$25,000	
Total		\$46,174,500	\$760,000	\$2,000,000	\$3,351,800	\$12,386,100	\$6,713,700	\$71,386,100	\$1,340,300	\$72,726,400	

Notes:

1. Refers to the sum of the contingency applied on the amount of material to be managed (Year 1 target) and the cost of managing waste. As stated in Section 7.3, the weighting assigned to the amount of material to be managed is 1.5, while the weighting assigned to the cost of managing waste is 2.
2. Refers to the contingency applied on the sales into the market. The assigned weighing of this contingency is 1.
3. Deficit includes Phase 1 deficit recovery for all costs: Phase 1 Start-up, Phase 1 Plan Development, other Phase 1 Program Management costs as well as any deficits in direct material operating costs.

7.06 MHSM Fee Rates

The MHSM fee rates under the Consolidated MHSW Program Plan are presented in Table 7.7.

Table 7.7: MHSM Fee Rates

Material Category	Sub-category	Fee Category	Total Cost (Including contingency on sales)(\$)	Supplied for Use	Consolidated Plan Fee Rate					
					\$/ Unit	\$/Kg	\$/L	\$/ steward	\$/ locati on	
Aerosols			\$1,977,500	54,764,495 units	\$0.036					
Antifreeze		Bulked	\$1,954,500	6,500,000 kg			\$0.077			
		Packaged	\$270,300	19,051,200 L			\$0.090			
Batteries - Consumer-Type Portable	Single-use	Alkaline, Manganese (AlMn) - Single-Use, Alkaline (Al) - Rechargeable. Silver Oxide (Ag2O)	\$2,690,100	4,689,000 kg		\$0.410				
		Zinc Carbon (ZnC) and Zinc Air (ZnAir) - Single-Use		1,873,000 kg						
	Rechargeable	Lithium Metal (Li) - Single-Use	\$129,200	177,000 kg						\$0.730
		Lithium Ion (Li-Ion) and Lithium Polymer (Li Polymer) - Rechargeable	\$2,748,600	51,000 kg						\$1.569
		Nickel-Metal Hydride (NiMH) - Rechargeable		271,000 kg						
		Nickel Cadmium (NiCd) - Rechargeable		1,430,000 kg						
Small Sealed Lead Acid (SSLA / Pb) - Rechargeable	\$916,200	149,000 kg	\$6.149							
Batteries - Industrial Stationary and Non-Lead Acid Motive			\$111,100	100 stewards				\$1,111		
Corrosives	Corrosives		\$1,550,000	10,296,243 units	\$0.151					
	Irritants		\$273,200	96,715,581 units	\$0.003					

Material Category	Sub-category	Fee Category	Total Cost (Including contingency on sales)(\$)		Supplied for Use	Consolidated Plan Fee Rate				
						\$/Unit	\$/Kg	\$/L	\$/steward	\$/location
Fertilizers	Containing banned pesticides		\$1,784,900	Plus \$185,000 (Phase 1 only)		Measured Return Share				
	Naturally-derived									
	Synthetically-derived									
Fire Extinguishers			\$205,600		90,228 units	\$2.279				
Flammables		Assorted flammables	\$11,102,700		718,375,392 L			\$0.015		
		Automotive additives			1,810,000 L			\$0.015		
		Windshield washer fluid			23,200,000 L			\$0.015		
		Solvents		\$660,000	3,682,000 kg			\$0.167		
		Gasoline		\$73,900	3,413 locations					\$21.652
Fluorescents	User-removed		\$759,800		13,300,000 units	\$0.057				
	WEEE-embedded	Display devices < 29"	\$326,500		23,372,000 units					
		Display devices > 29"								
		Portable computers								
Printing, copying & multi-function devices										
Leachates			\$175,900							Measured Return Share
Mercury devices	Measuring devices		\$100,100							Measured Return Share
	Mercury Switches - Automotive		\$387,700							Measured Return Share
	Mercury Switches - White Goods		\$142,600							
	Mercury Switches - Other		\$40,000							
	Thermostats		\$309,400							Measured Return Share
Oil Containers			\$3,140,300		68,100,000 L			\$0.046		
Oil Filters		Less than 8"	\$11,239,800		15,881,117 units	\$0.523				

Material Category	Sub-category	Fee Category	Total Cost (Including contingency on sales)(\$)		Supplied for Use	Consolidated Plan Fee Rate					
						\$/Unit	\$/Kg	\$/L	\$/steward	\$/location	
Oil Filters		Greater than 8"			2,802,550 units	\$1.046					
Paint & Coatings		< = 250 mL	\$23,442,700		115,182,162 kg	\$0.066					
		> 250 ml – 1 L				\$0.250					
		> 1 – 5 L				\$1.001					
		> 5 L				\$5.001					
Pesticides		Banned	\$754,300							Measured Return Share	
		Non-banned									Plus \$149,500 (Phase 1 only)
Pharmaceuticals		Prescription	\$1,835,600		244,040,085 units	\$0.008					
		Over-the-counter									
		Natural Health Products									
Pressurized Containers	Non-Refillable		\$660,800		1,661,201 units	\$0.398					
	Refillable		\$294,900		288,452 units	\$1.022					
Reactives			\$25,000							Measured Return Share	
Sharps and Syringes			\$2,283,500		186,857,544 units	\$0.012					
Toxics			\$25,000							Measured Return Share	

Notes:

- 1) Using conversion factor of 1 litre = 0.85 kg; the rate for solvent was calculated using the total quantity of flammable and solvents sold, and was augmented by the Phase 1 solvent deficit.
- 2) Please note that, in the absence of actual sales information from fire extinguisher stewards, the number of fire extinguishers supplied for use was estimated using a study conducted by the Red Cross for the American market. In the last stages of plan development, fire extinguisher stewards have reported that sales are significantly higher than presented in the Consolidated MHSW Program Plan and have requested that differential fees be based on weight or unit size (e.g. < 2 lbs; > 2 lbs). Stewardship Ontario will adjust the fee rate for fire extinguishers when more accurate information on the sales of this product becomes available.
- 3) Please note that, while the number of prescriptions issued in Ontario yearly was used to estimate the quantity of prescription drugs supplied for use, this product is typically introduced to the market in large format containers (i.e. bulk) by pharmaceutical companies. Stewardship Ontario will adjust the fee rate for prescription drugs when more accurate information on the number of large format containers used as the basis for sales by Pharmaceutical brand owners and first importers becomes available.
- 4) Certain materials were assigned a fee rate on the basis of “measured return share”, meaning that the actual management cost, as well as a share of the budgeted common costs and deficit recovery, will be charged to stewards of those product categories, due to the indeterminate quantity of product sold into market and available for collection. It is Stewardship Ontario’s intention to move to a set fee rate for these materials as soon as reliable data on sales into market and quantity available for collection are obtained

7.07 Economic Implications of the Consolidated MHSW Program Plan

During the development of the Consolidated MHSW Program Plan, Stewardship Ontario engaged in extensive consultation with stakeholders, in part to ensure that the Consolidated Program Plan affects the market fairly while meeting Program objectives¹². The key market actors that may be affected by this Program include:

- Service Providers
 - Collection service providers, including municipalities
 - Transport/haulage service providers
 - Processing/consolidation service providers
 - Recycling/disposal service providers
- Stewards

7.07.1 Implications for Service Providers

This program will have a variety of positive impacts on Ontario's "green economy", particularly for those municipalities and private sector companies that seize the opportunity to offer services that will improve the accessibility and the effectiveness of the MHSW program.

Municipalities will have an opportunity to maintain and/or expand the range of MHSW collection services and other services (such as storage/consolidation) provided to Stewardship Ontario at minimal cost to them.

Retailers and other commercial companies with expertise in customer service will have opportunities to attract new business by partnering with Stewardship Ontario to collect material from their customers. Companies with expertise in materials handling and logistics may see opportunities to expand their business by helping Stewardship Ontario optimize its transportation infrastructure.

Currently processing companies play a valuable role in managing municipal and hazardous special waste. With the expansion of MHSW collection, companies that already participate in the market will have opportunities to expand their business. Increasing scale of collection may allow existing companies to effectively utilize processing techniques that are not feasible at current collection levels. Additionally, those processing companies with innovative ideas may be able to take advantage of unique opportunities in material processing, recycling and marketing, that program implementation will create.

Conversely, an increasingly competitive marketplace may have impacts on municipalities and private sector companies that are already engaged in hazardous and special materials collection, handling and processing. Those that do not innovate, enhance customer service and/or improve efficiency may find that their role in this industry diminishes in favour of their competitors.

Overall the Consolidated MHSW Program Plan is expected to:

- Create new opportunities for existing economic actors to expand their current operations with reduced economic risk;
- Provide opportunities for new entrants into the market to encourage and sustain healthy competition;

¹² Stewardship Ontario's consultation activities and responses are documented in the *Final Consolidated Municipal Hazardous or Special Waste (MHSW) Program Plan – Report on Consultation*.

- Incent continuous improvement in program performance, system optimization and cost effectiveness;
- Involve transparent and fair vendor selection processes that create opportunities for economic actors, encourage new market entrants and provide for continuous performance, system optimization and cost effectiveness
- Shift the costs of managing MHSW to the designated Stewards of these materials; and
- Provide incentives to Stewards and service providers to reduce the costs of MHSW management.

The program will expand opportunities for service providers that are best able to contribute to improved program performance, system optimization and cost effectiveness, while reducing opportunities for those that fail to make changes necessary to further the objectives of the Consolidated MHSW Program Plan.

Specifically, significant increases in collection and recycling, as presented in table 7.8 outlined below, will produce opportunities in the marketplace over the life of this plan for the MHSW service provider community.

Table 7.8: Quantity of MHSW expected to be managed (collected and recycled) over the five years of the program

	Phase 1 material Baseline reported to date ¹ (tonnes)	Phase 1 material Baseline pro-rated to 12 months ² (tonnes)	Non Phase 1 material baseline ³ (tonnes)	Total estimated baseline (tonnes)	Year 1 (tonnes)	Year 2 (tonnes)	Year 3 (tonnes)	Year 4 (tonnes)	Year 5 (tonnes)
Collection	11,143	14,857	3,121	17,978	34,753	39,630	44,572	49,765	54,992
Recycling	6,231	8,308	3,033	11,341	24,414	28,581	33,311	37,797	42,552

Notes:

1. The baseline collection and recycling is taken from table 4.7 – Material Collection as reported by Service Providers through the Material Tracking System. The data is for the period July 1st 2008 to March 31st 2009 and does not represent a full year of activity. Moreover, the data does not reflect the information from all service providers. To date, the number of service providers (out of a total of 39 approved transporters and 30 approved processors) reporting for each quarter is: Q3 2008 - 30 transporters, 15 processors; Q4 2008 - 27 transporters, 15 processors; Q1 2009 - 25 transporters, 12 processors.
2. The Baseline pro-rated to 12 months attempts to account for the missing quarter of service provider reports. As mentioned in the note above, it is still underestimated as it does not include reports from all service providers.
3. As reported in table 4.8

The budget amounts that have been allocated to the various service providers are outlined in table 7.9 below.

Table 7.9: Year 1 budget allocation for service providers

Cost Component	Estimated Year 1 Expenditure
Collection	\$18,179,900

Transportation	\$12,716,400
Processing/Consolidation	\$2,647,700
Haulage	\$264,800
Recycling/Disposal	\$12,365,700

Stewardship Ontario will award contracts using transparent fair vendor selection processes. Stewardship Ontario will also encourage new market entrants and reward performance.

Tables 7.10 provides a summary analysis of key projected economic impacts of the proposed program on the Municipal Hazardous or Special Material to Municipal Hazardous or Special Waste value chain.

Table 7.10: Total Program Cost Comparisons (\$million) - 2007 Baseline & Projections for Year 1 of Phase 1 vs. Projections for Year 1 of Consolidated MHSW Program Plan (\$million)

	Annual Total	Municipal Costs (1, 3)	IFO Costs (1)					
			Plan Development & Program Start-up	Municipal & IFO-Run Channels (4)	Commercial & Special Channels	Program Delivery and Admin (5)	R & D	P&E (6)
2007 Baseline (2)	NA	\$18.6	NA	NA	NA	NA	NA	unknown
Year 1 Plan Projections for Phase 1	\$42.4	\$14.1	\$0.6	\$9.1	\$12.1	\$2.8	\$1.6	\$2.1
Year 1 Projections for Consolidated Plan (7)	\$65.0	N/A	\$2.6	\$28.9	\$20.6	\$6.6	\$0.8	\$5.5

Notes:

- 1) Figures refer to the cost for managing both Phase 1 and non-phase 1 or Consolidated Plan materials;
- 2) Where this information was available or could be approximated
- 3) Municipal costs include for each year:
 - 2007 - all costs for collection and post-collection management;
 - Year 1 of Phase 1 program - collection costs for Phase 1 materials (\$2.4 million) and collection & post-collection costs for non-phase 1 materials (\$21.8 million);
 - Year 1 of the Consolidated Plan - no costs (except those above terms negotiated with Stewardship Ontario.)
- 4) IFO costs for Municipal channels in Year 1 of Phase 1 include the post collection costs for Phase 1 materials only, i.e. \$9.1 million of the estimated \$11.5 million total municipal cost for phase 1 materials.
- 5) Includes both Stewardship Ontario and WDO program delivery and administration costs
- 6) Includes both shared and material-specific P&E
- 7) Figures for Consolidated Plan exclude recovery of deficit after Year 1 of Phase 1 implementation and are before contingency for reported sales

7.07.2 Implications for Stewards

Table 7.11 below provides examples of MHSW product specific cost impacts

Table 7.11: Examples of Product Specific Cost Impacts

Category	Product Example	Fee Rate	Fee Per Unit	Example Consumer Price 2009 (\$/unit)
Aerosols	Non-dairy Whipping Cream (340g)	\$0.036/Unit	\$0.036	\$2.79
	Non slip tire adhesive (17 oz)	\$0.036/Unit	\$0.036	\$19.99
Antifreeze (packaged)	Long-Life Premixed Antifreeze/coolant (3.78 L)	\$0.090/litre	\$0.340	\$8.99
	Extended Life DEX-COOL Antifreeze/Coolant	\$0.090/litre	\$0.340	17.99
Batteries	Single-Use: AA alkaline (23g)	\$0.410/kg	\$0.009	\$0.75 to \$1.57
	Rechargeable: AA NiMH (33g)	\$1.569/kg	\$0.052	\$3.50 to \$4.50
Corrosives	Corrosive - Household bleach	\$0.151/unit	\$0.151	\$2.19
	Irritants – Laundry Detergent	\$0.003/unit	\$0.003	\$6.99
FireExtinguisher	Compact Extinguisher (0.751 lbs)	\$2.279/unit	\$2.279	\$19.99
	Dry Chemical Fire Extinguisher (10 lbs)	\$2.279/unit	\$2.279	\$79.99
Flammables	Assorted Flammables: Sealer (17 L)	\$0.015/litre	\$0.255	\$12.99 to \$36.99
	Assorted Flammables: Stain (3.78 L)	\$0.015/litre	\$0.057	\$12.99 to \$38.99
	Windshield Washer Fluid (3.78L)	\$0.015/litre	\$0.057	\$1.69 to \$4.49
	Automotive Additives: Fuel injector cleaner (0.5 L)	\$0.015/litre	\$0.008	\$6.99 to \$11.99
	Solvent: Paint Thinner (4L)	\$0.167	\$0.668	\$5.99
Fluorescents	User Removed: Bulbs and Tubes	\$0.057/unit	\$0.057	\$3.99 to \$16.99
	Embedded: Display devices <29"	\$0.06/unit	\$0.056	\$99.99 to \$599.99
	Embedded: Display devices >29"	\$0.112/unit	\$0.112	\$489.99 to \$1499.99
	Portable Computers	\$0.02/unit	\$0.021	\$279.99 to \$849.99
	Printer/Copier	\$0.03/unit	\$0.028	\$79.99 to \$569.99
Oil Containers	1L Motor Oil	\$0.046/litre	\$0.046	\$3.39 to \$12.99
Oil Filters	Less than 8"	\$0.523/unit	\$0.523	\$4-\$13
	Greater than 8"	\$1.046/unit	\$0.523	\$10 - \$30
Paint & Coatings	< = 250 mL: Professional Interior Finish, Oil-Based (236mL)	\$0.066/unit	\$0.066	\$6.29-\$7.79
	> 250 ml – 1 L: paint gloss (946 mL)	\$0.250/unit	\$0.250	\$5.29-\$24.99
	> 1 – 5 L: 1 U.S. Gallon latex paint (3.78 L)	\$1.001/unit	\$1.001	\$9.99-\$42.99
	> 5 L: Stoneffects Rollable Tint Based (9.2 L)	\$5.001/unit	\$5.001	\$119.99

Category	Product Example	Fee Rate	Fee Per Unit	Example Consumer Price 2009 (\$/unit)
Pharmaceuticals	Prescription: Generic Betahistine	\$0.008/unit	\$0.008	\$30.21 to \$326.21
	Non-prescription: cold medicine	\$0.008/unit	\$0.008	\$4.97 to \$59.96
	Natural Health Products: vitamins	\$0.008/unit	\$0.008	\$3.99 to \$15.17
Pressurized Containers	Refillable	\$1.022/unit	\$1.022	\$44.99 to \$74.99
	Non-Refillable	\$0.398/unit	\$0.398	\$4.99 to \$17.99
Sharps and Syringes	Insulin Syringes	\$0.012/unit	\$0.012	\$14.27 to \$127.27

PART IV – Fee Setting Methodology and Year 1 Fees

8.0 Fee Setting Methodology and Year 1 Fees

This section describes:

- The authority under which Stewardship Ontario assesses Steward Fees,
- The principles that were used to determine how costs were allocated to different materials,
- The 20 material categories for which specific steward fees have been assessed, and
- The methodology that was used to determine material specific fees

Specific Year 1 Consolidated MHSW Steward Fees are detailed in Section 8.8 below.

8.01 Consolidated MHSW Program Material Categories

Steward fees will be assigned to each of the following material categories.

Aerosols	Leachate Toxics
Antifreeze	Oil Containers
Batteries - Consumer-Type Portable	Oil Filters
Batteries - Industrial Stationary and Non-Lead Acid Motive	Paint & Coatings
Corrosives	Pesticides
Fertilizers	Pharmaceuticals
Fire Extinguishers	Pressurized Containers
Flammables & Solvents	Reactives
Fluorescents	Sharps & Syringes
Mercury Devices	Toxics

The following subcategories have been established for Antifreeze to account for the different cost of managing packaging

- Bulked
- Packaged

The following subcategories have been established for Batteries - Consumer-Type Portable

- Single Use Alkaline Manganese (AlMn) , Alkaline (Al) Silver Oxide (Ag₂O)
- Single Use Zinc Carbon (ZnC) and Zinc Air (ZnAir)
- Single Use Lithium Metal (Li)
- Rechargeable Lithium Ion (Li-Ion) and Lithium Polymer (Li Polymer)
- Rechargeable Nickel-Metal Hydride (NiMH)
- Rechargeable Nickel Cadmium (NiCd)
- Rechargeable Small Sealed Lead Acid (SSLA / Pb)

The following subcategories have been established for Corrosives:

- Corrosives
- Irritants

The following subcategories have been established for Fertilizers:

- Containing Banned Pesticides
- Naturally derived

- Synthetically derived

The following subcategories have been established for Flammables & Solvents

- Assorted Flammables
- Solvents
- Automotive Additives
- Windshield Washer Fluid
- Gasoline

The following subcategories have been established for Fluorescents

- Fluorescents – User-removed
- Fluorescents embedded in electronics Display Devices < 29 inches
- Fluorescents embedded in electronics Display Devices > 29 inches
- Fluorescents embedded in electronics Portable Computers
- Fluorescents embedded in electronics Printing, Copying & Multi-Function Device

The following subcategories have been established for Mercury-containing Devices

- Measuring Devices
- Mercury Switches – Automotive
- Mercury Switches – White Goods
- Mercury Switches – Other
- Thermostats

The following subcategories have been established for Oil Filters

- 8 inches or less
- Greater than 8 inches

The following subcategories have been established for Paint & Coatings

- <= 250 ml
- > 250 ml – 1 litre
- > 1 – 5 litre
- > 5 litre

The following subcategories have been established for Pesticides (as a result of the April, 22 2009 ban on the sale of domestic pesticides for cosmetic purposes)

- Banned
- Non Banned

The following subcategories have been established for Pharmaceuticals

- Prescription
- Non-prescription
- Natural Health Products

The following subcategories have been established for Pressurized Containers

- Non-Refillable
- Refillable

Material subcategories have been incorporated to reflect different product types, size and potentially different management costs within the above material categories. Subcategories may have the same or different fee rates.

8.02 Authority and Obligations Under the Act

Under the WDA, the Industry Funding Organization for an approved Program Plan may assess fees against companies designated as Stewards under the plan. Section 30 of the Act sets out the powers for fee-setting as follows:

30. (1) If an industry funding organization is designated by the regulations as the industry funding organization for a waste diversion program, the organization may make rules,

- (a) designating persons or classes of persons as Stewards in respect of the designated waste to which the waste diversion program applies;
- (b) setting the amount of the fees to be paid by Stewards under subsection 31 (1) or prescribing methods for determining the amount of the fees;
- (c) prescribing the times when fees are payable under subsection 31 (1)

[2002, c. 6, s. 30 (1)]

30. (3) In making rules under clause (1) (b), the industry funding organization shall have regard to the following principles:

- 1. The total amount of fees paid by Stewards under subsection 31 (1) should not exceed the sum of the following amounts:
 - i. The costs of developing, implementing and operating the program.
 - ii. A reasonable share of costs not referred to in subparagraph i) that are incurred by Waste Diversion Ontario in carrying out its responsibilities under this Act.
 - iii. A reasonable share of costs incurred by the Ministry in administering this Act.

- 2. The fee paid by a Steward should fairly reflect the proportion of the sum referred to in paragraph 1 that is attributable to the Steward.

[2002, c. 6, s. 30 (3)]

8.03 Fee Setting Principles

Stewardship Ontario's guiding principles for the fee-setting process are as follows:

- 24. The cost to manage MHSW within each MHSW category under the Program will be determined by a transparent cost allocation methodology.
- 25. Common and shared costs will be assessed across all Stewards in a fair and transparent manner.
- 26. Stewardship Ontario accepts financial responsibility for products which no longer are supplied for use in Ontario (obsolete products) where an obligated steward for that product can be identified. Costs associated with the management of such materials will be attributed to stewards in a fair and reasonable manner.
- 27. Fees will be applied to stewards based on the MHSW that stewards supply into the Ontario market, but will cover the costs identified under items 1, 2 and 3 above.
- 28. Stewardship Ontario will allocate costs within material categories where appropriate to reflect different costs to manage and to incentivize greater diversion of waste from disposal

These guiding principles were used to develop the fee-setting methodology outlined in Section 8.5.

8.04 Treatment of Development, Implementation and Transitional Issues

The following issues relevant to fee setting for Year 1 have been identified and addressed as follows:

1. Phase 1 Program Plan development costs are re-allocated to both Phase 1 and new materials based on whether the original expenditure benefited only the original 9 materials or whether the benefit accrued to all materials, and using the 85% direct cost and 15% equal share formula selected for allocating common costs.

It is common for utilities to add such a system development charge to new customers' accounts as a condition to connect to the existing public infrastructure. These charges enable the utility to 1) pay for previous investments, 2) support improvements and expansions to the current infrastructure, and 3) they promote equity by balancing costs between existing and new customers (by recovering a pro-rated amount of the capital costs). Ultimately, from a development cost perspective, the new customer should be financially equivalent to the existing customer. The specific activities undertaken during Phase 1 Program development are described in Section 7.1.7.

2. The Consolidated MHSW Program Plan development and implementation costs have been allocated to all materials according to the 85% direct cost and 15% equal share formula selected for allocating common costs.
3. Allocation of costs within the municipal channel to each material has been based on relative weight as described in Section 7.2.2. Data will be gathered during Year 1 to identify more appropriate cost drivers to allocate those costs more accurately and equitably in Year 2 and future years.
4. Stewards or groups of Stewards which are approved to establish an ISP are required to pay Stewardship Ontario fees for the appropriate share of Consolidated MHSW Program Plan development and implementation costs up to the exemption date for the steward.
5. The Consolidated Plan, associated fees and fee rates and Rules for Stewards will be revised to reflect any subsequent decisions to approve any ISPs.
6. With the exception of aerosols, the costs associated with managing empty MHSW containers within the municipal Blue Box system have not been included. These costs will be recovered from MHSW stewards through the Blue Box Stewards' fees for Year 1, while data are collected to determine the quantities of MHSW containers vs Blue Box materials. Stewardship Ontario will consider and consult on the reporting of Blue Box packaging units in addition to weight, allowing identification and reconciliation of fees between the Blue Box and MHSW programs (and the appropriate payments to municipalities). It is likely that this transition would be implemented over 1 or more years to allow for reliable data collection and system changes to be made. In the meantime, Blue Box stewards of aerosols could apply for a rebate for Blue Box fees paid for containers on which MHSW fees have been paid (as was done for oil containers in Phase 1).
7. Fees for three groups of products cannot be calculated for Year 1 according to quantities supplied for use into the market and therefore will be treated as follows:
 - Costs for obsolete products (products which no longer are supplied for use in Ontario and for which there is an identifiable steward) will be allocated in proportion to the relative quantities of materials returned for management (return share) and billed quarterly.
 - Costs for *material categories for which no products or associated Stewards have been identified that are not already captured within one of the other MHSW material categories* i.e. toxics and reactives will be allocated in proportion to the relative

quantities of materials returned for management by the Program (return share) and billed quarterly.

Stewardship Ontario will require service providers to record brand name and/or manufacturer information at the point of collection for the two groups of MHSW products outlined above (*obsolete products and material categories for which no products or associated Stewards have been identified that are not already captured within one of the other MHSW material categories*). The cost incurred for management of these two categories of products will be determined each quarter and the return share will be determined for each identifiable steward for that quarter.

Stewardship Ontario will determine the return share for each steward of the above-mentioned MHSW categories by dividing the weight of designated MHSW identified for each steward that has been collected over the quarter by the total weight of designated MHSW identified for all stewards of that category that has been collected over that quarter, then multiplying the quotient by one hundred percent. The fees charged to each steward identified will be calculated by multiplying the resulting return share for each steward by the total cost incurred for the Quarter.

While the material-specific cost to manage these two groups of products has been estimated as per Section 7, the actual management cost will be charged to stewards of these two product categories, as well as a share of the budgeted common costs and deficit recovery.

- Costs for *materials with unidentified sales, unidentified quantities available for collection and diverted, and unidentified costs* (i.e. industrial stationary and non-lead acid motive batteries) will be determined by dividing the costs allocated to these materials (R&D and Common Costs) by the total number of stewards and billed quarterly¹³. Data will be gathered for this material group during Year 1 so that fees for Year 2 will be more certain and will be calculated in relation to quantities supplied for use into the market.
8. Stewardship Ontario cannot attribute costs to stewards for *orphaned products* (products which no longer are supplied for use in Ontario and for which there is no identified steward). However, in order to determine whether the costs of managing orphaned products are significant and material, Stewardship Ontario will receive and manage any orphaned products during Year 1 and track the quantities and associated costs. Such costs incurred during Year 1 will be allocated to the corresponding material category.

In subsequent years, if the cost of managing orphan wastes was shown to be not material, it will be allocated to the corresponding material category. If the cost was material, Stewardship Ontario will not accept responsibility for the orphaned MHSW and their related costs under the program given that a commercial connection cannot be established between the costs incurred and stewards designated under the Consolidated MHSW Program Plan and required to pay fees.

8.05 Methodology for Setting Year 1 Stewards' Fees

¹³ Stewardship Ontario does not expect to physically manage this group of materials in Year 1 of the Consolidated MHSW Program Plan. No tracking will therefore take place at the point of collection. More information on how Stewardship Ontario proposes to handle this material group is provided in Volume 2.

Stewardship Ontario has calculated the fees for Year 1 of the Consolidated MHSW Program Plan using the methodology described in this section. This methodology incorporates the best available data and generally accepted approaches for allocating costs.

- Step 1: Determine costs which pertain directly to collecting, transporting, processing/consolidating, recycling/disposing of each MHSW based on weight^{14,15}
- Step 2: Add cost of investments for each material necessary to reach accessibility targets detailed in Section 5
- Step 3: Add costs for research and development (R&D) for each material necessary to reach diversion targets, as set out in Volume 2
- Step 4: Add costs for promotion and education (P&E) for each material used to promote and improve reduction (for consumables) and collection (for durables) as set out in Section 7.
- Step 5: Add a share of common costs described in Section 7, according to the following calculation^{16,17}.
 - a. 15% in an equal portion to each of the material categories.
 - b. 85% to each MHSW material category in proportion to the direct costs associated with management of each MHSW category as described in Steps 1 through 4.
- Step 6: Add the contingency for forecast risk relating to management cost and quantities to be recovered as determined for each material category in Section 7.3
- Step 7: Add the costs related to recovering the deficit or credit for surplus determined for each material category in Section 7.4
- Step 8: Calculate fee rates by dividing the total costs (Steps 1 to 7) by the estimates of the total quantity of the obligated materials supplied for use in the Ontario market, including applying the contingency factors for forecasting risk associated with predicting sales of MHSW into the Ontario market described in Section 7.3, and express in the appropriate units for each material as set out in the Program Rules¹⁸.

¹⁴ Weight-based measurement is the predominant method of assigning costs within the industry. As described in Section 7.2.2, in Year 1 a cost allocation study will be undertaken to identify appropriate cost drivers and data to allocate costs within the municipal channel and those data will be used in future fee-setting cycles (with consideration of other factors as necessary). Data also may be identified during Year 1 for other channels to refine the approach to or results of allocating costs..

¹⁵ The cost to manage different types of MHSW within each category can vary by material, by product and by product characteristics. For example, this is the case with batteries that employ different chemistries, and fluorescents bulbs used in different types of applications. Further material variances in costs within categories may be reflected in future fee setting, as required.

¹⁶ This is a generally accepted approach to allocating common costs employed by similar industry funding organizations. It recognizes that a certain level of effort and cost is required for a Steward regardless of the volume of material for which that Steward is responsible. Stewardship Ontario will review the weightings annually and modify in future Years if appropriate.

¹⁷ Note that some common costs for Phase 1 have been reallocated to all materials under the Consolidated Plan as described in Section 8.4.

¹⁸ Except for the materials that are to receive unique treatment as set out in point 7 of Section 8.4.

Note: Fees for three groups of products cannot be calculated for Year 1 according to sales into the market as described in point 6 of Section 8.4 above.

8.06 Changes to be Made for Year 2 Fee Setting

Stewardship Ontario will calculate the Year 2 Consolidated Program Fees for MHSW Stewards using the same methodology as for Year 1, with specific modifications and improved data.

8.06.1 Year 2 Data Sources

Fee calculations for Year 2 of the approved Consolidated MHSW Program Plan will use improved data from the following sources:

- Stewards' reports received during Year 1 of the Consolidated Program MHSW Program Plan;
- Contracts between Stewardship Ontario and service providers (including municipalities) for the management of MHSW;
- Analysis of cost allocation methodology approved by the Stewardship Ontario Board of Directors for MHSW¹⁹;
- Analysis of R&D or capital investments or service agreements required to expand collection and diversion infrastructure for MHSW and to meet targets for accessibility, collection and diversion of MHSW;
- Findings from the review of the performance of any recovery channels such as, depot-in-a-box, return to retail, and new depot locations implemented in Year 1 (as per the strategy for improving accessibility) and an assessment of the relative cost-effectiveness of those channels; and,
- Results of research and monitoring of P&E activities undertaken in Year 1.

8.06.2 Modification of Material Categories

Material categories for which little or no data are available or for which no products have been identified which are not already part of another category, i.e. industrial stationary and non-lead acid motive batteries, toxics, leachate toxic and reactives, will be revised as appropriate as new information becomes available.

Stewardship Ontario will also reconsider material categories on a yearly basis to allow for disaggregation where information would support such disaggregation, as per section 8.6.3 below.

8.06.3 Consideration of Possible Differences within Material Categories

Changes may be considered to steps 1 to 4 within a material category to account for possible differences in collection and diversion performance, the relative cost to manage related MHSW, or to meet other Consolidated MHSW Program Plan policy objectives established by the Stewardship Ontario Board.

8.06.4 Adjustments to Contingency for Forecast Risk

Improved data will increase confidence in forecasting and reduce amounts required as a contingency against forecast risk.

¹⁹ As described in Section 7.2.2, in Year 1 a cost allocation study will be undertaken to identify appropriate cost drivers and data to allocate costs within the municipal channel. Also, more data are expected to become available through the vendor selection process. These will provide a more accurate allocation of costs throughout the system (versus a weight-based allocation) and these will be used in the following fee-setting cycles.

8.06.5 Future Fee Shortfall or Surplus

The appropriate share of any shortfall or surplus in the total Consolidated Program fees collected in Year 1 of the Consolidated Program will be recovered or credited in Program Year 2 fees²⁰. This calculation will be based on the combination of:

- Any amount of fees either underpaid or overpaid by Stewards of each material category for costs incurred during Year 1;
- Any deficit or surplus in the amount of common expenses incurred during Year 1, allocated on the same basis used to determine allocation of common costs (described in Step 5 of the Year 1 MHSW Program fee-setting methodology)

The amount of any surplus that the Stewardship Ontario Board of Directors agrees to maintain from material category-specific contributions will be directed only to activities prescribed in the Consolidated MHSW Program Plan and fee-setting methodology in respect of the specific material categories for which the contributions have been made.

8.06.6 Modify Step 8 of the Year 1 MHSW Program Fee-setting Methodology

Stewardship Ontario will modify the source of data used to calculate the fee rates (Step 8). The quantities of MHSW supplied for use in Ontario will be based on Stewardship Ontario reports from Stewards within each obligated material category or on other relevant data from research undertaken during Year 1.

8.07 Proposed Methodology for Setting MHSW Stewards' Fees for Subsequent Years of the Approved Consolidated MHSW Program Plan

Modifications may be made to the MHSW Fee-setting Methodology in subsequent years if required to meet program plan objectives. Any revisions made after the approval of the Consolidated MHSW Program Plan would be developed following public consultation by Stewardship Ontario and would be submitted for consideration and approval to WDO Board and the Minister as per the Program Agreement.

²⁰ It is anticipated that this step would carry forward into the fee-setting methodology in subsequent years.

PART V – MHSW PROGRAM DELIVERY

9.0 Stewardship Ontario Governance

9.01 General Overview

When established by Waste Diversion Ontario, an Industry Funding Organization (IFO) is incorporated as a non-share capital corporation under the Corporations Act (Ontario) by means of an Application for Letters Patent. The applicants for incorporation (representatives of the organizations recognized by WDO as the IFO proponents) are the initial members of the Corporation. The initial directors of the Corporation are named in the Application for Letters Patent.

When a Program Plan is approved, the Minister files a regulation designating the IFO. In the case of Stewardship Ontario which is the designated IFO for both the Blue Box Program Plan (BBPP) and the Municipal Hazardous or Special Waste (MHSW) Program Plan, O. Reg. 33/08 states that Stewardship Ontario is continued under the Waste Diversion Act, 2002 (Ontario) and “composed of the members of its Board of Directors”. Currently, the Stewardship Ontario board consists of 15 directors – 10 of whom are elected by Blue Box stewards and 5 of whom are appointed by organizations representing MHSW stewards. Those directors are elected until the board’s next AGM in April 2010. The 2:1 ratio of Blue Box to MHSW stewards reflects the estimated 2008 financial allocation of the Blue Box (approx \$60 M) and MHSW programs (projected \$30 M) respectively.

Each time a new program plan is developed, an Industry Funding Organization must submit a revised governance plan for the IFO. The Governance & Nominating Committee (GNC), a standing committee of the Stewardship Ontario board was charged with the task of developing a governance proposal for recommendation to the Stewardship Ontario board, the WDO and the Minister of the Environment.

The committee deliberated on a number of key issues including:

- Board size
- Director qualifications
- Nomination process
- Election process
- Qualified voting organizations
- Voting mechanism
- Independent director recruitment
- Mid-term vacancies
- Terms of office

In developing its recommendations the Governance Committee considered the body of best of practices that have been developed relating to the governance of not-for-profit corporations operating under a legislated mandate. The Governance Committee also considered the importance of ensuring a framework for governance that would provide flexibility to allow for participation of new stewards should programs currently under Stewardship Ontario’s responsibility expand or in the event that stewards are exempted from programs through ISPs, would allow for commensurate changes in organizations that are designated to vote for the slate of directors. In developing the proposed governance framework outlined in this Plan, Stewardship Ontario has sought the advice of The Director’s College (DeGroot School of Business), the Institute of Corporate Directors (ICD-Toronto), Brown Governance Inc., as well as legal counsel and specialists in director compensation and recruitment.

9.02 Governance Objectives

Stewardship Ontario has defined its objectives in relation to governance as follows:

To provide for an effective governance structure comprised of directors who:

- Have the necessary knowledge, experience, ability and commitment to fulfill their responsibilities
- Understand their purpose and their fiduciary obligations
- Understand what constitutes reasonable information for good governance and obtain it
- Understand the strategy & business of the organization they govern
- Are prepared to act to ensure that the organization's objectives are met and that performance criteria have been satisfied
- Fulfill their accountability by reporting on their own as well as the organization's effectiveness

*Stewardship Ontario, Governance Principles
Adopted by the Board of Directors, April 16, 2009*

Given the growing importance of environmental stewardship as a public policy objective in modern society, Stewardship Ontario is cognizant of the need for independent representation free of commercial ties to either Blue Box or MHSW wastes to provide an independent, external perspective to the governance of the Stewardship Ontario enterprise.

9.03 Board size

The size of the board must be sufficient to oversee an enterprise of approximately \$150 M annually and to provide for an appropriate mix of skills and experience to fulfill board and committee responsibilities and ensure quorum. Stewardship Ontario has a relatively heavy board calendar of some 8 meetings per year in addition to 3 standing committees (Finance, Audit & Risk, Compensation, Governance & Nominating) that meet a minimum of 3 times each.

The Stewardship Ontario board will consist of 14 directors nominated by stewards and elected by qualified voting organizations. When established, the Board will then appoint an additional 2 independent directors.

9.04 Director Qualifications

In order to serve as a director of Stewardship Ontario potential candidates must meet the following eligibility requirements and criteria:

- Minimum eligibility requirements
 - All directors must be over the age of majority
 - All directors must be resident of Ontario
 - No director may have the status of "bankrupt"
 - All directors must consent in writing to serve as a director and must be willing and able to devote the necessary time to fulfill duties as a director
 - If nominated, must be supported by letter of authorization from the nominating entity.
- Additional Stewardship Ontario board membership criteria:
 - Staff of either an obligated steward company or an association whose members represent at least one million dollars in fees
 - General business qualifications
 - Knowledge regarding recycling, waste management
 - Knowledge regarding sustainability and corporate social responsibility
 - Familiarity with the legal and regulatory environment of "SO"
 - Government relations

- Consumer marketing
- Finance and risk management experience
- Other criteria to be considered:
 - Diversity with respect to professional background, experience, perspective, age, gender, ethnicity and steward representation

*Stewardship Ontario, Governance Principles
Adopted by the Board of Directors, April 16, 2009*

9.05 Nomination Process for Industry Directors

Stewardship Ontario is seeking to provide for the widest possible pool of candidates and optimize the ability to recruit both corporate and association directors to balance representation on the board.

Accordingly:

- Nominations will be open to staff of an obligated steward, or an association whose members paid \$1 million or more fees to Stewardship Ontario in the previous fiscal year
- Stewardship Ontario will issue a call for nominations to all steward companies and associations detailing the requirements and duties of directors, and all relevant details regarding the board and its governance.
- Nominees will forward to the Governance & Nominating Committee a nomination form (signed by two stewards or associations or some combination thereof) in addition to a resume and election statement setting out reason(s) for seeking appointment to the S.O. board
- The Governance & Nominating Committee shall:
 - Assess nominees against criteria to ensure they meet minimum requirements and S.O. board membership criteria
 - Publish slate of nominees for election
 - Communicate the slate to nominating entities in advance of the Annual General Meeting

9.06 Election Process

One of the objectives of Stewardship Ontario is to create a cohesive governance structure comprising directors whose fiduciary obligations extend equally to the oversight of the Blue Box as well as the MHSW programs (and any future programs which Stewardship Ontario may become responsible for). Accordingly, the practice of electing Blue Box and MHSW stewards separately will be discontinued

9.06.1 Qualified Voting Organizations

Associations whose members paid \$10 million or more fees to Stewardship Ontario in the previous fiscal year will be eligible to appoint a number of representatives, as determined below, to vote for directors, and a list of such associations shall be published by Stewardship Ontario on its website.

Such associations shall be grouped into one of the following three categories, based on the products produced or sold by their respective members who are stewards:

- Consumables (e.g. food and beverage, consumer products, personal care products, pharmaceuticals, newspapers, paint, petroleum products, fertilizer, pesticides).
- Durables (e.g. batteries, mercury switches, thermometers, sharps, pressurized containers)
- Retailers and distributors (who serve as brand owners or first importers of consumables and/or durables)

The aggregate number of such representatives shall be equal to one representative for each \$10 million of fees paid to Stewardship Ontario by all stewards in the previous fiscal year. That number shall be allocated among the three categories based on the amounts of fees paid by the stewards to Stewardship Ontario in the previous fiscal year with respect to the three categories of products produced or sold by them.

Such associations within each category shall jointly appoint that number of representatives determined above, which representatives shall be entitled to vote for directors.

An association may exercise vote(s) in only one of the above categories.

9.06.2 Voting Mechanism for Industry Directors

In order to ensure that the board of directors has the appropriate balance of directors with respect to background, professional experience and skills, the Governance and Nominating Committee will review all nominations and put forward a slate that represents the best qualified candidates. The voting is based on a “plurality” of votes cast by the appointed representatives.

9.06.3 Independent Director Recruitment

Two independent directors will be recruited by the Governance & Nominating Committee in accordance with established criteria for board membership and with the following additional criteria:

- A prohibition on independent directors being associated with an electing association or its members or having any commercial connection to BB or MHSW wastes
- A requirement that all independent directors have skill sets not found amongst the other directors that would add to the governance of Stewardship Ontario

Timing of these nominations will coincide with the nomination of the other directors to be elected, so that the composition of the overall board of directors can be assessed as a group having a balanced set of skills and experience. Independent director candidates will be appointed by the Stewardship Ontario board.

9.06.4 *Mid-term vacancies*

Resignations prior to the end of a director's term will be filled by board appointment based on recommendations from the Governance and Nominating Committee.

9.06.5 *Terms of office and staggering of elections*

In order to provide for continuity as well as the opportunity for regular board refreshment, the board will have staggered terms for industry directors. Terms for directors will be set at 3 years although no limit is set on the number of terms a director may seek to be elected. For the first election only, and in order to provide a staggering mechanism, 7 directors will stand for 3 years and 7 directors will stand for 2 years. Independent directors will stand for three years.

9.07 Conclusion

The Stewardship Ontario board is committed to accountability and best practices in corporate governance and understands that there is a direct link between excellence in governance and excellence in organizational performance. The board believes that governance disclosure is as critical as financial disclosure. Accordingly, the annual report to stakeholders (including the Ministry of the Environment, Waste Diversion Ontario and stewards) will include a report on the board's performance for the previous year, any issues identified as well as measures that will be undertaken to promote continuous improvement in governance and board-related matters.

10.0 Program Agreement

AMENDED AND RESTATED PROGRAM AGREEMENT

THIS AGREEMENT is made as of the ____ day of _____, 2009
B E T W E E N:

WASTE DIVERSION ONTARIO,
a corporation without share capital
incorporated by the *Waste Diversion Act, 2002*

(hereinafter referred to as “**Waste Diversion Ontario**”)

- and -

STEWARDSHIP ONTARIO,
a corporation without share capital
incorporated pursuant to the *Corporations Act (Ontario)*
(hereinafter referred to as “**Stewardship Ontario**”)

WHEREAS according to Subsection 25 (3) of the *Act*, a waste diversion program developed under this *Act* must include an agreement between Waste Diversion Ontario and the industry funding organization that the program is developed in cooperation with, governing the role of the industry funding organization in the implementation and operation of the program and governing the exercise of the industry funding organization’s powers under the *Act*;

AND WHEREAS the Minister of the Environment has required that Stewardship Ontario be the industry funding organization established under Section 24 of the *Act* for the purposes of developing and implementing a waste diversion program for designated Municipal Hazardous or Special Waste under the *Act*;

AND WHEREAS the parties hereto entered into a Program Agreement as of the 8th day of December, 2007 (replacing an earlier agreement made as of the 23rd day of May, 2007) with respect to Phase 1 MHSW and wish to amend and restate such Program Agreement in order to provide for the implementation of the Waste Diversion Program with respect to Phase 2 MHSW (as herein defined) and Phase 3 MHSW (as herein defined) and to amend certain other provisions of such Program Agreement;

NOW THEREFORE in consideration of the premises and mutual agreements contained herein and subject to the terms and conditions hereinafter set forth, the parties covenant and agree as follows:

1. PURPOSE OF THE AGREEMENT

1.1 The purpose of this Agreement between Waste Diversion Ontario and Stewardship Ontario is to:

- (a) Define the roles and responsibilities of the two parties;
- (b) Set out the operating relationships between the two parties; and
- (c) Ensure openness and transparency to serve the public interest.

2. DEFINITIONS AND INTERPRETATION

2.1 Terms beginning with capital letters and used herein without definition shall have the meanings given to them in the *Act*, unless otherwise specified.

2.2 When used in this Agreement, the following words and expressions have the following meanings:

- (a) **“Act”** means the *Waste Diversion Act*, 2002, S.O. 2002, c. 6, as the same may be amended from time to time;
- (b) **“Agreement”** means this Program Agreement which is entered into pursuant to Section 25 (3) of the *Act* and includes all attached schedules and any amendments thereto;
- (c) **“Business Day”** means any working day, Monday to Friday inclusive, excluding statutory and other holidays, namely: New Year’s Day; Good Friday; Easter Monday; Victoria Day; Canada Day; Civic Holiday; Labour Day; Thanksgiving Day; Remembrance Day; Christmas Day, Boxing Day and any other day on which the Government of Ontario has elected to be closed for business;
- (d) **“Documentation”** means, for purposes of Section 9 of this Agreement, correspondence, documentation pertaining to public consultation during development of the Municipal Hazardous or Special Waste Program Plan, minutes of meetings of the Board of Directors and subcommittees, internal reports, consultants’ reports, agendas and other information and data obtained, created or maintained by Stewardship Ontario;
- (e) **“FIPPA”** means the *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. F.31, as amended;
- (f) **“Funds”** means monies received by Stewardship Ontario as described in Subsection 32(3) of the *Act*;
- (g) **“Municipal Hazardous or Special Waste”** or **“MHSW”** means waste materials defined under Ontario Regulation 542/06;
- (h) **“Municipal Hazardous or Special Waste Program Plan”** means the Waste Diversion Program (as amended) encompassing Phase 1 MHSW, Phase 2 MHSW and Phase 3 MHSW submitted by Waste Diversion Ontario to the Minister for approval, of which this Agreement forms a part;
- (i) **“Operating Agreement”** means the Operating Agreement entered into between Waste Diversion Ontario and the Minister;
- (j) **“Phase 1 MHSW”** means paints and coatings and the containers in which they are contained, solvents and the containers in which they are contained, oil filters (after they have been used for their intended purpose), containers that have a capacity of 30 litres or less and that were manufactured and used for the purpose of containing lubricating oil, single use dry cell batteries, antifreeze and containers in which it is contained, pressurized containers such as propane tanks and cylinders, and fertilizers, fungicides, herbicides, insecticides or pesticides and the containers in which they are contained;

- (k) **“Phase 2 MHSW”** means all batteries excluding lead acid batteries from vehicles, aerosol containers, portable fire extinguishers, florescent light bulbs and tubes, switches that contain mercury, thermostats, thermometers, barometers, or other measuring devices if they contain mercury, pharmaceuticals and sharps, including syringes;
- (l) **“Phase 3 MHSW”** means all materials that meet the definition of MHSW set out in Ontario Regulation 542/06 and which are not Phase 1 MHSW or Phase 2 MHSW;
- (m) **“Program Request Letter”** means the letter dated July 22, 2008 from the Minister to Waste Diversion Ontario and the Minister’s letter dated January 14, 2009 to Waste Diversion Ontario approving an extension of the date for submitting the Municipal Hazardous or Special Waste Program Plan;
- (n) **“Stewards”** means the persons or classes of persons designated under the Municipal Hazardous or Special Waste Program Plan rules as responsible for paying fees to Stewardship Ontario;
- (o) **“Steward”** means any member of the class of “Stewards”;
- (p) **“Waste Diversion Program”** means a program referred to in Sections 23 and 25 of the *Act*.

2.3 In this Agreement,

- (a) Words denoting the singular include the plural and vice versa and words denoting any gender include all genders;
- (b) The word “including” or “includes” shall mean “including [or includes] without limitation”;
- (c) Any reference to a statute shall mean the statute in force as at the date hereof, together with all regulations promulgated thereunder, as the same may be amended, re-enacted, consolidated and/or replaced, from time to time, and any successor statute thereto, unless otherwise expressly provided;
- (d) When calculating the period of time within which or following which any act is to be done or step taken, the date which is the reference day in calculating such period shall be excluded; if the last day of such period is not a Business Day, the period shall end on the next Business Day;
- (e) All dollar amounts are expressed in Canadian dollars;
- (f) Any tender of notices or documents under this Agreement shall be made upon the relevant party at the address set out in Section 13;
- (g) The division of this Agreement into separate sections and subsections, and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation of this Agreement; and
- (h) Except as specifically defined or provided for in this Agreement, words and abbreviations which have well known or trade meanings are used in accordance with their recognized meanings.

2.4 The parties acknowledge that the recitals to this Agreement are true and correct.

3. TERM OF AGREEMENT AND AMENDMENT

3.1 The term of this Agreement shall commence upon the date of approval of the Municipal Hazardous or Special Waste Program Plan (encompassing Phase 1 MHSW, Phase 2 MHSW and Phase 3 MHSW) by the Minister and shall remain in effect until five (5) years after that date and for successive periods of five (5) years each thereafter unless terminated earlier in accordance with Section 17 of this Agreement or amended in accordance with Subsection 3.5.

3.2 Any changes to the terms of this Agreement shall be by written amendment signed by both parties. No changes shall be effective or shall be carried out in the absence of such an amendment.

3.3 The parties agree to conduct a review of the performance and implementation of this Agreement not later than two (2) years following the date of commencement of the term of this Agreement and every two (2) years thereafter. As part of such review, each of the parties may suggest any appropriate amendments to the terms of this Agreement.

3.4 Notwithstanding Subsection 3.3, the parties agree that Waste Diversion Ontario and Stewardship Ontario shall be able to suggest appropriate amendments to the terms of this Agreement to the Minister at any time.

3.5 No material change may be made to the Municipal Hazardous or Special Waste Program Plan or to the terms of this Agreement without the written approval of the Minister as set out in Section 27 of the *Act*. Material changes include but are not limited to the following:

- (a) Definition of Municipal Hazardous or Special Waste wastes in the approved Municipal Hazardous or Special Waste Program Plan
- (b) Definition of Stewards - Meaning the persons or classes of persons designated under the Municipal Hazardous or Special Waste Program Plan Rules for Stewards as responsible for paying fees to Stewardship Ontario.
- (c) Change in the methodology for calculating fees as outlined in the approved Municipal Hazardous or Special Waste Program Plan.

4. ROLES OF THE PARTIES

4.1 Waste Diversion Ontario represents and warrants that it has approved the Municipal Hazardous or Special Waste Program Plan.

Waste Diversion Ontario:

- (a) Will ensure that the terms and conditions of this Agreement are carried out in a responsible, complete and thorough manner, and on a timely basis;
- (b) Will provide estimates to Stewardship Ontario from time to time of the following:
 - (i) the costs incurred or expected to be incurred by Waste Diversion Ontario in respect of developing, implementing and operating the Waste Diversion Program in respect of Municipal Hazardous or Special Waste; (ii) a reasonable share of the other costs incurred or expected to be incurred by Waste Diversion Ontario in carrying out its responsibilities under the *Act*; (iii) and a reasonable share of the costs incurred or expected to be incurred by the Ministry in administering the *Act*,

all of which are to be charged to Stewardship Ontario under Section 32 of the *Act*;

- (c) Will invoice Stewardship Ontario for the costs referred to in 4.1(b) commencing at the end of the first quarter following the date upon which the Municipal Hazardous or Special Waste Program Plan commences following designation of Stewardship Ontario by the regulations made under the *Act* as the industry funding organization for the Municipal Hazardous or Special Waste Program Plan (such costs to include costs identified in paragraph 4.1(b) incurred prior to the date upon which Stewardship Ontario is so designated);
- (d) Will implement the programs, policies and procedures identified as the responsibility of Waste Diversion Ontario in the Municipal Hazardous or Special Waste Program Plan approved by the Minister;
- (e) Will give written notice to Stewardship Ontario if, in the opinion of Waste Diversion Ontario, Stewardship Ontario has failed to comply with the terms of the Municipal Hazardous or Special Waste Program Plan, the Program Request Letter or the *Act* and advise Stewardship Ontario of the action required to remedy such non-compliance; and
- (f) Will implement relevant activities and functions as outlined in the Operating Agreement with the Minister.

4.2 Stewardship Ontario:

- (a) Will, following approval by the Minister, implement the Municipal Hazardous or Special Waste Program Plan;
- (b) Will honour invoices from WDO with payment within 30 days;
- (c) Will consult with Waste Diversion Ontario from time to time during the implementation of the Municipal Hazardous or Special Waste Program Plan as reasonably required by Waste Diversion Ontario;
- (d) Will make commercially reasonable efforts to implement any policies established by the Minister pursuant to Section 7 of the *Act*;
- (e) Will comply with the terms of the Municipal Hazardous or Special Waste Program Plan, the Program Request Letter and the *Act* (including the preparation of an annual report pursuant to Section 33 of the *Act*);
- (f) Will, subject to the resolution of any dispute pursuant to the provisions of Section 16 hereof, make commercially reasonable efforts to implement any actions required by Waste Diversion Ontario pursuant to paragraph 4.1(e) above to bring Stewardship Ontario into compliance with the terms of the Municipal Hazardous or Special Waste Program Plan, the Program Request Letter and the *Act*; and
- (g) Will adopt and maintain a Code of Conduct for its directors, officers and committee members that is satisfactory to Waste Diversion Ontario, acting reasonably, and amend its by-laws as required to enable Stewardship Ontario to carry out the terms of the Municipal Hazardous or Special Waste Program Plan, the Program Request Letter or the *Act*, provided that any amendments to the composition of the Board of Directors of Stewardship Ontario shall be subject to

an appropriate regulation made by the Minister and to the approval of Stewardship Ontario.

5. FEES AND BUSINESS PLANS

- 5.1 Stewardship Ontario has adopted the Rules for Stewards with respect to Payment of Fees (2009) set out in Schedule A hereto which have been approved by Waste Diversion Ontario. Any amendments to the Rules set out in Schedule A hereto and any new Rules shall be subject to the prior written approval of Waste Diversion Ontario.
- 5.2 At such time as Stewardship Ontario proposes to amend the Rules with respect to the payment of fees by Stewards:
- (a) Stewardship Ontario shall prepare a draft business plan outlining its proposed activities and objectives for the period in respect of which such fees are to be established and shall present such business plan to Waste Diversion Ontario for review and comment; and
 - (b) Following any such review and comments, Stewardship Ontario shall consult with stewards concerning any amendment to the Rules with respect to the payment of fees by stewards. Prior to formal approval of any Rules by Waste Diversion Ontario, Stewardship Ontario shall, if deemed necessary as a result of such consultation, prepare a revised business plan outlining its activities and objectives for the period in respect of which such fees are to be established and submitted to Waste Diversion Ontario.

6. TRANSPARENCY

- 6.1 Stewardship Ontario will maintain an Internet website accessible by the public and will post every rule made pursuant to the *Act* on its website. Subject to confidential or proprietary considerations, and provided that information is available in electronic format, Stewardship Ontario's website is to include information on, or contain the appropriate electronic links to, the Municipal Hazardous or Special Waste Program Plan and Stewardship Ontario's annual report pursuant to Section 33 of the *Act*. Stewardship Ontario will provide a copy of a rule to every person who requests a copy and may charge the person a reasonable fee for such copy.

7. INFORMATION SHARING

- 7.1 Subject to confidential and proprietary considerations, Stewardship Ontario shall provide data and information obtained in the course of developing or implementing the Municipal Hazardous or Special Waste Program Plan to Waste Diversion Ontario upon request. The parties acknowledge and agree that data and information which might be confidential or proprietary in relation to one Steward may cease to be proprietary or confidential if aggregated with data and information relating to more than one Steward, provided that after such aggregation it will not be possible to identify individual Stewards within the aggregated information. Information to be shared shall include, without limitation, comments received from Stewards with respect to the Municipal Hazardous or Special Waste Program Plan. The parties have agreed upon the information sharing protocol set out in Schedule B hereto to implement the provisions of this Subsection 7.1.
- 7.2 Stewardship Ontario acknowledges that information provided by Waste Diversion Ontario to the Minister is under the control of the Minister within the meaning of FIPPA. Waste Diversion Ontario shall retain full control over all other information obtained, created or maintained by Waste Diversion Ontario.

- 7.3 Any data or materials provided by Stewardship Ontario to Waste Diversion Ontario which are confidential and are to remain confidential shall be clearly marked as confidential. In the event that the Minister receives a request under the FIPPA relating to the disclosure of any such confidential information which has been provided by Waste Diversion Ontario to the Minister and provides notice thereof to Waste Diversion Ontario, Waste Diversion Ontario agrees to provide Stewardship Ontario with notice to that effect. Notwithstanding the foregoing, Stewardship Ontario acknowledges that the Minister is bound by FIPPA and may be required by order of a court or tribunal to disclose confidential information provided by Stewardship Ontario to Waste Diversion Ontario which has in turn been provided by Waste Diversion Ontario to the Minister.
- 7.4 Each of the parties agrees to hold data and information received from the other which are marked confidential in confidence, unless:
- (a) Such party is required to disclose such data or information by applicable law or by the order of any court or tribunal of competent jurisdiction;
 - (b) Such data or information have become generally available to the public without breach of this Agreement;
 - (c) Such data or information were developed independently by the recipient without the use of such confidential data or information or were lawfully received from another source having the right to furnish such data or information; or
 - (d) Such data or information were previously known to the recipient free of any restriction as evidenced by documentation in the recipient's possession.

8. STAKEHOLDER AND PUBLIC CONSULTATION

- 8.1 Waste Diversion Ontario may require Stewardship Ontario to provide opportunities for consultation with stakeholders, including the public, who may be affected by any proposed material changes to the Municipal Hazardous or Special Waste Program Plan. Such consultation is to be open, accessible and responsive to concerns expressed.

9. STEWARDSHIP ONTARIO RESPONSIBILITY FOR DOCUMENTATION AND AUDIT

- 9.1 Stewardship Ontario shall be responsible for maintaining Documentation in carrying out its responsibilities under this agreement, in a responsible and complete manner. Documentation may be maintained in paper or electronic format, as permitted by applicable law.
- 9.2 Without limiting the generality of the foregoing, the Board of Directors of Stewardship Ontario shall maintain the following:
- (a) All Documentation relating to its consultation activities, comments and responses received and a review of whether and how comments and responses were addressed; and
 - (b) All Documentation relating to the Funds.
- 9.3 The receipt and disbursement of the Funds will be reflected in the audited financial statements of Stewardship Ontario. The audited financial statements are to be prepared in accordance with generally accepted accounting principles and accompanied by the auditor's report thereon.

- 9.4 Stewardship Ontario agrees to implement and maintain measures to ensure the security and integrity of the Documentation and to protect the Documentation against loss, alteration and destruction.

10. COMPLAINTS AND INQUIRIES HANDLING

- 10.1 Waste Diversion Ontario shall be responsible for handling all complaints and inquiries it receives in the following manner:

- (a) Waste Diversion Ontario will be responsible for determining if the complaint and/or inquiry is related to:
 - (i) its responsibilities as set out under the *Act* or as set out in this Agreement;
 - (ii) any other action of Waste Diversion Ontario; or
 - (iii) Stewardship Ontario;
- (b) If the complaint/inquiry is related to Waste Diversion Ontario's responsibilities as set out under the *Act* or as set out in this Agreement, or to any other action of Waste Diversion Ontario, Waste Diversion Ontario will be responsible for addressing the complaint or responding to the inquiry;
- (c) If the complaint/inquiry is related to Stewardship Ontario, Waste Diversion Ontario shall forward the complaint/inquiry to Stewardship Ontario asking it to address the complaint or respond to the inquiry (in accordance with any applicable dispute resolution mechanism) and report to Waste Diversion Ontario within one calendar month and every calendar month thereafter until the dispute is resolved;
- (d) In the event that Waste Diversion Ontario receives complaints/inquiries pertaining to enforcement issues, Waste Diversion Ontario will forward such complaints/inquiries to the Ministry; and
- (e) With respect to any other complaint or inquiry, Waste Diversion Ontario will be responsible for forwarding the complaint or inquiry to the appropriate person.

11. INSURANCE

- 11.1 Stewardship Ontario shall put into effect and maintain throughout the term of this Agreement all the necessary and appropriate insurance for a prudent not-for-profit corporation.
- 11.2 Without limitation to the generality of the foregoing, Stewardship Ontario shall obtain and maintain directors and officers liability insurance in amounts which are customary for a prudent not-for-profit corporation.

12. ASSIGNMENT

- 12.1 Stewardship Ontario shall not assign any of its rights or obligations under this Agreement or any part thereof without the prior written consent of Waste Diversion Ontario and the Minister.

12.2 Stewardship Ontario shall not subcontract any of its rights or obligations under this Agreement or any part thereof without the prior written consent of Waste Diversion Ontario.

13. NOTICES

13.1 All notices to or upon the respective parties hereto shall be in writing and shall be delivered to the party to which such notice is required to be given under this Agreement at the respective address set out below by personal delivery, facsimile with confirmation of transmission, pre-paid registered post or electronically by email. All notices shall be deemed to have been duly given:

- (a) one (1) Business Day after such notice is received by the other party when delivered by personal delivery, by facsimile or by email; or
- (b) five (5) Business Days after posting by prepaid registered post. In the event of a postal disruption, notices must be given by personal delivery or by a signed back facsimile and all notices delivered within one (1) week prior to the postal disruption must be confirmed by a signed back facsimile to be effective.

Notices to Waste Diversion Ontario shall be delivered to:

Waste Diversion Ontario
45 Sheppard Avenue East, Suite 920
North York, Ontario M2N 5W9

Attention: Executive Director
Facsimile: 416-226-1368
e-mail: glendagies@wdo.ca

Notices to Stewardship Ontario shall be delivered to:

Stewardship Ontario
26 Wellington Street East, Suite 601
Toronto, Ontario M5E 1S2

Attention: Chief Executive Officer
Facsimile: 416-594-3463
e-mail: GZecchini@stewardshipontario.ca

13.2 Either party may, by written notice delivered to the other party, designate a new address or facsimile number for these notices.

14. WAIVER

14.1 No term, condition or provision hereof shall be or be deemed to have been waived by Waste Diversion Ontario by reason of any act, forbearance, indulgence, omission, or event. Only an express written waiver by Waste Diversion Ontario shall be binding and each such waiver shall be conclusively deemed to be limited to the circumstances, right or remedy therein specified.

15. SEVERABILITY

- 15.1 In the event that any provision of this Agreement or any part of such provision shall be determined to be invalid, unlawful or unenforceable to any extent, such provision or part thereof shall be severed from the remaining terms and conditions of this Agreement which shall continue to be valid and enforceable to the fullest extent permitted by law.

16. DISPUTE RESOLUTION

- 16.1 Stewardship Ontario shall include a dispute resolution mechanism in all contracts to which Stewardship Ontario is a party with the exception of contracts for goods and services in the ordinary course of business.

- 16.2 If any dispute arises between Stewardship Ontario and Waste Diversion Ontario as to their respective rights and obligations under this Agreement or the interpretation of the Municipal Hazardous or Special Waste Program Plan by Waste Diversion Ontario, the parties shall use the following dispute resolution procedures (modified if necessary pursuant to Subsection 17.3 below) to resolve such disputes:

- (a) The parties shall attempt to resolve disputes in the spirit of mutual cooperation through discussions and negotiations between the designated representatives of the parties within thirty (30) days of the date upon which written notice of the dispute was first given by one party to the other or as otherwise agreed upon;
- (b) If the parties are unable to resolve the dispute in the manner aforesaid, either party shall have the right, on notice in writing to the other, to require that such dispute be submitted to the Executive Director of Waste Diversion Ontario and the CEO of Stewardship Ontario for discussion and resolution within thirty (30) days of the date of the notice requiring such dispute to be submitted to them or as otherwise agreed upon;
- (c) In the event that the Executive Director of Waste Diversion Ontario and the CEO of Stewardship Ontario are unable to resolve such dispute, either party shall have the right, on notice in writing to the other, to require that such dispute be submitted to the Chair of the Board of Directors of Waste Diversion Ontario and the Chair of the Board of Directors of Stewardship Ontario for discussion and resolution within thirty (30) days of the date of the notice requiring such dispute to be submitted to them or as otherwise agreed upon;
- (d) If the Chair of the Board of Directors of Waste Diversion Ontario and the Chair of the Board of Directors of Stewardship Ontario are unable to resolve the dispute, either party shall have the right to refer the matter to binding arbitration in accordance with the provisions of the *Arbitration Act, 1991*, S.O. 1991, c. 17, as amended. Each party shall bear the cost of its own counsel and witnesses but the costs of the arbitration including the fees of the arbitrator(s), the cost of court reporters and transcripts and the cost of the arbitration facility shall be borne equally by the parties. The arbitration shall take place in Toronto, Ontario, Canada, before a single arbitrator to be chosen jointly by the parties. If the parties cannot agree on the choice of an arbitrator within thirty (30) days of the notice requiring such dispute to be submitted to arbitration, then the parties will each select an arbitrator who in turn will select a third arbitrator as soon as reasonably practicable following such thirty (30) day period; and
- (e) The parties may determine the procedure to be followed by the arbitrator(s) in conducting the proceedings, or may request the arbitrator(s) to do so. The

arbitrator(s) shall issue a written award within thirty (30) days of completion of the hearing.

- 16.3 Notwithstanding the provisions of Subsection 16.2, if such dispute relates to the costs recoverable by Waste Diversion Ontario (on its own behalf or on behalf of the Ministry) from Stewardship Ontario, to any invoice issued by Waste Diversion Ontario to Stewardship Ontario in respect of such costs or to any other issue which, in the reasonable opinion of Waste Diversion Ontario, pertains to the calculation of or responsibility for costs in relation to the Municipal Hazardous or Special Waste Program Plan, the following provisions shall apply:
- (a) The parties shall attempt to resolve such dispute in the spirit of mutual co-operation through discussions and negotiations between the designated representatives of the parties within fifteen (15) days of the date upon which written notice of the dispute was first given by one party to the other or as otherwise agreed upon;
 - (b) If the parties are unable to resolve the dispute in the manner aforesaid, either party shall have the right, on notice in writing to the other, to require that such dispute be submitted to the respective auditors of the parties for discussion and resolution within fifteen (15) days of the date of the notice requiring such dispute to be submitted to them or as otherwise agreed upon;
 - (c) In the event that the respective auditors of the parties are unable to resolve such dispute within such further fifteen (15) day period, such auditors shall, upon the request in writing of either party, select a third independent auditor as soon as possible to act as an arbitrator and to resolve such dispute in accordance with the provisions of the *Arbitration Act*, 1991, S.O. 1991, c. 17, as amended. In the event that the respective auditors of the parties are unable to agree upon the selection of an independent auditor to serve as arbitrator within five (5) days of the date of the written request by either party, Waste Diversion Ontario shall propose three (3) independent auditors to Stewardship Ontario and Stewardship Ontario shall, within two (2) days of receipt of such list, select one of such auditors to serve as the arbitrator;
 - (d) The auditor chosen as arbitrator shall make a final decision within fifteen (15) days of its appointment or such longer period as the parties may agree upon; and
 - (e) If any such dispute with respect to an invoice has not been finally resolved prior to the due date of such invoice, Stewardship Ontario shall pay the undisputed amount immediately to WDO and shall pay the disputed amount into a solicitor's trust account to be held pending the conclusion of the dispute resolution procedure. The disputed amount shall be disbursed by the solicitor in accordance with the results of the dispute resolution procedure. Each party agrees to continue performing its obligations under the Agreement pending the resolution of any dispute with respect to an invoice.
- 16.4 Stewardship Ontario will develop a dispute resolution procedure providing for the resolution of any dispute between Stewardship Ontario and a person with respect to the person's obligations under Section 31 of the *Act* or the person's obligations under the rules made by Stewardship Ontario under Section 30 of the *Act*, such dispute resolution procedure to be satisfactory in all respects to Waste Diversion Ontario.
- 16.5 Stewardship Ontario agrees to submit any dispute with respect to payments or in-kind contributions to be made to the municipalities under the Municipal Hazardous or Special

Waste Program Plan for resolution in accordance with the dispute resolution procedure adopted by Waste Diversion Ontario for this purpose, as amended from time to time. Waste Diversion Ontario agrees to consult with Stewardship Ontario upon request, but without obligation, with respect to the terms of such dispute resolution procedure.

17. TERMINATION

- 17.1 If, in the reasonable opinion of Waste Diversion Ontario, there has been a breach of this Agreement by Stewardship Ontario, Waste Diversion Ontario may terminate this Agreement if Stewardship Ontario fails to remedy such breach within ninety (90) Business Days following written notice from Waste Diversion Ontario outlining the breach in reasonable detail. In the event that the remedy of such breach by Stewardship Ontario reasonably requires more than ninety (90) Business Days, Stewardship Ontario shall so advise Waste Diversion Ontario without delay and provide a revised time line to remedy such breach. Waste Diversion Ontario shall notify Stewardship Ontario in writing as to whether the revised time line is acceptable and, if it is, the revised time line to remedy such breach will apply. Notwithstanding the foregoing, with respect to a breach of Section 12, Waste Diversion Ontario may terminate this Agreement immediately if Stewardship Ontario has not given written notice to Waste Diversion Ontario that it disputes such breach within ten (10) days of the notice of breach from Waste Diversion Ontario.
- 17.2 Notwithstanding Subsection 17.1, Waste Diversion Ontario may terminate this Agreement immediately upon written notice to Stewardship Ontario if:
- (a) Stewardship Ontario makes a voluntary assignment or a proposal under the *Bankruptcy and Insolvency Act* or a petition or any other proceeding shall be filed, instituted or commenced with respect to Stewardship Ontario under any bankruptcy, insolvency, debt restructuring, reorganization, liquidation, winding-up or similar law now or hereafter in effect, unless such proceedings are commenced by a party other than Stewardship Ontario and are being diligently contested by Stewardship Ontario and are stayed within 30 days from the date of notice of such proceedings being received by Stewardship Ontario;
 - (b) A receiver or trustee is appointed for any part of the assets of Stewardship Ontario; or
 - (c) Stewardship Ontario ceases for any reason whatsoever to be the designated industry funding organization for the Municipal Hazardous or Special Waste Program Plan or the Municipal Hazardous or Special Waste Program Plan is terminated for any reason whatsoever.
- 17.3 The parties acknowledge and agree that any determination by Waste Diversion Ontario that Stewardship Ontario is in breach of this Agreement as set out in a written notice given pursuant to Subsection 17.1 above is subject to the dispute resolution provisions of this Agreement but termination of this Agreement pursuant to Subsection 17.2 above is not subject to the dispute resolution provisions of this Agreement. If Stewardship Ontario disputes the right of Waste Diversion Ontario to terminate this Agreement pursuant to Subsection 17.1, Stewardship Ontario shall be required to give written notice of the dispute to Waste Diversion Ontario within ten (10) days of receiving written notice of breach from Waste Diversion Ontario and, if the parties have not resolved the dispute pursuant to paragraphs 16.2(a)-(c) above within twenty (20) days thereafter, the parties shall, at the option of Stewardship Ontario, proceed to arbitration pursuant to paragraph 16.2(d) above and the arbitrator shall be directed to deliver a written decision within ninety (90) Business Days of the written notice of breach. If Stewardship Ontario has

required arbitration of the issue, a notice given pursuant to Subsection 17.1 shall be effective ninety (90) Business Days thereafter unless the arbitrator has issued a written decision nullifying such notice on or before that date (without prejudice to any rights of Waste Diversion Ontario to appeal such decision on any basis provided for in the *Arbitration Act*, 1991, S.O. 1991, c.17, as amended).

18. AGREEMENT BINDING

18.1 This Agreement shall enure to the benefit of and be binding upon the parties hereto and their respective permitted successors and assigns.

19. ENTIRE AGREEMENT

19.1 This Agreement embodies the entire Agreement between the parties with regard to the implementation of the Municipal Hazardous or Special Waste Program Plan and supersedes any prior understanding or agreement, collateral, oral or otherwise, with respect to such subject matter existing between the parties at the date of execution of this Agreement.

20. PUBLIC ANNOUNCEMENTS

20.1 Neither Waste Diversion Ontario nor Stewardship Ontario shall make any press release or other formal public announcement which refers to the role of the other in the development and implementation of the Municipal Hazardous or Special Waste Program Plan without first consulting the other concerning the contents of such proposed press release or public announcement. The parties agree that prior consultation shall not be required in respect of routine communications or other general information provided by either of the parties to the public with respect to the implementation of the Municipal Hazardous or Special Waste Program Plan.

21. GOVERNING LAW

21.1 This Agreement shall be construed and interpreted in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein and the parties hereby agree that any dispute arising out of or in relation to this Agreement shall be determined in Ontario.

21.2 Stewardship Ontario agrees that it shall, and shall require its officers, directors and staff to, comply with all laws, ordinances, rules and regulations which apply to the operation of Stewardship Ontario, any activities of Stewardship Ontario and the responsibilities of Stewardship Ontario under the *Act*.

22. SIGNATURES

IN WITNESS WHEREOF the parties hereto have executed this Agreement as of the date stated in the Preamble to this Agreement.

WASTE DIVERSION ONTARIO

Per:



Clodhna McMullin
Chair

STEWARDSHIP ONTARIO

Per:



Jim Quick
Chair

Schedule A: Rules for Stewards with Respect to Payment of Fees respecting MHSM

These Rules do not revoke or amend any previously approved MHSM Rules for Stewards with Respect to Payment of Fees Respecting MHSM.

1. Interpretation in these Rules:

2009 Annual MHSM Steward's Report means a report prepared by a steward describing the aggregate amount of MHSM that was supplied for use in Ontario in the 2009 Data Period by the steward or his Franchisees containing the information in accordance with Appendix B;

2009 Data Period means the 12 month period ending December 31, 2009;

2010 Annual MHSM Steward's Report means a report prepared by Stewardship Ontario describing the aggregate amount of MHSM that was supplied for use in Ontario in the 2010 Data Period by the steward or his Franchisees containing the information in accordance with Appendix B;

2010 Data Period means the 12 month period ending December 31, 2010;

2010 Reconciliation Statement means a statement prepared by Stewardship Ontario describing the aggregate difference of MHSM, that was reported by the steward in its 2 Quarterly MHSM Steward's Reports (covering the Data Periods ending September 30, 2010 and December 31, 2010) and one-half of the 2009 Annual MHSM Steward's Report containing the information in accordance with Appendix G and filed online for the steward by Stewardship Ontario in the timeframe set out in Appendix E;

2011 Reconciliation Statement means a statement prepared by Stewardship Ontario describing the aggregate difference of MHSM, that was reported by the steward in its 4 Quarterly MHSM Steward's Reports (covering the Data Periods ending March 31, 2011, June 30, 2011; September 30, 2011 and December 31, 2011) and the 2010 Annual MHSM Steward's Report containing the information in accordance with Appendix G and filed online for the steward by Stewardship Ontario in the timeframe set out in Appendix E;

Base Interest Rate means the prejudgment interest rate established from time to time under the Rules of Civil Procedure of the Courts of Justice Act (Ontario), as amended from time to time, for prejudgment interest;

Brand Owner, with respect to a specific product or good, that is MHSM, where such product or good, or its packaging bears a trademark means during any time in the Data Period;

- (a) a person Resident in Ontario who is the holder of the registered trademark, or
- (b) a person Resident in Ontario who is the licensee, in respect of the registered trademark, or
- (c) a person Resident in Ontario, who owns the intellectual property rights to the unregistered trademark ; or
- (d) a person Resident in Ontario, who is the licensee, in respect of the intellectual property rights of the unregistered trademark;

Where “licensee” includes a person who packages goods, the products or goods are MSHM or MSHM Packaging and bears a trademark, other than a packer, producer or filler of Private Label Goods, and includes any person whose corporate name or business name registration contains the trademark;

Commencement Date means the date upon which the Minister has approved the Consolidated MSHW Program Plan and made a regulation with respect to the revised composition of the board of directors of Stewardship Ontario;

Commercial Connection, a person has a commercial connection with MSHM if it derives a direct economic benefit when such MSHM is supplied for use in Ontario;

Consolidated MSHW Program Plan means the waste diversion program required to be developed by the Minister in the Minister’s Program Request Letter;

Data Periods means the 3 month periods ending March 31, 2010; June 30, 2010; September 30, 2010; December 31, 2010; March 31, 2011; June 30, 2011; September 30, 2011 and December 31, 2011;

Deficit (Surplus) Cost means the deficit (surplus) cost associated with each material type from services provided under all MSHM Rules. These costs are related to activities undertaken in the development, implementation and management of the MSHW Program Plan (Phase 1) and Consolidated MSHW Program Plan;

Designated IC&I business means (i) an industrial, commercial or institutional business that generates Phase 1 MSHW or MSHW of the type referred to in clause 1 a) i) of the Appendix H; or (ii) an industrial, commercial or institutional business that generates MSHW of the types described in clauses 1 a) ii) through 1 a) vi) of the Appendix H that is not required to submit a Generator Registration Report with respect to municipal hazardous or special waste under subsection 18 (1) of Regulation 347, made under the Environmental Protection Act, as amended from time to time .

Electrical & Electronic Equipment (EEE) products that generate Waste Electrical & Electronic Equipment as defined in O. Reg. 393/04.

Filed means electronically submitted by a Steward to Stewardship Ontario through the interactive website. Filed in the case of a steward that has previously filed a MSHM Steward’s Report, means sent to the steward in accordance with the contact information set out in such report. Filed when effected by Stewardship Ontario with respect to a steward that has not previously filed a MSHM Steward’s Report, means notified as defined in paragraph 3(1) of these Rules.

First Importer means a person Resident in Ontario, who imports into Ontario, a specific product or good that is MSHM, for which a Brand Owner does not exist in Ontario and includes a person Resident in Ontario who is the first to take title to such product or good, upon or after arrival in Ontario from elsewhere during the Data Period;

Franchisor, Franchisee and Franchise System have the meaning ascribed thereto under the Arthur Wishart Act (Franchise Disclosure), 2000, as amended from time to time;

Measured Return Share means a share of the costs of collecting, consolidating, transporting, recycling or disposing of Obsolete MSHW or MSHW that are Toxics, Leachates, Fertilizers, Pesticides, Fungicides, Herbicides or Reactives as defined in Appendix A of these Rules;

Measured Return Share Steward's Report means a report prepared by Stewardship Ontario on a quarterly basis which contains the information in accordance with Appendix C;

MHSM Packaging means materials that are used for the containment, protection, handling, delivery and presentation of MHSM products or goods sold or delivered to consumers and Designated IC& Businesses in Ontario;

Minister means Minister of the Environment, Province of Ontario;

Municipal Hazardous or Special Materials (MHSM) means those goods and products set out in Appendix A which are Supplied for use in Ontario to consumers, or consumed or used by Designated IC&I businesses, that result in the generation of MHSW;

Municipal Hazardous or Special Waste (MHSW) as defined in Ontario Regulation 542/06;

Obligation Date means the first day stewards are obligated for Service Costs related to MHSM in these Rules starting July 1, 2010;

Obsolete MHSW Cost means the cost associated with the collection and processing of Obsolete MSHW;

Obsolete MHSW means MHSW for which there is no MHSM supplied for use in the Data Period;

Phase 1 MHSW means any of the municipal hazardous or special waste covered by the Municipal Hazardous or Special Waste Program Plan approved by the Minister on February 19, 2008;

Plan Development Costs means the cost of those items listed in Appendix I under the heading Plan Development Cost Components;

Plan Implementation Costs means the cost of those items listed Appendix I under the heading Plan Implementation Cost Components;

Private Label Goods means goods that carry the brand or trademark of a Brand Owner that is a retail outlet in Ontario and that were manufactured by a third party on its behalf;

Program Request Letter means the letter from the Minister to Waste Diversion Ontario dated July 22, 2008 requiring Waste Diversion Ontario to develop a waste diversion program in respect of certain categories of Municipal Hazardous or Special Waste in addition to Phase 1 MHSW;

Published Address means an address in Ontario appearing in a current telephone directory or a recognized current published business directory;

Quarterly MHSM Steward's Report means a report prepared by a steward describing the aggregate amount of MHSM, that was Supplied for use in Ontario in the Data Period by the steward or his Franchisees containing the information in accordance with Appendix B and filed with Stewardship Ontario in the timeframe set out in Appendix E;

Resident in Ontario, with respect to a corporation, means a corporation that has a permanent establishment in Ontario, in accordance with the provisions of Appendix D, at any time in the Data Period;

Rules mean these Rules;

Service Cost is the cost to manage, collect, transport, consolidate, process or dispose of, and any other waste management cost of MHSW;

Start up Costs are any costs incurred by Stewardship Ontario and WDO up to the Obligation Date related to implementing Phase 1 and the Consolidated MHSW Plan excluding the Plan Development Costs;

Steward in Good Standing means a steward who is current with its financial and reporting obligations to Stewardship Ontario including:

- (1) Plan Development Costs
- (2) Plan Implementation Costs
- (3) Deficit (Surplus) Costs
- (4) Obsolete MHSW Costs
- (5) Fees as outlined in the Measured Return Share Steward's Report
- (6) Fees outstanding from Reconciliation Statement

Supplied means sold, leased, donated, disposed of, used, transferred the possession or title of, or otherwise made available or distributed for use in the Province of Ontario. Supply and Supplies have similar meanings.

2) Designation of Stewards

For the purpose of determining which person shall be designated as a steward for a particular category of MHSW the following provisions shall apply, in the order in which they are set out. If two or more persons are designated as a steward pursuant to the following, then the earlier provision shall prevail.

- (1) A Brand Owner is designated as a steward with respect to all MHSW or Obsolete MHSW,
 - a. for which it is the Brand Owner and Supplied such MHSW for use in Ontario during the Data Period, for which it has a Commercial Connection;
 - b. in the case of Obsolete MHSW, for which it is the Brand Owner and such Obsolete MHSW was collected by Stewardship Ontario during the Data Period.
- (2) A First Importer is designated as a steward with respect to all MHSW or Obsolete MHSW,
 - a. for which it is the First Importer and Supplied such MHSW for use in Ontario during the Data Period;
 - b. in the case of Obsolete MHSW, for which it is the First Importer and such Obsolete MHSW was collected by Stewardship Ontario during the Data Period.
- (3) A Franchisor is designated as a steward with respect to all MHSW or Obsolete MHSW,
 - a. Supplied within the relevant Franchise System for use in Ontario during the Data Period;
 - b. in the case of Obsolete MHSW, for which it is the Franchisor and such Obsolete MHSW was collected by Stewardship Ontario during the Data Period.
- (4) In the event there are two Brand Owners for the same MHSW, the Brand Owner more directly connected to the production of the MHSW shall be designated as the steward,

but where the Brand Owner is a Franchisor who is Resident in Ontario, the Franchisor shall be designated as the steward.

- (5) In the event there is not an identifiable brand for a particular MHSM product or good and if the manufacturer of the MHSM is resident in Ontario, the manufacturer of such MHSM shall be designated as the steward for such MHSM, otherwise the First Importer shall be designated as the steward for such MHSM.

3) Steward's Report

- (1) Every steward shall file its 2009 Annual MHSM Steward's Report with Stewardship Ontario not later than 90 days after the Commencement Date, or 90 days after such steward is notified, whichever is later. A steward is notified:
 - (a) on the day the steward receives personal service via email of how to obtain a copy of these Rules, or
 - (b) three days following the sending by Stewardship Ontario by prepaid first class postage to the steward at its Published Address in Ontario, of a copy of these Rules or a written notice of how to obtain a copy of these Rules.
- (2) Every steward shall file a Quarterly MHSM Steward's Report with Stewardship Ontario in accordance with Appendix E.
- (3) Stewardship Ontario shall file a 2010 Reconciled Statement on behalf of the steward within 30 days of receipt of the prior year's fourth Quarterly MHSM Steward's Report.
- (4) Stewardship Ontario shall file a 2011 Reconciled Statement on behalf of the steward within 30 days of receipt of the prior year's fourth Quarterly MHSM Steward's Report.
- (5) Stewards may amend an Annual MHSM Steward's Report or any Quarterly MHSM Steward's Report with the consent of Stewardship Ontario to correct information that is in error or to replace data previously reported.
- (6) Notwithstanding the above, Stewardship Ontario may, acting reasonably, require a steward to file an Annual or Quarterly MHSM Steward's Report by sending a written request to the steward.

4) Fees Payable

Stewards shall pay fees to Stewardship Ontario in accordance with the following:

- (1) the fees for all MHSM categories as set out in the 2009 Annual MHSM Steward's Report [according to](#) the timetable and [payment calculation](#) set out in Appendix E;
- (2) the fees for all MHSM categories as set out in the 2010 Annual MHSM Steward's Report [according to](#) the timetable and [payment calculation](#) set out in Appendix E;
- (3) the fees set out in the Measured Return Share Steward's Report;
- (4) the fees set out in the 2010 or 2011 Reconciliation Statement.

Any fees owing back to the Steward disclosed in the Reconciliation Statement will be applied against future obligations. Stewardship Ontario may, at its own discretion, waive the right to apply such fees to future obligations and, in such case, will pay the amount so owing

to the steward and shall do so if a person is exempted as a steward under 5) and has paid all fees due to Stewardship Ontario.

5) Relief from Requirements to Report and Pay Fees

To the extent that the MHSM generated by a steward is the subject of an industry stewardship plan that has been approved by Waste Diversion Ontario or by the Minister, such steward upon filing notice thereof to Stewardship Ontario, will be exempted from the per unit Service Cost accruing in respect of the period following the date of approval of such industry stewardship plan. Any payment of Service Costs fees made to Stewardship Ontario, attributable to the period after the date of the approval of the industry stewardship plan, shall be refunded to the steward.

Within 60 days of such approval and the resulting exemption, each exempted steward must file all outstanding Quarterly MHSM Steward's Reports and report all MHSM supplied for use up to and including the date of exemption. At such time, Stewardship Ontario will file the steward's Reconciliation Statement.

Notwithstanding such exemption, each such steward, will remain obligated to pay its share of the costs, set out in Appendix F with respect to the period ending on the date of approval of the industry stewardship plan.

6) Penalties, Interest and Back Fees

- (1) Stewards, who fail to pay fees by the dates specified in Appendix E, will be subject to a penalty calculated at 10% of fees due and payable;
- (2) Interest on unpaid fees shall accrue from the due date at the Base Interest Rate plus 3%;
- (3) Stewardship Ontario may waive all or part of any penalty or interest charges otherwise payable under these Rules;
- (4) In the event that the amounts reported in the 2009 Annual MHSM Steward's Report or 2010 Annual MHSM Steward's Report are inaccurate, any deficiency in fees paid resulting from such inaccuracies shall be immediately due and payable from the date of the filing of the correcting 2009 Annual MHSM Steward's Report or 2010 Annual MHSM Steward's Report, and, if not paid within 30 days, will be subject to a penalty equal to 10% of such fee deficiency.

7) Record Provision and Retention

- (1) Stewards shall promptly provide data including calculation methodology, product and packaging data, audit reports, list of brands reported and list of brands excluded from report, and allocation percentages, used by stewards in the preparation of the Annual or any Quarterly MHSM Steward's Report upon request from Stewardship Ontario.
- (2) Stewards shall retain records to substantiate and verify the amount set out in their Annual or any Quarterly MHSM Steward's Report for a period of not less than five years from the date of the Annual or Quarterly MHSM Steward's Report to which they relate. A steward shall grant access to Stewardship Ontario upon its request to examine its books and records to enable Stewardship Ontario to audit and inspect such records respecting

an Annual or any Quarterly MHSM Steward's Report up to five years after the date of receipt of such Annual or Quarterly MHSM Steward's Report by Stewardship Ontario.

8) Dispute Resolution

If any dispute arises between a steward and Stewardship Ontario as to the amount of MHSM that is required to be included in an Annual or Quarterly or Reconciled or Measured Return Share Steward's Report:

- (1) The parties shall attempt to resolve the dispute through designated representatives from each of Stewardship Ontario and the steward within thirty (30) days of the date upon which written notice of the dispute was first given, or as otherwise agreed upon;
- (2) If the parties are unable to resolve the dispute within the above period, the steward and Stewardship Ontario shall, within thirty (30) days thereafter, jointly select an arbitrator to arbitrate the dispute and failing agreement as to the arbitrator within such time frame, Waste Diversion Ontario shall appoint the arbitrator on behalf of the parties;
- (3) The arbitrator shall render a decision on the dispute and the award arising therefrom, in accordance to the Arbitration Act, 1991, as amended from time to time;
- (4) Non-payment or failing to file an Annual or Quarterly MHSM Steward's Report by a steward shall not be items subject to arbitration. The decision of the arbitrator shall be final and binding on the parties and shall not be subject to appeal on any grounds whatsoever, and shall be enforceable against Stewardship Ontario and the steward, as the case may be, immediately on the issue of the decision to the parties to the dispute.

9) Interpretive Memoranda

Stewardship Ontario may publish on its website interpretive memoranda describing its interpretations of these Rules and how it proposes to administer them.

10) Publishing of Company Names

- (1) The names of stewards filing Annual or Quarterly MHSM Steward's Reports with Stewardship Ontario will be posted on the Stewardship Ontario website;
- (2) Stewardship Ontario will post the names of any stewards named in any Measured Return Share Steward's Report;
- (3) A list of Stewards in Good Standing may be posted on the Stewardship Ontario website;
- (4) Stewardship Ontario may post the registry of all brands reported in Annual or Quarterly MHSM Steward's Reports from time to time;
- (5) Stewardship Ontario may publish on its website the names of any person that may appear to be a steward Resident in Ontario, but which it has determined upon investigation is not Resident in Ontario.

Appendix A- Municipal Hazardous or Special Materials Definitions

Please note: In the case where a material may fall within more than one of the definitions outlined in Appendix A, stewards will report the material under the category that reflects how the material is managed at its end of life under the program. For example, a steward of a product that could be considered both a flammable and an aerosol will be required to register and report as steward of an aerosol if that is how the material is managed at the end of life stage under the program.

Please further note that exclusion from a definition does not necessarily mean exclusion from the program. A material is only exempt from the program if it is not captured by any of the other material definitions.

Municipal Hazardous Material		
Flammable materials	Defined by one or more of the following: <ul style="list-style-type: none"> • Consumer Chemical & Container Regulations; or • C.S.A. Standard Z752-03; or • Ont. Reg. 347 	
Inclusions	<i>Examples</i>	Exclusions

<p>Assorted Flammables include materials that are flammable and combustible liquids, solids, and gases as defined by CCCR, O.Reg 347, and CSA Std Z752-03 and that are not part of other material categories / sub-categories</p>	<ul style="list-style-type: none"> • Camping Fuel • Kerosene • Adhesives • Cleaners • Caulking • Filler • Grout • Fibreglass Resins • Thinners • Sealers • Strippers • Undercoating • Patches • Driveway Sealers • Waxes • Polishes • Wood Preservatives • Solid Fuels • Propane • Butane • Cigarette Lighters • Acetylene • Calcium hypochlorite • Sodium peroxydisulfate • MEK peroxide 	None
<p>Gasoline includes the range of automotive fuels that are flammable and combustible liquids, solids, and gases as defined by CCCR, O.Reg 347, and CSA Std Z752-03</p>	<ul style="list-style-type: none"> • Gasoline • Diesel • All automotive fuels 	None
<p>Windshield Washer Fluids include the range of windshield cleaning products that are flammable and combustible liquids, solids, and gases as defined by CCCR, O.Reg 347, and CSA Std Z752-03</p>	<ul style="list-style-type: none"> • Windshield Wiper Fluid • Screen wash 	None
<p>Automotive Additives include the range of products that are added to automobile engines or fuel lines and that are flammable and combustible liquids, solids, and gases as defined by CCCR, O.Reg 347, and CSA Std Z752-03</p>	<ul style="list-style-type: none"> • Fuel enhancers • De-icers • Gas-line antifreeze 	None
<p>Corrosive materials</p>	<p>Defined by one or more of the following:</p> <ul style="list-style-type: none"> • Consumer Chemical & Container Regulations; or • C.S.A. Standard Z752-03; or • Ont. Reg. 347 	
<p>Inclusions</p>	<p>Examples</p>	<p>Exclusions</p>

Includes products that meet the definition of "corrosive products" in the CCCR, 2001 and which can only be sold if their containers display information prescribed in the CCCR, 2001.	<p>Acids (e.g., muriatic, sulphuric, etc.), acidic cleaning products, descalers, tire cleaners, drain openers.</p> <p>Bases (e.g., sodium hydroxide), basic cleaning products, drain openers, paint remover, masonry products (cement powders).</p>	<ul style="list-style-type: none"> The sub-category of products defined or classified as an "irritant" in the CCCR regulations Those products, such as "cosmetic, device, drug or food within the meaning of the <i>Food and Drugs Act</i> (Section 12 of the <i>Hazardous Products Act</i>) which are not regulated by the <i>Hazardous Products Act</i> and therefore not subject to the labelling requirements of the CCCR, 2001
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Irritants	Defined by the Consumer Chemical & Container Regulations, 2001	
Inclusions		
The sub-category of products defined or classified as an "irritant" in the CCCR regulations		

Toxic Materials (Toxics)	Defined by one or more of the following:	
	<ul style="list-style-type: none"> Consumer Chemical & Container Regulations; or C.S.A. Standard Z752-03. 	
Inclusions	Examples	Exclusions
Toxic and harmful liquids, solids, pastes, gels, and gases, as defined by CCCR, and CSA Std Z752-03	Adhesives (contact cements, glues, epoxies) automotive additives & cleaners, coatings, caulking, filler, grout, fibreglass resins, sealers, strippers, undercoating, patches driveway sealers, waxes, polishes, wood preservative, other anti-freezes and de-icers.	None

Reactive Materials (Reactives)	Defined by Ont. Reg. 347	
Inclusions	Examples	Exclusions
Materials that react with; Air and/or water producing a gas; Materials that explode.	Isocyanate foams; Metal powders;	None

Leachate Toxic (Leachates)	Materials as defined by Ont. Reg. 347	
Inclusions	Examples	Exclusions
Materials that upon extraction produce an extract containing a toxic substance in a quantity greater than the limit identified by the Regulation.	Those materials identified in Schedule 4 of Regulation 347 that exceed the limit set out in the Regulation.	Those materials that do not exceed the limit set out in the Regulation.

Municipal Special Material		
Batteries- Consumer- Type Portable		
Inclusions		

<ul style="list-style-type: none"> • All batteries that weigh equal to, or less than 5kg. • Typically used in consumer household and IC&I applications. • Includes all battery chemistries. 		
Batteries - Industrial Stationary		
Inclusions		
<ul style="list-style-type: none"> • All stationary batteries weighing greater than 5kg. • Typically used in industrial applications including uninterrupted power supply and load leveling, telecommunications, emergency lighting and fire protection, control switching, and other similar applications. • Includes all battery chemistries. 		

Batteries - Non-Lead Acid Motive		
Inclusions		Exclusions
<ul style="list-style-type: none"> • All non-lead acid batteries for motive application, weighing greater than 5kg. • Used in motive-power applications, including automobile, life-truck, marine, railway, and aircraft. • Includes all battery chemistries, excluding lead-acid. 		Vehicle lead acid batteries

Pressurized Containers		
Inclusions	Examples	Exclusions
<p>Means:</p> <ul style="list-style-type: none"> • Seamless Cylinders and Tubes: TC-3AAM, TC-3AAXM, TC-3ALM, TC-3AM, TC-3ANM, TC-3ASM, TC-3AXM, TC-3EM, and TC-3HTM. • Welded Cylinders and Spheres: TC-4AAM-33, TC-4BM, TC-4BM17ET, TC-4BAM, TC-4BWM, TC-4DM, TC-4DAM, TC-4DSM and TC-4EM. • Non-refillable Containers: TC-39M • Composite Cylinders: TC-3FCM and TC-3HWM. • Insulated Cylinders: TC-4LM • Cylinders for Acetylene Service: TC-8WM, TC-8WAM. 	Acetylene; Propane; Freon; Isocyanate resins; Helium; Nitrogen; Oxygen.	<ul style="list-style-type: none"> • Pressurized containers sold exclusively for commercial / industrial applications and in inspection / life-cycle management programs • Containers for refrigerants regulated under the Ontario Environmental Protection Act regulation 189/94
Aerosol Containers		
Inclusions	Examples	Exclusions

<p>Aerosol container means any non-refillable means of containment that:</p> <p>(a) contains a substance under pressure; and</p> <p>(b) is fitted with a self-closing device allowing the contents to be ejected:</p> <p>(i) as solid or liquid particles in suspension in a gas,</p> <p>(ii) as a foam, paste or powder, or</p> <p>(iii) as a liquid or a gas.</p>	<p>All aerosol containers regardless of product contents.</p> <p>May display this symbol:</p> 	<p>None</p>
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Portable Fire Extinguishers		
Inclusions	Examples	Exclusions
<p>Portable fire extinguisher means a portable device, carried or on wheels and operated by hand, containing an extinguishing agent that can be expelled under pressure for the purpose of suppressing or extinguishing fire.</p>	<p>ABC Extinguishers; Halon Extinguishers; Carbon Dioxide Extinguishers.</p>	<p>Those portable fire extinguishers sold exclusively for commercial and/or industrial applications and therefore not available for retail consumption</p>

Fertilizers and the containers in which they were contained		
Inclusions	Examples	Exclusions

<p>“Fertilizer” means any substance or mixture of substances defined as a fertilizer in the <i>Fertilizers Act</i> (Canada) and <i>Fertilizers Regulations</i> (Canada) and which is regulated under the <i>Fertilizer Regulations</i>. This includes any substance manufactured, sold or represented as a plant nutrient.</p>	<ul style="list-style-type: none"> • Fertilizers requiring registration under the <i>Act</i> and <i>Regulations</i> • Registration exempt fertilizers as outlined in Schedule II of the <i>Regulations</i> • Specialty fertilizers, other than those referred to in paragraph (b) of the definition “specialty fertilizers” in the <i>Fertilizers Regulations</i> • Potting soils which contain fertilizers • Manure • Composted manure • Any product making a nutrient claim 	<ul style="list-style-type: none"> • Unregistered supplements, including composts, for use only in improving the physical condition of the soil and where no nutrient claim is made • Fibrous organic materials including peat, peat moss, sphagnum moss, tree bark and other materials for use only in improving the physical condition of the soil and where no nutrient claim is made • Animal and vegetable manures sold in their natural condition which are exempt from the <i>Fertilizer Act</i> and <i>Regulations</i>, as outlined in section 3 (1) (a) of the <i>Regulations</i>, which generally refers to unaltered, unpackaged manures sold only by the farmer directly to the end-user, which was produced by the farm’s herd • Any substance not meeting the definition of Fertilizer as defined in the <i>Fertilizers Act</i> and <i>Regulations</i> • Fertilizers packaged in containers greater than 30 kgs
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Pesticides , Fungicides, and or Herbicides, and the containers in which they were contained

Inclusions	Examples	Exclusions
<p>Pesticides include fungicides, herbicides, insecticides and certain repellents registered under the Pest Control Products Act (Canada) bearing the “DOMESTIC” classification. By definition, commercial, agricultural and restricted classifications are excluded.</p>		

Paints and Coatings, and the containers in which they were contained

Inclusions	Examples	Exclusions
<p>Means latex, oil and solvent-based architectural, consumer automotive and consumer marine coatings, including paints and stains sold as MHSM consumer products or designated IC&I business products, whether tinted or untinted.</p>	<p>Examples include Alkyd paints and coatings; Latex paint and coatings; Stains.</p>	<p>Products sold in containers with a volume greater than 30 litres.</p>

Lubricating Oil Containers

Inclusions	Examples	Exclusions
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Oil containers with a volume of 30 litres or less, which are used for the containment of lubricating oil products including: - Petroleum-derived or synthetic - Crankcase, engine and gear oils, and hydraulic, transmission and heat transfer fluids; and - Fluids used for lubricating purposes in machinery or equipment.	Containers that contained; Synthetic crankcase or engine oil; Hydraulic fluid; Polyoester fluids; Circulating oil or turbine oil; Paper machine oil; Transmission fluid; Power steering fluid; Gear oil; Vegetable oil for lubrication; Re-refined oil.	Containers that contained: Ethylene glycol heat transfer fluid; Propylene glycol heat transfer fluid; Silicone heat transfer fluid; Synthetic aromatic hydrocarbon heat transfer fluid; Glycol-based heat transfer fluid; Water glycol hydraulic fluid; Phosphate ester hydraulic fluid; Hydraulic oil dye.
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Antifreeze and containers in which they were contained

Inclusions	Examples	Exclusions
Antifreeze used or intended for use as a vehicle engine coolant	Ethylene or propylene glycol. Antifreeze sold in all containers sizes, including fluid supplied in bulk format. Bulked Antifreeze is any antifreeze sold in containers greater than 30 Litres. Packaged Anti-Freeze is any antifreeze sold in containers 30 L or less.	<ul style="list-style-type: none"> • Used Oil • Plumbing antifreeze • Vehicle windshield antifreeze • Product marketed as industrial heat transfer fluid • Fuel (gasoline & diesel) antifreeze • Lock De-Icer antifreeze • Air Brake antifreeze • Excludes initial "factory fill" product

Oil Filters

Inclusions	Examples	Exclusions
Means filters produced and/or arriving into the province, and which are for sale, directly or as part of a product, in Ontario.	Spin-on or element style filter that is used in hydraulic, transmission or internal combustion engine applications including diesel fuel filters; Household furnace fuel filter; Storage tank diesel fuel filter; Sump type automatic transmission filter; Plastic/paper element style filter; Diesel fuel filter used at retail & commercial pump islands; Coolant filter.	Gasoline fuel filter; Air filter; Household furnace air filter; Sock-type filter.

Fluorescent light bulbs and tubes

Inclusions	Examples	Exclusions
Fluorescent light bulbs and tubes means a fluorescent lamp that is a low pressure mercury electric-discharge source in which a fluorescing coating transforms ultraviolet energy generated by the mercury discharge into visible light. Includes both fluorescents meant to be removed by the user and fluorescents embedded in electronics products.	Fluorescent tubes and compact fluorescent bulbs. Fluorescent bulbs in display devices, laptop computers, scanners and photocopiers.	Other non-fluorescent light bulbs such as incandescent, gas discharge, halogen or LED.

Pharmaceuticals

Inclusions	Exclusions

<p>“pharmaceuticals” means all drugs, as defined in section 2 of the <i>Food and Drugs Act (Canada)</i>, without regard to paragraph (c) of that definition and “Natural Health Products”, as defined in section 1 of the <i>Natural Health Products Regulations(Canada)</i>, and, for greater certainty, includes:</p> <ul style="list-style-type: none"> (a)Drugs used or intended for use in both human and animals; (b)Prescription drugs as set out in Schedule F or the <i>Food and Drug Regulations (Canada)</i> (c)Biological drugs and radiopharmaceuticals as set out in Schedules C and D of the <i>Food and Drugs Act (Canada)</i>; (d)Controlled substances, as defined in section 2 to the <i>Controlled Drugs and Substances Act (Canada)</i> and controlled and restricted drugs as defined in Schedules G and J of the <i>Food and Drug Regulations (Canada)</i>; (e)Narcotics, as defined in section 2 to the <i>Narcotic Control Regulations (Canada)</i>; (f)Non-prescription orally ingested drugs and orally ingested Natural Health Products but not those listed in paragraphs (h) and (j) of this definition; and (g)Non-prescription topical antibiotic and anti-fungal creams 	<ul style="list-style-type: none"> (a) “Food”, as defined under section 2 of the Food and Drugs Act (Canada), and non-prescription drug products in food format and Natural Health Products in food format, including probiotics sold in food format, that are primarily sold and marketed as a food; (b) Non-orally ingested non-prescription drugs and Natural Health Products including non-prescription topical creams but not those listed in paragraph (g) of this definition; and (c) Orally ingested non-prescription drug and Natural Health Product drops, lozenges and chewing gum, such as for coughs, sore throats or halitosis.
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Sharps, including syringes		
Inclusions	Examples	Exclusions
Waste sharps are materials consisting of needles, syringes and lancets in the administration of healthcare for humans and companion animals (i.e. pets).	Human and veterinary sharps from the residential sector.	Sharps from the commercial and institutional sector.

Switches that contain mercury		
Inclusions	Examples	Exclusions
Switches containing mercury means products or devices that open or close an electrical circuit or a liquid or gas valve.	Float switches, actuated by rising or falling liquid levels; tilt switches, actuated by a change in the switch position; pressure switches, actuated by a change in pressure; and temperature switches and flame sensors actuated by a change in temperature.	None

Thermostats, thermometers, barometers or other measuring devices containing mercury		
Inclusions	Examples	Exclusions

<p>Thermostats means a product that uses a mercury switch to sense and control room temperature through communication with heating, ventilation and air conditioning equipment.</p> <p>Thermometer means an instrument for measuring temperature, having a graduated glass tube with a bulb containing mercury that expands and rises in the tube as the temperature increases.</p> <p>Barometer means an instrument containing mercury used for measuring atmospheric pressure.</p>	<p>Thermostats, thermometers, barometers.</p>	<p>None</p>
Solvents and containers in which they were contained		
<p>Inclusions</p> <p>Means liquid products that are intended to be used to dissolve or thin a compatible substance and, 1. are comprised of 10% or more of water-immiscible liquid hydrocarbons, including halogen-substituted liquid hydrocarbons; or, 2. are flammable as described in part (c) of "municipal hazardous waste" in Ontario Reg. 542</p>	<p>Examples</p> <p>Paint thinners, lacquer thinners, automotive body resin solvents, contact cement thinners, paint strippers and degreasers sold into the retail market; Contain (but not limited to) materials as turpentine, alcohols (methanol, isopropanol, ethanol), ketones (acetone, methyl ethyl ketone), xylene, toluene, mineral spirits, linseed oil, naphtha, methylene chloride, ABS solvent, liquid sandpaper solvent, brush cleaner, cleaner for PVC.</p>	<p>Exclusions</p> <p>Beverages; Products sold in containers with a volume greater than 30 litres.</p>

Appendix B
Form of Annual /Quarterly MHSM Steward's Report and 2010/2011 Consolidated MHSM Fee Rates

Name of steward; Mailing, Billing address

Primary Contact Person and contact information for MHSM Steward's Report

Required information to be included in the Annual / Quarterly MHSM Steward's Report:

1. Description of methodology and data used to prepare this Annual / Quarterly MHSM Steward's Report
2. Date of report and associated data period;
3. Description of Excluded Waste deductions from this Annual /Quarterly MHSM Steward's Report,
4. List of brands or trade marks covered in this Annual / Quarterly MHSM Steward's Report;
5. List of franchisees included in this Annual/Quarterly MHSM Steward's Report; and
6. Declaration of accuracy of contents of this Annual / Quarterly MHSM Steward's Report.

Units, Kilograms or Volume of Municipal Hazardous or Special Materials sold or delivered in Ontario for the brands owned, or first imported into Ontario in the data period.

Material Category	Fee Category	Units	Fee Rate	Measurement
Aerosols			\$0.036	\$/Unit
Antifreeze	Litre (bulked)		\$0.077	\$/L
	Litre (packaged)		\$0.090	\$/L
Batteries - Industrial Stationary and Non-Lead Acid Motive			\$1,111	\$/steward per year
Corrosives	Corrosives		\$0.151	\$/Unit
	Irritants		\$0.003	\$/Unit
Fertilizers	Containing Banned Pesticides		Measured Return Share Steward's Report	
	Naturally-derived			
	Synthetically-derived			
Fire Extinguishers (Portable)			\$2.279	\$/Unit
Flammables	Assorted flammables		\$0.015	\$/L
	Automotive additives		\$0.015	\$/L
	Windshield washer fluid		\$0.015	\$/L
	Solvents		\$0.167	\$/L
	Gasoline		\$21.652	\$/Location* per year
Fluorescents - User-removed	Unit		\$0.057	\$/Unit
Fluorescents – embedded in designated EEE	Display devices < 29"		\$0.056	\$/Unit
	Display devices > 29"		\$0.112	\$/Unit
	Portable computers		\$0.021	\$/Unit
	Printing, copying & multi-function devices		\$0.028	\$/Unit
Leachates			Measured Return Share Steward's Report	
Oil Containers	Litre		\$0.046	\$/L
Oil Filters	Less than 8"		\$0.523	\$/Unit
	Greater than 8"		\$1.046	\$/Unit
	< = 250 mL		\$0.066	\$/Unit

Paint & Coatings	> 250 ml – 1 L		\$0.250	\$/Unit
	> 1 – 5 L		\$1.001	\$/Unit
	> 5 L		\$5.001	\$/Unit
Pesticides , Fungicides, and or Herbicides	Banned		Measured Return Share Steward's Report	
	Not Banned		Measured Return Share Steward's Report	
Pharmaceuticals	Prescription		\$ 0.008	\$/Unit
	Over-the-counter		\$ 0.008	\$/Unit
	Natural Health Products		\$ 0.008	\$/Unit
Pressurized Containers - Non-Refillable	Unit		\$0.398	\$/Unit
Pressurized Containers - Refillable	Unit		\$1.022	\$/Unit
Reactives			Measured Return Share Steward's Report	
Sharps and Syringes	Unit		\$0.012	\$/Unit
Toxics			Measured return share	

Batteries

Chemistry	Size/ Application	Units	Fee Rate	Measurement
<i>Single-Use</i> Alkaline Manganese (AlMn) - Alkaline (Al) - Silver Oxide (Ag2O)	Button Cell		\$0.410	\$/Kg
	AAA		\$0.410	\$/Kg
	AA		\$0.410	\$/Kg
	C		\$0.410	\$/Kg
	D		\$0.410	\$/Kg
	9V		\$0.410	\$/Kg
	Lantern		\$0.410	\$/Kg
	Camera		\$0.410	\$/Kg
	Other		\$0.410	\$/Kg
<i>Single-Use - Zinc Carbon (ZnC) and Zinc Air (ZnAir)</i>	Button Cell		\$0.410	\$/Kg
	AAA		\$0.410	\$/Kg
	AA		\$0.410	\$/Kg
	C		\$0.410	\$/Kg
	D		\$0.410	\$/Kg
	9V		\$0.410	\$/Kg
	Lantern		\$0.410	\$/Kg
	Other		\$0.410	\$/Kg
<i>Single-Use Lithium Metal (Li)</i>	Button Cell		\$0.730	\$/Kg
	AAA		\$0.730	\$/Kg
	AA		\$0.730	\$/Kg
	C		\$0.730	\$/Kg
	D		\$0.730	\$/Kg
	9V		\$0.730	\$/Kg
	Lantern		\$0.730	\$/Kg
	Camera		\$0.730	\$/Kg
	Other		\$0.730	\$/Kg
	Button Cell		\$1.569	\$/Kg
	AAA		\$1.569	\$/Kg

Chemistry	Size/ Application	Units	Fee Rate	Measurement
<i>Rechargeable</i> Lithium Ion (Li-Ion) and Lithium Polymer (Li Polymer)	AA		\$1.569	\$/Kg
	C		\$1.569	\$/Kg
	D		\$1.569	\$/Kg
	9V		\$1.569	\$/Kg
	Lantern		\$1.569	\$/Kg
	Camera		\$1.569	\$/Kg
	Cell Phone		\$1.569	\$/Kg
	Laptop		\$1.569	\$/Kg
	Power Tool		\$1.569	\$/Kg
Other		\$1.569	\$/Kg	
<i>Rechargeable</i> - Nickel-Metal Hydride (NiMH)	Button Cell		\$1.569	\$/Kg
	AAA		\$1.569	\$/Kg
	AA		\$1.569	\$/Kg
	C		\$1.569	\$/Kg
	D		\$1.569	\$/Kg
	9V		\$1.569	\$/Kg
	Lantern		\$1.569	\$/Kg
	Camera		\$1.569	\$/Kg
	Cell Phone		\$1.569	\$/Kg
	Laptop		\$1.569	\$/Kg
	Power Tool		\$1.569	\$/Kg
Other		\$1.569	\$/Kg	
<i>Rechargeable</i> Nickel Cadmium (NiCd)	Button Cell		\$1.569	\$/Kg
	AAA		\$1.569	\$/Kg
	AA		\$1.569	\$/Kg
	C		\$1.569	\$/Kg
	D		\$1.569	\$/Kg
	9V		\$1.569	\$/Kg
	Lantern		\$1.569	\$/Kg
	Camera		\$1.569	\$/Kg
	Cell Phone		\$1.569	\$/Kg
	Laptop		\$1.569	\$/Kg
	Power Tool		\$1.569	\$/Kg
Other		\$1.569	\$/Kg	
<i>Rechargeable</i> Small Sealed Lead Acid (SSLA / Pb)	Small (0kg - 0.5kg)		\$6.149	\$/Kg
	Medium(0.5kg- 2kg)		\$6.149	\$/Kg
	Large (2kg - 5kg)		\$6.149	\$/Kg

* Note Location means any retail outlet that sells or distributes fuel to consumers in one geographical location in Ontario.

Appendix C
Form of Measured Return Share Steward's Report

Stewardship Ontario will prepare this report quarterly on behalf of all obligated stewards for Obsolete MHSW or for which fees are to be paid on a Measured Return Share basis. Stewardship Ontario will calculate the Service Costs and management cost attributable to this MHSW. The costs will then be allocated back to each such obligated steward. Each such obligated steward will receive the same form of Report.

Stewardship Ontario will determine the form of each report. Below is a list of materials/MHSW to be included in this Report:

Material Category	Fee Category	Fee
Leachates		Measured return share
Mercury Devices	Measuring Devices	Measured return share
	Mercury Switches - Automotive	Measured return share
	Mercury Switches - White Goods*	Measured return share
	Mercury Switches Other	Measured return share
	Thermostats	Measured return share
Reactives		Measured return share
Toxics		Measured return share
Pesticides	Not -Banned	Measured return share
	Banned	Measured return share
Fertilizers	Containing Banned Pesticides	Measured return share
	Naturally-derived	Measured return share
	Synthetically-derived	Measured return share

All Fees set out in this report are payable to Stewardship Ontario by the steward within 30 days of the sending of each report if a steward is notified within the meaning of 3 (1) of these Rules

Payable due dates

- (1) All fees will be invoiced and payable within 30 days of being invoiced
- (2) Stewards, who fail to pay fees by the date specified in (1), will be subject to a penalty calculated at 10% of fees due and payable.
- (3) Interest on unpaid fees shall accrue from such date at the Base Interest Rate plus 3%.
- (4) Stewardship Ontario may waive all or part of any penalty or interest charges otherwise payable under these Rules.

Appendix D - Resident in Ontario (Corporation)

Resident in Ontario, with respect to a corporation, means a corporation that has a permanent establishment in Ontario, where:

- (a) “**permanent establishment**” includes branches, mines, oil wells, farms, timberlands, factories, workshops, warehouses, offices, agencies and other fixed places of business and
- (b) the following rules apply,

Contracting Employees or Inventory Sufficient

Where a corporation carries on business through an employee or agent who has general authority to contract for the corporation or who has a stock of merchandise owned by the corporation from which the employee or agent regularly fills orders which the employee or agent receives, such employee or agent shall be deemed to operate a permanent establishment of the corporation.

Commission Agent not Sufficient

The fact that a corporation has business dealings through a commission agent, broker or other independent agent shall not of itself be deemed to mean that the corporation has a permanent establishment.

Parent of Subsidiary not Sufficient

The fact that a corporation has a subsidiary controlled corporation in a place or a subsidiary controlled corporation engaged in a trade or business in a place shall not of itself be deemed to mean that the first-mentioned corporation is operating a permanent establishment in that place.

Licensed Insurance Company Sufficient

An insurance corporation is deemed to have a permanent establishment in each jurisdiction in which the corporation is registered or licensed to do business.

Purchasing Office not Sufficient

The fact that a corporation maintains an office solely for the purchase of merchandise shall not of itself be deemed to mean that the corporation has a permanent establishment in that office.

Ownership of Land Sufficient

Where a corporation, otherwise having a permanent establishment in Canada, owns land in a province or territory of Canada, such land is a permanent establishment.

Production Packing and other Activities Sufficient

The fact that a non-resident corporation in a year produced, grew, mined, created, manufactured, fabricated, improved, packed, preserved or constructed in whole or in part anything in Canada, whether or not the corporation exported that thing without selling it prior to exportation, shall of itself, be deemed to mean that the corporation maintained a permanent establishment at any place where the corporation did any of those things in the taxation year.

Machinery or Equipment Sufficient

The use of substantial machinery or equipment in a particular place at any time in a year of a corporation constitutes a permanent establishment of such corporation in that place for such a year.

Principal Place of Business Sufficient

Where a corporation has no fixed place of business, it has a permanent establishment in the principal place in which the corporation's business is conducted.

Charter or By Laws designating Head or Registered Office Sufficient

Where a corporation does not otherwise have a permanent establishment in Canada, it has a permanent establishment in the place designated in its charter or by-laws as being its head office or registered office.

Appendix E - Payment and Reporting Timetables

The following Reporting and payment schedules shall apply:

If a steward is notified within the meaning of 3 (1) of these Rules no later than December 28, 2009 then the following schedule shall apply:

Description of Steward Responsibility for filing a Report	Data Period End Date	Report Filing Due Date	Payment Calculation	Payment Due date
2009 Annual MHSM Steward's Report	12 months ending Dec 31, 2009	March 31, 2010	Not applicable for these Rules	
Q1 - 2010 Report	March 31, 2010	April 30, 2010	Not applicable for these Rules	
Q2 -2010 Report	June 30, 2010	July 31, 2010	1/4 of 2009 Annual MHSM Steward's Report	July 31, 2010
Q3 – 2010 Report	September 30, 2010	October 31, 2010	1/4 of 2009 Annual MHSM Steward's Report	October 31, 2010
Q4 - 2010 Report	December 31, 2010	January 31, 2011	1/4 of 2009 Annual MHSM Steward's Report	January 31, 2011
2010 Reconciliation Statement	As outlined in the Reconciliation Statement	February 28, 2011*	As outlined in the Reconciliation Statement	March 31, 2011
Q 1 - 2011 Report	March 31, 2011	April 30, 2011	1/4 of 2010 Annual MHSM Steward's Report	April 30, 2011
Q2 - 2011 Report	June 30, 2011	July 31, 2011	1/4 of 2010 Annual MHSM Steward's Report	July 31, 2011
Q3 – 2011 Report	September 30, 2011	October 31, 2011	1/4 of 2010 Annual MHSM Steward's Report	October 31, 2011
Q4 – 2011 Report	December 31, 2011	January 31, 2012	Not applicable for these Rules	
2011 Reconciliation Statement	As outlined in the Reconciliation Statement	February 28, 2012	As outlined in the Reconciliation Statement	March 31, 2012

If a steward is notified within the meaning of 3 (1) of these Rules after December 28, 2009 and no later than January 27, 2010 then the following schedule shall apply:

Description of Steward Responsibility for filing a Report	Data Period End Date	Report Filing Due Date	Payment Calculation	Payment Due date
2009 Annual MHSM Steward's Report	12 months ending Dec 31, 2009	Notification date plus 93 days	Not applicable for these Rules	
Q1 - 2010 Report	March 31, 2010	April 30, 2010	Not applicable for these Rules	
Q2 -2010 Report	June 30, 2010	July 31, 2010	1/4 of 2009 Annual MHSM Steward's Report	July 31, 2010
Q3 – 2010 Report	September 30, 2010	October 31, 2010	1/4 of 2009 Annual MHSM Steward's Report	October 31, 2010
Q4 - 2010 Report	December 31, 2010	January 31, 2011	1/4 of 2009 Annual MHSM Steward's Report	January 31, 2011
2010 Reconciliation Statement	As outlined in the Reconciliation Statement	February 28, 2011*	As outlined in the Reconciliation Statement	March 31, 2011
Q 1 - 2011 Report	March 31, 2011	April 30, 2011	1/4 of 2010 Annual MHSM Steward's Report	April 30, 2011
Q2 - 2011 Report	June 30, 2011	July 31, 2011	1/4 of 2010 Annual MHSM Steward's Report	July 31, 2011

Description of Steward Responsibility for filing a Report	Data Period End Date	Report Filing Due Date	Payment Calculation	Payment Due date
Q3 – 2011 Report	September 30, 2011	October 31, 2011	1/4 of 2010 Annual MHSM Steward's Report	October 31, 2011
Q4 – 2011 Report	December 31, 2011	January 31, 2012	Not applicable for these Rules	
2011 Reconciliation Statement	As outlined in the Reconciliation Statement	February 28, 2012	As outlined in the Reconciliation Statement	March 31, 2012

If a steward is notified within the meaning of 3 (1) of these Rules after January 27, 2010 and no later than April 29, 2010 then the following schedule shall apply:

Description of Steward Responsibility for filing a Report	Data Period End Date	Report Filing Due Date	Payment Calculation	Payment Due date
2009 Annual MHSM Steward's Report	12 months ending Dec 31, 2009	Notification date plus 93 days	Not applicable for these Rules	
Q1 - 2010 Report	March 31, 2010	Notification date plus 93 days	Not applicable for these Rules	
Q2 -2010 Report	June 30, 2010	July 31, 2010	1/4 of 2009 Annual MHSM Steward's Report	July 31, 2010
Q3 – 2010 Report	September 30, 2010	October 31, 2010	1/4 of 2009 Annual MHSM Steward's Report	October 31, 2010
Q4 - 2010 Report	December 31, 2010	January 31, 2011	1/4 of 2009 Annual MHSM Steward's Report	January 31, 2011
2010 Reconciliation Statement	As outlined in the Reconciliation Statement	February 28, 2011*	As outlined in the Reconciliation Statement	March 31, 2011
Q 1 - 2011 Report	March 31, 2011	April 30, 2011	1/4 of 2010 Annual MHSM Steward's Report	April 30, 2011
Q2 - 2011 Report	June 30, 2011	July 31, 2011	1/4 of 2010 Annual MHSM Steward's Report	July 31, 2011
Q3 – 2011 Report	September 30, 2011	October 31, 2011	1/4 of 2010 Annual MHSM Steward's Report	October 31, 2011
Q4 – 2011 Report	December 31, 2011	January 31, 2012	Not applicable for these Rules	
2011 Reconciliation Statement	As outlined in the Reconciliation Statement	February 28, 2012	As outlined in the Reconciliation Statement	March 31, 2012

If a steward is notified within the meaning of 3 (1) of these Rules after April 29, 2010 and no later than July 30, 2010 then the following schedule shall apply:

Description of Steward Responsibility for filing a Report	Data Period End Date	Report Filing Due Date	Payment Calculation	Payment Due date
2009 Annual MHSM Steward's Report	12 months ending Dec 31, 2009	Notification date plus 93 days	Not applicable for these Rules	
Q1 - 2010 Report	March 31, 2010	Notification date plus 93 days	Not applicable for these Rules	
Q2 -2010 Report	June 30, 2010	Notification date plus 93 days	1/4 of 2009 Annual MHSM Steward's Report	Notification date plus 93 days

Description of Steward Responsibility for filing a Report	Data Period End Date	Report Filing Due Date	Payment Calculation	Payment Due date
Q3 – 2010 Report	September 30, 2010	October 31, 2010	1/4 of 2009 Annual MHSM Steward's Report	October 31, 2010
Q4 - 2010 Report	December 31, 2010	January 31, 2011	1/4 of 2009 Annual MHSM Steward's Report	January 31, 2011
2010 Reconciliation Statement	As outlined in the Reconciliation Statement	February 28, 2011*	As outlined in the Reconciliation Statement	March 31, 2011
Q 1 - 2011 Report	March 31, 2011	April 30, 2011	1/4 of 2010 Annual MHSM Steward's Report	April 30, 2011
Q2 - 2011 Report	June 30, 2011	July 31, 2011	1/4 of 2010 Annual MHSM Steward's Report	July 31, 2011
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If a steward is notified within the meaning of 3 (1) of these Rules after October 30, 2010 and no later than January 27, 2011 then the following schedule shall apply:

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2009 Annual MHSM Steward's Report	12 months ending Dec 31, 2009	Notification date plus 93 days	Not applicable for these Rules	
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Description of Steward Responsibility for filing a Report	Data Period End Date	Report Filing Due Date	Payment Calculation	Payment Due date
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Appendix F - Fees Due Upon Exemption

Upon approval of an industry stewardship plan (ISP), each steward that is participating in the ISP will be responsible to pay the following costs to Stewardship Ontario:

- (1) Its share of the full amount of outstanding Plan Development Costs;
- (2) Its share of Plan Implementation Costs to the date of ISP approval excluding Deficit (Surplus) Costs identified below;
- (3) The full amount of any and all outstanding Deficit (Surplus) Costs relating to Phase 1 and Consolidated MHSW Program Plan implementation to the date of ISP approval;
- (4) Obsolete MHSW Costs
- (5) Fees as outlined in the Measured Return Share Steward's Report
- (6) Fees outstanding from Reconciliation Statement

These costs will be allocated on the basis of dividing the Steward's reported MHSM by material category with the total MHSM reported by all stewards for each material category. If such data are not available, these costs will be divided equally among all stewards who have reported data for that material category or may be based upon a Measured Return Share for materials defined in Appendix C to pay on this basis;

Stewardship Ontario shall File an invoice for each steward claiming exemption under an ISP, setting out their respective share of the above mentioned costs.

Payable due dates:

- (1) All fees will be invoiced and payable within 30 days of being invoiced
- (2) Stewards, who fail to pay fees by the date specified in (1), will be subject to a penalty calculated at 10% of fees due and payable.
- (3) Interest on unpaid fees shall accrue from such date at the Base Interest Rate plus 3%.
- (4) Stewardship Ontario may waive all or part of any penalty or interest charges otherwise payable under these Rules.

Appendix G Form of Reconciliation Statement

Name of Steward

Mailing address

Billing address

Primary Contact Person for MHSW Steward's Report

Email address

Date of Statement and associated data period.

Units, Kilograms or Volume of Municipal Hazardous or Special Materials sold or delivered in Ontario for the brands owned, or first imported into Ontario in the data period.

Material	Sub category	Annual MHSW Report A	Total from Quarterly MHSW Reports B	B – A C	Difference * material Fee rate C * Fee Rate
Aerosols					
Antifreeze	Litre (bulked)				
	Litre (packaged)				
Batteries - Industrial Stationary and Non-Lead Acid Motive					
Corrosives	Corrosives				
	Irritants				
Fertilizers	Containing Banned Pesticides				
	Naturally-derived				
	Synthetically-derived				
Fire Extinguishers (Portable)					
Flammables	Assorted flammables				
	Automotive additives				
	Windshield washer fluid				
	Solvents				
	Gasoline				
Fluorescents -	User-removed				
Fluorescents – embedded in designated EEE	Display devices < 29"				
	Display devices > 29"				
	Portable computers				
	Printing, copying & multi-function devices				
Oil Containers	Litre				
Oil Filters	Less than 8"				
	Greater than 8"				
Paint & Coatings	< = 250 mL				
	> 250 ml – 1 L				
	> 1 – 5 L				
	> 5 L				
Pesticides, Fungicides, and/or Herbicides.	Banned				
	Not Banned				

Material	Sub category	Annual MHSM Report A	Total from Quarterly MHSM Reports B	B – A C	Difference * material Fee rate C * Fee Rate
Pharmaceuticals	Prescription				
	Over-the-counter				
	Natural Health Products				
Pressurized Containers	Non-Refillable				
	Refillable				
Reactives					
Sharps and Syringes					
Toxics					

Batteries

Chemistry	Size/ Application	Annual MHSM REPORT A	Total from Quarterly MHSM Reports B	Differential in Units B-A	Difference * material Fee C*Fee Rate
<i>Single-Use</i> Alkaline Manganese (AlMn) - Alkaline (Al) - Silver Oxide (Ag2O)	Button Cell				
	AAA				
	AA				
	C				
	D				
	9V				
	Lantern				
	Camera				
<i>Single-Use - Zinc Carbon (ZnC) and Zinc Air (ZnAir)</i>	Button Cell				
	AAA				
	AA				
	C				
	D				
	9V				
	Lantern				
	Other				
<i>Single-Use</i> Lithium Metal (Li)	Button Cell				
	AAA				
	AA				
	C				
	D				
	9V				
	Lantern				
	Camera				
<i>Rechargeable</i> Lithium Ion (Li-Ion)	Button Cell				
	AAA				
	AA				
	C				
	D				
	9V				

Chemistry	Size/ Application	Annual MHSM REPORT A	Total from Quarterly MHSM Reports B	Differential in Units B-A	Difference * material Fee C*Fee Rate
and Lithium Polymer (Li Polymer)	Lantern				
	Camera				
	Cell Phone				
	Laptop				
	Power Tool				
	Other				
Rechargeable - Nickel-Metal Hydride (NiMH)	Button Cell				
	AAA				
	AA				
	C				
	D				
	9V				
	Lantern				
	Camera				
	Cell Phone				
	Laptop				
Power Tool					
Other					
Rechargeable Nickel Cadmium (NiCd)	Button Cell				
	AAA				
	AA				
	C				
	D				
	9V				
	Lantern				
	Camera				
	Cell Phone				
	Laptop				
Power Tool					
Other					
Rechargeable Small Sealed Lead Acid (SSLA / Pb)	Small (0kg - 0.5kg)				
	Medium (0.5kg - 2kg)				
	Large (2kg - 5kg)				

**Appendix H – Extract from the Addendum to the Minister’s Program Request Letter to
Waste Diversion Ontario for an amended Waste Diversion Program for Municipal
Hazardous or Special Waste**

1. Waste Diversion Ontario (WDO) shall develop an amended Waste Diversion Program for MHSW (the “Program”) incorporating Phase 2 and 3 wastes as specified below, in accordance with all legislative requirements of the *Waste Diversion Act, 2002* (the “Act”):
 - (a) The amended Program shall include the addition of the following wastes (“Phase 2”):

From residential and all IC&I generators:

 - i. all batteries, excluding lead acid batteries from vehicles;

From residential generators and IC&I small quantity generators:

 - ii. aerosol containers, such as hair spray containers;
 - iii. portable fire extinguishers;
 - iv. fluorescent light bulbs and tubes, limited to generators of no more than 5kg/month. The collection system, including convenient collection locations, the actions of generators and collection site operators, and the transportation system should ensure that the fluorescent bulbs and tubes remain whole and unbroken (refer to section 7(k) below);
 - v. switches that contain mercury;
 - vi. thermostats, thermometers, barometers or other measuring devices, if the thermostats, thermometers, barometers, or other measuring devices contain mercury;
 - vii. pharmaceuticals (from residential generators only); and
 - viii. sharps including syringes (from residential generators only).
 - (b) The final phase of the amended Program will include the addition of all other remaining materials (“Phase 3”) that meet the definition of “municipal or hazardous waste” in O. Reg. 542/06; and
 - (c) “IC&I small quantity generators” is defined as a business that is not required to submit a generator registration report with respect to the waste under subsection 18(1) of Regulation 347 under the EPA.

Unless specified otherwise, these IC&I businesses are limited to delivering no more than 100 kg/month of MHSW to a MHSW depot. Municipal or retail MHSW depots require appropriate ministry approval to receive MHSW from IC&I generators. In addition, small IC&I generators require appropriate ministry approval to transport MHSW materials.

Appendix I – Cost Components

Plan Development Cost Components

Plan Development Costs are the costs that have been incurred during plan development for the following activities relating to both Phase 1 and Consolidated Plans:

1. Consulting with stakeholders, including stewards, service providers, municipalities, the public and WDO and the MOE
2. Research and purchase of data to establish baselines e.g. lab pack analysis, sales into market data, etc.
3. Legal opinions on definitions and exemptions
4. Legal drafting of program rules
5. Consulting fees paid to various professionals for the purpose of:
 - i. Determining the definition of obligated materials;
 - ii. Compiling baseline data on the quantities of Municipal Hazardous or Special Material (MHSM) supplied for sale or use in Ontario available for collection as MHSW, collected, diverted and disposed;
 - iii. Defining program metrics for accessibility, collection and diversion and for design of a program to meet those targets;
 - iv. Developing, refining and testing of cost models and fee rates.
6. Drafting the Consolidated MHSW Program Plan

Plan Implementation Cost Components

Plan Implementation Costs are the following costs, relating to both Phase 1 and Consolidated Plans:

1. Stewardship Ontario's Consolidated Plan start up costs;
2. WDO Consolidated Plan start up Costs;
3. Stewardship Ontario's Phase 1 Start-up Cost Recovery
4. Deficit in Stewardship Ontario's Phase 1 start-up cost recovery for the first eighteen months
5. Deficit in Waste Diversion Ontario's Phase 1 start-up cost recovery for first eighteen months
6. Steward Registration & Compliance Management
7. Material & Supplier Management
 - i. Field Operations
 - ii. Processor Audits
 - iii. Vendor Standards
8. Program management costs
 - i. Industry Funding Organization Administration
 - ii. Performance Tracking Systems
 - iii. Material Tracking Systems
 - iv. Waste Diversion Ontario Administration
9. Shared Promotion and Education
10. MHSM material specific Promotion and Education costs
11. MHSM material specific Research and Development
12. MHSM Service Costs

Schedule B: Information Sharing Protocol

In accordance with Subsection 7.1 of the Program Agreement, Waste Diversion Ontario (WDO) and the Industry Funding Organization (IFO) agree to keep each other informed and apprised of matters as they relate to the implementation of the Consolidated MHSW Program Plan as set out below:

- The IFO agrees to provide WDO with information on a regular basis which is compiled or developed by the IFO during program implementation that is pertinent to WDO's responsibilities under the Waste Diversion Act. WDO will provide reasonable advance notice to the IFO of the timing and content of its information requirements.
- The IFO and WDO agree to share communications from stewards and stakeholders that include complaints or criticisms concerning the following aspects of the Consolidated MHSW Program Plan implementation process immediately upon receipt and to co-operate in determining an appropriate response to such complaints or criticisms:
 - complaints or criticisms that raise issues of compliance with the terms of the Program Plan, the *Waste Diversion Act, 2002* (Ontario) or the Program Request Letter;
 - complaints or criticisms from stewards, service providers and other stakeholders that suggest that the Program Plan does not affect the marketplace in a fair manner;
 - Complaints or criticisms from residents or businesses regarding access to the collection system or fees charged;
 - complaints or criticisms that reference the other, i.e. WDO or the IFO, as the case may be, the Ministry of the Environment or the Minister of the Environment.
- The IFO and WDO agree to share information about inbound calls from the media or other members of the public, identifying key questions and flagging potentially contentious issues. Media calls and requests for interviews should be accorded priority, with the IFO notifying WDO designated communications staff as soon as possible.
- The IFO agrees to share with WDO all final draft versions of hardcopy or electronic communications materials for review including but not limited to:
 - a) Communications plans
 - b) Advertising plans;
 - c) News releases;
 - d) Media advisories;
 - e) Media backgrounders;
 - f) Schedules of upcoming media events or releases; and
 - g) Significant policy positions.
- The communications materials referred to above will be shared between designated communications staff at the IFO and WDO as soon as the material is ready to be submitted to WDO for review and comment or seven (7) business days prior to release, whichever is earlier. If timely response to events does not allow for seven (7) days lead time, the IFO agrees to provide the materials to WDO as soon as available.
- For the purposes of this Information Sharing Protocol, the Executive Director is the designated communications staff of WDO and the Vice-President, Communications & Stakeholder Relations is the designated communications staff of Stewardship Ontario.
- WDO agrees to share with the IFO all final draft versions of news releases, fact sheets and announcements related to the Consolidated MHSW Program Plan for review. WDO will keep the IFO apprised of releases and events in as timely a manner as possible once approved for release.

- The IFO will handle inquiries related to its responsibilities under the Program Agreement.
- WDO will handle inquiries related to its responsibilities under the *Waste Diversion Act, 2002* (Ontario) and the Program Agreement.
- WDO and the IFO agree to give each other at least seven (7) days notice regarding any planned events and public appearances (media interviews, etc.) by its officers and representatives. If event planning does not allow for seven (7) days lead time, the parties agree to advise each other as soon as possible.

If the IFO is seeking the participation of the WDO Chair or the Minister in any of its events or public appearances, the IFO agrees to give WDO Chair and the Minister reasonable notice.

Appendix 1 – Regulation 542/06

ONTARIO REGULATION 542/06
made under the
WASTE DIVERSION ACT, 2002
MUNICIPAL HAZARDOUS OR SPECIAL WASTE

Interpretation

1. (1) In this Regulation,

"lubricating oil" means petroleum-derived or synthetic crankcase oil, engine oil, hydraulic fluid, transmission fluid, gear oil, heat transfer fluid, or other oil or fluid used for lubricating machinery or equipment;

"municipal hazardous or special waste" means, subject to subsection (2), waste that consists of municipal hazardous waste or municipal special waste, or any combination of them, whether or not the waste is owned, controlled or managed by a municipality;

"municipal hazardous waste" means waste that consist of any of the following materials, or any combination of them, whether or not the waste is own, controlled or managed by a municipality;

- (a) corrosive products, flammable products or toxic products, as those terms are defined in the Consumer Chemicals and Containers Regulations, 2001 made under the *Hazardous Products Act* (Canada), if the sale of the product is permitted only if the container of the product displays information required by those regulations,
- (b) containers that display information that is required by the Consumer Chemicals and Containers Regulations, 2001 made under the *Hazardous Products Act* (Canada) for containers that contain corrosive products, flammable products or toxic products as those terms are defined in those regulations,
- (c) flammable hazards, corrosive hazards or toxicity hazards, as those terms are described in Clause 4 of CSA Standard Z752-03, "Definition of Household Hazardous Waste", published in September 2003 by Canadian Standards Association, if the hazard I defined by Clause 7 of that Standard as a household waste that shall not be disposed of in one or more systems within the regular domestic waste stream because of significant risks posed to humans or the environment,
- (d) corrosive waste, as defined in Regulation 347 of the Revised Regulations of Ontario, 1999 (General – Waste Management) made under the *Environmental Protection Act*,
- (e) ignitable waste, as defined in Regulation 347 of the Revised Regulations of Ontario, 1990,
- (f) leachate toxic waste, as defined in Regulation 347 of the Revised Regulations of Ontario, 1990,
- (g) reactive waste as defined in Regulation 347 of the Revised Regulations of Ontario, 1990,
- (h) containers that contain anything referred to in clause (c), (d), (e), (f), (g);

"municipal special waste" means waste that consists of any of the following materials, or any combination of them, whether or not the waste is owned, controlled or managed by a municipality:

- (a) batteries
- (b) pressurized containers,
- (c) aerosol containers,
- (d) portable fire extinguishers,
- (e) fertilizers, fungicides, herbicides, insecticides or pesticides, and containers in which they are contained,
- (f) paints and coatings, and containers in which they are contained,

- (g) containers that have a capacity of 30 litres or less and that were manufactured and used for the purpose of containing lubricating oil,
- (h) oil filters, after they have been used for their intended purpose,
- (i) fluorescent light bulbs or tubes,
- (j) pharmaceuticals,
- (k) sharps, including syringes,
- (l) switches that contain mercury,
- (m) thermostats, thermometers, barometers or other measuring device, if the thermostats, thermometers, barometers, or other measuring devices contain mercury,
- (n) antifreeze, and containers in which it is contained,
- (o) solvents, and containers in which they are contained;

“oil filter” means a spin-on filter or element-style filter that has been used to filter lubricating oil, but does not include a filter with no significant metal content.

- (2) For the purpose of this Regulation, used or unused lubricating oil is not municipal hazardous or special waste.

Designation

- 1. Municipal hazardous or special waste is prescribed as a designated waste for the purposes of the Act.

Made by:

Laurel Broten
Minister of the Environment

Date made: December 7, 2006.

Appendix 2 – Phase 2/3 MHSW Program Request Letter

Ministry
of the
Environment

Office of the Minister

135 St. Clair Ave. West
12th Floor
Toronto ON M4V 1P5
Tel (416) 314-6790
Fax (416) 314-6748

Ministère
de
l'Environnement

Bureau du ministre

135, avenue St. Clair ouest
12^e étage
Toronto ON M4V 1P5
Tél (416) 314-6790
Télééc (416) 314-6748



JUL 22 2008

Ms. Gemma Zecchini, Chair
Waste Diversion Ontario
45 Sheppard Avenue East, Suite 920
North York, Ontario
M2N 5W9

Dear Ms. Zecchini:

I am pleased to write to the Board of Directors of Waste Diversion Ontario (WDO) to provide further direction on the next phases of the Municipal Hazardous or Special Waste (MHSW) program that I approved on February 19, 2008.

Pursuant to section 7 of the *Waste Diversion Act, 2002*, I am requiring that WDO develop an amended waste diversion program for MHSW that will include all wastes referred to as "Phase 2" and "Phase 3", in addition to the wastes covered by the current program, in accordance with this letter and the enclosed addendum. As you are aware, O. Reg. 542/06 designates Stewardship Ontario as the Industry Funding Organization for municipal hazardous or special waste.

Funding for the amended program shall become the full responsibility of the stewards and shall address all costs inclusive of collection through to final diversion or disposal of MHSW.

The program shall address diversion principles by providing financial and/or other incentives encouraging reduction, reuse and recycling activities. Where limited reuse and recycling options are available, the diversion program should encourage the establishment of facilities with sufficient reuse and recycling capacity to maximize management of MHSW. The program shall also include provisions that aim to expand the availability of MHSW collection sites to make it convenient and accessible to all Ontarians, including high-density urban areas, rural and northern Ontario. Specifically, in order to increase access to collection for consumers, the program shall include a range of collection options, including, but not limited to, the following: residential collection, residential collection arranged on an individual basis ('toxic taxi'), incentives to encourage material recovery, and retail take-back programs. In

addition to promoting reduce, reuse and recycling activities, wherever possible, the MHSW program should promote best practices and encourage the development of innovative diversion techniques.

Please submit to me, by March 2, 2009, (i) the sections of the approved program plan for Phase 1 materials that are not amended and will not require public consultation, (ii) the amended program proposal for Phase 1 materials, and (iii) a new proposal for Phase 2 materials. If approved, the not amended sections of the program together with the amended sections of the program would, on implementation, replace the existing MHSW program that I approved on February 19, 2008. In addition, please submit to me by August 31, 2009, a further amended program proposal, to incorporate phase 3 materials.

As with the submission for Phase 1, please include a separate full evaluation and analysis of available options, and specific details and rationale for the program to be proposed.

I am requesting that WDO explore the current management of lead acid batteries from vehicles and submit a report with recommendations on their inclusion in the program along with the Phase 2 program submission (see addendum regarding the collection of batteries).

I am pleased that we are building on the success of the MHSW program. Certainly your experience and efforts in its design and implementation will be instrumental in developing a successful program for the additional waste materials.

An addendum to this letter has been attached which provides additional direction for the requested program submissions.

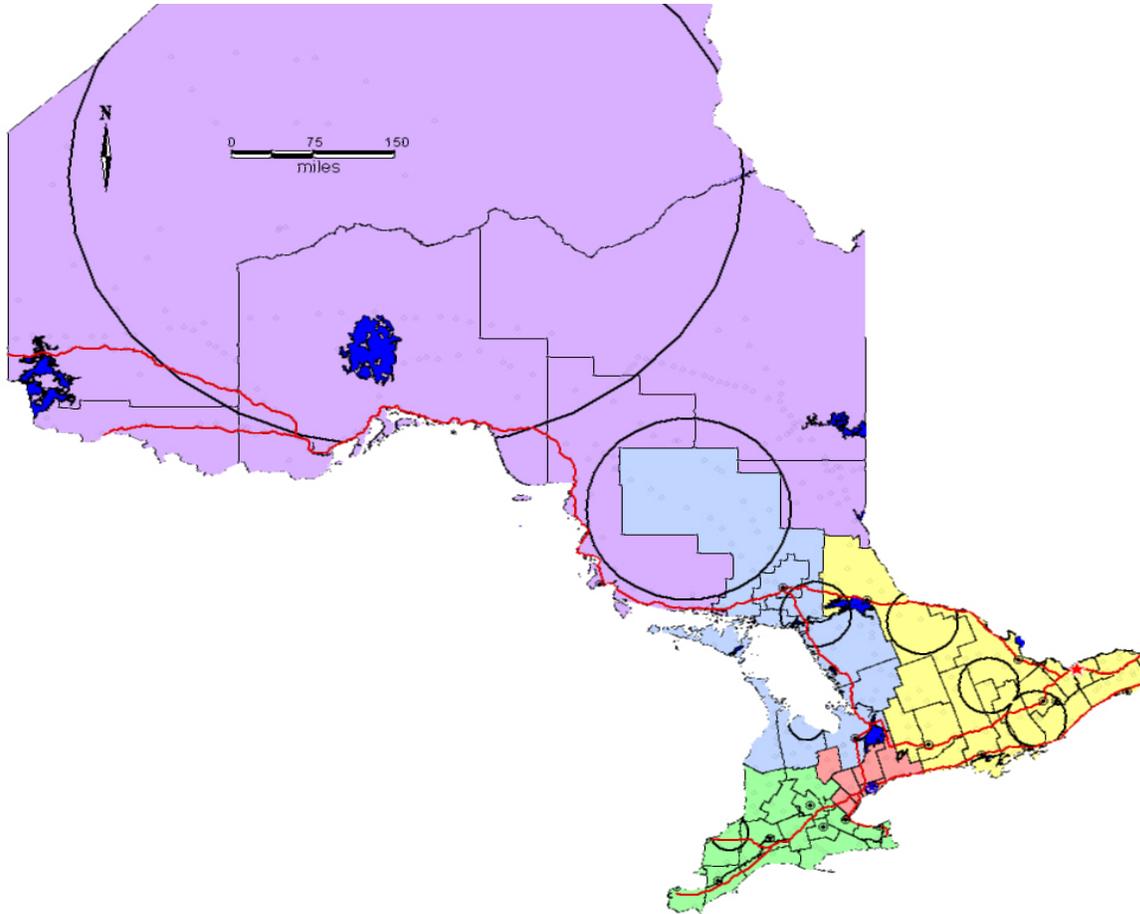
I thank you for your continued commitment to enhancing waste diversion in Ontario.

Sincerely,

John Gerretsen
Minister of the Environment
Enclosure

Appendix 3 – Segments of Ontario population that are considered to lack adequate MHSW collection services

The circled areas in the map below show the segments of Ontario population that are considered to lack adequate MHSW collection service under the program. The map was created by first identifying where collection service was available, regardless of service frequency, then circling the areas where no known collection service exists.



Appendix 4 – Criteria Used to Assign Confidence Levels

Confidence levels were established for each material category for the following three areas:

- Quantities Supplied into the Market
- Quantity Collected (Year 1 Target)
- Direct Material Management Cost

Confidence Level Pertaining to Quantities Supplied into the Market

H	Quantities are developed from Phase I steward returns and re-confirmed by stewards to reflect economic conditions
M	Quantities not developed from Phase I information but with input from more than one steward and confirmed by working group or from recognized research source (e.g., AC Nielsen)
L	Quantities not developed from Phase I information and with input from few stewards (or from project team assumptions)

Confidence Level Pertaining to Quantity Collected (Year 1 Target)

H	Quantities developed from WDO 2007 datacall collected from "direct" MHSW classifications and/or BB data, and have consistent Phase I reported numbers, and/or have confident return to retail or Specialty Service Channel data.
M	Quantities developed only from WDO 2007 datacall, and/or collected from "complex" MHSW classifications and/or BB data.
L	Quantities developed from inconsistent data, significant market/operations extraneous event (e.g., material bans), or assumptions with minimal direct basis.

Confidence Level Pertaining to Direct Material Management Cost

H	Costs are largely determined by current contracts
M	Blend of the low and high for multi-channel material groups.
L	Costs are estimated based on sample set of municipal provided data.

The Confidence Level assigned to each material was in turn used to determine the contingency according to the values below.

Confidence Level	Corresponding Contingency Level
H	1%
M	3%
L	5%

Finally, each of the areas of uncertainty have been weighted to reflect the sensitivity of each on the cost estimates:

- future sales – 1
- quantity to be collected (Year 1 target) – 1.5, and
- cost of managing waste – 2

The contingency on quantities supplied into the market is applied to the sales figures when calculating fee rates and the contingencies relating to Quantity Collected and Direct Material Management Cost are applied to the direct material management cost.

Table A4.1 Material-Specific Confidence Level, Contingency Level, and Weighting

Material Category	Sub-category	Quantity to be Collected (Yr 1 target)			Direct Material Management Costs			Combined Contingency Applied on Direct Management Costs	Quantity into Market		
		Conf. level	Cont. level	Weighting	Conf. level	Cont. level	Weighting		Conf. level	Cont. level	Weighting
Corrosives	Corrosives	L	5%	1.5	L	5%	2	17.5%	L	5%	1
	Irritants	L	5%	1.5	L	5%	2	17.5%	L	5%	1
Antifreeze	Bulked Packaged	H	1%	1.5	H	1%	2	3.5%	L	1%	1
Antifreeze Containers		M	3%	1.5	M	3%	2	10.5%	H	5%	1
Flammables & Solvents	Flammables	M	3%	1.5	M	3%	2	10.5%	L	3%	1
	solvents	H	1%	1.5	L	5%	2	11.5%	L	3%	1
Fluorescents	User removed	M	3%	1.5	M	3%	2	10.5%	M	3%	1
	Embedded in Electronics	M	3%	1.5	M	3%	2	10.5%	M	3%	1
Fertilizers	Natural Synthetic	L	5%	1.5	L	5%	2	17.5%	M	5%	1
Oil Containers		H	1%	1.5	H	1%	2	3.5%	L	1%	1
Oil Filters		H	1%	1.5	H	1%	2	3.5%	H	1%	1
Paint & Coatings		H	1%	1.5	H	1%	2	3.5%	H	1%	1
Pesticides		L	5%	1.5	L	5%	2	17.5%	H	5%	1
Sharps & Syringes		M	3%	1.5	L	5%	2	14.5%	L	5%	1
Aerosols		H	1%	1.5	M	3%	2	7.5%	L	3%	1
Batteries - Consumer Portable	Single use	L	5%	1.5	M	3%	2	13.5%	M	3%	1
	Recharg.	L	5%	1.5	M	3%	2	13.5%	M	3%	1
Batteries - Ind. Stationary and non-lead Acid Motive		L	5%	1.5	L	5%	2	17.5%	M	1%	1
Pharmaceuticals		L	5%	1.5	M	3%	2	13.5%	H	3%	1
Fire Extinguishers		H	1%	1.5	L	5%	2	11.5%	M	5%	1
Pressurized Containers	Non-refillable	H	1%	1.5	L	5%	2	11.5%	L	3%	1
	refillable	M	3%	1.5	L	5%	2	14.5%	M	3%	1
Leachate											
Mercury Devices	Mercury Switches - Autos	H	1%	1.5	H	1%	2	3.5%	N/A	N/A	1
	Mercury Switches - White Goods	L	5%	1.5	L	5%	2	17.5%	N/A	N/A	1
	Mercury switches - Other	-	-	-	-	-	-	-	-	-	-
	Thermostats	M	3%	1.5	M	3%	2	10.5%	N/A	N/A	1
	Measuring Devices	M	3%	1.5	M	3%	2	10.5%	N/A	N/A	1

Material Category	Sub-category	Quantity to be Collected (Yr 1 target)			Direct Material Management Costs			Combined Contingency Applied on Direct Management Costs	Quantity into Market		
		Conf. level	Cont. level	Weighing	Conf. level	Cont. level	Weighing		Conf. level	Cont. level	Weighing
Toxic		-	-	-	-	-	-	-	-	--	-
Reactives		-	-	-	-	-	-	-	-	-	-

Notes:

- 1) Material-specific contingencies were applied to the following three elements: the quantity to be managed (Yr 1 target); the cost to manage; and the sales into the market. The first two (quantity to be managed and cost to manage) were applied on the direct end-of life material management costs. The combined contingency levels for these two elements are presented in the column entitled "Combined Contingency Applied on Direct Management Costs". The third contingency (sales into market) was applied to the estimated quantity of material to be supplied for use.
- 2) "N/A" indicates that the material category is obsolete (no new products are being supplied to the market) and no contingency on sales has therefore been applied to these materials
- 3) A dash ("-") indicates that no targets have been set for these materials, and no contingency has therefore been applied.