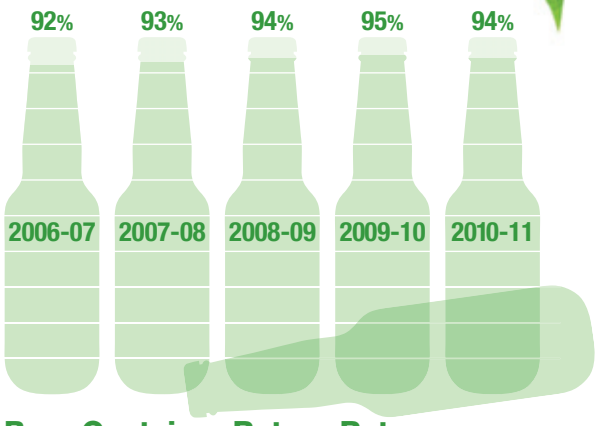
SETTING THE STANDARD IN MATERIALS MANAGEMENT

The Beer Store

Responsible Stewardship
2010 – 2011

Summary Results:

TBS Packaging Management System



Beer Container Return Rates

Unless otherwise noted in the report, all references to split years, such as 2010-11, refer to years ending April of the second year (i.e. 2010-11 refers to a period ending April 2011). See Appendices for detailed dates associated with data inputs.

1.78 billion containers collected

Over 375,000 tonnes of packaging diverted from Ontario landfills

94% of beer containers sold collected for reuse or high-end value-added recycling

The Beer Store (TBS) packaging management system continues to produce outstanding results. With 94% of beer containers collected, TBS is generating return and diversion rates that are among the best in Canadian stewardship programs. The TBS deposit-return system not only supports the use of highly efficient and environmentally preferable refillable bottles, it also generates superior environmental outcomes in its recycling of single-use containers. Materials separation at the point of collection (particularly glass colour sorts) enables a higher proportion of collected containers to be directed toward high-end recycling. Both reuse and recycling of beer containers generate significant environmental and economic benefits when compared to manufacturing from virgin raw materials.

TBS Container Diversion Outcomes

282,800 TONNES	Glass bottle reuse by brewers
23,200 TONNES	Clear glass recycled into new glass bottles
39,700 TONNES	Coloured glass recycled into new glass bottles or fiberglass
7,000 TONNES	Aluminum recycled into new aluminum
24,700 TONNES	Corrugated cardboard and boxboard recycled into paper products

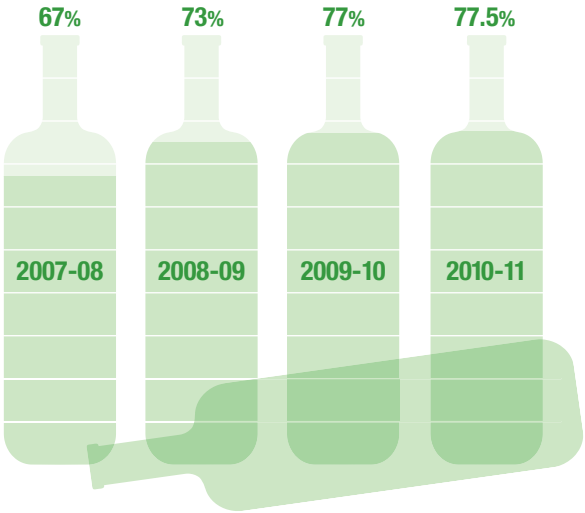
Summary Results:

ODRP Packaging

281 million containers collected annually

1 billionth ODRP container collected December 2010

Over 100,000 tonnes of packaging diverted from Ontario landfills annually



ODRP Container Return Rates

The Ontario Deposit Return Program (ODRP) continues to make a meaningful contribution to Ontario's waste diversion objectives with the return rate increasing over 10 percentage points in its first four years of operation. Unlike most deposit return systems, ODRP operates in conjunction with a curbside collection program (i.e. the Blue Box) that also takes back beverage containers. Collectively ODRP and the Blue Box are diverting over 65,000 more tonnes of glass annually from Ontario landfills than the Blue Box diverted on its own prior to ODRP's introduction – more than double the original diversion target established for the program at commencement. Moreover, the materials collected under the ODRP program are directed toward higher-end recycling supporting Ontario's green economy and generating environmental benefits.

ODRP Container Diversion Outcomes

35,500 TONNES	Clear glass recycled into new glass bottles
69,500 TONNES	Coloured glass recycled into new glass bottles or fiberglass
750 TONNES	Aluminum recycled into new aluminum

With ODRP, Ontario is now the principal source of quality glass cullet for Ontario glass manufacturing – previously Ontario glass manufacturers had to source glass cullet from other jurisdictions to support production.

The Beer Store

Economic and Environmental Benefits:

TBS and ODRP Packaging Management System

TBS Deposit Return Advantages:

Convenient return to retail locations.

High return rates:

94% of TBS beer containers recovered;
77.5% of ODRP containers recovered.

Better recycling outcomes:

Material sorting at point of collection reduces contamination significantly and enables recycling to high-end uses (e.g. recycling old glass bottles into new glass bottles).

Taxpayer Benefits:

TBS system fully funded by brewers and beer consumers:

Costs are internalized into product prices, not externalized to general taxpayers.

ODRP system financed by LCBO and its consumers – funded by unredeeemed deposits topped up by revenues generated by beverage alcohol sales .

High diversion rates reduce municipal waste management costs:

Estimated municipal cost savings of $40 million annually.

Support for Ontario's Green Economy:

167,957 tonnes of glass cullet generated for utilization by Ontario bottle and fiberglass manufacturers and other recyclers:

Reducing the cost of manufacturing and its environmental impacts.

24,720 tonnes of cardboard packaging re-utilized by Ontario cardboard manufacturers.

Environmental Benefits:

A 73% improvement in greenhouse gas emission reductions as a result of beverage alcohol container collection through ODRP.

2.9 million gigajoules in energy savings (TBS and ODRP programs combined) equivalent to powering 2,700 Ontario indoor hockey rinks per year.

The Beer Store

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President's Message

At TBS environmental leadership is a core value. We may be one of the few retailers in North America that takes back all the packaging it sells. Bottles, cans, cardboard packaging, bottle caps, plastic rings and bags, you name it – if we sell it – we take it back.

In fact, we take back more than we sell. For years we've been taking back Liquor Control Board of Ontario (LCBO) beer containers and with the introduction of the Ontario Deposit Return Program (ODRP) in 2007, we began to accept back for deposit refund all liquor containers over 100ml – wine, spirits and coolers. As you'll see in this year's **Responsible Stewardship Report**, the ODRP program has been a great success, generating a significant increase in the amount of glass diverted from Ontario's landfills and a significant decrease in greenhouse gas emissions associated with beverage alcohol containers.

The TBS commitment to outstanding packaging management has been going on for so long that it is easy to take for granted. With this year's **Responsible Stewardship Report** we thought we would try to take a step back and look at why the TBS deposit return system works so well.

In that regard we have some help from the Organization for Economic Cooperation and Development (OECD). In order to promote better recycling outcomes, the OECD developed a set of guidelines related to materials management systems to identify key attributes of successful systems and help policy makers design and operate better recycling and reuse systems. When you assess TBS packaging management performance against the OECD guidelines, as we do in this year's report, you gain some insights as to why the TBS system works so well. Our operations exemplify many of the OECD's key attributes for success.

This spring, we were honoured with **The Best Green Retailing Practices in Canada Award** from Vancouver-based GLOBE Foundation. This is one of the many awards TBS has received since it became the first packaging management system to be certified under Canada's prestigious Ecologo program in 1990. There is a reason we continue to garner accolades from non-government organizations and others concerned about environmental issues. As our performance in relation to OECD guidelines makes clear, we set very high standards when it comes to materials management.

I hope you enjoy this year's Responsible Stewardship Report.

Ted Moroz
President

TBS Recycling:

Quick Facts

The Beer Store

Beverage Alcohol Sales Locations

437:	TBS Stores (Beer Containers)
44:	On-Site Brewery Stores (Beer Containers)
616:	LCBO Stores (ODRP & Beer Containers)
141:	Retail Partner Stores (ODRP & Beer Containers)
77:	Northern Agency Stores (ODRP & Beer Containers)
448:	Winery Retail Stores (ODRP Containers)
16,000:	Licensed Establishments – estimated (ODRP & Beer Containers)
17,763:	**Beverage Alcohol Sales Locations**
86%:	**Percent of legal drinking age Ontarians within a 5 minute drive of a retail beer location**

Beverage Alcohol Container Redemption Locations

437:	TBS Stores (ODRP & Beer Containers)
44:	On-Site Brewery Stores (Beer Containers)
5:	LCBO Stores (ODRP & Beer Containers)
141:	Retail Partner Stores (ODRP & Beer Containers)
77:	Northern Agency Stores (ODRP & Beer Containers)
113:	Empty Bottle Dealers (ODRP & Beer Containers)
817:	**Total Beverage Alcohol Container Redemption Locations**

Container Statistics

1.90 Billion:	TBS beer containers sold (includes TBS brands sold at the LCBO)
363 Million:	ODRP (wine, spirit & cooler) containers sold
2.26 Billion:	**Total Beverage Alcohol Containers Sold**
1.78 Billion:	TBS beer containers collected
281 Million:	ODRP containers collected
2.06 Billion:	**Total Beverage Alcohol Containers Collected**

$40 Million Estimated Annual Savings for Municipal Taxpayers

The TBS Deposit Return System:

Setting the Standard in Materials Management

The Beer Store's deposit return program is known worldwide as a highly successful packaging management system. Refundable deposits of 10 and 20 cents per container establish an economic incentive to encourage returns. Ontario consumers play an active and important role in driving high return rates at TBS container return locations. Recovery rates in 2010-2011 for beer were 99.8% for refillable bottles; 97% for non-refillable glass bottles; and 80% for aluminum cans. The total recovery rate for all beer containers was 94%.

This spring, TBS was honoured with the **Best Green Retailing Practices in Canada Award** from Vancouver-based GLOBE Foundation. TBS was chosen from a group of other well-known retailers, as a company that excels in the delivery of "end-to-end sustainable practices", measuring performance, and continually aiming to improve environmental outcomes from distribution and retail operations. TBS's system offers an opportunity for bottle reuse, delivers high-end recycling and minimal waste, and sets the standard for materials management.

OECD Materials Management Guidelines

Sustainable Materials Management or "**SMM**" is a new approach to sustainable development which shifts the focus away from end-of-life management (disposal and recycling), to a more integrated process which considers the whole system of material flows and related life-cycle impacts. According to the Organization for Economic Cooperation and Development (OECD), a leading think tank on this issue, Sustainable Materials Management is defined as "an approach to promote sustainable materials use, integrating actions targeted at reducing negative environmental impacts and preserving natural capital throughout the life-cycle of materials, taking into account economic efficiency and social equity." (Organization for Economic Cooperation and Development, OECD, 2005)

OECD identifies policy principles designed to guide business and government on how to introduce systemic change targeted at achieving maximum efficiency in SMM. TBS's materials management system serves as an excellent case study of a business that has worked towards applying these principles and succeeded in "shifting behaviours of economic actors and human societies toward meeting their material needs without destabilizing natural systems". (OECD, outcomes of SMM).

The Beer Store's deposit return system drives 94% of all containers back through the same channel used to distribute products. Starting with the container manufacturer, then brewer, distributor, retailer and finally consumer, each of these actors plays a vital role in re-directing the material back through the system to where it started, for reuse and recycling over and over again.

Sustainable Materials Management:

The Beer Store's Deposit Return Program

Since 1927, The Beer Store has managed a deposit return system for all of the beer packaging it sells. The refundable deposit of 10 or 20 cent on beer containers (higher values for kegs) provides an economic incentive to return both the container (bottle, can or keg) and its secondary packaging. The exceptionally high recovery rate of 94% for all container types is testament to this fact, and is achieved because consumers and licensees collectively participate in the deposit return program.

detoxification: *eliminating the progressive build-up of harmful chemicals and compounds produced, most often in the resource extraction stage of the life-cycle*

A key strategy in SMM is **detoxification**, which supports eliminating the progressive build-up of harmful chemicals and compounds produced, most often in the resource extraction stage of the life-cycle. Approximately 62% of beer containers sold in Ontario are refillable bottles. This means that each use of a refillable bottle avoids all the energy, resource consumption and waste associated with extracting and processing the raw materials required to make a new bottle. Considering that each Ontario refillable beer bottle is used 12-15 times, this represents a 93% savings, or "detoxification" of the pollution related to virgin material extraction.

Recycling aluminum and single-use glass containers also generates significant reductions in pollution compared to manufacturing these materials from virgin raw materials. For example, the Environmental Protection Agency in the United States estimates that manufacturing aluminum from recycled materials generates nitrous oxide, sulfur oxide and particulate matter emissions reductions of 60%, 90% and 95% respectively compared to manufacturing aluminum from raw materials.

dematerialization:
reduction of throughput materials, particularly those with the negative life-cycle impacts

Dematerialization is another principal of SMM. It refers to the reduction of throughput materials, particularly those with negative life-cycle impacts. Doing "more with less", without impacting the quality of service is central to the refillable bottle, which manages to provide over 1.17 billion beer servings annually requiring the production of only 93 million bottles annually.[i]

TBS also uses the same vehicles that deliver full goods to stores and licensees to take empty bottles and used packaging back to their distribution centres. Ontario brewers that deliver beer to distribution centres or stores also take-back empty refillables to the breweries where they are washed and refilled. By integrating material return with product delivery, TBS and its brewers have eliminated most of the requirements for extra collection trucks like the vehicles used for curbside recycling and other dedicated collection.

Licensees receive free empty container pick-up when beer is delivered as long as minimum order quantities are met. Offering free container collection to licensees for all beverage alcohol containers, when TBS product is delivered, is unique to The Beer Store's deposit return system, and provides a convenient and economically beneficial way of returning large numbers of empty containers.

design for value recovery:
ensures that products are designed for maximum reuse and recycling through an effective recovery program

Design for value recovery, another key principle of SMM, ensures that products are designed for maximum reuse and recycling through an effective recovery program, like the deposit return model used by TBS. This system currently recovers virtually all of the refillable bottles for reuse and 84% of the non-refillable beer containers for recycling (non-refillable glass and cans combined). No other packaging recovery program in Canada, including municipal curbside recycling, comes close in terms of overall recovery rate and the "value" of the materials post recovery.

Refillable bottles are shipped back to breweries for reuse. Non-refillable glass, cans and other packaging are carefully separated and then processed and transported for recycling. Over two-thirds of the non-refillable glass collected by TBS is crushed and shipped as glass cullet to Owens Illinois, a bottle manufacturer located in Brampton. Most of the remaining glass coming from TBS's main recycling processor is sold as raw material to the fiberglass industry, also located in Southern Ontario. Aluminum cans are re-smelted, rolled and used for aluminum sheet products like beer cans. Cartons are compacted and shipped to local paper packaging mills to make new cartons and paperboard products.

[i] According the Brewers Association of Canada the refillable bottle purchases required to sustain the refillable bottle float are approximately 8% of annual sales.

Sustainable Materials Management:

The Beer Store's Deposit Return Program cont'd

TBS's deposit return system not only drives high recovery rates, but the separation of material type at the point of collection is a design feature that enables a greater degree of high-value recycling with respect to recyclable materials. End-market businessses consistently report that aluminum, PET and glass received via the TBS system is far less contaminated with other materials than post-consumer packaging collected through other means such as curbside collection.[ii]

Industry sources estimate that curbside collection systems generally lose 5% to 20% of collected materials to beneficiation processes (i.e. processes designed to separate collected materials such as glass, aluminum, plastic, paper etc. from each other). Generally curbside collection systems lose a significant percentage of collected materials to landfill or low-end recycling uses.[iii]

In the TBS system, virtually all of the collected materials are recycled. Glass is not diverted to landfill or used as asphalt filler but is actually recycled into new glass bottles and fibreglass.

In summary, TBS's deposit return system exemplifies many of the OECD strategies related to Sustainable Materials Management:

- **Supports the industry's use of refillable containers:**
  Thereby reducing raw material needs, pollution and energy requirements associated with container use;
- **Generates higher return rates than alternate systems thereby maximizing the energy benefits and pollution reductions associated with material recycling:**
  For example, the increased collection and diversion rates for LCBO packaging associated with the implementation of ODRP, reduced the LCBO's carbon footprint by approximately 6,500 metric tonnes of CO2.[iv]
- **Sustains high-value recycling outcomes for collected materials:**
  Colour separation for glass containers at the point of collection means that virtually all of the collected glass is directed toward high-end recycling uses, thereby generating significant reductions in energy use and pollution associated with glass manufacturing.

[ii] As reported by TBS recyclers.

[iii] Residual rates from Municipal Recycling Facilities will vary depending on the configuration, equipment; materials processed and collection method.

[iv] See page 23 for details of calculation.

Supporting Ontario's Green Economy:

TBS Deposit Return and Recycling End Markets

Owens-Illinois (O-I) is the world's largest glass container manufacturer, with revenues of $6.6 billion in 2010 and more than 24,000 employees at 80 plants in 21 countries. The company's Brampton plant is an important end-user of material recovered by TBS through the combined ODRP and TBS deposit systems. O-I's Brampton plant employs 375 people and manufactures the industry standard refillable beer bottle used by the Canadian brewing industry as well as recyclable single-use beer, cooler, wine and spirits bottles used by Ontario beverage alcohol producers.

The TBS and ODRP deposit return programs help to provide O-I Brampton with a consistent supply of high-quality recycled glass. Using recycled glass as a material input to OI's manufacturing process results in fewer emissions and greater energy efficiency. Using recycled glass also avoids the environmental impact of extracting, transporting and processing the raw materials needed to make virgin glass. A Life Cycle Assessment published by O-I in 2010 established that increasing the use of recycled glass in the manufacturing process by 10 percent reduces carbon emissions by approximately five percent and leads to energy savings of about three percent.

In addition to using locally-sourced recycled glass, much of O-I's glass container production is for local Ontario bottlers, and many of these containers are sold right back to beverage alcohol producers in Ontario, thereby closing the materials management loop.

Some glass is also shipped to Montreal and the US to bottle manufacturers, as well as Owens Corning in Scarborough, a fiberglass manufacturer.

Strategic Materials (SMI) is the largest glass processor in North America, selling approximately 2 million tonnes of glass cullet each year. SMI operates 40+ plants with a total employment of 1,500 people company-wide with 150 employees based in Canada.

SMI has a 15-year history of providing glass recycling solutions in Ontario, and first partnered with TBS to process all their packaging in 2003. Their NexCycle Innovations plant in Brampton processes most material collected through TBS and ODRP programs (some glass goes directly to the NexCycle Industries plant in Guelph). The Brampton facility is 117,000 square feet and processes over 136,000 metric tonnes of recyclable material each year, the majority of which is glass (by weight).

The NexCycle Industries plant in Guelph, Ontario services over 20 Ontario municipalities and a portion of the glass collected through the deposit return program. NexCycle Industries processes scrap glass into cullet which is then sold back to the manufacturing industries as raw material, predominately for glass containers and for fibreglass.

TBS Packaging Management System:

2010-2011 Results

The TBS packaging management system includes the collection of all beer containers sold by TBS via either retail or wholesale channels and the collection of all related packaging. This includes beer containers (approximately 16.7%) sold at LCBO retail outlets and agency stores throughout rural and northern Ontario, and beer containers sold in Ontario bars and restaurants.

The TBS packaging system generated an overall return rate of 94% in 2010-2011.

TABLE 1: TBS Container Sales and Recovery by Container Type

Container Type	TBS sales (units)	LCBO sales (units)	Return (units)	TBS Recovery Rate (2009-2010)	TBS Recovery Rate (2010-2011)	System Recovery Rate (2009-2010)	System Recovery Rate (2010-2011)
All Glass Bottles (Refillable & Non-Refillable)	1,192,295,760	147,449,769	1,333,409,339	112%	112%	98.8	99.5%
Refillable Bottles: Industry Standard Bottle (ISB) and Non-Standard	*1,065,532,692*	*103,193,140*	*1,166,698,937*	110%	109%	100%	99.8%
Non-Refillable Bottles	*126,763,068*	*44,256,629*	*166,710,402*	124%	132%	91%	97%
Metal Cans	386,251,313	169,345,184	444,551,287	120%	115%	82%	80%
Kegs	1,397,799	-	1,406,707	101%	101%	101%	101%
PET Bottles	126,533	18,218	764	2%	1%	1%	1%
TOTAL (by units)	**1,580,071,405**	**316,813,171**	**1,779,368,097**	**113%**	**113%**	**95%**	**94%**

*The return rates for one-way glass bottles in the previous three TBS Responsible Stewardship Reports may have been underestimated slightly due to an allocation of some of these containers to refillable bottle returns. TBS rolled out a new data collection system throughout its retail and logistics network in 2007 and during the transition to this new system, although counts on glass bottle returns were exact, some estimates were required for the purposes of this report regarding the split between refillable bottles and one-way glass bottle returns. The implementation of the system is now complete and no estimates are required regarding the refillable, one-way glass bottle splits.

TABLE 2: Secondary Packaging

	TBS (tonnes sold*) 2011	LCBO (tonnes sold*) 2011	Recovered (tonnes**) 2010	Recovered (tonnes**) 2011
Corrugated/Boxboard	21,335	3,182	26,090	24,720
Metal	2,609	659	156	286
Plastic	380	74	390	590

* Tonnes sold reflect secondary packaging associated with TBS-listed beer products only.

** Recovered secondary packaging includes any TBS and ODRP related packaging that is returned with containers. A TBS Recovery Rate is not presented because of co-mingling of the ODRP secondary packaging, and the current unavailability of the ODRP secondary packaging generation data.

TBS Packaging Management System:

2010-2011 Results cont'd

Brewer Packaging

TBS collects packaging on behalf of the 87 brewers that sell through its retail and wholesale system.

Refillable Beer Bottles

Industry Standard Bottle: TBS collects the industry standard bottle or ISB, a 341ml refillable bottle. Under the terms of an industry standard bottle agreement administered by the Brewers Association of Canada brewers can access the ISB float for their refillable packaging needs. Currently 24 of the brewers selling in the TBS system utilize the industry standard bottle. Twenty of these brewers are located in the province of Ontario.

Proprietary Refillable Bottles: In addition to the ISB, TBS collects a number of proprietary refillable beer bottles utilized by several other brewers. The following brewers have proprietary refillable bottles collected in the TBS system:

Amsterdam Brewing
Brick Brewing Co.
Labatt (the Lakeport clear bottle) as well as 1.18L and 710ml bottles
Mill Street Brewery
Moosehead
Sleeman Breweries
Steam Whistle Brewing
Molson 1.18L and 710ml bottles
Heritage Brewery
Muskoka Cottage Brewery (started June 2011)

One-way Glass Bottles

Currently 38 import and 4 domestic brewers sell one-way glass bottles in the TBS system.

Cans

Currently 47 brewers sell cans in the TBS system.

Kegs

TBS collects and manages an industry standard keg float to which all brewers that sell through TBS have access. In addition, it collects unique or proprietary kegs from an additional 21 import brewers and 8 domestic brewers.

TBS Packaging Trends: 2006-2011

CHART 1: Return Rates by Container Type

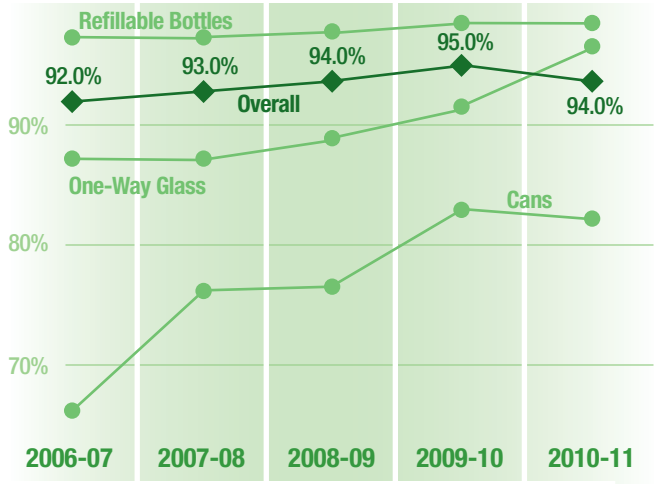


TABLE 3: Percentage of Beer Container Types Sold

	2006-07	2010-11
Refillable Bottles	76.5%	61.7%
Cans	15.4%	29.3%
One-Way Glass	8.1%	9.0%
PET	.006%	.008%

As can be seen from Table 3, the TBS container mix is changing over time. Single-use recyclable containers, particularly cans, are increasing their share of the packaged beer market at the expense of refillable bottles. Cans have almost doubled in market share since 2006-07 growing from 15.4% to 29.3% of TBS beer containers sold between 2006-07 and 2010-11. Single-use glass containers have also increased by 0.9% points of market share over the same period.

The shift to single-use packaging is primarily a reflection of consumer demand. Single serve beer products, which are primarily sold in cans, have grown significantly in the Ontario market in the last five years. An increasing number of value-priced brands are also now available in can packaging.

The shift of packaging into container types that traditionally have lower return rates than refillable bottles, is likely a major factor in TBS's overall return rate decline of one percentage point in 2010-11.

ODRP Packaging:

2010-2011 Results

TABLE 4: ODRP Sales, deposit value by container type and share of market

ODRP Container	Deposit ($)	Sales (units)	Sales Distribution	Sales by Material Type
Glass containers less than or equal to 630ml	0.10	83,514,589	23%	
Glass containers over 630ml	0.20	184,423,819	51%	74%
Aluminum or steel cans less than or equal to 1L*	0.10	59,897,221	16%	
Aluminum cans over 1L*	0.20			16%
Tetra Pak (polycoat) and Bag-in-Box less than or equal to 630ml	0.10	300,271	<1%	
Tetra Pak (polycoat) and Bag-in-Box over 630ml	0.20	7,639,895	2%	2%
Polyethylene Terephthalate (PET or plastic) containers less than or equal to 630ml	0.10	16,351,183	5%	
Polyethylene Terephthalate (PET or plastic) over 630m	0.20	10,992,805	3%	8%
TOTAL		**363,119,783**		

*Sales for small and large format cans are combined

TABLE 5: ODRP Containers: Sales and Recovery

April 25, 2010 to April 24, 2011

	Sales in Units		Returns in Units		Recovery Rate					
Container Type	Small Containers	Large Containers	Small Containers	Large Containers	Small Containers 2009-10	Small Containers 2010-11	Large Containers 2009-10	Large Containers 2010-11	**Combined 2009-10**	**Combined 2010-11**
GLASS	83,514,589	184,423,819	57,898,751	160,046,433	66%	69%	87%	87%	**80%**	**81%**
PET	16,351,183	10,992,805	6,977,998	6,161,795	53%	43%	54%	56%	**53%**	**48%**
TETRA/BIB	300,271	7,639,895	165,575	2,354,341	28%	55%	33%	31%	**33%**	**32%**
SUBTOTAL	**100,166,043**	**203,056,519**	**65,042,324**	**168,562,569**	**64%**	**65%**	**83%**	**83%**	**76%**	**77%**
CANS*	59,897,221		47,742,519						**82%**	**80%**
GRAND TOTAL - ANNUAL RATE									**77%**	**77.5%**

Small containers for all categories except cans denotes a container with contents less than or equal to 630 ml.
For cans, a small container is one with contents less than or equal to 1L.
Large containers for all categories except cans denotes a container with contents over 630 ml.
For cans, a large container is one with contents over 1 L.

*ODRP can returns are not tracked separately; rather they are based on the total rate of return for all cans (both TBS and non-TBS listed).

ODRP Packaging:

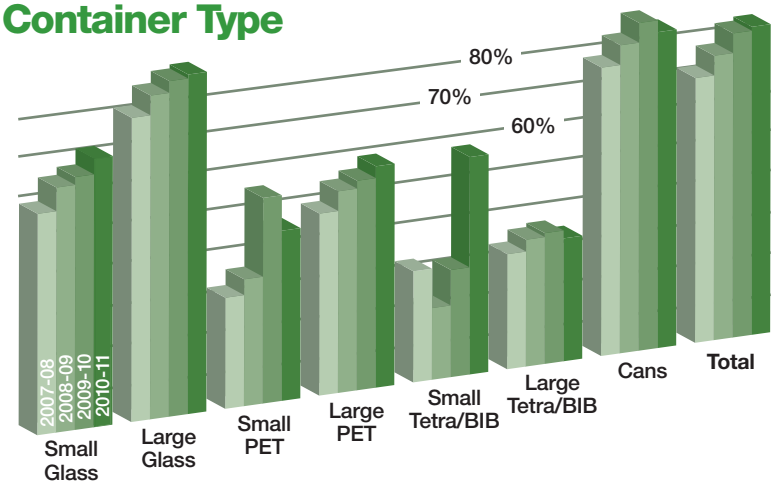
2010-2011 Results cont'd

The overall recovery rate for ODRP containers experienced a small increase from 77% in 2009-10 to 77.5% in 2010-11.

More specifically, small glass containers (under 630 ml) have an overall recovery rate of 69%, up from 66% in 2009-10, and 63% in 2008-09. The recovery rate for small Tetra Paks was 55%, up from 28% in 2009-10 and 19% in 2008-09. The entire category of small containers (excluding cans) increased to 65% in 2010-11, up from 64% in 2009-10 and 59% in 2008-09.

The recovery rate for large glass bottles (over 630 ml) was 87%, which was the same rate as 2009-2010, while large PET containers experienced an increase of two percentage points, from 54% in 2009-10 to 56% in 2010-11.

CHART 2: ODRP Recovery Rates by Container Type

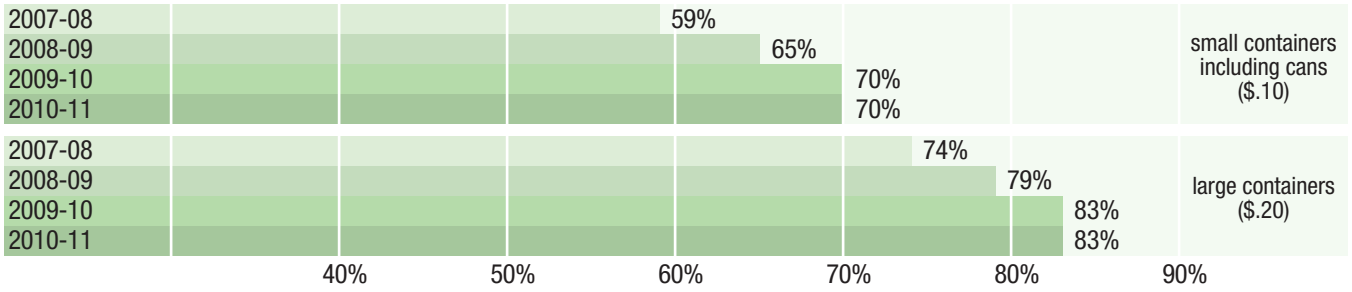


Overall, the combined recovery rate for all ODRP non-can containers increased to 77% in 2010-11, up one percentage point from 76% in 2009-10. (See Table 5 on page 16.)

The ODRP can recovery rate dropped by two percentage points, from 82% in 2010, to 80% in 2010-11.

The combined recovery rate for small containers (including cans) was 70% and for large containers was 83%. These rates are the same as 2009-10.

CHART 3: ODRP Recovery Rates by Deposit Value (Small and Large)



ODRP Packaging:

2010-2011 Results cont'd

The Beer Store and the Province of Ontario have established a series of Environmental Performance Goals for the first five years (from February, 2007 to February, 2012) of the ODRP program.

These Environmental Performance Goals are measured over twelve month operating periods commencing the end of the first week of February each year. Note that this 12-month reporting period is different than the reporting period outlined in Table 5, which covers a 52-week period up to the end of April each year.

TABLE 6: ODRP Program Year Environmental Performance Goals

ODRP Program Year*	Environmental Performance Goals (Total recovery rate for all containers)	Program Performance (Actual recovery rate for all containers)
2007-2008	63%	63%
2008-2009	71%	71%
2009-2010	75%	77%
2010-2011	80%	77.5%
2011-2012	85%	-

*ODRP program years run from February to February each year. All other charts and tables in this report contain data from April to April periods when referring to split years.

ODRP Packaging Trends: 2007-08 to 2010-11

CHART 4: ODRP Return Rates by Container Type

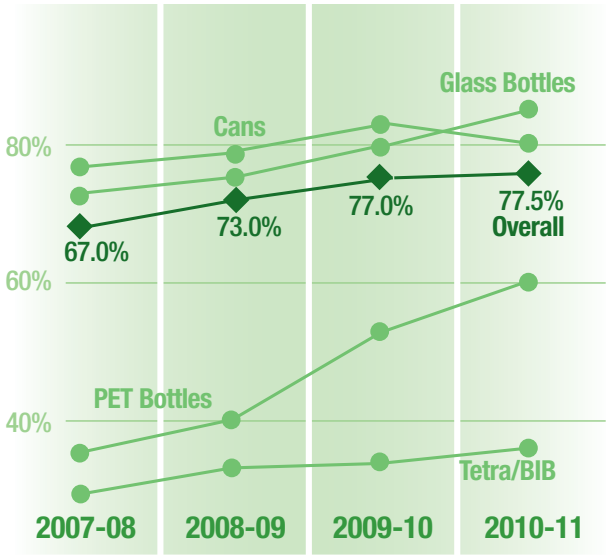


TABLE 7: Percentage of ODRP Container Types Sold

	2007-08	2010-11
Large Glass	48%	51%
Small Glass	30%	23%
Cans	14%	16%
PET	6%	8%
Tetra/BIB	2%	2%

ODRP return rates continued to improve in 2010-2011 with an increase to 77.5%. Return rates for glass containers, which represent 74% of ODRP containers sold, increased to 81% in 2010-2011 up from 69% in 2007-08.The improved return rates for glass containers in the ODRP system has generated a significant increase the amount of glass diverted from landfill since the ODRP program was implemented.

The return rate for ODRP cans which are managed collectively with TBS beer cans dropped two percentage points in 2010-2011 but is still 6% points higher than the can return rate for 2007-08. The recent reduction may be due to a significant increase in beer can sales during the course of 2010-2011. As can returns are associated with sales from previous periods, when actual sales were lower, the higher can sales volume has the effect of lowering actual return rates. Once the increase in can sales levels off, return rates for these containers should improve.

The overall return rate for ODRP containers increased in 2010-2011 to 77.5%, up from 67% in 2007-08, despite the fact that plastic and Tetra Pak containers which historically have lower return rates than glass or aluminum containers have increased as a percentage of ODRP containers sold since 2007-2008.

TBS-ODRP Packaging:

Combined Diversion Results

Collectively the combined TBS and ODRP programs represent the largest beverage container diversion system in Canada diverting approximately 480,000 tonnes of beverage container packaging from Ontario landfills – or 55% of the weight of packaging diverted by the entire Ontario Blue Box program. This diversion generates an estimated $40 million reduction in waste management costs for municipalities.

CHART 5: TBS/ODRP Diversion by Packaging Type by Weight

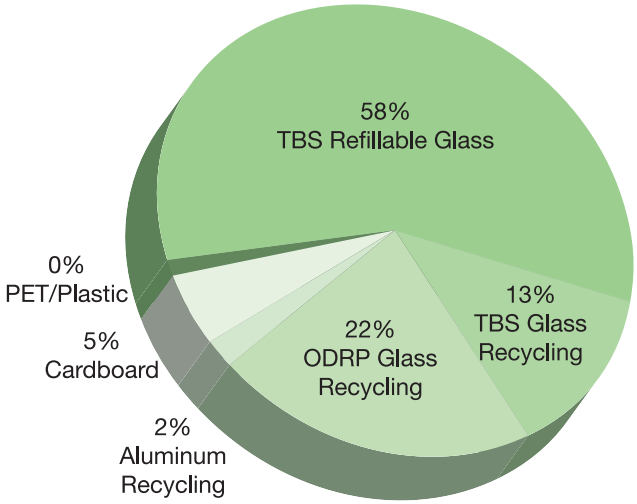


TABLE 8: TBS and ODRP Landfill Diversion

2010-2011	Glass Reuse	Clear Glass Bottle Recycling	Coloured Glass Bottle Recycling	Aluminum Recycling	Steel Recycling	PET	Mixed Plastics	Total Diversion
TBS Tonnes Diverted	282,785	23,203	39,685	7,012	286	-	737	353,708
ODRP Tonnes Diverted	-	35,521	69,548	753	-	912	-	106,734
TOTAL TONNES DIVERTED	**282,785**	**58,724**	**109,233**	**7,765**	**286**	**912**	**737**	**460,442**

*Tetra Pak and Bag-in-the-box containers are excluded from this chart, because they are commingled with carton packaging.

As can be seen from Chart 5, refillable beer bottles generate 58% of the total diversion (including secondary packaging) in the TBS/ODRP programs. Although ODRP glass containers represent just over 10% of the containers collected they generate 22% of total diversion when measured by weight. This is because glass is heavier than other types of packaging and ODRP glass containers, predominantly wine and spirit containers, are generally larger and heavier than beer containers.

TBS diversion (excluding corrugated cardboard/boxboard) is lower compared to last year (approximately 33,000 tonnes) due to the decline in sales of the refillable bottle. ODRP glass tonnage is also down slightly which may reflect LCBO initiatives to light weight wine and spirit containers.

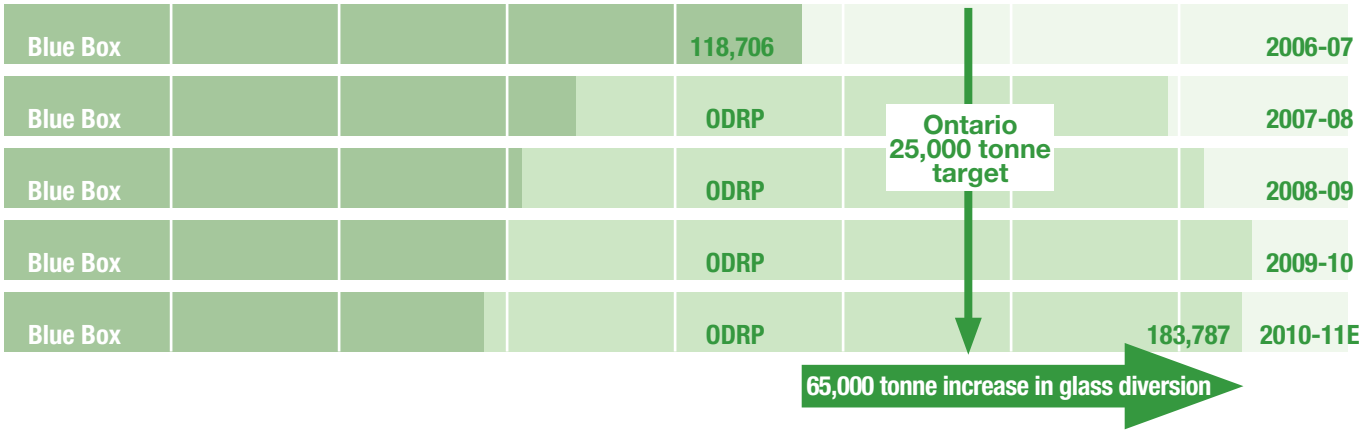
TBS-ODRP Packaging:

Combined Diversion Results cont'd

ODRP and Blue Box Glass Diversion

One of the reasons the Ontario government implemented a deposit return program for LCBO wine and spirit containers was because it anticipated that deposit return would divert more glass from Ontario landfill than was the case with the Blue Box program. The Ontario government indicated that it hoped to divert an additional 25,000 tonnes of LCBO glass annually through the implementation of the ODRP program.

CHART 6: Ontario Increase in Glass Diversion from Landfill



Based on Stewardship Ontario reports, it can be determined that collectively, the Blue Box and ODRP are diverting an estimated 65,000 additional tonnes of glass from Ontario landfill than the Blue Box did on its own. This represents an increase in glass diversion of 55% and is more than double the program target of 25,000 tonnes.

It is difficult to know exactly how much of this change relates directly to ODRP, but based on Stewardship Ontario and LCBO estimates, TBS estimates that the increase in diversion of beverage alcohol glass following the introduction of ODRP was approximately 43,197 tonnes or two thirds of the cumulative change in total Ontario glass diversion.[v]

[v] See Appendix 3: TBS and ODRP Glass Diversion Calculations

TBS-ODRP Packaging:

Combined Energy Savings and Avoided Greenhouse Gases (GHGs)

For each and every beverage alcohol container recovered by TBS for recycling and reuse, energy is conserved and emissions related to container manufacturing are reduced. Reuse and recycling avoids having to extract virgin resources, use energy, and generate pollution. When you consider reusing 1.17 billion bottles, and recycling 893 million single-use beverage alcohol containers each year in Ontario, the environmental savings are remarkable.

TABLE 9: TBS and ODRP Avoided GHG Emissions and Avoided Energy Consumption

2010-2011	Glass Reuse	Clear Glass Bottle Recycling	Coloured Glass Bottle Recycling	Aluminum Recycling	Steel Recycling	PET	Mixed Plastics	Totals
Total Tonnes Diverted	282,785	58,724	109,233	7,765	286	912	737	460,442
Avoided GHG Emissions (MTCO2E)	**107,458**	**6,460**	**6,008**	**75,010**	**340**	**3,320**	**na**	**198,596**
Avoided Energy (Gigajoules)	**1,922,938**	**98,656**	**119,064**	**678,350**	**3,606**	**77,803**	**na**	**2,900,417**

Last year alone, the combined TBS and ODRP programs diverted over 485,000 tonnes of packaging (including corrugated cardboard/boxboard and mixed plastics not shown above). The vast majority of all beer packaging recovered by weight is comprised of glass bottles (98%), of which over 85% are refillable.[vi] Energy conservation associated with reusing glass bottles has consistently proven to be environmentally superior to their non-refillable counterparts. Deposit return, reverse distribution for packaging, and efficient washing technology all support the fact that refillable bottles are the greenest choice for Ontario beer drinkers. Bottle reuse in 2010-2011 is responsible for avoiding 1.9M gigajoules of energy, equivalent to the energy from 328,000 barrels of oil[vii], worth about $29.5 million in today's oil prices[viii].

[vi] Glass diversion associated with refillable bottles represents the annual difference between the glass purchases necessary to sustain the refillable bottle floats versus the number of containers sold each year. Based on information obtained from the Brewers Association of Canada regarding management of the industry standard refillable bottle, TBS has assumed that annual glass purchases necessary to sustain the refillable bottle float represent 8 percent of sales. Avoided glass bottle production associated with sales in refillables therefore is 92% of sales converted to tonnes utilizing the industry standard bottle weight (263 grams). Annual glass recycling by breweries associated with refillable glass bottles has been included in TBS Coloured Glass Bottle Recycling tonnes diverted and is calculated by subtracting the number of unreturned refillable bottles from the annual refillable bottle purchase estimate and converting that total to tonnes using the weight of the industry standard bottle.

[vii] One barrel of oil contains 5.86 GJ of energy. http://www.unitjuggler.com/energy-conversion.html

[viii] Based on a crude oil price of $90 per barrel.

TBS-ODRP Packaging:

Combined Energy Savings and Avoided Greenhouse Gases cont'd

Of the remaining non-refillable glass bottles, approximately two thirds are recycled back into new bottles. Recycled bottles replace virgin raw materials, which directly reduce greenhouse gases and other pollutants like nitrogen oxide emissions.

Aluminum cans are shipped directly to a smelter to melt and re-roll into new can sheet. Making can sheet from recycled content uses only 5% of the energy required to make can sheet from virgin raw material, and avoids ten tonnes of greenhouse gas emissions for every tonne recycled.

Collectively reusing and recycling beverage alcohol containers last year avoided nearly 200,000 tonnes of greenhouse gas emissions, the same amount emitted from about 38,940 passenger vehicles each year[ix].

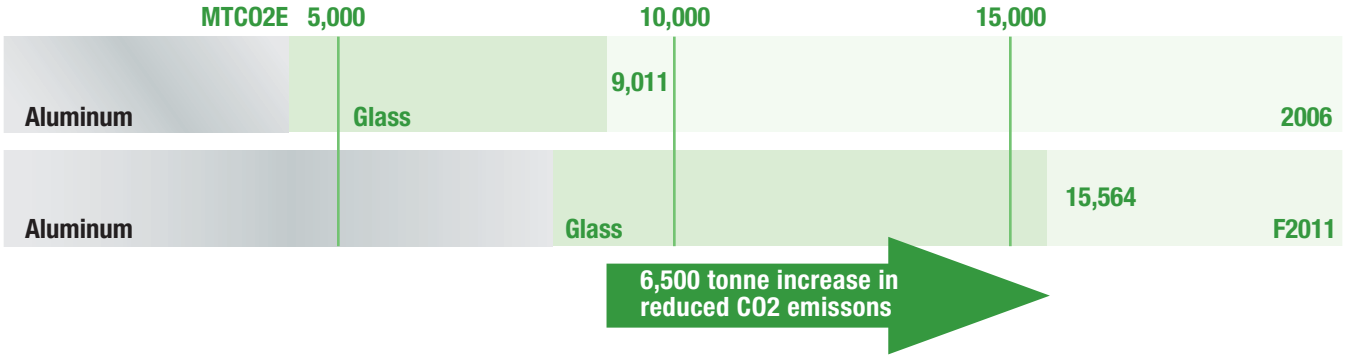
Greenhouse Gas (GHG) Emission Reductions

As noted earlier, ODRP has generated an enormous increase in the weight of glass packaging diverted from Ontario landfills. Increased ODRP packaging diversion also generates significant reductions in greenhouse gas emissions associated with that packaging.

ODRP has generated a:

73% IMPROVEMENT	in GHG reductions associated with all ODRP packaging
54% IMPROVEMENT	in GHG reductions related to glass packaging
100% IMPROVEMENT	in GHG reductions related to aluminum packaging

CHART 7: GHG Reductions Associated with ODRP Container Recycling



As noted earlier in the report, ODRP driven annual GHG reductions are equivalent to approximately 6,500 metric tonnes of CO2 emissions.

[ix] Based on U.S. Environmental Protection Agency estimates of average greenhouse gas emissions associated with passenger vehicles. See http://www.epa.gov/cleanenergy/energy-resources/calculator.

TBS System:

Other Energy Savings

TBS considers retail locations (437) and distribution centres (8) as part of its larger Sustainable Materials Management program. For several years TBS management and individual employees have participated on an "Energy Team" dedicated to researching, testing and introducing initiatives aimed at reducing TBS energy consumption.

TBS has been recognized for outstanding achievement in energy use reduction by retrofitting existing buildings with R-30 roofs, installing programmable thermostats and heater timers, switching to energy efficient lighting, and replacing large hot water tanks with smaller, more efficient models.

Since 2007 all new TBS retail locations opened were built with an R-30 roof and R-20 insulated walls, energy saving fluorescent lighting, LED lit exterior signage, motion sensor lighting in the washrooms, and energy shield curtains dividing refrigerated areas from the lobby.

Renovating existing locations has achieved meaningful reductions in overall energy use. TBS participated in the Toronto Hydro-Electric System Power Savings Blitz program at 42 retail stores throughout the City of Toronto. The results of this initiative represented a savings of approximately 184,000 kilowatt hours of electricity per year, avoiding approximately 38.5 tonnes of greenhouse gas emissions. Following this success, lighting retrofits were installed in more than half of TBS retail stores.

Two 24-foot diameter fans were installed in TBS's largest distribution centre in Brampton. The fans circulate the warm air throughout the building and produce tangible results by reducing overall heating costs. Following this achievement, mega-fans fans were installed at four other distribution centres.

TBS continues to strive for further energy efficiency improvements and new technology is constantly being tested. One such technology involves the utilization of cold outside air in the winter to supplement in-store refrigeration. To date, a test of this technology has achieved a 23% savings in energy requirements for refrigeration in the test store. TBS is also testing the use of solar panels to supplement electricity requirements with renewable power.

Summary of TBS Promotional and Educational Activities 2010-2011

Awards and Recognition

TBS was honoured with the award for Canada's ***Best Green Retailing Practices*** by the GLOBE Foundation (Spring 2011)

Finalist for the ***Outstanding Environmental Leadership*** award by the Brampton Board of Trade (March 2011)

Community involvement

Returns for Leukemia is an annual fundraiser by the United Food & Commercial Workers Local 12R24 in partnership with The Beer Store to raise funds for The Leukemia & Lymphoma Society of Canada (May 2010)

TBS charges 5-cents per plastic bag at the point of sale. A portion of the proceeds go to ***Conservation Council of Ontario*** to promote conservation solutions and raise public awareness about the conservation movement.

Staff and Managers

TBS head office continues to communicate **environmental program information** on-line on a weekly basis to store managers and staff.

All retail employees received **t-shirts with "Green before Green was Cool"** messaging (December 2010)

Communication to store managers and staff on **Contamination of Recyclables - Do's and Don'ts for handling** ODRP and beer containers (November 2010)

Communication to store managers and staff on "**Earth Hour**" with poster. Stores were directed to switch off all non-essential lights and unplug non-essential equipment at 8:30pm that night (March 2011)

New Employees

All new employees are fully trained and informed of the importance of The Beer Store's core value of environmental leadership before they begin their first shift.

Employees are trained on-line, tested, and then must demonstrate knowledge and competence in the area of returns and recycling.

In Store

Regular rotation of **in-store posters and cart advertising** with environmental messaging on Environmental Leadership; Take it Back; The Beer Store is Green; Cooler Returns; and Leukemia Bottle Drive.

Internet

The Beer Store website – www.thebeerstore.ca (all year), with a page on environmental leadership; TBS Responsible Stewardship report is posted for downloading.

TBS Truck Advertising

390 trucks and trailers carried large decals with messaging promoting cooler; Tetra Pak; and wine bottle returns.

105 trucks carried decals with My Beer Store messaging ("Green before Green was Cool") (November 2010)

Summary of ODRP Promotional and Educational Activities 2010-2011:

By Government and LCBO

LCBO continues to build on its successful support of the Ontario Deposit Return Program through multiple communication and marketing channels. The organization is leveraging the results of its positive initial investment during the past three years and has moved to a program of reinforcement that is cost-effective, web-based and environmentally friendly.

Environmental Sustainability Report 2010-2011:

LCBO's new, premiere sustainability document promotes the deposit return program in its first chapter. The Environmental Sustainability Report is highlighted on the LCBO's popular website. The Report is also featured on the LCBO intranet as an educational and reference tool for LCBO employees.

ONTARIO DEPOSIT RETURN PROGRAM
PROGRAMME DE CONSIGNATION DE L'ONTARIO

English | Français | Italiano | Português | 中文 | ਪੰਜਾਬੀ

Summary of ODRP Promotional and Educational Activities 2010-2011:

By Government and LCBO cont'd

Bag it Back:

As noted in the LCBO's Sustainability Report, the Ontario Deposit Return Program, which is funded by the LCBO and the municipal Blue Box Program combined, divert about 92 per cent of beverage alcohol containers from landfills.

LCBO is encouraging suppliers to source more environmentally sustainable packaging options such as lightweight glass to further reduce its environmental footprint.

www.bagitback.ca remains the LCBO's key educational tool for environmentally-motivated individuals and businesses.

The dedicated site, originally created in 2007 and refreshed since that time, offers a wealth of information to both commercial and residential users about the most effective ways to work with the ODRP. The ODRP refunded $45.2 million in deposits to customers in 2010-11.

www.backitback.ca is featured prominently on in-store signage, the LCBO public website as well as the organization's intranet. The organization's internal newsmagazine, The Exchange, also provides regular reminders to employees of the need to actively promote the Bag It Back program.

For new employees, information on the Bag it Back program is part of the orientation process.


LCBO NEWS RELEASE

LCBO STORES CLOSED ON VICTORIA DAY

Promoting ODRP to the Media

Fully 60 per cent of all 2010-2011 province-wide LCBO news releases actively promoted the container deposit return program. The key phrase below reminds media and the Ontario public of the availability of the program that returns beverage alcohol containers to the recycling stream.

« Please bring a reusable bag when shopping at the LCBO and take your empty beverage alcohol containers (large and small glass bottles, PET plastic, Tetra Pak cartons, bag-in-box and cans) to The Beer Store for a full deposit refund. »

October 21, 2011

Mr. Tony Tutolo
Vice President Finance
Brewers Retail Inc.
5900 Explorer Drive
Mississauga, ON L4W 5L2

Dear Mr. Tutolo:

As specifically requested by Brewers Retail Inc. (TBS), we have performed the following procedures on certain information in "Setting the Standard in Materials Management: The Beer Store Responsible Stewardship 2010 - 2011" (the Report) prepared by TBS in accordance with the reporting requirements of TBS under Section 35 (3) of *The Waste Diversion Act 2002, S.O. 2002, c.6* (the Act) for the period from May 1, 2010 to April 30, 2011.

The following procedures were completed with respect to the recovery rates for the container types: All Glass Bottles (Refillable & Non-Refillable), Refillable Bottles: Industry Standard Bottle (ISB) and Non-Standard, Non-Refillable Bottles, Metal Cans, Kegs and PET Bottles (the Container Types), as set out in Table 1: TBS Container Sales and Recovery by Container Type (Table) on page 13 of the Report.

A. Information in the Report and Table 1: TBS Container Sales and Recovery by Container Type

1. We compared the TBS sales, LCBO sales and Return units by Container Type (except All Glass Bottles (Refillable & Non-Refillable)) in the Table to detailed working tables A.2.1 Standard and Non-Standard Refillable Bottles, A.2.2 Standard Refillable Industry Bottles, A.3.1 Non-Refillable Bottles, A.4.1Metal Cans, A.5.1 Kegs and A.6.1 PET prepared by TBS and found the units to be in agreement.

2. We recomputed the TBS sales, LCBO sales and Return units by All Glass Bottles (Refillable & Non-Refillable) in the Table by adding detailed working tables A.2.1 Standard and Non-Standard Refillable Bottles, and A.3.1 Non-Refillable Bottles, prepared by TBS and found the units to be arithmetically correct.

3. We recomputed the TBS Recovery Rate (2010 -2011) for each container type in the Table by dividing the respective Return units by the respective TBS sales units and found the percentages to be arithmetically correct.

4. We recomputed the System Recovery Rate (2010- 2011) for each container type in the Table by dividing the respective Return units by the sum of the respective TBS sales and LCBO sales units and found the percentages to be arithmetically correct.

PricewaterhouseCoopers LLP Chartered Accountants
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The following procedures were completed with respect to the detailed working tables which serve as the source data to the Table contained in the Report. These detailed working tables are not contained in the Report.

B. Information in the detailed working tables A.2.1 Standard and Non-Standard Refillable Bottles, A.2.2 Standard Refillable Industry Bottles, A.3.1 Non-Refillable Bottles, A.4.1 Metal Cans, A.5.1 Kegs and A.6.1 PET

1. We compared the TBS sales, LCBO sales and Return units in the table A.2.1 Standard and Non-Standard Refillable Bottles, A.3.1 Non-Refillable Bottles, A.4.1 Metal Cans, A.5.1 Kegs, and A.6.1 PET to the "Appendix A – Sales by Package Fiscal 2011" prepared by TBS and found the units to be in agreement.

2. We compared the TBS sales, LCBO sales and Return units in the table A.2.2 Standard Refillable Industry Bottles to the Industry Bottle Over/Short Calculation schedule prepared by TBS and found the units to be in agreement.

C. TBS sales units

1. We recomputed the total sales units for each Container Type in Appendix A – Sales by Package Fiscal 2011 as the sum of the sales units for the respective size names within each Container Type and found the units to be arithmetically correct. We recomputed the total sales units in Appendix A – Sales by Package Fiscal 2011 (i.e., number of bottles or cans sold) of the respective size names by multiplying the number of packages of each size name sold by the number of units in the package and found the units to be arithmetically correct. We compared the sales for the respective size names in Appendix A – Sales by Package Fiscal 2011 to the TBS schedule of sales volume by size and name (the TBS Package Sales and Volume by Type of Sale Schedule) and found the units to be in agreement.

2. We compared the total TBS sales units in hectolitres from the TBS Package Sales and Volume by Type of Sale Schedule prepared by TBS to the Appendix A – Sales by Package Fiscal 2011 prepared by TBS and found the units to be in agreement. We recomputed the total TBS sales units in hectolitres by adding the units of hectolitres sold directly by TBS and by TBS to the LCBO from the TBS Container Type Schedules, and compared such units to the total sales units in hectolitres from the TBS Package Sales and Volume by Type of Sale Schedule and found the units to be in agreement.

D. LCBO sales units

1. We compared the LCBO sales units in Appendix A – Sales by Package Fiscal 2011 to Appendix B – LCBO Sales of TBS Products Fiscal 2011 prepared by TBS that sets out the calculation of TBS sales (net of TBS sales direct to the Liquor Control Board of Ontario (LCBO)) and LCBO sales and found the units to be in agreement.

2. We recomputed the total sales units for each Container Type on the respective Appendix B - LCBO Sales of TBS Products Fiscal 2011 as the sum of the sales for the respective size names in hectolitres divided by the size of the respective containers within each Container Type and found the units to be

arithmetically correct. We compared the sales for the respective size names on the Appendix B - LCBO Sales of TBS Products Fiscal 2011 to schedules of LCBO sales volume for import and domestic sales by size and name (the LCBO Sales Schedules) and found the units to be in agreement.

E. Return units

1. On the respective TBS Container Type Schedules (except Metal Cans which was on the ODR Return Rates Report) included in Appendix A - Sales by Package Fiscal 2011, we recomputed the total number of units returned of each size name by multiplying the number of packages returned by the number of units in the package and found the units to be arithmetically correct. We recomputed the total returns by Container Type by adding the number of units of individual size names and noted no exceptions.

2. We compared the total number of packages returned from the TBS Container Type Schedules (except Metal Cans which was on the ODR Return Rates Report) to the total number of packages returned on a schedule prepared by TBS (Empty Returns F2011) and found them to be in agreement.

These procedures do not constitute an audit of the Report, the Table, or the detailed working tables and therefore we express no opinion on the Report, the Table, or the detailed working tables. Had we performed additional procedures or had we made an examination of the Report, the Table, or detailed working tables other matters might have come to our attention that would have been reported to you.

This letter is for use solely in connection with the Report provided by TBS to Waste Diversion Ontario. Consequently, the letter should not be used by other parties. Any use that a third party makes of this letter, or any reliance or decisions made based on it, are the responsibility of such third party. We accept no responsibility for any loss or damages suffered by any third party as a result of decisions made or actions taken based on this letter.

PricewaterhouseCoopers LLP

Chartered Accountants, Licensed Public Accountants

Methodology and Assumptions: Appendix 1:
TBS and ODRP Packaging Calculations

The following beer container streams are generated by both TBS and/or the LCBO, and recovered by TBS:

Glass (Standard & non-standard refillable and non-refillable glass bottles)

Metal cans (Aluminum & Steel)

Kegs (Licensee & Retail Consumer)

Non-refillable plastic bottles (PET)

To determine recovery rates for the various container streams (excluding metal cans – see below), for the 52-week period ending April 24, 2011, sales and return data were acquired from the TBS Information Services department and from the LCBO through its Sale of Data program.

The sales data used include:

TBS retail and licensee sales by brand and pack size stock keeping unit or "SKU" (every pack size for a given brand constitutes an individual SKU)

TBS sales to Retail Partners by SKU

TBS sales to LCBO stores by SKU

LCBO home consumer sales of TBS listed products by SKU

Container sales data were verified using a checksum methodology on the reported sales volumes.[x] Similarly, recovery data were reconciled with data provided by the brewers receiving recovered refillable bottles and associated secondary packaging (e.g. cartons and crowns), and TBS's recycling processors, which receive non-refillable containers and other recyclable packaging.

To determine a recovery rate for all metal beverage containers (TBS and ODRP programs combined) for the 52-week period May 3, 2010 to May 1, 2011 for sales and May 10, 2010- May 8, 2011 for returns were acquired from the TBS Information Services department through its 26 bi-weekly period Can Settlement Reports.

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[x] PricewaterhouseCoopers LLP or PwC completed specified procedures as noted in their letter on the container-based packaging sales, returns and recovery rates.

Methodology and Assumptions: Appendix 1:

TBS and ODRP Packaging Calculations cont'd

As a result of TBS acting as the sole recovery channel for beer products listed for sale by both the LCBO and TBS, there are two recovery rates that need to be considered. These are:

TBS Recovery Rate:

what TBS recovers in total, relative to what it sells through its own stores, to licensees, and to its Retail Partners, given by:

$$\frac{\text{Total TBS Container Returns}}{\text{Total TBS Container Sales}} = \text{TBS Recovery Rate (\%)}$$

System Recovery Rate:

what TBS recovers relative to all sales of beer, including sales of co-listed products by the LCBO, given by:

$$\frac{\text{Total TBS Container Returns}}{\text{Total TBS Container Sales + LCBO Container Sales}} = \text{System Recovery Rate (\%)}$$

Methodology and Assumptions: Appendix 1:

TBS and ODRP Packaging Calculations cont'd

Metal Can Recovery Rate

For operational efficiency, beverage alcohol can returns (steel and aluminum) for TBS and ODRP are blended together at the point of return. As such, it is not practical to determine a separate TBS beer can return rate from an ODRP can return rate. Nor is it possible to accurately provide a separate aluminum and steel can recovery rate. It should be noted however, that steel cans make-up a very small share of metal cans (approximately 0.1%).

For the purposes of the TBS and ODRP programs it is assumed that the metal can return rate is the same for both programs. All metal can sales and recovery data are derived for the 52-week period May 3, 2010 to May 1, 2011 for sales, and May 10, 2010 – May 8, 2011 for returns.

Collectively, the metal can return rate is given by:

TBS & ODRP Can Recovery Rate:

what TBS recovers relative to all sales of beer cans, including TBS cans and ODRP cans, given by:

$$\frac{\text{Total TBS Can \& ODRP Can Returns}}{\text{Total TBS Can Sales + ODRP Can Sales}} = \text{TBS \& ODRP Can Recovery Rate (\%)}$$

Methodology and Assumptions: Appendix 1:

TBS and ODRP Packaging Calculations cont'd

The following secondary packaging materials are generated from beverage alcohol containers and recovered by TBS. Recovered material is not identified as ODRP or TBS secondary packaging at the time of collection and therefore includes packaging from both programs.

Corrugated/Boxboard (cases for cans and bottles; trays; knockdown cartons)

Steel (beer caps or crowns, steel cans[xi])

Plastic (six-pack can rings, plastic bags, plastic film; and plastic bottles)

By weight, secondary packaging material makes up approximately 5% of all the packaging recovered through the TBS beer and ODRP deposit systems. Following is a brief description of the methodology used to estimate the generation and recovery of secondary materials.

Corrugated/Boxboard: To calculate generation quantities for these materials by weight for the 12-month period ending April 24, 2011 common cardboard case SKUs were measured. Using these weights, the average weight of a cardboard case was calculated. These weights were applied to beer product sales to estimate total cardboard packaging generated by TBS. For example, the weight of a boxboard carton associated with a specific 6-pack of industry standard bottles was multiplied by the number of 6-packs sold of these bottles to yield an estimate of the total boxboard generated from these sales. In other cases, procurement data was used to determine the amount of cardboard purchased by TBS (i.e. corrugated cardboard trays). This data was also multiplied by the respective weight of the material.

TBS cardboard packaging recovery data is monitored and reported by TBS, individual brewers, and TBS's contracted recyclers.

Since the introduction of ODRP, a quantity of secondary packaging associated with LCBO sales is now returned to TBS. As noted above, this secondary packaging is commingled with TBS secondary packaging on return. Currently due to unavailable ODRP generation data for secondary packaging like plastic film, bags, boxboard, and corrugated packaging, an accurate system recovery rate cannot be determined.

[xi] Steel cans are commingled with other secondary steel packaging like crowns at the processor and are therefore reported together. Similarly, plastic beer bottles are also commingled with other plastics and presented as a mixed plastics category. Recovery rates for cans, which include aluminum; or plastic beer bottles on their own, are available in **Table 1: TBS Sales and Recovery by Container Type**

Methodology and Assumptions: Appendix 1:

TBS and ODRP Packaging Calculations cont'd

Metal: Secondary metal refers to bottle caps generally made from steel. The total weight of steel caps was calculated by multiplying the weight of one beer cap by the number of bottles on deposit sold by TBS and the LCBO. The total weight of steel cans sold by both TBS and LCBO was also calibrated and added to the cap generation total.

Steel recovery data from TBS's recycling processors was used as the numerator to provide an estimate of the metal (beer cap and steel can) recovery rate. However, the vast majority of recovered beer caps are shipped in used cases back to brewers where they are recycled.

Plastic: Secondary plastic packaging refers to plastic film or shrink wrap, used for cases and pallets, six-pack can rings and plastic bags:

Plastic Six-Pack Can Rings: The total weight of plastic can rings produced was calculated by multiplying the weight of one plastic can ring by the total number of six packs sold with plastic rings.

Plastic Bags: The total amount of plastic bags purchased by TBS was derived from procurement data and multiplied by the respective weight of a plastic bag to estimate the total plastic bag weight. The LCBO began phasing out its plastic bags in May, 2008. Consequently, the generation data for LCBO plastic bags in 2010-2011 is zero. TBS may recover plastic grocery or other types of bags when it collects empty container units, be it beer bottles or other types of containers. These types of plastic bags are collected and recycled but not generated by either TBS or the LCBO.

Plastic Film Wrap: The total amount of film wrap generated was calculated by multiplying the average weight of film used per pallet, by the total number of pallets used for beer sold by TBS. The total number of pallets in the system was calibrated by reconciling the total hectolitres (hl) sold in 2010-2011 by the average number of hl packaged per pallet.

Of note, TBS updated part of its packaging weight methodology in 2011. All secondary packaging materials ranging from cardboard to plastic were weighed to derive new unit values for these items. These values provide an update to the original weights calibrated in 2004.

Methodology and Assumptions: Appendix 1:

TBS and ODRP Packaging Calculations cont'd

The return rates for the ODRP are calculated by dividing the total number of program containers (or the total number of program containers of a type) returned to TBS for a refund, by the total number of program containers (or the total number of program containers of a type) sold in Ontario for the fifty-two week period ending April 24, 2011.

$$\frac{\text{Number of ODRP containers returned to TBS}}{\text{Number of ODRP containers sold}} = \text{ODRP Recovery Rate (\%)}$$

In the case of metal cans, because ODRP cans (aluminum and steel) are commingled with TBS cans at the point of return, the total number of ODRP returns are determined based on the share of ODRP can sales to TBS can sales.

Methodology and Assumptions: Appendix 2:

Energy Savings and Greenhouse Gas Reduction Estimates

Assumption to support Energy and GHG savings data

A diversion estimate (tonnes) for refillable bottles was derived by assuming that the number of bottle purchases necessary to sustain the refillable float is equal to approximately 8% of sales. Diversion associated with refillable use therefore is the weight of bottles sold minus the weight of bottles purchased to sustain the float.

Conversion factors from units to tonnes

Calculations for the tonnage data provided in this report only required one weight for the refillable industry standard bottle (ISB), which is 263 grams. This weight was attained by the Brewers Association of Canada and cross-checked by TBS's waste auditor using a weight scale.

Consistent with reporting of other Canadian agencies that operate deposit return programs, determining the tonnes of aluminum, non-refillable bottle glass and PET recycling, TBS used the data provided by its processors, as this represents hard data, versus soft data which would require weight-to-unit conversions. This is especially relevant with non-refillable glass bottles, which vary dramatically in size, and thickness.

Multipliers used for performance analysis

Source for **avoided energy multipliers**: *Determination of the Impact of Waste Management Activities on Greenhouse Gas Emissions: 2005 Update Final Report*, ICF Consulting, Environment Canada & Natural Resources Canada, October 2005.

Source for **avoided emissions multipliers**: *GHG Calculator for Waste Management, Update Oct 2009*, ICF Consulting for Environment Canada

Avoided GHGs from glass bottle reuse (0.38 eCO2/tonne) is not presented in the *Determination of the Impact of Waste Management Activities on Greenhouse Gas Emissions: 2005 Update Final Report*. This multiplier was provided in its previous version from *Determination of the Impact of Waste Management Activities on Greenhouse Gas Emissions, March 2004 (Update on March 30, 2001 report)*, submitted to Natural Resources Canada by ICF Consulting.

In addition, this value was cross-referenced with the multiplier from the US EPA's Waste Reduction Model (WARM) of "current mix of inputs". Based on the US data, the 0.38 eCO2/tonne value can be considered as "conservative".

To calculate energy savings related to using secondary feedstock for fiberglass production, 0.5 GJ/tonne was used as a conservative estimate, based on discussions with the Ontario fibreglass market. In terms of pollution related to climate change, the pollution profile is a function of the source of the electricity. Because the bulk of the energy used for fiberglass production in Ontario is electricity-based (low coal and high nuclear content), GHG savings are minimal, so eCO2/tonne was set at 0.

This analysis assumes that 100% of clear glass and 50% of coloured glass is used for bottle to bottle recycling, and 50% of the remaining coloured glass is used for fibreglass.

Methodology and Assumptions: Appendix 2:

Energy Savings and Greenhouse Gas Reduction Estimates cont'd

TABLE 10: Avoided GHG and Avoided Energy Multipliers

	Glass Reuse	Glass Bottle Recycling	Aluminum Recycling	Steel Recycling	PET Recycling
Avoided GHG Emissions (eCO_2 /tonne)	0.38	0.11	9.66	1.19	3.64
Avoided Energy (Gigajoules /tonne)	6.8	1.68	87.36	12.61	85.31

Diversion data (tonnes) for recycled materials

Data was provided by recycling processors as part of monthly and annual reporting requirements to TBS.

Avoided municipal costs

To estimate the savings incurred by Ontario municipalities, it is assumed that if the TBS and ODRP programs did not exist, all home-consumption beverage alcohol packaging would be managed by municipalities. This would result in higher costs to municipalities from increased recycling and disposal.

First, the total amount of packaging generated is calculated by taking the actual tonnage of TBS and ODRP containers and secondary packaging recovered by weight, and estimating the weight of generated material using the current TBS and ODRP return rates. (i.e. collected tonnage / return rate (%) = generation in tonnes)

Then, current Blue Box material-specific recovery rates for 2009 were applied to the generation data to determine how much material by type would end-up in the municipal Blue Box program. The costs to manage these materials were assumed to be shared 55/45 between municipalities and Blue Box stewards. (Source: for Blue Box material recovery rates and net costs by material type: Stewardship Ontario 2009.)

Finally, all un-recovered tonnage was assumed to be handled by municipalities through their disposal service. A disposal cost of $75 per tonne was added to the total cost savings figure as a conservative estimate to represent combined collection and disposal fees.

The Beer Store

Methodology and Assumptions: Appendix 3:

TBS-ODRP Glass Diversion Calculations

TABLE 11: Estimate of Increased Glass Diversion from Landfill: Blue Box and ODRP

Reported Glass Tonnage Marketed by Municipalities

(From Highlights of the 2008 Municipal Datacall)

	Calendar Years	2006	2007	2008	2009	2010E
	Flint	18,435	11,800	9,527	15,688	15,688
	Coloured	12,566	6,767	5,503	6,994	6,994
	Mixed	108,653	82,645	79,953	69,947	69,947
1	**Total**	139,654	101,212	94,983	92,609	92,609
2	Estimated Tonnage diverted to landfill as a result of beneficiation processes (assume 15%)	20,948	15,182	14,247	13,891	13,891
3	Actual Glass Tonnage diverted from landfill by Blue Box Program	118,706	86,030	80,736	78,718	78,718

Glass Tonnage Diverted by ODRP Program

	April to April Periods		2007-08	2008-09	2009-10	2010-11
	Flint		31,204	35,268	38,185	35,521
	Coloured		61,180	61,850	67,964	69,548
4	**Total**	NA	92,384	97,118	106,149	105,069
	(Adjustment for January 2007)		(6,500)			
5	Cumulative Glass Tonnage Diversion	**118,706**	**171,914**	**177,854**	**184,867**	**183,787**
6	**Additional Diversion in Comparison to 2006 Base Year**		**53,208**	**59,148**	**66,161**	**65,081**
7	Estimate of LCBO Glass in Blue Box	85,912	34,643			13,121
8	Diversion Assume 15% Loss	73,025	29,447	NA	NA	11,153
9	**Total LCBO Glass Diversion** (Blue Box plus ODRP)	**73,025**	**115,331**			**116,222**
10	**Additional Diversion in Comparison to 2006 Base Year**		**42,305**			**43,197**

Methodology and Assumptions: Appendix 3:

TBS-ODRP Glass Diversion Calculations cont'd

Explanatory Note:

Methodological Approach:

Overall Increase in Glass Diversion: Blue Box and ODRP

The preceding table compares the volume of glass diverted by the Blue Box prior to the introduction of the ODRP program in 2006 to the volume of glass diverted by both programs in the first four years of the ODRP program.

The Blue Box base year for comparison is 2006 the first column on the left. This represents the amount of glass diverted from Ontario landfill by the Blue Box program prior to the introduction of the ODRP program in 2006.

The Blue Box glass diversion total for 2006 is compared to the combined diversion of the Blue Box and ODRP programs in the first four years of ODRP operations. WDO Blue Box glass diversion data for calendar years 2007, 2008 and 2009 is combined with TBS ODRP Responsible Stewardship Reports' diversion data for the years 2007-08, 2008-09, 2009-10 to develop an estimate of annual diversion for the 2007-08, 2008-09, 2009-10 periods.

For the period 2010-11 an estimate of total glass diversion was developed by utilizing WDO Blue Box glass diversion data for calendar 2009 with the TBS Responsible Stewardship data for the period 2010-11. This estimate will be subject to revision once WDO Blue Box glass diversion data becomes available for the calendar year 2010.

In the Blue Box system, not all glass marketed by municipalities to recyclers is ultimately recycled. A certain percentage of glass is lost in the beneficiation process. TBS, based on interviews with glass recycling processors, has estimated that 15% of glass marketed by municipalities is subsequently lost to beneficiation processes and subsequently sent to landfill.

As can be seen in row 6 above, the combined Blue Box and ODRP systems collectively diverted an additional 53,208, 59,148, 66,161 and an estimated 65,081 tonnes of glass from Ontario landfills in the first four years of ODRP operations.

Increase in glass diversion associated with beverage alcohol containers:

In addition to calculating the change in total glass diversion associated with the introduction of the ODRP program, the above table provides an additional estimate regarding how much of the increase in glass diversion associated with the two programs can be attributed to an increase in diversion associated with beverage alcohol glass containers. Data sources related to beverage alcohol glass content in the Blue Box are not as accurate as the aggregate data. Nevertheless, working with estimates developed by Stewardship Ontario and the LCBO, TBS has provided an estimate of the increase in glass diversion associated with beverage alcohol containers.

As can be seen from row 10 above, TBS estimates that approximately two thirds of the combined increase in glass diversion can be attributed to beverage alcohol glass containers – an increase of approximately 43,000 tonnes in 2010-11 or proportionately 59% more ODRP glass than the Blue Box was estimated to divert in 2006.

Methodology and Assumptions: Appendix 3:

TBS-ODRP Glass Diversion Calculations cont'd

Details Regarding Data Sources and Methodology:

1. Waste Diversion Ontario compiles an annual report on the amount of materials recovered in the Blue Box program and marketed by municipalities to recyclers. Figures for Blue Box diversion in Row 1 are from Highlights of the 2009 : Residential Blue Box Materials, available online at the Waste Diversion Ontario website at http://www.wdo.ca/reports/default.aspx
2. As noted above, based on information obtained by TBS from glass recyclers, it is estimated that 15% of what is marketed by municipalities to glass recyclers will be lost to beneficiation processes and ultimately sent to landfill. Row 2 is calculated by applying 15% to Row 1 totals.
3. Row 3 is simply the total from Row 1 minus Row 2 (the glass lost to beneficiation). The resulting total represents an estimate of the actual amount of glass diverted from Ontario landfills by the Blue Box program.
4. Row 4 totals for ODRP glass diversion totals are from TBS Responsible Stewardship Reports for the years 2007-08, 2008-09, 2009-10 and 2010-11. Please note that the ODRP diversion totals for 2007-08, 2008-09 were initially underreported due to a methodological error. These diversion totals were corrected and re-stated in the 2009-10 Responsible Stewardship Report and the corrected totals from that Report are used in the chart above. The diversion totals represent the tonnage of glass shipped from TBS to glass recyclers.
5. Row 5 is calculated by adding rows 3 (Blue Box) and 4 (ODRP) to calculate a glass diversion total for the combined systems. Please note for the period 2007-08, the Blue Box data for 2007 includes one month (January) for which no ODRP program was in place. Given that the purpose of the assessment is to review, the difference between Blue Box diversion (with no ODRP) to Blue Box diversion plus ODRP an adjustment was made to the combined data for 2007-08 to remove an estimate of the LCBO glass diverted in the Blue Box for that month (6,500 tonnes).
6. Row 6 calculates the difference in glass diversion associated with the Blue Box and ODRP programs in comparison to the base year of 2006. An amount for each year was derived by subtracting the total diversion for 2006 from the diversion totals for the periods 2007-08, 2008-09, 2009-10 and 2010-2011.
7. In order to determine the increase in glass diversion associated with ODRP containers it is necessary to develop an estimate of how much Blue Box glass is associated with beverage alcohol containers both prior to ODRP's introduction and currently. As part of its fee setting process Stewardship Ontario provides information to stewards regarding the amount of materials diverted under its program. On October 22, 2008 Stewardship Ontario provided stewards with estimates regarding glass diversion data that excluded beverage alcohol containers for the years 2006 and 2007. This information is contained in a publication entitled Explanatory Note on Stewards' Fees for 2009 available online at the Stewardship Ontario website at http://www.stewardshipontario.ca/bluebox/pdf/fees/2009_fees_explanatory_note.pdf. An estimate of LCBO glass in the Blue Box for 2006 and 2007 was calculated by

Methodology and Assumptions: Appendix 3:

TBS-ODRP Glass Diversion Calculations cont'd

subtracting the glass diversion totals for 2006 and 2007 reported in the explanatory note, 53,743 and 66,569 tonnes respectively, from the glass diversion totals recorded in the WDO Municipal Datacall Reports (Row 1 totals in the chart for those years). For the period 2010-11 TBS, based on an estimate by the LCBO in its 2011 Sustainability Report, that 92% of LCBO containers (page 5 states "With ODRP and municipal Blue Box systems combined, Ontarians are recycling 92 per cent of their empty beverage alcohol containers – one of the best return rates of any such system in the world.") that 15% of ODRP containers are collected in the Blue Box. Given that 77% of ODRP containers were collected in the ODRP system in 2009-10, TBS assumes that the LCBO estimates that 15% of its containers remain in the Blue Box (92 minus 77). To calculate a glass tonnage estimate for those containers, TBS assumed that two thirds of the small glass and large glass containers not collected under ODRP program remained collected in the Blue Box (15% of the 22.5% of containers not collected). Standard glass weights for each category were utilized to develop a tonnage diversion estimate for the period 2010-11. That total is reported in Row 7 in the far right hand column.

8. Row 8 represents 15% of Row 7 – see note 2 above.
9. Row 9 represents an estimate of the total glass diversion for the Blue Box and ODRP systems attributable to beverage alcohol containers for the years 2006, 2007-08 and 2010-11 (years for which an estimate of beverage alcohol glass in the Blue Box is available).
10. Row 10 calculates the difference between diversion for beverage alcohol glass containers in 2007-08 and 2010-11 in comparison to the base year estimate of 2006. The totals are calculated by subtracting the diversion total for 2006 (Blue Box only) from the diversion totals for 2007-08 and 2010-11 (Blue Box and ODRP). As can be seen from Row 10, approximately two thirds of the increase in glass diversion can be attributable to improved glass diversion associated with beverage alcohol glass containers.