

Product Stewardship Plan



BC Used Oil
Management Association

1 Overview

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 mandate is to ensure the responsible collection and management of the used oil, antifreeze, filters and containers required under the BC Recycling Regulation.

Since its inception, BCUOMA has improved collection and recycling performance in all regions of British Columbia – and across all product categories. This commitment to continuous improvement is a major focus in the new stewardship plan.

BCUOMA has operated a province-wide collection and recycling program for used oil, oil filters and used oil containers since August 2003 and for anti-freeze since 2011 for both the do-it-yourself market, as well as the commercial and industrial markets. The BCUOMA program is funded by its producer members through an Environmental Handling Charge (EHC) on the sale or commercial use of new products. Each BCUOMA member determines if and how it will recover its costs for the BCUOMA charge. BCUOMA produces audited annual financial statements outlining the fee revenue and program expenditures.

BCUOMA received approval from the Province for its current Product Stewardship Plan in 2009. The Plan was amended and approved to include Antifreeze in 2011. In 2014, BCUOMA submitted an updated Plan with new targets. The 2014 Plan was reviewed over 3 years by the Ministry of Environment without decision. In 2017, after discussion with the Ministry of Environment, BCUOMA began the process to prepare a new plan with new targets as much of the information and targets in the proposed 2014 Plan had become stale-dated.

2 Legal Requirements

The *Recycling Regulation*, replacing the *Post-Consumer Residual Stewardship Program Regulation*, was brought into law on October 7, 2004. Under authority of the Environmental Management Act the regulation sets out the requirements for Product Stewardship in British Columbia. BCUOMA represents the producers of designated products appointed to carry out their legal obligations in accordance with the approved plan.

Section (4) of the BC Recycling Regulation states:

A producer must submit a product stewardship plan, at the time specified in the applicable Schedule, if any, and in a manner and format satisfactory to a director, for the products within the product category of the product the producer sells, offers for sale, distributes or uses in a commercial enterprise in British Columbia.

This stewardship plan is submitted in accordance with the above regulation.

The list of members that have appointed BCUOMA to carry out the duties of the Producer under Part 2 of the Regulation is held by BCUOMA and can be made available to the Director on request.

2.1 Products covered under the plan

Lubricating oil:

- petroleum-derived or synthetic

- crankcase, engine and gear oils
- hydraulic, transmission and heat transfer fluids
- fluids used for lubricating purposes in machinery or equipment

Empty oil containers:

- empty containers with a capacity of 30 litres or less, manufactured and used for any product in the lubricating oil product category

Oil filter products:

- spin-on-style or element-style fluid filters that are used in hydraulic, transmission or internal combustion engine applications
- oil, diesel fuel, storage tank fuel, coolant and household furnace oil filters

(Does not include gasoline, air or household furnace air filters.)

Antifreeze product category

- automotive antifreeze and includes empty containers for this antifreeze

3 Governance and Financing

BCUOMA’s members, through networks of both company-owned and independently-owned retail and wholesale facilities, bring lubricating oil, automotive antifreeze and filters into the province for sale or distribution. Retail facilities range from self-serve gas bars to mass merchandise marketers, quick lubes, radiator shops, and automotive, farm, marine and commercial equipment dealers. Wholesale lubricating oil facilities comprise both branded bulk plants, and independently owned and brand owner warehouses.

Oil is sold in containers as small as less than a litre bottles, and as large as 205 litre drums, 1600 litre “lube cubes”, 30,000 litre tank trucks and 50,000 litre rail cars. Automotive antifreeze is mainly sold in 4 - 5 litre containers with very little, if any, sold in containers larger than the tote size (1000 litres). For oil and automotive antifreeze containers, the Regulation applies only to the containers 30 litres or less in size.

3.1 Governance

A multi-sector nine-member Board of Directors manages BCUOMA, with representatives from the manufacturing, retail, local government and public. An Executive Director reports to the Board and is responsible for operations management, financial management, communications, staff management and general administrative oversight. BCUOMA also works closely with other used oil associations in Canada to harmonise operations and minimize costs.

3.2 Bylaws

BCUOMA’s bylaws outline how the organization will operate. BCUOMA’s Bylaws are available on the BCUOMA website in the member’s section.

3.3 Annual General Meeting and Annual Reporting

BCUOMA holds an Annual General Meeting that is open to the public to attend. At the meeting BCUOMA members vote on items such as Director appointments, bylaw changes and fees. BCUOMA members also use the AGM to select an independent financial auditor for the next year.

An Annual Report is released to the members and the public at the AGM. The Annual Report outlines the financial and operational performance of BCUOMA over the last year. The Report includes an Audited Financial Statement. The Report is submitted to the Ministry of Environment for Review against the requirements in the Recycling Regulation and approved Product Stewardship Plan.

3.4 Program Financing

BCUOMA collects Environmental Handling Charges (EHC's) from its members. The EHC's are applied at the point that the member sells the product. EHC's are set by the members and reviewed as needed. Sometimes the charge is passed on to the consumer by the member or downstream seller as a separate charge and sometimes it is not.

4 Product Design and Use Trends

4.1 Lubricating Oil

New vehicles are more efficient and require fewer oil changes. There is also a new and growing trend to sell "oil-in-a-box" where oil is in a plastic bladder bag and packaged in a cardboard box with a spout. This new packaging poses a challenge for recycling and new methodologies will need to be researched as the trend develops.

A portion of the oil put into vehicles is consumed in use and not available for collection. The most recent study in BC identifies that 31.2% of the oil put into vehicles is consumed in use and not available for recycling. Oil that is consumed in use is typically burned off during vehicle operation, lost in small leaks or drips or lost in a vehicle accident or engine malfunction.

Used lubricating oil can be re-purposed by the owner and not made available for collection. A study done by BCUOMA identified that in BC used lubrication oil that is unavailable for collection was being used for burner fuel, explosive manufacturing, cement/lime manufacturing, fish/pleasure boats and other uses. An estimated 18.75 Million Liters of used lubricating oil is re-purposed by the owner and not available for collection. The largest re-purposing application of used lubricating oil is as burner fuel in shop heaters, where an estimated 8.1 Million Liters of used oil is burned. The Ministry of Environment supports used oil burners and has provided guidance for their use, including testing requirements.

4.2 Antifreeze

Antifreeze is sold in concentrated and diluted form. BCUOMA tracks the ratio between these two forms as they have implications for determining the volume sold and available for collection. BCUOMA has been operating an Antifreeze program since 2011, and a few other Provinces have started a program since then. The number of reports and studies available for user stage analysis of antifreeze are much fewer than oil. Antifreeze can be lost in use through leaks vehicle accidents and engine malfunction (e.g. hose breaks). It can be assumed that most if not all the Antifreeze sold off

the retail shelf is “top-up” antifreeze that is replacing antifreeze lost in use and not available for collection.

The Used Oil Management Associations of Canada commissioned a study in 2011 that estimated that 55% of Antifreeze is lost in use and not available for collection. Further analysis, including anecdotal information from industry, suggests that its likely closer to 75% of antifreeze that is not available and that vehicle servicing intervals for antifreeze have become longer with newer more efficient vehicles. BCUOMA intends to complete a study in 2018 to update the amount of antifreeze that is estimated to be not available for collection.

4.3 Oil Filters

Oil filters have been typically made of metal but in recent years there are more non-metals filters being sold. Non-metal filters often have plastic and cardboard components that are lighter in weight than metal filters. Light-weighting of filters will change the recovery performance measurement methodology, and effect the estimate used to translate kilograms collected into units. BCUOMA intends to commission a study in 2018 to research market trends in non-metal filters and determine if the recovery measurement methodology should be updated.

4.4 Oil and Antifreeze Containers

Oil and antifreeze containers have not changed in composition over the most recent years and the recycling methodology is well known. At times, manufacturers have used containers made of plastic that are difficult to recycle but this has not been the case in recent years. Some containers that are not used for oil or antifreeze, but similar automotive products, can make it into the BCUOMA collection stream causing contamination. BCUOMA’s collectors and processors do their best to keep contamination at a minimum. Some provinces have added Diesel Exhaust Fluid containers to their program, as they have seen large increases of these containers in the recycling stream. BCUOMA will continue to monitor the level of contamination and adjust the program as needed.

5 Collection

Of all the oil and antifreeze collected in BC, most (96%) of it is collected from commercial facilities such as service stations, lube shops and large commercial operations (e.g. mining, forestry, agriculture). These commercial facilities are typically serviced by a Registered BCUOMA Collector that has a service agreement with that facility. Approximately 4% of the oil and antifreeze collected in BC comes from consumers that change their own oil/antifreeze or small commercial operators that chose to use the free consumer drop off system.

5.1.1 Commercial Collection (96%)

The commercial collection system provides the cleanest material and leads to the best environmental outcome for that material. In a commercial setting, oil and antifreeze that is recovered from a personal or commercial vehicle can be stored and kept clean and free of contamination such as water, gasoline or solids This oil/antifreeze that is kept clean is more likely to be processed and re-used as new lubricating oil or antifreeze.

Commercial facilities choose which Registered BCUOMA Collector that they want to enter into a service agreement with. The agreements often outline the collection frequency, collection

requirements and any payments or charges. The commercial agreements are between the facility and the collector and do not involve BCUOMA. BCUOMA does provide financial incentives to Collectors and Processors based on the collection volume and location. Collectors have supply arrangements with Processors that manage used oil, antifreeze, filters and containers.

Some small commercial operations can choose to use the consumer recycling system and transport their oil or antifreeze to a BC Used Oil Management Association Registered Collection Facility. BCUOMA does not put volume restrictions on drop offs, but the recycling facility may. If large volumes are being dropped off it is recommended that a phone call be made in advance to ensure that the facility can accept the large volume.

5.1.2 Consumer Collection (4%)

For consumers that choose to change their own oil or antifreeze, BCUOMA has a Province-wide network of registered Recycling Centers that provide consumers with free access for recycling. These facilities are often located in high traffic retail locations but can also be located at industrial sites, multi-material private depots (bottle depots) and local government recycling/landfill sites.

5.1.2.1 BCUOMA Recycling Centers

BCUOMA has made some recent changes to its Recycling Center program to improve the consumer experience and environmental performance at the facilities. BCUOMA has invested in new infrastructure such as modified sea containers with spill containment, collection tanks and consumer friendly signs. BCUOMA has also increased the rates provided to facilities for the liters of consumer oil/antifreeze collected. Over the last couple years some retailers that were getting inundated with late night drop offs, mystery materials and other products not part of the program (e.g. paint, tires, couches) have chosen to drop out of the BCUOMA program.

5.1.2.2 Community Collection Events

BCUOMA provides financial support for community collection events operated by Regional Districts, Municipalities and Community Groups. These events are often multi-material events that are also supported by other stewardship programs and provide residents with an opportunity to recycle many different types of products. Organizations are invited to apply for a BCUOMA Community Collection Event grant, which is currently \$1500 per event.

5.1.2.3 Consumer Accessibility Standard and Targets

BCUOMA has completed three studies over the past two years to analyze the collection network, measure accessibility and customize an accessibility standard that supports the user types. BCUOMA's commits to, as a minimum, meet the Stewardship Association of BC's Accessibility Standard. As of 2017, 99.5% of the population of BC had access to a BCUOMA registered facility at the SABC standard.

As a continuous improvement initiative, BCUOMA intends to work towards an enhanced level of accessibility across BC as follows:

Table 1. Accessibility Levels by Community Type

Type of Community	Enhanced Service Level
City, High Industrial	One facility per 100,000 people
City, Low Industrial	One facility per 200,000 people or one facility within a 30-minute drive if the population is less than 200,000
Town, High Industrial	One facility
Town, Low Industrial	One facility within a 30-minute drive, otherwise its own facility
Village	One facility within a 30-minute drive, otherwise its own facility

BCUOMA has defined the community types as follows:

Table 1: Categorization of BC Communities by Type

Type of Community	Population Characteristics	Business Establishment Characteristics	Number of Communities	Population (2016)
City, High Industrial	More than 5,000	More than 20 per 10,000 people	44	1,449,800
City, Low Industrial	More than 5,000	20 or less per 10,000 people	53	2,690,333
Town, High Industrial	2,501 to 5,000	More than 50 in total	3	14,196
Town, Low Industrial	2,501 to 5,000	50 in total or less	63	228,627
Village, High Industrial	1,000 to 2,500	More than 50 in total	1	1,047
Village, Low Industrial	1,000 to 2,500	50 in total or less	89	149,683
Other (<1000)	n/a	n/a	66	31,454
Total			319	4,565,142

More information of the methodology used to determine the community types and the enhanced accessibility service level outlined in the following tables can be found in the Report on the BCUOMA website by MNP titled *Analysis of Coverage for the Return Collection Facility Incentive Program*.

6 Transportation and Processing

6.1 Incentive System for Province-wide Collection Coverage

BCOUMA has designated eleven (11) zones across British Columbia. Used oil, oil filters, oil containers, used anti-freeze and anti-freeze containers are regularly picked up from over 4,000 generators by BCUOMA Registered Collectors. Collectors are required to ship the collected materials to a BCUOMA Register Processor for an approved end use. Any approved end use must be environmentally sound and be in compliance with environmental requirements.



6.2 Registered Collectors and Processors

BCUOMA registers the collectors and processors before they are eligible to participate in the program. Under the Hazardous Waste Regulation, used oil, automotive antifreeze and oil filters are considered a hazardous waste. As well, the oil and antifreeze containers often contain a certain amount of new oil or antifreeze, and measures are required to ensure that proper equipment and vehicles are used to pick them up. 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. In addition, the collector and processor must submit a current Business Licence. If either of these two conditions is not met, BCUOMA will not register the collector.

These 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, such as for mining explosives or exploration drilling. Antifreeze processors already actively involved in processing used antifreeze to the point where an additive package can be added and the recycled antifreeze can again be sold as automotive

6.3 Product Collection Targets

As BCUOMA is a mature program, the target collection rate (Recovery Rate) is projected to be very stable, consistent and much higher than the 75% identified in the Recycling Regulation. The Target Recovery Rate for BCUOMA products is projected from 2017 results and calculated using the following methodology:

Collection Targets for 2019-2024

	Sold (2017)	Consumed in Use	Repurposed	Available for Collection	Collected	Recovery Rate
Used Oil (Millions of Litres)	99.7	(30.0) ¹	(18.8) ²	50.9	47.8	93.9%
Filters (Units)	6.8	n/a	n/a	6.8	5.9	87.0%
Containers (Million KG's)	2.1	n/a	n/a	2.1	1.8	83.2%
Used Antifreeze (Millions of Liters)	12.6	(9.45)	n/a	3.15	2.6	82.6%

1: BCUOMA study identified that 30.1% of oil is consumed during use. Next study 2019.

2. BCUOMA study: 18.75-23.5 Million liters of oil are repurposed by the owner or otherwise unavailable for collection. Next Study 2019.

3. An estimated 75% of antifreeze is lost in service and unavailable for collection. Next study 2018.

6.4 Product Management Targets

Collected products are managed in accordance with the Pollution Prevention Hierarchy. Oil previously sold as lubricating oil is collected, refined and reused as lubricating oil. Some oil is collected, transformed and recycled as a new energy product. Metal filters are collected and recycled into other metal products. Paper filters that can't feasibly be recycled are managed so a portion of the inherent energy can be recovered. Antifreeze previously sold as an antifreeze product is refined and reused as an antifreeze product. Plastic and metal containers are recycled into new plastic and metal products.

Management Targets for Product Collected 2019-2024

	Reuse	Recycling	Energy Recovery
Used Oil	50%	50%	
Filters		80%	20%
Used Antifreeze	100%		
Containers		100%	

Notes:

Oil: Oil is re-refined into new lubricating oil or recycled as an energy product

Oil Filters: all collected metal filters are recycled; paper filters are managed through energy recovery.

Containers: all collected containers are recycled into new plastic or metal products

Antifreeze: all collected antifreeze is refined for reuse.

6.5 Landfill Audits

BCUOMA participates in landfill waste audits with local governments and other stewardship agencies on an annual or semi-annual basis depending on local government scheduling. The audit findings to date have demonstrated that BCUOMA products are not disposed in landfills at any detectable amount. BCUOMA will continue to work with local governments on future audits.

7 Paying the Cost of Collection and Management

BCUOMA pays the cost of collection and management of products by providing incentives to the marketplace to drive the desired outcomes. Most residents and businesses have their vehicles serviced commercially (e.g. Service station, lube shop) and negotiate service terms with the commercial operation. For consumers that choose to service their own vehicles, the used oil and antifreeze can be returned at a BCUOMA registered RCF at no cost to the consumer.

BCUOMA Registered RCF's receive a financial incentive from BCUOMA to collect oil and antifreeze from consumers. BCUOMA also supplements the commercial arrangement with RCF's by providing infrastructure and marketing support. RCF's can be retailers, depots, local governments or other business that chooses to enter into an agreement with BCUOMA and, separately, enter into a service agreement with a BCUOMA Registered Collector.

BCUOMA provides an incentive to BCUOMA Registered Processors and Collectors based on the material type and the zones in the Province. BCUOMA Registered Processors own the material they collect or receive from collectors and market this material for their own benefit.

The incentives provided by BCUOMA are actively managed and reviewed by the association to ensure that the outcomes are being achieved.

Local Governments can choose to register as a RCF with BCUOMA and follow the same rules and procedures as private facilities for hazardous waste management, including assurance the requirements are being met.

Local Governments that collect other household hazardous waste products at their recycling facility or transfer station, and choose not to enter into an agreement with BCUOMA to collect oil and antifreeze, are effecting the marketplace by displacing the private options available to BCUOMA and

reducing BCUOMA’s access to an open market. Further, these local governments are providing assistance to a business at a detriment to BCUOMA, and this will likely cause system disruption or poor results in that community.

7.1 Dispute resolution

BCUOMA requires Collectors, Processors and Return Collection Facilities to register and follow the requirements to receive payment in the form of a financial incentive from BCUOMA. BCUOMA’s requirements including Manuals, Registration Forms and Applications are posted on www.usedoilrecycling.com.

If there is a dispute between BCUOMA and a service provider or stakeholder the person or company can take the following actions:

1. Bring the dispute to the Executive Director.
2. Ask that the BCUOMA Board consider the issue
3. If the matter is not resolved at the previous two levels, service providers can use normal commercial legal procedures such as the Commercial Arbitration Act.

BCUOMA is the only stewardship agency in British Columbia that has a local government representative and a member-at-large representative on its Board. This type of representative helps to provide the local government and non-industry input directly at the Board level, including the resolution of any disputes or concerns by collectors and processors, local governments, producer members or the public.

8 Program Marketing and Consumer Awareness

BCUOMA will continue to ensure that timely and relevant information is available to the public on its website. BCUOMA will continue to use brochures, municipal recycling calendars, table top displays, other visual displays and relevant public hand-outs as a means of spreading the message to the public on used oil and antifreeze material recycling. BCUOMA also uses traditional and social media to inform the public of the program.

8.1 Consumer Awareness Target

The most recent Consumer Awareness Benchmark Study for all Stewardship Programs in BC was completed in 2016. The study indicates that 78% of consumers are aware there is a recycling program in BC for BCUOMA managed products. The study also states that 84% of British Columbians believe that the products collected in the BCUOMA program are being managed in a safe and environmentally responsible manner. BCUOMA is largely a commercial program with 97% of the product collected from commercial facilities, thus consumer awareness is not as critical a performance measure as a more consumer oriented product and program. The next study is planned for 2018.

Consumer Awareness Target	75% of British Columbians are aware there is a recycling program for BCUOMA managed products
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9 Consultation Summary

As a mature and successful stewardship program, BCUOMA focused the plan and consultation on improving performance measurements to comply with ministry requirements for independent verification, augment existing – and successful – collection and processing systems, and reflect industry’s improved product design for environment.

The British Columbia Used Oil Management Association (BCUOMA) conducted the following consultations with stakeholders that have contributed to the development of this Stewardship Plan:

1. October 7th to November 21st, 2014 consultation on the draft Stewardship Plan including two webinars.
2. October 18th, 2017 – December 22nd, 2017 consultation on proposed targets.
3. May 28th, 2018 – June 30th, 2018 consultation on revised plan and targets incorporating 2017 feedback.

Stakeholders were notified of the opportunity to participate in commenting on the draft plan through:

- posting on the BCUOMA website with direct links to the draft plan and the webinars;
- direct emails to all BCUOMA members, and collectors and processors;
- notification of the Coast Waste Management Association and the Recycling Council of British Columbia and their respective members including environmental organizations, business associations and local governments; and,
- notification of the Product Stewardship Council and subsequent webinars.

A summary of the written submissions and BCUOMA’s responses is attached (Appendix II).

APPENDICES

Appendix I Pollution Prevention Hierarchy Definitions for BCUOMA Managed Products

Appendix II Consultation Summary

Appendix III 2017 Consultation on Proposed Targets Written Responses

Appendix IV 2018 Plan Consultation Written Responses

Appendix I – BCUOMA Pollution Prevention Hierarchy (PPH) Reporting Procedures

BCUOMA is required to produce an annual report on the performance of its program, including how the recovered product was managed in accordance with Pollution Prevention Hierarchy. Key definitions and procedures to support this reporting are provided below.

1.0 Operating Definitions of Pollution Prevention Hierarchy terms

Reuse the Product: to use again as the original product after reclaiming and/or refining.

Recycle the Product: to reprocess into a new, different product.

Recover Energy from the Product: to recover and use the inherent energy of the product in a thermal process. Thermal treatment without energy recovery is considered disposal not Recovered Energy.

2.0 Procedures for PPH Reporting

Used Oil – The amount of uncontaminated used oil recovered, less the water content, that is received at a used oil refinery is reported as Reuse. The amount of uncontaminated used oil, less the water content, that is received at a facility that is not a refinery and treated and sold for use as a new product (e.g. asphalt, energy product) that meets applicable use standards is reported as Recycled.

Used Antifreeze - The amount of used antifreeze that is received at a used antifreeze processing facility, that has a glycol content of 42% or greater and is uncontaminated, and is refined and sold as an antifreeze product that meets applicable use standards is reported as Reuse.

Filters – The amount of metal filters processed to remove the oil content and received at a steel recycler will be reported as Recycled. The amount of paper filters sent for thermal treatment where a portion of the inherent energy is recovered will be reported as Recovered Energy.

Antifreeze and Lubrication Oil Containers – The amount of containers, less the oil or antifreeze content, received at a facility that manufacturers plastic resin (pellets) or a steel recycler will be reported as Recycled. The amount of containers received at a facility that recovers a portion of the inherent energy from the containers will be reported as Recovered Energy.

Appendix II – To be completed at end of Consultation

The End