



BCUOMA

British Columbia Used Oil
Management Association

REPORT TO DIRECTOR

2011 CALENDAR YEAR

Submitted to:

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1. Executive Summary

The Table below is taken from the BCUOMA three year Business Plan and summarizes the sales and recovery numbers for 2011 for oil, antifreeze, filters and oil and antifreeze containers, as well as estimates for 2012 to 2014.

Product	Year	Sales (Millions)	Recoverable Portion – Millions	Percentage Recovered	Quantity Recovered – Millions
Oil:	2011	93.50 L	65.35 L	73.3%	47.88 L
	2012 projected	95.37 L	66.66 L	78.0%	52.00 L
	2013 projected	97.28 L	68.00 L	78.0%	53.04 L
	2014 projected	99.22 L	69.36 L	78.0%	54.10 L
Oil filters:	2011	6.228	6.228	86.2%	5.366
	2012 projected	6.292	6.292	88.0%	5.537
	2013 projected	6.418	6.418	88.0%	5.648
	2014 projected	6.547	6.547	88.0%	5.760
Oil containers:	2011	34.20 L (1.802 kg)	1.802 kg	87.1%	1.570 kg
	2012 projected	32.03 L (1.753 kg)	1.802 kg	88.0%	1.586 kg
	2013 projected	32.36 L (1.771 kg)	1.802 kg	88.0%	1.586 kg
	2014 projected	32.69 L (1.789 kg)	1.802 kg	88.0%	1.586 kg
Antifreeze	2011 (1/2 yr)	5.064 L	2.279 L	43.4%	0.989 L
	2012 projected	10.140 L	4.563 L	46.0%	2.099 L
	2013 projected	10.140 L	4.563 L	50.0%	2.282 L
	2014 projected	10.140 L	4.563 L	54.0%	2.464 L
Antifreeze Containers	2011 (1/2 yr)	2.839 L (0.121 kg)	0.121 kg	87.1%	0.105 kg
	2012 projected	5.678 L (0.242 kg)	0.242 kg	88.0%	0.213 kg
	2013 projected	5.678 L (0.242 kg)	0.242 kg	88.0%	0.213 kg
	2014 projected	5.678 L (0.242 kg)	0.242 kg	88.0%	0.213 kg

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 June 8, 2012, there were 210 oil, filter and antifreeze producer members of BCUOMA. The producer members are listed in alphabetical order on www.usedoilrecycling.com/en/bc/members.

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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.

Producers, through networks of both company-owned and independently-owned retail and wholesale facilities, bring lubricating oil, antifreeze and filters into the province for sale or distribution. Retail facilities range from self-serve gas bars to mass merchandise marketers, quick lubes and automotive, farm, marine and commercial equipment dealers. Wholesale lubricating oil facilities comprise both branded bulk plants and independently owned and producer warehouses. Oil and antifreeze is sold in containers as small as less than 500 ml bottles, to as large as 50,000 litre rail cars, with the Regulation applying to the containers 30 litres or less in size.

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, 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.

In the case of used oil filters, BCUOMA also requires the sign-off by a steel mill or metal broker before BCUOMA will pay the RI to the Collector. This is done to ensure that the filters are actually crushed and delivered to a destination where there is assurance that they are no longer a hazardous waste, and that they will be beneficially recycled into new steel materials.

The amount of the RI varies depending in which zone of the province 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

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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.

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 the 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. The Report to the Director will be posted on the BCUOMA website in early July 2012 at www.usedoilrecycling.com/en/bc/aboutus.

3. Educational Materials and Strategies

In the development of a communication and education program, there are a number of different key groups that BCUOMA is trying to reach. They include the over 4,000 Generators of used oil and antifreeze materials, some of which are return collection facilities (RCFs) for the do-it-yourselfer, local governments, and the British Columbians that top-up their own oil and/or antifreeze.

The key elements of the consumer awareness and education program for 2011 included the following:

- a. A partnership with the other BC Stewards and the Recycling Council of BC for the Recycling Hotline, and a website to inform the do-it-yourselfers of the nearest location to take back their used oil materials.
- b. The official launch of the antifreeze recycling program took place on July 4, 2011, at the M & R Environmental recycling facilities in Burnaby. For all of 2011, M & R

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Environmental was the only BCUOMA registered antifreeze Processor. All the major television and radio stations and newspapers gave prominent and positive coverage to the launch.

- 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 2011, 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 137 municipalities and:

- i. visited or contacted 475 return collection facilities;
- ii. met with 18 local government officials and provided them with brochures and other information about the program;
- iii. took part in 35 media interviews;
- iv. attended 8 community events; and
- v. recruited about 35 new return collection facilities for the do-it-yourselfer to take their used oil and antifreeze materials.

A detailed report on the 2011 program can be accessed at:
www.usedoilrecycling.com/en/bc/communicationspublicity

- d. In 2011, BCUOMA again partnered with other BC Stewards to produce an updated British Columbia's Recycling Handbook. In addition to the Handbook, BCUOMA brochures, ice scrapers and oil spouts were handed out to local government officials, members of the public and RCF operators. All of this information references the toll free hotline number and the website as the source of the nearest RCF for the do-it-yourselfer.

In communication with Generators of used oil who charge oil change service fees that are incorrectly termed “environmental handling charges”, BCUOMA will continue 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 Information

As of December 31, 2011, there were about 530 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 530, about 300 also accept 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 40 sites that are either run by local government or not-for-profit groups at their landfill sites, transfer stations or recycling centers. All of 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 450 to 525 RCFs for the used oil material do-it-yourselfers, and approximately 350 RCFs for antifreeze do-it-yourselfers. However, there continues to be a few remote areas of the province where coverage could be improved. In most of these remote areas, there are few automotive service centers that sell oil or service vehicles. 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.

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.

5. Life Cycle Management

a. Oil

In 2011, the sales of lubricating oil were 93.50 million litres which is more than the low point of 83.55 million litres in 2009, and less than the high point of 101.8 million litres in 2005. Approximately 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.

Only a portion of every litre of oil sold is available for recovery because approximately 30.1 per cent of the oil is consumed during use. Of the 65.35 million litres available for recovery, 47.88 million litres were collected and recycled, with a recovery rate of 73.3 per cent. The remaining 17.47 million litres did not come back through the BCUOMA collection and recycling program. Rather, much of it was used in processes such as manufacturing explosives, oil space heaters, chain oil, and other industrial applications. After over eight years of operation, much more used oil is being recovered by the program when compared to the first few years. In addition, less of the used oil is disposed of in an unsafe manner than occurred before the program commenced in mid 2003.

b. Used Antifreeze

For the last half year of 2011, there were 1,892,460 litres of premix antifreeze (50% glycol:50% water) and 1,585,880 litres of concentrate antifreeze (100% glycol) sold in British Columbia. By adjusting the antifreeze sales to a 50:50 glycol/water mixture, there were a total of 5,064,220 litres of antifreeze sold in British Columbia from July 1, 2011 to December 31, 2011. Consistent with Ontario and Manitoba, it is assumed that 55% of the antifreeze sold is consumed in use and the remaining 45% (2,378,899 litres) is available for collection and recycling. For the first half year 989,000 litres of used antifreeze, adjusted to a 50:50 glycol/water mixture, was collected for a recovery rate of 43.4%.

c. Oil and Antifreeze Containers

For oil containers, the number sold increased from 1.736 million kg in 2010 to 1.803 million kg in 2011. Since the program began in mid-2003 there had been a trend for a reduction in oil sold in containers and more in bulk. 2011 was the first year where there was a slight increase in the amount of oil sold in containers. The amount of antifreeze containers sold in last half of 2011 was 121,000 kg. Since the oil and

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antifreeze containers are collected and processed together, the combined recovery rate was 87.1% (1.675 million kg).

d. Oil Filters

For oil filters, the number sold increased from 6.098 million filters in 2010 to 6.228 million filters in 2011 for a recovery rate of 86.2%

6. Pollution Prevention Hierarchy

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 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 2011.

END USES OF PROCESSED USED OIL

END USES	AMOUNT IN MILLIONS OF LITRES
Re-refined Into New Oil	36,866,000
Pulp Mills	1,036,000
Cement Plants	0
Asphalt Plants	7,685,000
Other Approved End Uses	2,293,000
TOTAL	47,880,000

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b. Used Antifreeze

All the used antifreeze recovered during 2011 was processed by M & R Environmental in Burnaby. In early 2012, Pacific Rim Coolants was approved as a Processor 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.

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 be 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.

In the last year, another problem oil container has appeared on the market. It is a 22.7 litre bag-in-a-box. The bladder bag is composed of three layers and is not considered recyclable. One BC plastic processor is currently having these oil contaminated bladder bags hauled to a hazardous waste landfill in Alberta. BCUOMA is currently corresponding with the companies using these containers and the plastic processors to determine a course of action to deal with them.

In 2011, BCUOMA contracted with Conestoga Rovers Associates (CRA) to undertake an oil and antifreeze container study. CRA opened 500 bags of oil and antifreeze containers and examined 500 - 20 litre pails at each of the two container processors in the Lower Mainland. The following table shows the results of the 2011 study and compares it with the 2008 study.

	2011	2008	COMMENTS
Avg. Bag Weight	6.8 kg	6.4 kg	
Eligible Containers	5.0 kg (74%)	4.6 kg (72%)	Includes oil & antifreeze cont. in 2011 and only oil containers in 2008.
Non-Eligible Containers	1.8 kg (26%)	1.8 kg (28%)	Mainly consisted of brake fluid, windshield washer, milk & soap/detergent bottles. In

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			2008, it also included antifreeze containers
# Oil Containers/Bag	39.6	39.2	Includes Lids & a very few oil pails (Most oil containers are 1 to 5 litre size)
# Antifreeze Containers/Bag	3.4	4.2	Mainly 4 litre size
# Windshield Washer	2.9	4.8	Mainly 4 litre size
	2011	2008	COMMENTS
# Fuel & Oil Additive Containers/Bag	1.5	7.6	Mainly less than 1 litre size
Oil Containers by weight	66%	71.7%	
Antifreeze Containers by weight	8%	N/A	
Windshield Washer Containers by weight	6%	N/A	
20 - Litre Oil Pails	93.2%	N/A	
20 - Litre Antifreeze Pails	0.3%	N/A	
20 - Litre Non-Eligible Pails	6.5%	N/A	Mainly Grease & Food Pails

In 2011, there were 1.675 million kg of oil and antifreeze containers collected. Of that total, 1.203 million kg were from the 130,385 bags of oil and antifreeze containers collected and 0.472 million kg were from the 429,188 - 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.

However, when this ineligible percentage was reviewed with one of the major Processors, BCUOMA was advised that some of this ineligible material was not claimed for a RI, nor was it included in the reported data. This information is currently under further review to determine how this effects the calculation of ineligible material.

To reduce the number of ineligible containers, the Ministry of Environment is encouraged to bring in a further amendment to the *Recycling Regulation* to include all automotive fluid containers.

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 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.

7. Recovery Rate

a. Oil

It is estimated that 30.1% of the oil sold is consumed-in-use and not available for collection. This number was determined by a Consumed-In-Use Study that was undertaken on behalf of BCUOMA by a consultant in 2005, and the report is available on www.usedoilrecycling.com/en/bc/aboutus. In 2011, 93.50 million litres of oil was sold and based on the above report, 65.35 million litres was considered available for collection. Of the 65.35 million litres, 47.88 million litres was collected and recycled through the BCUOMA system for a recovery rate of 73.3%.

BCUOMA has agreed to undertake another Unaccounted for Used Oil Study in 2012 to determine the uses for the oil that is not going through the BCUOMA program. While this amount of oil has dropped since program inception, there is still about 17.5 million litres that is used for such things as space heaters, making explosives at coal mines, chain oil and other on-site industrial uses. Also, a small portion of these 17.5 million litres is oil being soaked up by oily rags, floor dry material and oil that remains with the discarded oil containers and filters.

b. Used Antifreeze

Based on work done in Ontario, it is estimated that only 45% of all antifreeze (50% glycol:50% water) sold in BC is available for collection. BCUOMA is working with SOGHU and the other Used Oil Management Associations on a Consumed-In-Use study for antifreeze. The results of this study are expected in late 2012.

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From July 1, 2011, to December 31, 2011, a total of 5,064,220 litres of antifreeze (50% glycol:50% water) was sold in British Columbia with 989,000 litres of used antifreeze, adjusted to a 50% glycol:50% water mixture, was collected for a recovery rate of 43.4%.

c. Oil and Antifreeze Containers

Of the 1.924 million kg of oil and antifreeze containers sold in 2011, all of them were potentially recoverable. There has been a steady increase in the recovery rate since the program began in August 2003, from 12% to 87.1% in 2011.

There may be a small percentage of the 20 litre pails that are re-used by some of the farmers, fishers and loggers, although the percentage of use is unknown at this time.

d. Oil Filters

Of the 6.228 million oil filters sold in 2011, all of them were potentially recoverable. The recovery rate for 2011 was 86.2%.

e. Population by Zone and Regional District

In the Table below, the litres of used oil and antifreeze, kg of filters and kg of oil and antifreeze containers collected in each of the Regional Districts in 2011 are shown. In addition, the per capita amounts of litres of oil and antifreeze, kg of filters and kg of oil and antifreeze containers are also outlined for each of the Regional Districts. In making these determinations, BCUOMA divides the province into eleven zones and determines the amount collected in each of these zones. BCUOMA then uses these numbers to calculate the amount collected in each Regional District by knowing the population of each Regional District as a percentage of the total population of the zone. The assumption is then made that the per capita generation rate in a particular zone is the same for each of the Regional Districts located within that zone. In a few instances, a Regional District is located within two of the eleven zones. In several Regional Districts, where there is a heavy concentration of industry and a low population, the per capita generation rate of used oil materials is very high.

2011 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	420,793	13.29	29,034	0.92	17,862	0.56	10,544	0.333
Bulkley-Nechako	517,552	13.15	39,076	0.99	23,281	0.59	6,009	0.153
Capital	2,814,874	7.51	210,065	0.56	97,146	0.26	84,584	0.226

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Cariboo	995,904	15.12	69,288	1.05	42,210	0.64	15,723	0.239
Central Coast	45,832	14.40	2,510	0.79	1,134	0.36	489	0.154
Central Kootenay	1,236,393	20.38	75,356	1.24	29,655	0.49	4,768	0.079
Central Okanagan	2,256,730	12.05	150,403	0.80	86,167	0.46	39,153	0.209
Columbia-Shuswap	815,580	15.17	52,016	0.97	25,310	0.47	8,609	0.160
Comox Valley	861,215	13.29	59,422	0.92	36,557	0.56	21,579	0.333
Cowichan Valley	625,820	7.51	46,703	0.56	21,598	0.26	18,805	0.226
East Kootenay	1,228,650	20.38	74,884	1.24	29,469	0.49	4,738	0.079
Fraser Valley	2,229,392	7.77	165,653	0.58	84,126	0.29	71,982	0.251
Fraser-Fort George	1,960,692	20.23	135,646	1.40	83,250	0.86	25,984	0.268
Metro Vancouver	18,682,389	7.77	1,388,181	0.58	704,978	0.29	603,214	0.251
Kitimat-Stikine	627,537	15.81	41,164	1.04	22,325	0.56	4,843	0.122
Kootenay-Boundary	648,973	20.38	39,554	1.24	15,565	0.49	2,503	0.079
Mount Waddington	159,924	13.29	11,034	0.92	6,788	0.56	4,007	0.333
Nanaimo	1,342,245	8.91	97,440	0.65	50,167	0.33	37,915	0.252
North Okanagan	1,001,025	12.05	66,715	0.80	38,221	0.46	17,367	0.209
Northern Rockies	1,048,461	165.79	37,304	5.90	11,832	1.87	472	0.075
Okanagan Similkameen	996,107	12.05	66,387	0.80	38,034	0.46	17,282	0.209
Peace River	3,722,315	57.91	183,660	2.86	70,331	1.09	9,795	0.152
Powell River	295,631	14.40	16,192	0.79	7,312	0.36	3,156	0.154
Skeena-Queen Charlotte	193,863	9.95	16,104	0.83	11,739	0.60	2,020	0.123
Squamish-Lillooet	498,741	12.05	33,239	0.80	19,043	0.46	8,653	0.209
Stikine	96,324	165.79	3,427	5.90	1,087	1.87	43	0.075
Strathcona	591,349	13.29	40,802	0.92	25,101	0.56	14,817	0.333
Sunshine Coast	365,893	12.05	24,386	0.80	13,971	0.46	6,348	0.209
Thompson-Nicola	1,595,237	12.05	106,317	0.80	60,910	0.46	27,677	0.209
TOTAL	47,875,441		3,281,964		1,675,167		1,073,080	

8. Fee Information

The BCUOMA program is funded by an Environmental Handling Charge (EHC). It is a condition of membership in BCUOMA that producer members remit quarterly to BCUOMA an EHC to cover the costs of the collection and recycling program. In 2011, the EHC for oil was \$0.05/litre, \$0.10/litre for oil containers, \$0.55/filter for filters 8 inches or less in size, and \$1.25 for filters 8 inches or larger. Effective July 1, 2011, the EHC on both concentrate and pre-mix antifreeze was \$0.20/litre and for the antifreeze containers it was \$0.10/litre of container.

Whether or not the Producer passes the EHC down the distribution chain to the wholesaler, retailer and consumer is up to the producer member. An explanation about the EHC is found on www.usedoilrecycling.com/en/bc/aboutus.

The 2011 Annual Report, including the independently audited financial statements, has been posted on www.usedoilrecycling.com/en/bc/aboutus.

BCUOMA Report to Director, Environmental Quality Branch

9. Performance Targets

Each June, BCUOMA finalizes a new three-year Business Plan that summarizes the performance for the previous year, and projects the recovery rates, financial performance, and other targets for the current year and following two years. The 2012 to 2014 Annual Business Plan has been posted on www.usedoilrecycling.com/en/bc/members.

The key BCUOMA performance measures are recovery rates, number of return collection facilities for the do-it-yourselfer, an adequate number of collectors & processors, amount of EHCs collected, and the ratio of the flow-through of EHC to the payment of RIs to collectors. Each of these performance measures will continue to be tracked and reported in the Annual Business Plan.

2011 Target Set in Business Plan	2011 Target Achieved
Projected EHC revenue = \$12.142 million	Actual EHC revenue = \$13.162 million
Projected Administration costs as a % of EHC revenue = 4.58%	Actual Administration costs as a % of EHC revenue = 4.10%
Projected Oil Sales = 86.07 million litres	Actual Oil Sales = 93.50 million litres
Projected Oil Recovery Rate = 79.0%	Actual Oil Recovery Rate = 73.4 %
Projected Antifreeze Sales = 5.748 million litres (July 1 to December 31)	Actual Antifreeze Sales = 5.064 million litres (July 1 to December 31)
Projected Antifreeze Recovery Rate = 55%	Actual Antifreeze Recovery Rate = 43.4%
Projected Filter Sales = 5.973 million	Actual Filter Sales = 6.228 million
Projected Filter Recovery Rate = 92%	Actual Filter Recovery Rate = 86%
Projected Container Sales = 1.849 million kg	Actual Container Sales = 1.924 million kg
Projected Container Recovery Rate = 85%	Actual Container Recovery Rate = 87%
Projected Number of Return Collection Facilities = 450 - 525	Actual Number of Return Collection Facilities = 530 (300 for antifreeze)
Projected Number of Registered Collectors & Processors = 39	Actual Number of Registered Collectors & Processors = 39
Projected Excess Revenue Over Expenditures = \$1.195 million	Actual Excess Revenue Over Expenditures = \$2.169 million

In 2011, the average program cost to collect and recycle a litre of oil was \$0.078 compared to \$0.077 in 2009; for antifreeze it was \$0.311/litre; for a filter in 2011 it was \$0.564 compared

to \$0.569 in 2010, and for a kg of oil and antifreeze container in 2011 it was \$1.63 compared to \$1.62 in 2010. 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.

10. Green House Gas Savings

In 2010, BCUOMA engaged Conestoga Rovers to undertake a Green House Gas (GHG) Savings Study. In their report, released in August 2010, they determined there was 2.47 kg CO₂ savings per litre of oil collected and recycled, 1.09 kg CO₂ savings per kg of filters collected and recycled, and 2.11 kg CO₂ savings per kg of oil container collected and recycled.