



BCUOMA

British Columbia Used Oil
Management Association

Annual Report to the Director

2012 Calendar Year

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1. Executive Summary

Products within plan	Oil, Antifreeze, Oil Filters, and Oil and Antifreeze Containers
Program website	www.usedoilrecycling.com

Recycling Regulation Reference	Topic	Summary (5-bullet maximum)
Part 2, section 8(2)(a)	Public Education Materials and Strategies	<ul style="list-style-type: none"> • Partnership with BC Stewards & RCBC on hotline & recyclepedia to inform do-it-yourselfers regarding take-back. • A 4 month Summer Ambassador Program to visit or contact all 500 + Return Collection Facilities, visit local governments, attend community events and media interviews. • Radio, newspaper and internet advertising. Participation with other BC Stewards on a Video, the Recycling Handbook, and Consumer Protection BC initiative.
Part 2, section 8(2)(b)	Collection System and Facilities	<ul style="list-style-type: none"> • 520 Return Collection Facilities (RCFs) in 2012 compared to 508 in 2011 for take back of used oil materials. • 339 RCFs for the take back of used antifreeze materials in 2012, compared to approximately 300 in 2011. Registered BCUOMA Collectors also pick up from more than 4,000 generators across BC.
Part 2, section 8(2)(c)	Product Environmental Impact Reduction, Reusability and Recyclability	See Section 5 for product environmental impact reduction, reusability and recyclability
Part 2, section 8(2)(d)	Pollution Prevention Hierarchy and Product / Component Management	See Section 6 for Pollution Prevention Hierarchy and product/component management
Part 2, section 8(2)(e)	Product Sold and Collected and Recovery Rate	See Section 7 for product sold, collected and recovery rate
Part 2, section 8(2)(e.1)		See Section 7 for breakdown per regional district
Part 2, section 8(2)(f)	Summary of Revenues and Expenses	Outlined in Section 8 of the Report

Comparison of Key Performance Targets
Key performance targets outlined in Section 9 of the Report

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2. Program Outline

The British Columbia Used Oil Management Association (BCUOMA) is a not-for-profit Society formed under the British Columbia Society Act in 2003. BCUOMA's role is to perform on behalf of each producer (brand-owner) member of BCUOMA certain duties required under the *Recycling Regulation*. Effective December 31, 2012, there were 215 producer members of BCUOMA. Members range from very large companies, such as Imperial Oil and Petro-Canada, to very small companies such as a small industrial filter seller out of rural Chilliwack. The producer members are listed in alphabetical order on www.usedoilrecycling.com/en/bc/members.

A nine member Board of Directors manages BCUOMA, with representatives from manufacturing, retailing, local government and public-at-large. An Executive Director reports to the Board, and is responsible for operations management, financial management, communications, staff management and general administrative oversight. In order to streamline operations and minimize costs, BCUOMA shares an office in Edmonton with the Alberta Used Oil Management Association (AUOMA). Contact information for BCUOMA's offices is listed on www.usedoilrecycling.com/en/bc/contactus.

As required by Regulation, BCUOMA has operated a province-wide collection and recycling program for used oil, used oil filters and used oil containers since August 2003 for both the do-it-yourselfer market, as well as the commercial and industrial markets. This is similar to the tire stewardship program, but different from some of the other stewardship programs such as Product Care and the Medications Programs, which do not serve the commercial and industrial markets. Antifreeze and antifreeze containers were incorporated in the BCUOMA program effective July 1, 2011.

The used oil and antifreeze materials - used oil, used antifreeze, used oil filters, and used oil and antifreeze containers, are regularly picked up from over 4,000 Generators across British Columbia by BCUOMA Registered Collectors (Collectors). BCUOMA pays the Collectors Return Incentives (RIs) twice a month, as long as the Collector has provided BCUOMA with the required supporting documentation, and has shipped the collected materials to a BCUOMA Registered Processor (Processor) for an approved end-use. For an approved end-use to be eligible, the end-use must be environmentally sound and be substantially in compliance with environmental requirements.

The amount of the RI varies depending on the zone of the province in which the used oil materials are generated. The more remote the area of the province, the higher the RI rate which is paid to the Collector. All members pay the same Environmental Handling Charge (EHC) for the sale of oil, antifreeze, oil filters and oil and antifreeze containers; the intent of the program is that people living in the populated south-west area of the province help support the collection and recycling in the rest of the province. Under most market conditions, the RIs are set high enough so that there is no cost to the Generators. However, volume, quality, amount of competition and location are all determining factors as to how much, if any of the RI, is passed on to the Generator from the Collector. The RI zone map and the rates paid per zone for each of the three used oil materials can be found on www.usedoilrecycling.com/en/bc/collectors.

3. Public Education Materials and Strategies

The key elements of the consumer awareness and education program for 2012 included the following:

- a. A partnership with the other BC Stewards and the Recycling Council of BC for the Recycling Hotline, and a website (Recyclepedia) to inform British Columbians of what is recyclable and the nearest location to take back their used oil and antifreeze materials. In addition, the BC Stewards produced a video, Recycling Handbook and participated in a Consumer Protection initiative on ecofees.
- b. For the first time in 2012, online ads were used, in addition to radio and newspaper ads, which in most cases, were run at times when the Ambassador Team was in a particular location.
- c. A Summer Ambassador Program, where a team of young people in a hybrid vehicle toured the province to meet with RCF operators, respond to media interview requests, and meet local governments and the general public at special events. The purpose of their visits is to ensure that the RCFs are up-to-date with information, brochures and signs, and that local governments and the general public are informed about the program. In 2012, BCUOMA partnered with the Medications Group, Product Care and ESABC to hand out their brochures and information when meeting with local governments and the general public. During the 17 week summer period, the team travelled to 122 municipalities and:
 - i. visited or contacted all listed return collection facilities;
 - ii. met with 19 local government officials and provided them with brochures and other information about the program;
 - iii. took part in 65 media interviews;
 - iv. attended 12 community events; and
 - v. recruited some new RCFs for the do-it-yourselfer to take their used oil and antifreeze materials.

A detailed report on the 2012 program can be accessed at:
www.usedoilrecycling.com/en/bc/communicationspublicity

In communication with Generators of used oil who charge oil change service fees that are incorrectly termed “environmental handling charges”, BCUOMA continues to emphasize that if they do show these charges they should fairly represent the EHC that BCUOMA requires the Producers to remit. This message is prominently shown on www.usedoilrecycling.com/en/bc/aboutus, and in the BCUOMA Brochure. It also emphasizes that this is not a government tax.

4. Collection System and Facilities

In 2012, there were 520 of the over 4,000 Generators that were RCFs for the do-it-yourselfer to take back small quantities of used oil materials at no cost. Of those 520, 339 also accepted used antifreeze materials. The RCFs list can be accessed on www.usedoilrecycling.com, by calling the Recycling Council of BC toll-free hotline number, or using the Recyclepedia App on apple or android smart phones.

Most of the province is well served with RCFs, with approximately 58 sites that are either run by local government or not-for-profit groups at their landfill sites, transfer stations or recycling centers. All of

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the Canadian Tire stores, Mr. Lube stores, most Great Canadian Oil Change stores, and many other commercial automotive service centers are included in the locations available to the do-it-yourselfer.

In the April 15, 2011, approved stewardship plan for both used oil and antifreeze materials, it was indicated that BCUOMA would like to maintain between 400 to 500 RCFs for the used oil material do-it-yourselfers, and approximately 350 to 400 RCFs for antifreeze do-it-yourselfers. BCUOMA does have a policy to provide financial assistance to local governments and not-for-profit groups, for the purchase of an oil tank or other relevant infrastructure for collection of the used oil and antifreeze materials. BCUOMA will also pay up to \$500 to a local government which holds a Household Hazardous Waste Collection event if they collect used oil and antifreeze materials at the event.

As well, as of July 1, 2011, BCUOMA paid the RCF operators \$0.10/l for their used oil if they collect used oil, oil filters and oil containers, and \$0.15/l for their used antifreeze if they collect used antifreeze and antifreeze containers. The payments are made to the operators twice per year and has resulted in more Generators being interested in being a RCF.

BCUOMA is seldom notified by the operator when a RCF shuts down, relocates, changes ownership, or decides they will no longer accept used oil and/or antifreeze materials from the do-it-yourselfers. As a result, BCUOMA has the Ambassador Team visit or contact most of the operators each year to ensure that they are still with the program and have the necessary signage, brochures and other information about the program. The list of RCFs is regularly updated based on this information, as well as other information from the Recycling Hotline operators, local governments and members of the public. Another important factor in keeping the RCF list current is the twice/year payments that BCUOMA now makes directly to the RCF operators.

Attached please find a copy of the current list of RCFs organized according to the eleven zones of the province, and the cities and towns in each of the zones.

5. Product Environmental Impact Reduction, Reusability and Recyclability

75% of the oil sales in British Columbia in 2011 were for industrial and commercial uses, and only 25% for passenger cars and light trucks. The newer vehicles and industrial engines have a longer driving distance and/or time period between oil changes, and they have been designed to consume much less oil in use. It appears that oil sales for passenger cars and light trucks is dropping despite the increase in population in BC. The fluctuation in oil sales from year to year relates mainly to the level of industrial economic activity in the province.

Given that 1 litre of used oil can contaminate a million litres of drinking water, it is important that the used oil, filters and oil containers be collected, recycled and kept out of the receiving environment. An Unaccounted Used Oil Study undertaken in 2012, identified that only about 2.5 million litres of used oil ends up in the landfill with the landfilled oil containers, filters and oily rags, and a very small amount might get dumped into the environment or used for road oiling or weed control.

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BCUOMA registers the Collectors and Processors before they are eligible to receive RIs. Under the *Hazardous Waste Regulation*, used oil and used oil filters are considered a hazardous waste; as well, the oil containers often contain a certain amount of new oil. Most test results on used antifreeze show it to not be a hazardous waste. Occasionally, the test results show it to be a leachable toxic waste. In addition, measures are required to ensure that proper equipment and vehicles are used to collect the used oil and antifreeze materials. As a result, it is important that any Collectors and Processors handling used oil and antifreeze materials are doing so in compliance with the required environmental standards.

BCUOMA requires as a condition of registration, and every two years thereafter, that each Collector and Processor must engage an independent third party qualified professional to conduct an environmental audit of their operations, and state in a Letter of Regulatory Compliance that the operation is in substantial compliance with all applicable provincial and federal environmental Legislation and Regulations. Also, the Collector and Processor must submit a current Business License. If either of these two conditions is not met, BCUOMA will not register the Collector or Processor.

If the government regulator advises BCUOMA that a Collector or Processor is in significant non-compliance with environmental requirements, BCUOMA will de-register that company. This has been done on several occasions in the past, and the result is the company will not be able to operate, due to BCUOMA cutting off RI payments upon de-registration. As a result, the incentive to comply for existing registered Collectors and Processors is directly tied to their financial viability to operate in British Columbia.

In 2012 BCUOMA advised two companies that are selling oil in incompatible or non-recyclable containers that BCUOMA would be recommending to their members in June 2013, that the EHC be increased from \$0.10/litre of container to \$0.17/litre of container. As a result one company who sold oil in the non-recyclable container (22.7 litre bag-in-a-box) discontinued its use in 2012, while the other company continues to sell oil in this container but has discontinued selling oil in the 1 litre PET oil bottle, which is incompatible with the HDPE oil containers. BCUOMA continues to deal with the one company who is selling oil in an incompatible, non-recyclable 22.7 litre bladder bag to have them either make the container recyclable or phase out its use.

In 2012, Conestoga Rovers Associates (CRA) were engaged under contract to determine the Unaccounted Uses for Used Oil. As identified in Section 7, only 69.9% of the 88.7 million litres oil that was sold in 2012 was considered available for collection (62.0 million litres). In 2012, 12.6 million litres of oil available for collection were not recovered through the BCUOMA program. The CRA report identified that about 2.5 million litres of oil mainly ends up in landfills in the oil filters and oil containers that aren't recovered, plus oily rags and absorbent material that gets land-filled. A smaller portion of the 2.5 million litres is used for road oiling, weed eradication and dumping.

The remaining 10.1 million litres of oil is used by businesses as a fuel (mainly used oil furnaces) or for other industrial uses such as chain oil or other commercial uses. These users are referred to as "cherry pickers" since this used oil is also not available to BCUOMA for collection and recycling.

6. Pollution Prevention Hierarchy and Product / Component Management

a. Used Oil

One of the conditions of payment of RIs to registered BCUOMA Collectors is that they only deliver the used oil and antifreeze materials to BCUOMA registered Processors that sell them for BCUOMA approved end-uses. For used oil, approved end-uses include re-refining and using it as a fuel for pulp mills, cement kilns, asphalt plants, and other uses that meet the intent of the *Hazardous Waste Regulation* or applicable government standards in other states or provinces.

In all cases, the oil must be analyzed in accordance with government-approved methods, and shown to meet the required industry and/or government specifications. Application of used oil to any land for the purpose of road construction, repair or dust suppression is prohibited by the *Hazardous Waste Regulation*, and is not considered a BCUOMA approved end-use. In addition, there are no emission controls on used oil furnaces (space heaters), and the operators in almost all cases do not analyze the used oil to ensure it meets Ministry standards. As a result, the use of used oil in oil-fired furnaces is not considered a BCUOMA approved end-use.

Below is a table that summarizes the end-uses for the used oil for 2012.

END USES OF PROCESSED USED OIL

END USES	AMOUNT IN LITRES
Re-refined Into New Oil	39,142,000
Pulp Mills	705,000
Cement Plants	0
Asphalt Plants	8,619,000
Other Approved End Uses	921,000
TOTAL	49,387,000

For all used oil collected as of January 1, 2014, there will be a change in the amount of used oil collected and processed since all water in the used oil will be factored out of the calculation. This will likely reduce the amount of used oil recovered and delivered to the final end use by about 3%. Also starting in January 2014, the Processor of used antifreeze will be paid instead of the Collector. The payment will be subject to receipt of all required reporting information, including amount of litres of oil processed, monthly inventory of litres of unprocessed oil and processed oil, and the total litres of oil sold for approved, specified end-uses.

b. Used Antifreeze

The used antifreeze recovered during 2012 was processed by M & R Environmental in Burnaby and Pacific Rim Coolants on Vancouver Island. Most of the processed antifreeze was then resold in the province as new antifreeze. It is both difficult and expensive to process the used antifreeze to meet the appropriate ASTM Standards for recycled antifreeze.

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One of the challenges in this province is finding enough companies that will purchase the recycled antifreeze to use in their vehicles and equipment. One processor is working with various levels of government in BC to encourage them to use the recycled antifreeze for their vehicle fleets.

Starting in January 2014, the Processor of used antifreeze will be paid instead of the Collector. The payment will be subject to receipt of all required reporting information, including monthly inventory of litres of unprocessed antifreeze and processed antifreeze, and the total litres of processed antifreeze sold for approved end-uses.

c. Used Oil and Antifreeze Containers

The plastic oil and antifreeze containers are processed at approved facilities in both British Columbia and Alberta. The main challenge in processing oil and antifreeze containers is separating the oil from the plastic. This is achieved by first shredding the containers, followed by centrifuging and washing the shredded plastic. Once a sufficient amount of oil has been removed from the shred, it can be pelletized to make new oil containers, drainage tile, parking curbs and other plastic products. The other option is to use unwashed plastic shred to make items such as plastic lumber where some of the oil is still encased in the finished product and can't be leached out.

Rather than being phased out in 2012 as earlier reported, the 1 litre PET oil bottle is now slated to be phased out in mid-2013, rather than pay the extra \$0.07/litre of container EHC. As a result, the oil company has been advised that BCUOMA will be proposing a motion to its members to impose the extra EHC in 2013, if the company again delays the phase-out. This extra charge was approved by the members in June 2013, and the extra charge will take effect on October 1, 2013.

This same extra charge of \$0.07/litre of container will also take effect on the 22.7 litre bag-in-a-box at the same time. One company has already phased out this non-recyclable bladder bag and hopefully the last company will either develop a recyclable plastic bladder bag or phase it out shortly. In the interim, the only acceptable method of disposal is to a hazardous waste landfill in Alberta.

In 2012, there were 1.634 million kg of oil and antifreeze containers collected. Of that total, 1.136 million kg were from the 140,938 bags of oil and antifreeze containers collected, and 0.498 million kg were from the 453,075 - 20 litre pails collected. The 2011 study showed that 74% of the containers in the bags are eligible oil and antifreeze containers, and 93.5% of the 20 litre pails are eligible oil and antifreeze containers.

Most of the ineligible material is composed of empty windshield washer, diesel exhaust fuel and oil and fuel additive containers. Rather than have the Generators try to sort out these other containers which would otherwise go to landfill, BCUOMA is accepting them in the program. The Ministry of Environment is being encouraged to bring in an amendment to the *Recycling Regulation* to include all automotive fluid containers.

Starting in January 2014, the final Processor of used containers will be paid instead of the Collector. The payment will be subject to receipt of all required reporting information,

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including kilograms of containers shredded per month, monthly inventory of kilograms of un-shredded/centrifuged containers, and shredded/centrifuged containers. Once the shredded/centrifuged containers are mixed with other shredded HDPE from other sources, washed and pelletized, the pelletized material is a commodity and will not be tracked.

d. Used Oil Filters

Since used oil filters are considered a hazardous waste and are quite costly to crush for use in a steel mill, BCUOMA does not pay the Collector the RI until either a steel mill or a metal broker has signed off that they have received the crushed oil filters. BCUOMA wants to avoid the situation where a Processor will simply sign-off the shipment as received, have the Collector receive the RI, and then simply store the un-crushed filters.

If the Processor sufficiently crushes the filters to the point where there is less than 3% oil by weight, and the Ministry of Environment no longer considers them a hazardous waste, BCUOMA then considers sign-off by the metal broker as sufficient to warrant payment of the RI to the Collector. However, if the Ministry hasn't granted the exemption under the *Hazardous Waste Regulation*, and the crushed filters are still considered a hazardous waste, BCUOMA does not pay the RI to the Collector until the steel mill has signed off as having received the crushed filters.

Most of the filters are mainly constructed of steel, and are highly recyclable by the steel mills for recycling into reinforcing steel, nails and other steel products. However, a filter study undertaken in 2007 has shown that about 8% of the filters recovered are made of paper. For nearly all of the filter Processors, they are still able to mix most of the paper filters in with the crushed steel filters. However, a major Lower Mainland filter Processor has too many paper filters in the mix so that they have to be hand-sorted, crushed separately to less than 3% oil by weight, and shipped to a waste to energy facility as a fuel source.

Starting in January 2014, the Processor of used oil filters will be paid instead of the Collector. The payment will be subject to receipt of all required reporting information, including kilograms of crushed filters per month, monthly inventory of kilograms of un-crushed, and crushed filters. Once the crushed filters are delivered to a metal broker and mixed with other metal products, it is a commodity and will not be tracked.

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7. Product Sold (Distributed), Collected and Recovery Rate

SALES, COLLECTION & RECOVERY RATES FOR USED OIL AND ANTIFREEZE MATERIALS

PRODUCT	YEAR	SALES IN MILLIONS	AVAILABLE FOR COLLECTION IN MILLIONS	QUANTITY RECOVERED MILLIONS	PERCENTAGE RECOVERED %	3 YEAR AVERAGE RECOVERY RATE %
Oil	2010	85.1 Litres	59.5 Litres	47.5 Litres	79.8	
	2011	93.5 Litres	65.4 Litres	48.0 Litres	73.4	77.5
	2012	88.7 Litres*	62.0 Litres	49.4 Litres	79.3	
Antifreeze	2011 (1/2 Yr)	5.07 Litres	2.28 Litres	0.991 Litres	43.4	
	2012	9.560 Litres* ¹	4.302 Litres	2.328 Litres	54.1	48.9
Filters	2010	6.10	6.10	5.22	85.6	
	2011	6.23	6.23	5.39	86.5	85.8
	2012	6.057*	6.057	5.159	85.2	
Containers	2010	1.736 kg	1.736 kg	1.533 kg	88.3	
	2011	1.924 kg	1.924 kg	1.676 kg	87.1	84.9
	2012	2.066 kg* ²	2.066 kg	1.637 kg	79.2	

* - balance has been audited. Refer to appendix Independent Reasonable Assurance Report to the Directors of BCUOMA

a. Used Oil Collected and Recovery Rate

Since only about 2.5 million litres of oil sold (distributed) each year is disposed of through discarded oil containers, oil filters, oily rags or illegally dumped or used in road oiling or weed control, the remainder is either consumed-in-use (estimated to be 30.1%), used by "cherry pickers", or it comes through the BCUOMA system. Cherry pickers are the businesses that use used oil for fuel for used oil furnaces, greenhouses, for making explosives in coal mines, chain oil or other business uses. This amount is not available to BCUOMA for collection.

Once the new system of paying the Processors for the oil is in place, commencing January 1, 2014, the amount of used oil collected and the end-uses will be reported on in such a way that the Auditors

¹ Glycol is defined as 100% glycol and is sold in concentrated form, while antifreeze is defined as a mixture of 50/50 glycol blended with water. The amount of antifreeze reported above has been calculated as follows in order to allow for a consistent method of reporting: (in millions of litres)

Actual volume of antifreeze sold during the year	2,766
Actual volume of glycol sold during the year	3,397
Actual volume of glycol sold during the year multiplied by two to allow for dilution	<u>6,794</u>
Total volume of both antifreeze and glycol sold during the year	9,560

² The total volume of containers sold is initially measured in litres and then subsequently converted to kilograms to allow for the calculation of recovery rates. The total volume of containers sold for the fiscal year 2012 was 39,603 million litres.

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consider that assurance auditing of those parameters will be possible for the data collected in 2014. However, starting next year, it is proposed to determine a three year rolling average recovery rate, with the consideration that the oil that is available for collection is the amount sold less the amount consumed-in-use, and the amount used by the "cherry pickers". If the Ministry of Environment will accept the above qualifiers for determining the three year rolling average recovery rate, it is possible that the Auditors may be able to perform assurance auditing for BCUOMA on used oil recovery rate. Because it is a three year rolling average, it will likely take until 2017 before assurance auditing can be undertaken on a 2014 to 2016 three year rolling average.

b. Used Antifreeze Collected and Recovery Rate

Based on a study conducted in 2012 by Dessau for all the Used Oil Management Associations from across Canada, it was determined that about 52.4% of the antifreeze sold (distributed) (50% glycol:50%water) is consumed in use in BC through overheating radiators, burst hoses, accidents, evaporation, etc. Of the 47.6% that is potentially available for collection, there are still some small local businesses that filter their own antifreeze. As a result, this antifreeze is also not available for collection.

In calculating the amount of used antifreeze collected, the antifreeze delivered to the processor is measured in litres and tested for the % glycol. Once the % glycol is known, the reported litres collected are adjusted to a 50% glycol:50%water, the same proportion of glycol and water that is put in a vehicle or equipment as new antifreeze.

Once the new system of paying the Processors for used antifreeze is in place, commencing January 1, 2014, the amount of used antifreeze collected and the end-uses will be reported on in such a way that the Auditors consider that assurance auditing of those parameters will be possible for the data collected in 2014. Starting next year it, is proposed to determine a three year rolling average recovery rate, with the consideration that the antifreeze that is available for collection is the amount sold less the amount consumed-in-use, and an estimated amount used by the "cherry pickers". It is also important to note that with antifreeze, most of the antifreeze sold in one year is not collected and recycled that year.

If the Ministry of Environment will accept the above qualifiers for determining the three year rolling average recovery rate, it is possible that the Auditors may be able to perform assurance auditing for BCUOMA on the used antifreeze recovery rate. Because it is a three year rolling average, it will likely take until 2017 before assurance auditing can be undertaken on a 2014 to 2016 three year rolling average.

c. Used Oil Filters Collected and Recovery Rate

In the case of used oil filters, all the used filters are considered available for collection. There doesn't appear to be anyone that considers used filters to have a value. As a result, there is the potential for all the used filters to be collected and recycled through the BCUOMA program. Commencing in January 1, 2014, payment will be made to the filter Processors on filters on the weight of the crushed filters

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delivered to a metal broker. Assurance auditing of the amount collected and recycled into other steel products will be possible in 2015 on the 2014 data collected.

Determining recovery rate is more problematic. For sales of filters, BCUOMA knows the number of small filters (< 8 inches) and large filters (8 inches and larger) sold each year. However, when the filters are collected, effective January 1, 2014, the measurement will be made in kilograms of crushed filters. The challenge in determining a recovery rate is that BCUOMA accurately knows the number of filters sold in one year plus will know the crushed weight of the filters collected. Starting next year, it is proposed to determine a three year rolling average recovery rate, with the consideration that the filters sold are available for collection that year, and that the estimated kilograms of filters sold each year can be determined so that crushed weight recovered can be divided by weight of filters sold. If the Ministry of Environment will accept the above qualifiers for determining the three year rolling average recovery rate, it is possible that the Auditors may be able to perform assurance auditing for BCUOMA on used the oil filter recovery rate. Because it is a three year rolling average, it will likely take until 2017 before assurance auditing can be undertaken on a 2014 to 2016 three year rolling average.

d. Used Oil and Antifreeze Containers Collected and Recovery Rate

In the case of used oil and antifreeze, all the used containers are considered available for collection. There doesn't appear to be anyone that considers used containers to have a value. As a result, there is the potential for all the used containers to be collected and recycled through the BCUOMA program. Commencing in January 1, 2014, payment will be made to the Processors on the shredded/centrifuged weight of the containers, either pelletized or used to make plastic lumber. Assurance auditing of the amount collected and recycled into other plastic products will be possible in 2015 on the 2014 data collected.

Determining recovery rate is more problematic. For sales of containers, BCUOMA knows the number of litres of containers sold each year. However, when the containers are collected, effective January 1, 2014, the measurement will be made in kilograms of shredded/centrifuged containers. The challenge in determining a recovery rate is that BCUOMA accurately knows the litres of containers sold in one year plus will know the shredded/centrifuged weight of the containers collected. However, starting next year it is proposed to determine a three year rolling average recovery rate, with the consideration that the containers sold are available for collection that year, and that the estimated kilograms of containers sold each year can be determined so that the shredded/centrifuged weight recovered can be divided by weight of containers sold. If the Ministry of Environment will accept the above qualifiers for determining the three year rolling average recovery rate, it is possible that the Auditors may be able to perform assurance auditing for BCUOMA on the container recovery rate. Because it is a three year rolling average, it will likely take until 2017 before assurance auditing can be undertaken on a 2014 to 2016 three year rolling average.

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2012 COLLECTIONS BY REGIONAL DISTRICT								
REGIONAL DISTRICT	Oil - Litres	Oil Litres Per Capita	Filters - kg	Filters kg per Capita	Containers - kg	Containers kg Per Capita	Antifreeze - litres	Antifreeze litres per capita
Alberni-Clayoquot	417,062	13.22	27,613	0.88	19,023	0.60	21,851	0.693
Bulkley-Nechako	528,871	13.45	43,801	1.11	23,892	0.61	17,634	0.448
Capital	2,821,777	7.50	193,512	0.51	90,602	0.24	259,098	0.688
Cariboo	1,012,716	15.40	65,053	0.99	50,272	0.76	39,066	0.594
Central Coast	50,901	15.80	2,937	0.91	1,277	0.40	1,138	0.353
Central Kootenay	1,261,514	20.72	71,763	1.18	33,952	0.56	14,449	0.237
Central Okanagan	2,296,978	12.19	149,551	0.79	93,474	0.50	104,792	0.556
Columbia-Shuswap	824,648	15.38	50,267	0.94	27,820	0.52	23,394	0.436
Comox Valley	859,982	13.22	56,938	0.88	39,225	0.60	45,056	0.693
Cowichan Valley	626,272	7.50	42,948	0.51	20,108	0.24	57,505	0.688
East Kootenay	1,252,420	20.72	71,245	1.18	33,707	0.56	14,345	0.237
Fraser Valley	2,281,092	7.90	154,448	0.53	71,849	0.25	142,824	0.495
Fraser-Fort George	2,036,025	20.89	124,584	1.28	105,161	1.08	65,285	0.670
Metro Vancouver	19,300,688	7.90	1,306,806	0.53	607,928	0.25	1,208,456	0.495
Kitimat-Stikine	632,830	15.93	47,829	1.20	20,823	0.52	15,903	0.400
Kootenay-Boundary	660,567	20.72	37,577	1.18	17,778	0.56	7,566	0.237
Mount Waddington	155,678	13.22	10,307	0.88	7,101	0.60	8,156	0.693
Nanaimo	1,345,608	8.88	91,130	0.60	49,750	0.33	104,443	0.689
North Okanagan	1,015,283	12.19	66,103	0.79	41,316	0.50	46,319	0.556
Northern Rockies	1,023,154	160.17	35,331	5.53	10,827	1.69	2,214	0.347
Okanagan Similkameen	1,010,275	12.19	65,777	0.79	41,112	0.50	46,090	0.556
Peace River	4,231,233	63.95	185,937	2.81	80,291	1.21	95,100	1.437
Powell River	324,646	15.80	18,734	0.91	8,146	0.40	7,261	0.353
Skeena-Queen Charlotte	196,828	10.16	18,702	0.97	11,379	0.59	6,558	0.402
Squamish-Lillooet	516,970	12.19	33,659	0.79	21,038	0.50	23,585	0.556
Stikine	92,577	160.17	3,197	5.53	980	1.69	200	0.347
Strathcona	589,463	13.22	39,027	0.88	26,886	0.60	30,883	0.693
Sunshine Coast	372,742	12.19	24,268	0.79	15,168	0.50	17,005	0.556
Thompson-Nicola	1,614,054	12.19	105,087	0.79	65,683	0.50	73,636	0.556
TOTAL	49,352,854		3,144,131		1,636,570		2,499,814	

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8. Summary of Revenues and Expenditures

PROGRAM COSTS	2012	2013 APPROVED	2014 PROJECTED	2015 PROJECTED
RI, IDIs & RCF Payments	\$ 10,877,786	\$ 10,831,647	\$ 10,878,586	\$ 10,942,465
Bad Debt	\$ 13,680	\$ 10,000	\$ 10,000	\$ 10,000
Communications	\$ 333,158	\$ 384,795	\$ 400,000	\$ 410,000
Legal	\$ 35,188	\$ 8,000	\$ 8,000	\$ 8,000
Consulting	\$ 44,771	\$ 60,000	\$ 60,000	\$ 60,000
EHC Compl. Rev.	\$ 53,108	\$ 63,000	\$ 64,000	\$ 64,000
Mgmt & Adm Con	\$ 49,657	\$ 52,486	\$ 54,351	\$ 56,283
Depot Infrast	\$ 9,146	\$ 40,000	\$ 40,000	\$ 40,000
TOTAL	\$ 11,416,494	\$ 11,449,928	\$ 11,514,937	\$ 11,590,748
ADMIN. COSTS				
Mgmt & Admin Con	\$ 336,316	\$ 354,944	\$ 368,202	\$ 381,963
Legal	\$ 16,412	\$ 32,000	\$ 32,000	\$ 32,000
Indep. Audit	\$ 51,200	\$ 70,000	\$ 73,000	\$ 76,000
Office Gen Exp	\$ 61,522	\$ 90,000	\$ 80,000	\$ 80,000
Rent	\$ 40,340	\$ 42,000	\$ 44,000	\$ 46,000
Board Expenses	\$ 20,729	\$ 25,000	\$ 60,000	\$ 25,000
Ammortization	\$ 597	\$ 10,000	\$ 8,000	\$ 6,000
TOTAL	\$ 527,116	\$ 623,944	\$ 665,202	\$ 646,963
REV & EXPENSES				
EHC REVENUE	\$ 13,455,029	\$ 13,464,132	\$ 13,464,132	\$ 13,464,132
OTHER INCOME	\$ 76,939	\$ 110,000	\$ 120,000	\$ 130,000
PROG. COSTS	\$ 11,416,494	\$ 11,449,928	\$ 11,514,937	\$ 11,590,748
ADMIN. COSTS	\$ 527,116	\$ 623,944	\$ 665,202	\$ 646,963
EXCESS REVENUE OVER EXPENSES	\$ 1,588,358	\$ 1,500,260	\$ 1,403,993	\$ 1,356,422

As a condition of membership in BCUOMA, producer members are required to remit to BCUOMA the Environmental Handling Charges (EHCs), if they bring oil, antifreeze and filters into BC for sale, distribution or their own use. It is up to each producer, distributor, wholesaler and retailers as to whether they pass on the EHC down the line. However, in most cases, the extra charge does appear on the consumer's receipt in most places where oil and antifreeze materials are purchased.

Below is a table that outlines the EHCs that producer members remit to BCUOMA.

BC Used Oil Management Association 2012 Report to Director, Waste Management

EHC REMITTANCES TO BCUOMA

PRODUCT	ENVIRONMENTAL HANDLING CHARGE (EHC)
Oil	\$0.05/litre
Filters < 8 Inches in length	\$0.55/filter
Filters 8 inches or longer	\$1.25/filter
Antifreeze	\$0.20/litre
Oil and Antifreeze containers (30 litres or less)	\$0.10/litre of container

9. Plan Performance

Below is a table that outlines targets set out in BCUOMA's approved Stewardship Plan and its Annual Business Plan.

Plan Target	2012 Results	Strategies for Improvement
Used Oil Return Collection Facilities (RCFs) = 400 - 500	520 RCFs	
Used Antifreeze Return RCFs = 350 - 400	339 RCFs	It is expected that this # will increase following the Summer Ambassador Program
Registered Collectors & Processors = 39	Registered Collectors & Processors = 39	
Oil Sales = 95.37 Million Litres	Oil Sales = 88.71 Million Litres	Decreased oil sales is a reflection of the economic activity in BC for 2012.
Recovery of Used Oil = 52 Million Litres	Recovery of Used Oil = 49.4 Million Litres	Even though 6.66 Million Litres less oil was sold, only 2.56 Million Litres less oil was collected
Antifreeze Sales = 10.14 Million Litres	Antifreeze Sales = 9.60 Million Litres	Antifreeze program is very new
Recovery of Used Antifreeze = 2.099 Million Litres	Recovery of Used Antifreeze = 2.327 Million Litres	
Filter Sales = 6.292 Million	Filter Sales = 6.056 Million	Filter sales tend to follow oil sales
Filters Recovered = 5.537 Million	Filters Recovered = 5.159 Million	Filters sold in one year are not necessarily recovered that year.
Oil & Antifreeze Container Sales = 37.708 Million Litres (2.045 Million kg)	Oil & Antifreeze Container Sales = 39.470 Million Litres (2.066 Million kg)	
Containers Recovered = 1.799 Million kg	Containers Recovered = 1.637 Million kg	
EHC Revenue = \$14.086 Million	EHC Revenue = \$13,455,029	

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Plan Target	2012 Results	Strategies for Improvement
Administration costs as a % of EHC Revenue = 4.10%	Administration costs as a % of EHC Revenue = 3.92%	
Excess Revenue Over Expenditure = \$1.667 Million	Excess Revenue over Expenditure = \$1,558,358	

In 2012, the average program cost to collect and recycle a litre of oil was \$0.0786, which is the same cost as it was in 2011; for antifreeze, it was \$0.2958/litre compared to \$0.2861/litre for the last half of 2011; for a filter in 2012, it was \$0.584 compared to \$0.564 in 2011, and for a kg of oil and antifreeze container in 2012, it was \$1.6432 compared to \$1.6243 in 2011. The program is structured in such a way that all British Columbians pay the same EHC when they buy the oil, antifreeze, filters, and oil and antifreeze containers, but the costs for collection are much higher in the remote locations of the province.

Appendices / Additional Information and Third Party Assurance

Include:

Annual Report which includes audited Financial Statements

Independent Reasonable Assurance Report to the Director of BCUOMA*

Specified Procedures for Non-Financial Information such as Product Collected and End Fate of Product Collected in Accordance with the Pollution Prevention Hierarchy. Please note the changes are being made to the BCUOMA program effective January 1, 2014, that will enable assurance auditing to be done on these items in June 2015, for the 2014 operating period. If evaluation criteria can be agreed on with the Auditor and the Ministry of Environment on a three-year rolling average for Recovery Rate, that measurement will also be subject to assurance auditing for the 2016 operating period.

A copy of the list of BCUOMA's Return Collection Facilities as of June 2013.

A copy of the 2013 - 2015 BCUOMA Business Plan

*The report provides assurance on the following selected information:

- The location of collection facilities, and any changes in the number and location of collection facilities from the previous report; and
- The total amount of the producer's product distributed (sold)