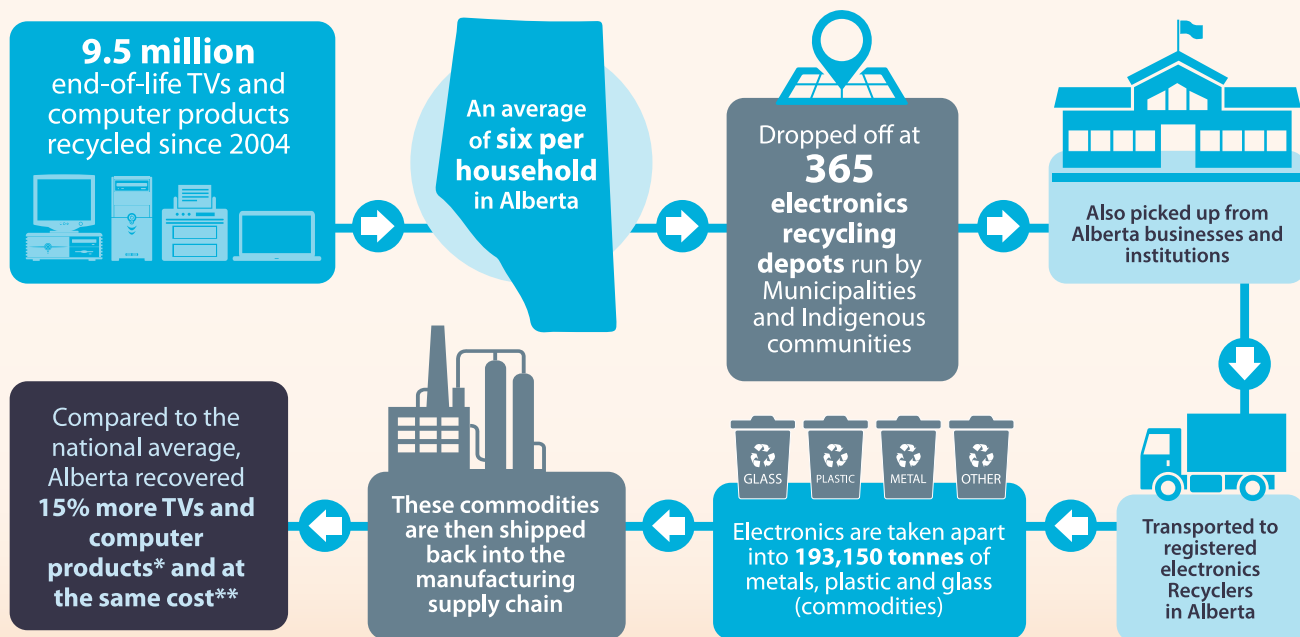




PROGRESS REPORT 2018-19



*kgs. recovered per capita; **cost per kg. recovered; 2011-16

MAKING RECYCLING MORE CONVENIENT

96% of the population live no further than a 20-minute drive from an electronics recycling depot

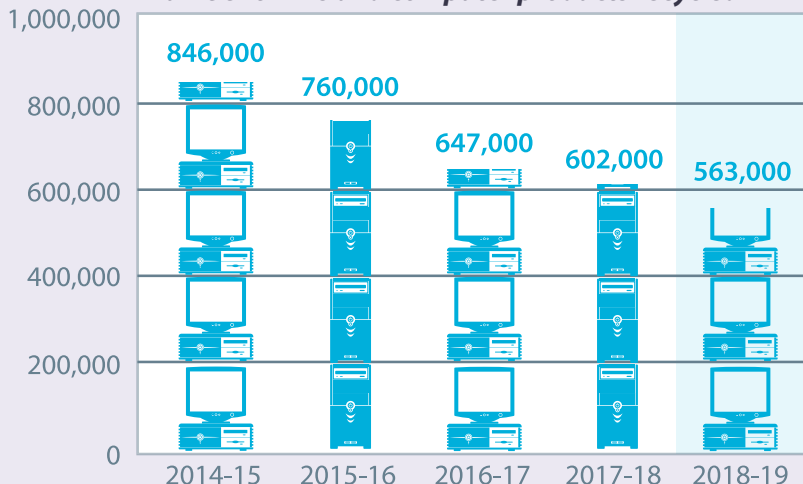


RECYCLING RESULTS

The chart presents results over the last five years.

The amount recycled this year is 6.5% lower than the prior year, continuing a trend of lower recycling volumes in the electronics industry. As the majority of heavier, older model TVs and monitors have been recycled, increasing numbers of newer, lighter units are showing up for recycling.

Number of TVs and computer products recycled



KEEPING EVEN MORE ELECTRONICS OUT OF THE LANDFILL

The Government of Alberta is considering changes to the Electronics Program that could see over 250 products ranging from small appliances such as microwaves and toasters to vacuum cleaners, curling irons and power tools added to the Program. Albertans have been so committed to recycling their old TVs and computer equipment that in a recent poll they indicated they want to keep more electronics out of the landfill.



of Albertans support expansion of the program

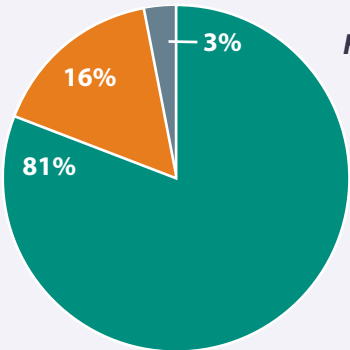
ENVIRONMENTAL FEES AT WORK

The environmental fees paid on the purchase of new electronics are used to help fund their collection and recycling along with other Program-related costs (see pie chart). There are 1,510 businesses (Suppliers) registered with Alberta Recycling to ensure that these fees are remitted on every TV and computer sold in Alberta.

Alberta Recycling values the commitment of these Suppliers who diligently remit the fees for the recycling of end-of-life electronics.



	TVs, Monitors & All-In-One Computers	
	Less than 30 inches	\$ 4.00
	30 inches or larger	\$10.00
	Computers & Servers	\$ 4.40
	Laptop, Notebook & Tablet Computers	\$ 1.20
	Printers, Photocopiers, Scanners, Fax Machines	\$ 4.80



How the fees are used

-  **Recycling Expenditures 81%**
(Collection and recycling of electronics)
-  **Administration 16%**
(Program management)
-  **Recycling Development 3%**
(R&D; Program awareness)

ALBERTANS SUPPORT THE ELECTRONICS RECYCLING PROGRAM

Every year Albertans are polled to measure support for both the Program and the environmental fees charged on the sale of new TVs and computer equipment. This year results indicate Program support remains strong but support for the fees has not increased over the prior year. Eight out of 10 people are aware of their nearest recycling depot and in the past year three out of 10 have used a depot to recycle their old TVs and computers. Follow us on Facebook and Instagram (@albertarecycling) and make sure you post a picture of yourself recycling your old computer or TV!

Annual survey results

Date	Support for program	Support for environmental fees	Awareness of depots	Have recycled in the past year
2017	86%	51%	85%	27%
2018	89%	47%	81%	32%
2019	85%	47%	84%	29%

HARD-TO-GET ELECTRONICS PILOT PROJECT

In a recent poll 20% of Albertans indicated they have end-of-life TVs and computer products at home but for various reasons have not recycled them yet. This project encourages schools (K-12 and post-secondary) to engage their community in digging out old electronics and bring them to the school for recycling. In turn, the school receives funding for each unit collected. In 2019/20, this pilot will be evaluated to determine if it should continue in the long term. Following are the results to-date:



31
Municipalities



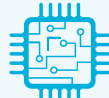
187
Schools



89,365
Students



\$76,480.00
awarded to
schools



10,637
TVs and computer
products collected

Curbside collection

For a fourth year, Alberta Recycling has partnered with a municipality to test curbside collection. Residents were invited to leave out their TVs and computer products. To-date 2,092 items have been collected through this program. In 2019/20, this pilot will be evaluated to determine if it should be expanded as a long term project.

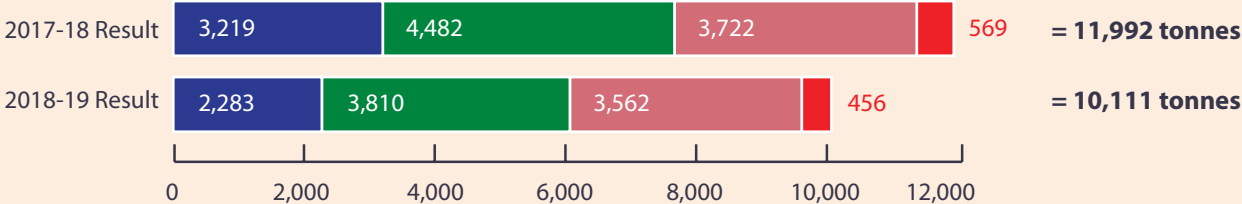
**results to-date are preliminary; final amount to be reported in fall 2019.*



2,092 TVs and computers
collected in weeklong curbside pilot

HOW 9.5 MILLION ELECTRONICS ARE RECYCLED

Registered Recyclers pick up TVs and computer products from business and institutions and from 365 recycling depots across the province. They transport the material back to their facilities (all located in Alberta) where they break down each item, separating the materials into metals, plastic and glass. These commodities are then shipped back into the manufacturing supply chain. Following are results from the past two years, revealing a year-over-year decrease in glass and plastic which could be indicative of a decrease in cathode-ray-tube TVs and monitors available for recycling.



1. 'Other' includes batteries, toner and inks, wire and cables, and wood.

KEEPING HAZARDOUS SUBSTANCES OUT OF THE LANDFILL

Since 2004, 12,100 tonnes of hazardous material has been safely and properly handled during the recycling process. Following are results from the past two years showing some of the substances of concern diverted from the landfill.

Material	2017-18	2018-19
82 Pb Lead Lead (tonnes) Circuit boards, cathode ray tubes, TVs, monitors, CPUs, laptops, and printers.	295	279
80 Hg Mercury Mercury (kg.) Batteries - general; mercury lamp batteries and switches; laptops	0.31	0.28
48 Cd Cadmium Cadmium (kg.) Circuit boards, cathode ray tubes, insulated wire, TVs, monitors and CPUs	4.31	4.08
4 Be Beryllium Beryllium (kg.) Circuit boards, TVs and monitors	12.56	11.90
51 Sb Antimony Antimony (tonnes) Circuit boards, CPUs, laptops, and printers	1.41	1.32



Data security is a top priority

Once a computer is collected by a registered Recycler, they are responsible to destroy the hard drive (example pictured above) and other storage media. The Recyclers can also provide Certificates of Destruction if requested.



ENVIRONMENTAL STANDARDS FOR RECYCLERS

An objective of the Electronics Program is to ensure the registered Recyclers operate in an environmentally and socially responsible manner. Annual environmental audits by external experts are conducted to confirm if the Recyclers are following Program requirements. Results are reported annually in a “Compliance Assurance Summary Report” found at albertarecycling.ca





PROGRESS REPORT 2018-19



*cost per kg. recovered; **kgs. recovered per capita; 2011-16

MAKING RECYCLING MORE CONVENIENT

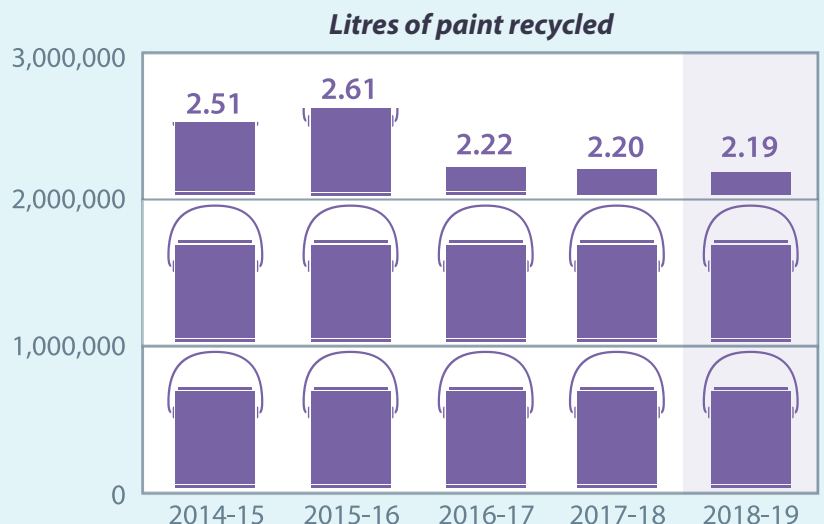
93% of the population live no further than a 20-minute drive from a paint recycling depot



RECYCLING RESULTS

The chart presents results over the last five years.

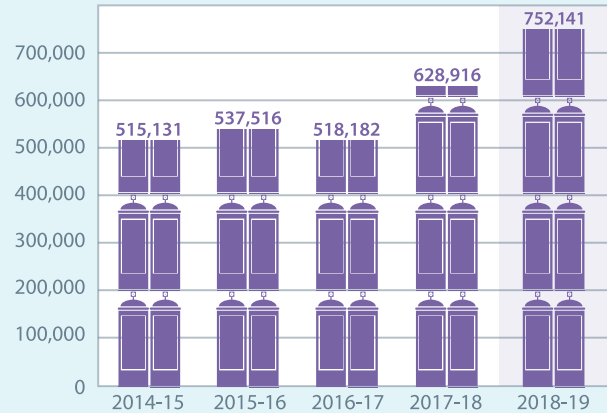
Sales of new paint for the past three years have decreased over the levels seen in the two years prior. These lower sales drive the volume of leftover paint recovered by the program and are a result of the downturn in the Alberta economy.



Number of spray paint cans recycled

This chart presents results over the last five years. The current year of 2018-19 shows continued growth with a 19.6% increase over the previous year. This improvement is attributed in part to communications for commercial paint roundups that specify spray paint cans are accepted in the program for recycling (see next page for more information on these roundups).

Since 2008, five million spray paint cans have been recycled.



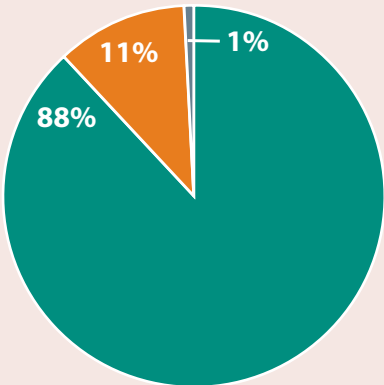
ENVIRONMENTAL FEES AT WORK

The environmental fees paid on the purchase of new paint and containers are used to help fund collection and recycling of this material along with other Program-related costs (see pie chart). There are 509 businesses (Suppliers) registered with Alberta Recycling to ensure that the fees are remitted on each eligible product sold in Alberta.



Alberta Recycling values the commitment of these Suppliers who diligently remit the fees for the recycling of leftover paint and containers.

	100 ml to 250 ml	\$0.10
	251 ml to 1L	\$0.25
	1.01 L to 5 L	\$0.75
	5.01 L to 23 L	\$2.00
	SPRAY PAINT CANS (any size)	\$0.10



How the fees are used

- Recycling Expenditures 88%** (Collection and recycling of paint and containers)
- Administration 11%** (Program management)
- Recycling Development 1%** (R&D; Program awareness)

ALBERTANS SUPPORT THE PAINT RECYCLING PROGRAM

Every year Albertans are polled to measure support for the Paint Program and the environmental fees charged on the sale of new paint and containers. This year the results indicated Program support remains strong while support for the fees increased by five points over 2018. Follow us on Facebook and Instagram (@albertarecycling) and make sure to post a photo of yourself recycling your old paint, spray paint and paint containers!

Annual survey results

Date	Support for program	Support for environmental fees	Awareness of paint depots	Have recycled in the past year
2017	84%	53%	82%	30%
2018	82%	54%	81%	31%
2019	82%	59%	84%	31%

WHAT HAPPENS TO YOUR LEFTOVER PAINT



Registered Recyclers pick up leftover or unused paint and containers from 318 depots throughout Alberta and from businesses and institutions.



Oil-based paint is bulked and shipped to approved downstream processors to be used in the energy recovery process.



The latex paint is delivered to approved recyclers in Alberta for two end uses: to be made into new paint and to be used as feedstock in the manufacturing of cement.

HELPING ALBERTA BUSINESSES RECYCLE THEIR PAINT

Recycling depots often have limited storage capacity or operating hours that can restrict the access for painting contractors and businesses to recycle their leftover paint and containers. Alberta Recycling is working with recycling depots and paint Recyclers to help address these issues. In 2018-19, monthly commercial paint roundups were held in Edmonton and Calgary. This was in addition to six municipalities that held roundups in north, central and southern Alberta, with feedback obtained from participants to continue with commercial paint roundups in 2019-20.



EMPTY PAINT CANS ARE RECYCLED TOO

Metal paint cans and plastic pails are an equally important part of the Paint Recycling Program as the environmental fees paid at the time of purchase help fund the collection and recycling of these materials.

What happens to empty metal and plastic paint cans

The plastic pails collected by paint Recyclers are shipped to an approved processor in southern Alberta and recycled into composite lumber, fence posts and parking curbs



The metal cans are recycled into industrial products such as rebar.



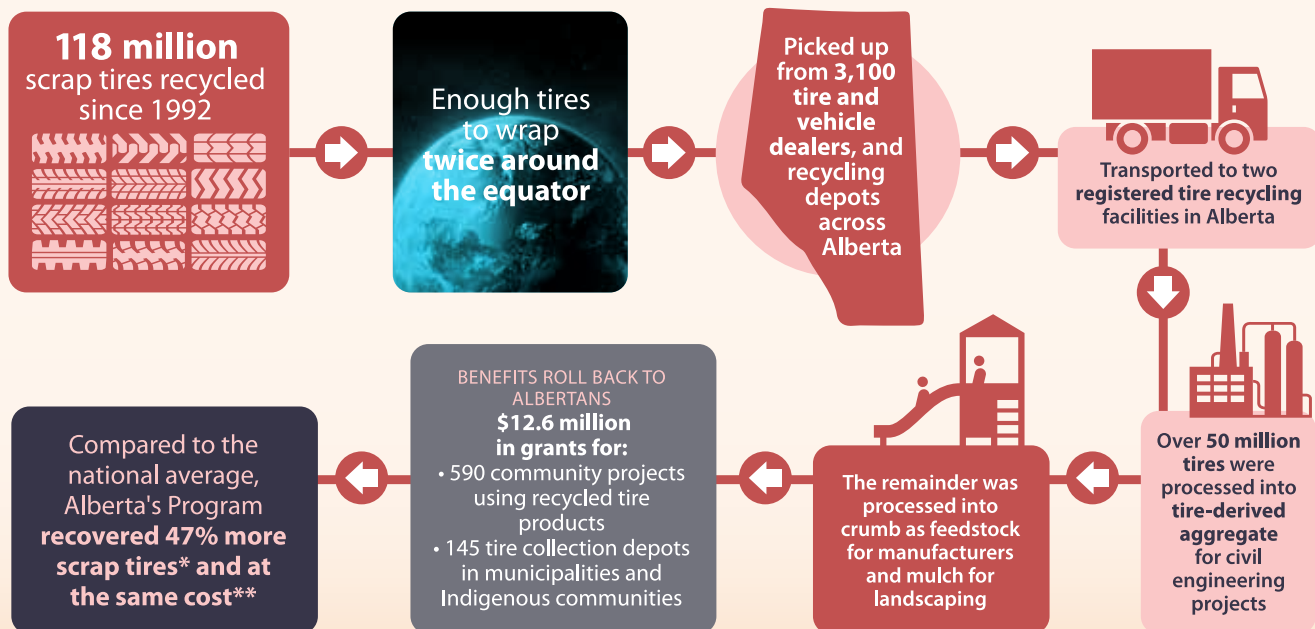
ENVIRONMENTAL STANDARDS FOR RECYCLERS

An objective of the Paint Program is to ensure leftover paint and containers are collected and shipped by the registered recyclers to downstream processors in an environmentally and socially responsible manner. Regular inspections by Alberta Recycling and an environmental audit by external experts every three years confirm if the Recyclers are following the requirements of the Program.





PROGRESS REPORT 2018-19



*kgs. recovered per capita; **cost per kg. recovered 2011-16

Tire Suppliers' Recycling Role

When Albertans get new tires, they usually leave their old ones behind. They can because 3,100 vehicle and tire dealers and auto repair shops play a dual role – selling new tires and making sure the old scrap tires you leave behind are collected for recycling at Alberta facilities.



RECYCLING RESULTS

The chart presents results over the last five years.

In 2018-19, sales of new tires began to recover from the lower levels seen in the two years prior. Increased sales of new tires results in rebounding recycling volumes as scrap tires are collected and recycled.

Number of tires recycled



ALBERTANS ARE GETTING GREAT MILEAGE FROM THEIR TIRE RECYCLING PROGRAM WITH \$12.6 MILLION IN GRANTS

Across the province you will find recycled tire products in 590 Municipal Demonstration Grant Projects such as playgrounds, arenas, outdoor fitness areas and walking trails.

Additionally 145 Indigenous communities and municipalities have received funding to upgrade their tire collection areas located at landfills and transfer stations.



Year	Support for program	Support for environmental fees
2015	90%	60%
2016	86%	64%
2017	87%	61%
2018	83%	60%
2019	83%	62%

ALBERTANS SUPPORT THE TIRE RECYCLING PROGRAM

Every year Albertans are polled to measure support for both the Program and the environmental fees charged on the sale of new tires. This year results indicate Program support remains strong. Support for the fees increased by 2% over 2018 and remain the highest of the four recycling programs. Follow us on Facebook and Instagram (@albertarecycling) and post a photo of a grant project in your community!

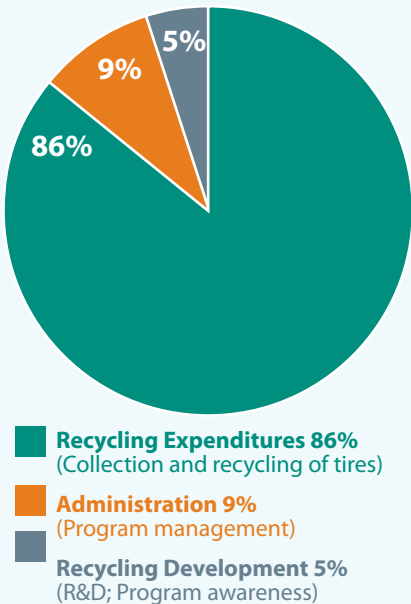


ENVIRONMENTAL FEES AT WORK

The environmental fees paid on the purchase of new tires are used to help fund tire collection and recycling along with other Program-related costs (see pie chart). There are 3,100 businesses (Suppliers) registered with Alberta Recycling to ensure that the fees are remitted on every eligible tire sold in Alberta.

Alberta Recycling values the commitment of these Suppliers who diligently remit the fees for the recycling of scrap tires.

How the fees are used



	CAR AND LIGHT TRUCK TIRES (e.g. spares, sport and cross-over utility vehicles)	\$4/tire
	SPECIALTY, INDUSTRIAL AND OTHER TIRES (e.g. trailer, ATV, dirt bike, ATV, forklift, small loaders, skid-steers)	\$4/tire
	MEDIUM TRUCK TIRES (e.g. large commercial freight trucks and passenger buses)	\$9/tire
	OFF-THE-ROAD TIRES (e.g. equipment used in construction, road building, forestry mining etc.)	\$40, \$100, or \$200/tire depending on rim size

This chart breaks out the amount of tires processed by type for the past three years. Tires vary in size and weight, therefore a standardized unit is applied to present the results, using a passenger-tire-equivalent (PTE) of one PTE equalling 10 kgs. There is 100 PTEs in one tonne of tires.

Year	 Passenger, Light Truck, Specialty, Industrial & Other Tires (PTE)	 Medium Truck Tires (PTE)	 Off-the-Road Tires (PTE)
2016-17 Result	3,467,900	2,150,200	448,500
2017-18 Result	3,761,700	2,035,400	236,200
2018-19 Result	4,039,300	2,198,700	523,000

ENVIRONMENTAL STANDARDS FOR RECYCLERS

A goal of the Tire Program is to ensure all scrap tires are collected and processed by registered Recyclers in an environmentally and socially responsible manner. Monthly inspections by Alberta Recycling and an environmental audit by external experts every three years, confirm if the Recyclers are following the requirements of the Program.



WHAT HAPPENS TO YOUR SCRAP TIRES



Two registered recyclers coordinate the collection of scrap tires from **3,100 vehicle and tire dealers, auto repair shops and 344 recycling depots.**

Since 2002 4-H clubs have partnered with Alberta Recycling to clean up rural areas, collecting 1.08 million tires for which they have received funding per unit.



Stage one: tires are shredded into large pieces for use as tire-derived aggregate (TDA). The steel and fibre are still embedded.

Application: TDA is applied in place of washed rock (a limited and non-renewable commodity), as drainage material for leachate collection in municipal landfills.



Stage two: shred is ground to make mulch, with the steel removed.

Application: landscaping.

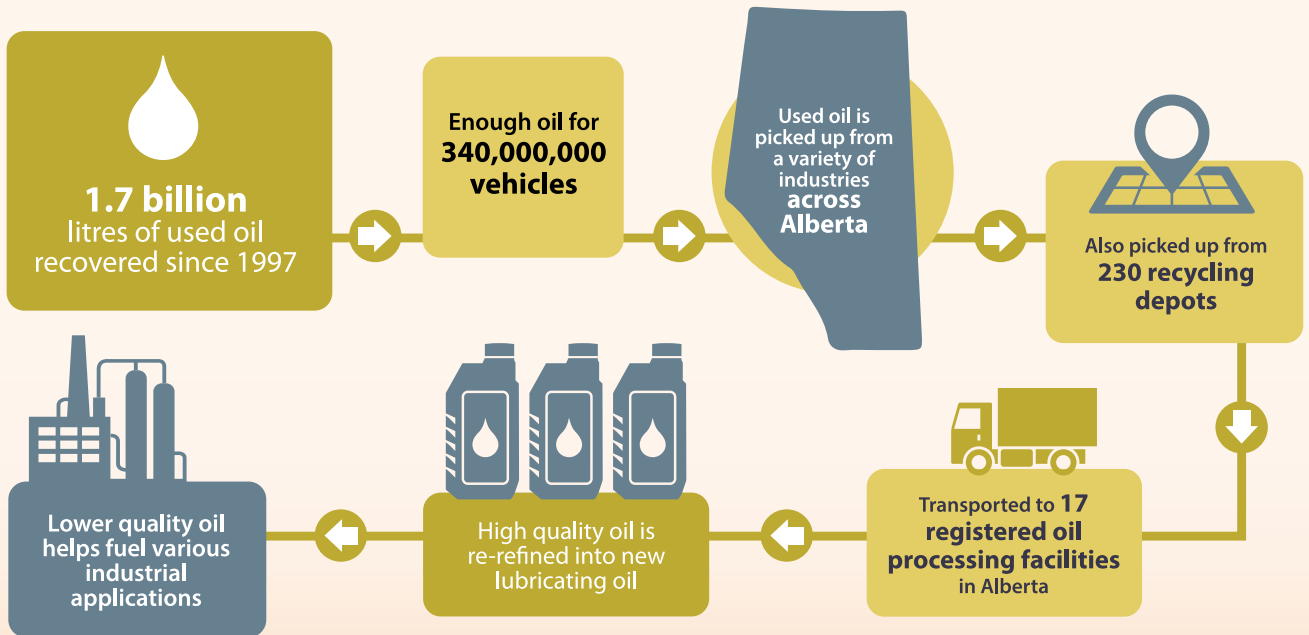


Stage three: tires are processed into crumb with the steel and fibre removed.

Application: top-dressing in sports fields or as feedstock for playground surfacing and molded products.



PROGRESS REPORT 2018-19



MAKING RECYCLING MORE CONVENIENT

Alberta Recycling is working with municipalities and Indigenous communities to increase the number of used oil material recycling depots across the province.

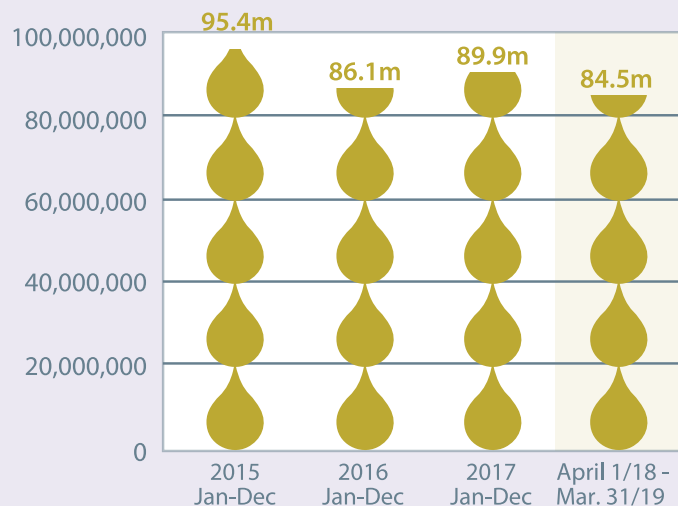


RECOVERY RESULTS

The chart presents results over the last four years.

On October 1, 2018 the government transferred management of the program from the Alberta Used Oil Management Association (AUOMA) to Alberta Recycling. With this transition, the fiscal year shifted from calendar to April-March.

Litres of used oil recovered annually



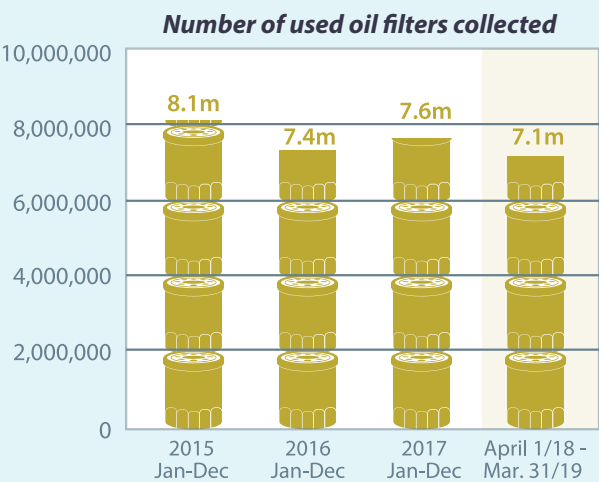
Oil processed for the January - March 2018 stub period is not identified in this chart but it is included in the cumulative total.

COLLECTION RESULTS

The chart presents results over the last four years.

As previously noted, with the transition of program management from AUOMA to Alberta Recycling, the fiscal year shifted from calendar to April-March.

Since 1997, 145.4 million used oil filters have been collected.



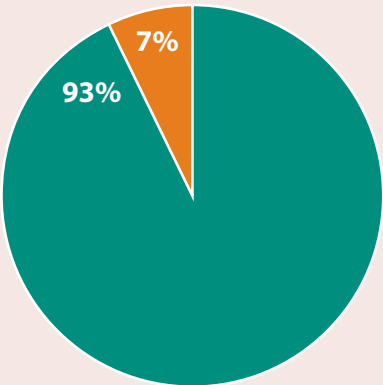
ENVIRONMENTAL FEES AT WORK

The environmental fees paid on the purchase of oil, filters and containers are used to help fund collection and recycling of this material along with other Program-related costs (see pie chart). There are 246 businesses (Suppliers) registered with Alberta Recycling to ensure that the fees are remitted on each eligible product sold in Alberta.

Alberta Recycling values the commitment of these Suppliers who diligently remit the fees for the recycling of used oil materials.

How the fees are used

(results from October 2018 – March 2019)



- Recycling Expenditures 93%**
(Collection and recovery/ recycling of used oil, filters and containers)
- Administration 7%**
(Program management)



ALBERTANS SUPPORT THE USED OIL MATERIALS RECYCLING PROGRAM

Since 1997 a staggering amount of used oil materials have been recycled and kept out of the environment. Based on Albertans’ participation over the past 22 years, it’s safe to say that Albertans support the recycling of used oil, oil filters and containers and the proof of this statement is evident in this year’s poll results. They revealed that 86% of Albertans support the program and 64% support the fees.

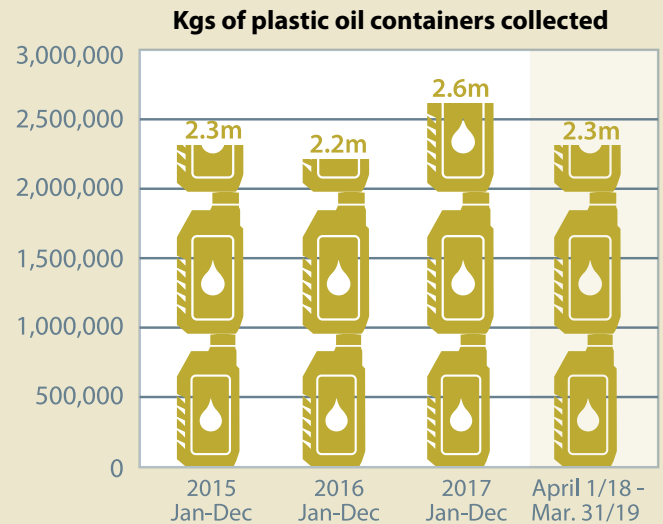


OIL CONTAINERS COLLECTED

This chart presents results over the last four years

Similar to the used oil and filter results, with the transition of program management from AUOMA to Alberta Recycling, the fiscal year shifted from calendar to April-March.

Since 1997, 37.8 million kilograms of empty oil containers have been collected.



WHAT HAPPENS TO YOUR EMPTY CONTAINERS AND USED FILTERS

Plastic oil containers and metal oil filters are an equally important part of the Used Oil Materials Recycling Program as the environmental fees paid at the time of purchase help fund the collection and recycling of these materials.

The containers are pelletized and used as feedstock for products such as new containers, guardrails, fence posts and railway ties.

Oil filters are crushed (with the residual oil captured) and processed by metal recyclers for manufacturing into construction materials such as rebar.



ENVIRONMENTAL STANDARDS FOR RECYCLERS

An objective of the used oil materials recycling program, similar to the other programs managed by Alberta Recycling, is to ensure that registered recyclers collect and ship oil materials to downstream processors in an environmentally and socially responsible manner. This year, Alberta Recycling will begin regular inspections of registered recyclers and in the near future, an environmental audit by external experts will be completed to confirm they are following Program requirements.



CROSS-CANADA COLLABORATION

Alberta Recycling works with the other provincial programs through the national working group, the National Used Oil Materials and Antifreeze Council. In 2019, new communications pieces and tools will be developed to enhance the information and services provided to stakeholders.



MAKING SURE EVERY DROP COUNTS

If not managed and recycled properly, used oil is our nation's largest potentially hazardous material. As Alberta Recycling enters its first year of managing the program, we are committed to making sure used oil materials are handled responsibly and effectively. We are excited about enhancing the program, providing the best service possible to Albertans by capturing all used oil, filters and containers to keep them out of the waste stream and protect our environment.

Alberta Recycling is a not-for-profit association responsible for managing Alberta's Tire, Electronics, Paint and Used Oil Materials Recycling Programs. The organization is run by a Board of Directors representing various stakeholder groups and is accountable to the Minister of Environment and Parks.

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albertarecycling.ca