CBA

Canadian Battery Association

Representing the Industry Since 1970

Annual Report to the Director

2018 Calendar Year

Submitted to: **Director, Extended Producer Responsibility Programs**
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Stewardship Category	Reporting Metric	Target / Report	2018 Results	Follow-Up Action
Sales and Recovery	Lead Battery Sales by Type	Report	SLI: 21,306,986 kg Motive: 1,813,489 kg Stationary: 864,556 kg Verified by NFA*	None
	Lead Battery Recovery by Product Type	Report	SLI: 21,339,362 kg Motive: 2,800,235 kg Stationary: 71,355 kg Verified by NFA*	Continue to recruit Private Recyclers to report their data to the CBA.
	Lead Battery Recovery Rate	Target >90% for SLI & Motive	SLI: 100.2% Motive: 154.4% Stationary: 8.3% SLI + Motive: 104.4% Target Met Verified by NFA*	Continue to recruit Private Recyclers to report their data to the CBA.

	Recovery by Regional District	Report	See Table 1	Continue to work with Regional Districts to identify priority communities that would benefit from an RCF
Sales and Recovery Cont'd	Sales per Capita	Report	SLI: 4.25 kg/person/yr[1]	Continue to Monitor and compare to other Provinces
	Recovery per Capita	Report	SLI: 4.25 kg/person/yr[1]	Continue to Monitor and compare to other Provinces
	Amount of product collected relative to amount of product in waste stream	Report	See Table 2	Continue to conduct Waste Characterization Studies to identify priority communities and sectors
Awareness	Per Cent based on standardized surveys	Report	See Table 3	Continue to Monitor Consumer Awareness using Standardized Surveys every two years
Accessibility	Total number of Return Collection Facilities (RCFs) in the Province	Report	Total Number of RCFs: 239 See Table 4 for details Verified by NFA*	Continue to expand the number of RCFs especially in small communities and work with Provincial Government to harmonize the Hazardous Waste Regulation with the Recycling Regulation
	Total number of RCFs by Regional District	Report	See Table 5 for list of RCFs	Continue to work with Regional Districts to identify priority communities that would benefit from an RCF

Accessibility Cont'd	Urban Communities	Target: <5km	Average Distance: 2.0km Target Met See Table 4 for details	Add Retail Locations as RCFs to when opportunities arise
	Rural Communities	Target: <10km	Average Distance: 3.1km Target Met for all Rural Communities except Peachland, Whistler, Kent/Agassi See Table 4 for details	Establish RCFs that meet CBA Target for the 3 communities
	Small Communities	Report	51 small communities <4,000 with RCFs within 10km. See Table 4 for details Communities <4,000: Average Distance to RCF: 18.1km Communities <1,000: Average Distance to RCF: 27.8km	Continue to expand the number of RCFs especially in small communities once the work with Provincial Government to harmonize the Hazardous Waste Regulation with the Recycling Regulation is completed

Accessibility Cont'd	Remote Locations	Report	No Programs for Remote Locations – see Table 4	Start to develop programs for Remote Locations and Sensitive Areas once the work with Provincial Government to harmonize the Hazardous Waste Regulation with the Recycling Regulation is completed
	Sensitive Areas	Report	No Programs for Sensitive Areas – see Table 4	
	Percent of population served using CBA Target	Report	Urban: 100% Rural: 97% Urban + Rural: 99.5%	Monitor and track progress year over year
Product Management	Use of Permitted Recycling Facilities	Target: 100%	100% Lead Batteries sent to Permitted Facilities. Target Met.	Continue to Monitor and work with Environment Canada and develop education and training programs for the compliant export of lead batteries
	Adherence to International Hazardous Waste Commitments	Target: 100%	100% compliance to International Requirements. Target Met.	
	Value of Lead Batteries in Small Communities	Report	Queen Charlotte City: $8 at Tickers RCF; Port Hardy: $7 at Boris Mobile Mechanic Fort Nelson: $6 at Archies Auto Wrecking Langley: $12 at Edmonds Batteries	Monitor and track progress year over year

Product Management Cont'd	End Fate of Product based on Pollution Prevention Hierarchy	Report	Lead: 99% recovered during smelter process. 1% in dross and is landfilled. Electrolyte: 100% of sulphuric acid recovered and sold as input to another manufacturing process (e.g., fertilizer) Casing: 100% of polypropylene and metal casings recycled into new battery casings. Other Components: Plastic separators burned for energy and lead recovery.	Communicate with Smelters on changes on Recycling Rates and Product Management.

* NFA: Non-Financial Audit. Note that one participant in the Stewardship Program for lead batteries recovered 1.5M kg. Those recovery numbers were included in the recovery statistics but was not subject to the Non-Financial Audit.

[1] Population estimate from StatsCan
https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1710000901

Table 1: Recovery of Lead Batteries by Regional District

Name	Population	kg
Alberni-Clayoquot	30,456	153,071
Bulkley-Nechako	45,536	228,863
Capital	392,046	1,970,415
Cariboo	63,364	318,466
Central Coast	3,215	16,159
Central Kootenay	60,803	305,595
Central Okanagan	199,103	1,000,688
Columbia-Shuswap	53,028	266,518
Comox Valley	66,166	332,549
Cowichan Valley RD	85,459	429,515
East Kootenay	58,154	292,281
Fraser Valley	303,701	1,526,395
Fraser-Fort George	90,121	452,946
Metro Vancouver	2,592,227	13,028,482
Kitimat-Stikine	36,270	182,292
Kootenay-Boundary	29,205	146,784
Mount Waddington	11,127	55,924
Nanaimo	160,942	808,891
North Coast	16,842	84,648
North Okanagan	86,451	434,501
Northern Rockies	5,879	29,548
Okanagan-Similkameen	87,161	438,069
Peace River	62,231	312,772
Powell River	20,014	100,590
Squamish-Lillooet	43,274	217,494
Strathcona	46,572	234,070
Sunshine Coast	29,390	147,714
Thompson-Nicola	138,423	695,711

Table 2: Recovery of Lead Batteries in Landfill Studies

Year	Study	Source of Waste	Sample Size(kg)	Lead Batteries Recovered (kg)
2014	Sunshine Coast Regional District	Residential		0
2015	Metro Vancouver	IC&I		5.85 SSLA*
2016	Capital Regional District			0
2017	Peace River Regional District	Residential		0
		IC&I		1.07 SSLA
	Kitimat			0
2018	Columbia Shuswap RD	Transfer Stn		3.90 SSLA
	City of Squamish			0
		Totals	49,105	6.92 SSLA
		Diversion Rate	99.985%	

SSLA=Small Sealed Lead Acid

Table 3: Consumer Awareness Study Results for Lead Batteries

Questions to Consumers	Response		
	2013	2016	2018
Awareness Program Exists to Take Care of Lead Batteries	73%	80%	79%
Participation in the Program	51%	62%	61%
Know Where to Get Information About Recycling and Safe Disposal of Lead Batteries	68%	80%	72%
Know Location to take Unwanted Lead Batteries	54%	72%	69%
Know Where to Get Information about Return Collection Facilities for Lead Batteries	65%	80%	72%
Perception Program for Lead Batteries is Convenient	75%	67%	72%
Trust Program will Safely Recycle / Dispose of Lead Batteries	84%	81%	84%

Table 4: Summary of Return Collection Facilities by Community

Community	Community Population	# of RCFs	Pop/RCF Ratio	Population Serviced To CBA Target	Closest RCF (km)
Urban Communities					
Abbotsford	141,485	6	23,581	141,485	0.3
Burnaby	238,728	6	39,788	238,728	2.8
Campbell River	33,696	2	16,848	33,696	0.8
Chilliwack	90,390	3	30,130	90,390	2.0
Coquitlam	147,619	4	36,905	147,619	1.8
Delta	101,997	3	33,999	101,997	4.1
Kamloops	91,402	8	11,425	91,402	0.9
Kelowna	125,737	8	5,717	125,737	3.0
Langford	9,936	3	13,312	39,936	0.8
Maple Ridge	85,653	2	42,827	85,653	3.4
Mission	39,873	1	39,873	39,873	0.5
Nanaimo	93,351	5	18,670	93,351	2.2
New Westminster	73,771			73,771	2.3
North Cowichan	30,229	1	30,229	30,229	4.3
North Vancouver, City of	52,794	3	17,598	52,794	3.0
North Vancouver, District Mun.	86,602			86,602	3.0
Penticton	33,016	2	16,508	33,016	1.2
Port Coquitlam	61,187	1	61,187	61,187	1.2
Port Moody	34,193			34,193	3.7
Prince George	70,912	4	17,728	70,912	1.1
Richmond	213,392	7	30,485	213,392	0.3
Saanich	110,889	2	55,445	110,889	2.1
Surrey	543,940	11	49,449	543,940	3.6
Vancouver	653,046	8	81,631	653,046	2.0
Vernon	41,671	4	10,418	41,671	1.4
Victoria	85,192	4	21,298	85,192	0.4
West Kelowna	34,930	3	11,643	34,930	0.2
West Vancouver	40,923			40,923	3.7
	3,396,554	101	30,279	3,396,554	2.0
Rural Communities					
Armstrong	4,842	4	1,211	4,842	0.6
Castlegar	7,934	2	3,967	7,934	3.2
Central Saanich	15,895	2	7,948	15,895	1.2
Coldstream	10,938	3	3,646	10,938	3.6
Colwood	17,583	2	8,792	17,583	2.0
Comox	14,400			14,400	3.9
Courtenay	26,056	2	13,028	26,056	0.7
Cranbrook	20,452	2	10,226	20,452	1.5
Creston	4,661	1	4,661	4,661	0.8

Dawson Creek	12,115	2	6,058	12,115	1.2
Duncan	4,768	4	1,192	4,768	0.9
Esquimalt	16,830	2	8,415	16,830	0.7
Fernie	4,333	1	4,333	4,333	1.3
Fort St. John	22,618	2	11,309	22,618	0.6
Ganges	6,000	1	6,000	6,000	0.2
Gibsons	4,550	1	4,550	4,550	3.2
Grand Forks	4,029	1	4,029	4,029	4.5
Hope	5,796	1	5,796	5,796	0.9
Kent/Agassi	6,220				14.6
Kimberley	7,050	1	7,050	7,050	5.1
Kimberly	4,513	1	4,513	4,513	5.1
Kitimat	7,664	1	7,664	7,664	4.0
Ladysmith	8,342	2	4,171	8,342	1.1
Lake Country	14,183	1	14,183	14,183	5.1
Langley	27,283	6	4,547	27,283	0.6
Langley, Township of	122,415	2	61,208	122,415	5.6
Merritt	7,607	2	3,804	7,607	0.9
Metchosin	4,792			4,792	5.7
Nelson	11,249	1	11,249	11,249	0.5
North Saanich	11,143			11,143	4.0
Oak Bay	17,368			17,368	2.6
Oliver	4,568	1	4,568	4,568	1.3
Osoyoos	4,800	1	4,800	4,800	3.9
Parksville	12,883	1	12,883	12,883	2.7
Peachland	4,959				11.9
Pitt Meadows	19,090			19,090	1.7
Port Alberni	16,236	2	8,118	16,236	0.5
Powell River	13,729	3	4,576	13,729	1.0
Prince Rupert	11,261	1	11,261	11,261	2.4
Qualicum Beach	8,687			8,687	7.3
Quesnel	9,026	2	4,513	9,026	0.7
Revelstoke	7,316	1	7,316	7,316	4.0
Saanichton		1			1.0
Salmon Arm	18,128	2	9,064	18,128	1.9
Sechelt	9,490	2	4,745	9,490	0.3
Sidney	11,129	1	11,129	11,129	1.4
Smithers	5,462	2	2,731	5,462	0.0
Sooke	11,868	2	5,934	11,868	3.4
Spallumcheen	5,222			5,222	4.7
Sparwood	4,078	1	4,078	4,078	2.0
Squamish	19,067	2	9,534	19,067	1.8
Summerland	11,375	1	11,375	11,375	2.6
Terrace	10,659	3	3,553	10,659	0.7
Trail	7,376	1	7,376	7,376	6.2
Vanderhoof	4,526	1	4,526	4,526	0.4
View Royal	10,137	1	10,137	10,137	0.7

Whistler	10,627				25.5
White Rock	19,288	1	19,288	19,288	2.3
Williams Lake	11,028	2	5,514	11,028	2.2
	735,644	85	8,137	713,838	3.1
Small Communities <4,000					
100 Mile House	1,860	1	1,860	1,941	0.2
Anmore	2,322			2,322	4.9
Ashcroft	1,557			1,557	9.8
Barriere	1,751	1	1,751	1,751	0.2
Bella Coola	1,900				451
Bowen Island	3,580	1	3,580	3,580	1.5
Burns Lake	1,803	2	902	2,114	0.7
Chase	2,365	1	2,365	2,365	0.4
Chetwynd	2,877	1	2,877	2,676	0.3
Clearwater	2,368	1	2,368	2,368	0.5
Cobble Hill	1,775	1	1,775	1,775	0.7
Cumberland	3,562	1	3,562	3,562	1.5
Elkford	2,630				34.2
Enderby	2,816	3	939	2,906	0.3
Fort Nelson	3,902	1	3,902	3,902	1.4
Fort St. James	1,755	1	1,755	1,322	0.2
Fraser Lake	1,178	1	1,178	1,122	0.6
Fruitvale	2,098			2,098	6.4
Gold River	1,254	1	1,254	1,425	0.7
Golden	3,862	2	1,931	3,959	1.6
Harrison Hot Springs	1,407				21.9
Highlands	2,394	1	2,394	2,175	6.4
Houston	3,155	1	3,155	2,958	0.6
Hudson's Hope	1,022				41.2
Invermere	2,941	1	2,941	3,668	1.8
Kaslo	1,000				54.7
Keremeos	1,348				20.1
Lake Cowichan	3,169	1	3,169	3,169	2.7
Lantzville	3,408			3,408	2.7
Lillooet	2,403	1	2,403	2,367	1.8
Lions Bay	1,325				17.2
Logan Lake	2,099				35.8
Lumby	1,722	3	574	1,804	0.4
Mackenzie	3,492	1	3,492	3,827	0.5
Montrose	1,020			1,020	2.8
Nakusp	1,571	1	1,571	1,530	0.3
Northern Rockies Regional Mun.	5,834				
Pemberton	2,511	1	2,511	2,416	0.3
Pender Harbour	3,000				18.3
Port Hardy	3,731	1	3,731	3,731	4.1

Port McNeill	2,500	1	2,500	2,618	0.3
Princeton	2,782	1	2,782	2,782	0.2
Rossland	3,639				12.6
Salmo	1,165	1	1,165	1,060	5.6
Sicamous	2,468	1	2,468	2,950	3.0
Taylor	1,544				13.9
Telkwa	1,328				12.4
Tofino	2,190	1	2,190		20.3
Tumbler Ridge	2,853				75.0
Ucluelet	1,634	1	1,634	1,591	1.1
Warfield	1,669			1,669	9.2
	119,539	37	2,280	87,488	18.1
Small Communities <1,000					
Alert Bay	435				11.4
Belcarra	618			618	7.7
Boston Bar	800	1	800	800	3.7
Cache Creek	972	1	972	972	0.2
Canal Flats	744				42.6
Cherryville	930	1	930	930	1.9
Clinton	629	1	629	629	1.5
Elko	163	1	163	163	0.4
Falkland	600	1	600	600	1.8
Glenemma		1			0.9
Granisle	307				61.4
Greenwood	688				12.0
Hazelton	257			257	6.1
Lytton	240				38.9
Mabel Lake		1			10.9
Masset	859				109.0
McBride	576				80.1
Midway	667	1	667	667	1.8
New Denver	519				41.5
New Hazelton	642	1	642	642	0.9
Port Alice	785				29.4
Port Clements	366				68.5
Port Edward	474				13.4
Pouce Coupe	689			689	6.4
Radium Hot Springs	764				12.5
Sayward	311				63.0
Scotch Creek		1			2.7
Sechelt Ind Gov.	831			831	0.5
Silverton	199				45.2
Skimikin		1			4.0
Slocan	309				32.8
Stewart	423				170.0

Sun Peaks Mountain	457				30.5
Tahsis	295				46.5
Valemount	947	1	947	947	0.2
Village of Queen Charlotte	943	1	943	943	0.7
Wells	231				60.0
Youbou	966	1	966	966	0.9
Zeballos	99				61.3
	19,735	15	751	10,654	27.8
Remote Locations*					
	None to Date				
Sensitive Areas*					
	None to Date				

***** Establishment of Return Collection Facilities in Remote Locations and Sensitive Areas is on hold until amendments to the Hazardous Waste Regulation. The amendments to the regulation will allow for the collection of lead batteries at temporary sites and then transported to an established Return Collection Facility in a larger community. Amendments maybe completed by the end of 2019.

Consumer Accessibility Summary Table by Community Size

British Columbia Incorporated Areas	Population	# of RCFs	RCF/Pop	Pop Served	Ave km to RCF	% Pop Served
Urban Communities >30,000	**3,396,554**	**103**	**30,279**	**3,396,554**	**2.0**	**100.0%**
Rural Communities >4,000	**735,644**	**85**	**8,137**	**713,838**	**3.1**	**97.0%**
Urban + Rural Combined	**4,132,198**	**188**	**6,051**	**4,110,392**	**2.7**	**99.5%**
Small Communities >1,000	**119,539**	**36**	**2,280**	**87,488**	**18.1**	**73.2%**
Small Communities <1,000	**19,735**	**15**	**751**	**10,654**	**27.8**	**54.0%**
	4,261,106	**239**		**4,208,534**		**98.8%**

Table 5: Return Collection Facilities by Regional District

Regional District	Community Population	# of RCFs	Pop/RCF Ratio	Population Served	Closest RCF (km)
Alberni-Clayoquot					
Port Alberni	16,236	2	8,118	16,236	0.5
Tofino	2,190	1	2,190	2,190	20.3
Ucluelet	1,634	1	1,634	1,634	1.1
Unincorporated Areas	10,661				
Bulkley-Nechako					
Burns Lake	1,803	2	902	1,803	0.7
Fort St. James	1,755	1	1,755	1,755	0.2
Fraser Lake	1,178	1	1,178	1,178	0.6
Houston	3,155	1	3,155	3,155	0.6
Smithers	5,462	2	2,731	5,462	0.0
Telkwa	1,328			1,328	12.4
Vanderhoof	4,526	1	4,526	4,526	0.4
Unincorporated Areas	20,562				
Southside					
Granisle	307				61.4
Capital Regional					
Central Saanich	15,895	2	7,948	15,895	1.2
Colwood	17,583	1	17,583	17,583	2.0
Esquimalt	16,830	2	8,415	16,830	0.7
Highlands	2,394	1	2,394	2,394	6.4
Langford	39,936	3	13,312	39,936	0.8
Metchosin	4,792			4,792	5.7
North Saanich	11,143			11,143	4.0
Oak Bay	17,368			17,368	2.6
Saanich	110,889	2	55,445	110,889	2.1
Sidney	11,129	1	11,129	11,129	1.4
Sooke	11,868	2	5,934	11,868	3.4
Victoria	85,192	3	28,397	85,192	0.4
View Royal	10,137	1	10,137	10,137	0.7
Unincorporated Areas	27,489				
Cariboo					
100 Mile House	1,860	1	1,860	1,860	0.2
Quesnel	9,026	2	4,513	9,026	0.7
Wells	231				
Williams Lake	11,028	2	5,514	11,028	2.2
Unincorporated Areas	42,049				

Regional District	Community Population	# of RCFs	Pop/RCF Ratio	Population Served	Closest RCF (km)
Central Coast					
Bella Coola	1,900				451
Unincorporated Areas	1,218				
Central Kootenay					
Castlegar	7,934	2	3,967	7,934	3.2
Creston	4,661	1	4,661	4,661	0.8
Kaslo	1,000				54.7
Nakusp	1,571	1	1,571	1,571	0.3
Nelson	11,249	1	11,249	11,249	0.5
New Denver	519				41.5
Salmo	1,165	1	1,165	1,165	5.6
Silverton	199				45.2
Slocan	309				32.8
Unincorporated Areas	31,818				
Central Okanagan					
Kelowna	125,737	8	15,717	125,737	3.0
Lake Country	14,183	1	14,183	14,183	5.1
Peachland	4,959			4,959	11.9
West Kelowna	34,930	3	11,643	34,930	0.2
Unincorporated Areas	19,643				
Columbia-Shuswap					
Falkland	600	1	600	600	1.8
Golden	3,862	2	1,931	3,862	1.6
Revelstoke	7,316	1	7,316	7,316	4.0
Salmon Arm	18,128	2	9,064	18,128	1.9
Sicamous	2,468	1	2,468	2,468	3.0
Unincorporated Areas	22,317				
Glenemma		1			0.9
Skimikin		1			4.0
Scotch Creek		1			2.7
Comox Valley					
Comox	14,400			14,400	3.9
Courtenay	26,056	2	13,028	26,056	0.7
Cumberland	3,562	1	3,562	3,562	1.5
Unincorporated Areas	23,261				
Cowichan Valley					
Duncan	4,768	3	1,589	4,768	0.9
Ladysmith	8,342	2	4,171	8,342	1.1
Lake Cowichan	3,169	2	1,585	3,169	2.7
North Cowichan	30,229	1	30,229	30,229	4.3

Regional District	Community Population	# of RCFs	Pop/RCF Ratio	Population Served	Closest RCF (km)
Unincorporated Areas	35,888				
East Kootenay					
Canal Flats	744			744	42.6
Cranbrook	20,452	2	10,226	20,452	1.5
Elkford	2,630			2,630	34.2
Fernie	4,333	1	4,333	4,333	1.3
Invermere	2,941	1	2,941	2,941	1.8
Kimberley	7,050	1	7,050	7,050	5.1
Radium Hot Springs	764			764	12.5
Sparwood	4,078	1	4,078	4,078	2.0
Unincorporated Areas	17,625				
Elko	163	1	163	163	0.4
Fraser Valley					
Abbotsford	141,485	4	35,371	141,485	0.3
Chilliwack	90,390	3	30,130	90,390	2.0
Harrison Hot Springs	1,407				21.9
Hope	5,796	1	5,796	5,796	0.9
Kent/Agassi	6,220			6,220	14.6
Mission	39,873	1	39,873	39,873	0.5
Unincorporated Areas	16,893				
Boston Bar	800	1	800	800	3.7
Fraser-Fort George					
Mackenzie	3,492	1	3,492	3,492	0.5
McBride	576				80.1
Prince George	70,912	4	17,728	70,912	1.1
Valemount	947	1	947	947	0.2
Unincorporated Areas	15,560				
Metro Vancouver					
Anmore	2,322			2,322	4.9
Belcarra	618			618	7.7
Bowen Island	3,580	1	3,580	3,580	1.5
Burnaby	238,728	6	39,788	238,728	2.8
Coquitlam	147,619	4	36,905	147,619	1.8
Delta	101,997	3	33,999	101,997	4.1
Langley, Township of	122,415	2	61,208	122,415	5.6
Langley	27,283	6	4,547	27,283	0.6
Lions Bay	1,325			1,325	17.2
Maple Ridge	85,653	2	42,827	85,653	3.4
New Westminster	73,771			73,771	2.3
North Vancouver, City of	52,794	3	17,598	52,794	3.0
North Vancouver, District Mun.	86,602			86,602	

Pitt Meadows	19,090			19,090	1.7
Port Coquitlam	61,187	1	61,187	61,187	1.2
Port Moody	34,193			34,193	3.7
Richmond	213,392	7	30,485	213,392	0.3
Surrey	543,940	10	54,394	543,940	3.6
Vancouver	653,046	7	93,292	653,046	2.0
West Vancouver	40,923			40,923	3.7
White Rock	19,288	1	19,288	19,288	2.3
Unincorporated Areas	28,263				
Kitimat-Stikine					
Hazelton	257				6.1
Kitimat	7,664	1	7,664	7,664	4.0
New Hazelton	642	1	642	642	0.9
Stewart	423				170.0
Terrace	10,659	2	5,330	10,659	0.7
Unincorporated Areas	17,127				
Dease Lake					
Iskut					
Kootenay-Boundary					
Fruitvale	2,098			2,098	6.4
Grand Forks	4,029	1	4,029	4,029	4.5
Greenwood	688			688	12.0
Midway	667	1	667	667	1.8
Montrose	1,020			1,020	2.8
Rossland	3,639			3,639	12.6
Trail	7,376	1	7,376	7,376	6.2
Warfield	1,669			1,669	9.2
Unincorporated Areas	10,857				
Mount Waddington					
Alert Bay	435			435	11.4
Port Alice	785				29.4
Port Hardy	3,731	1	3,731	3,731	4.1
Port McNeill	2,500	1	2,500	2,500	0.3
Unincorporated Areas	4,118				
Nanaimo					
Lantzville	3,408			3,408	2.7
Nanaimo	93,351	5	18,670	93,351	2.2
Parksville	12,883	1	12,883	12,883	2.7
Qualicum Beach	8,687			8,687	7.3
Unincorporated Areas	39,388				

Regional District	Community Population	# of RCFs	Pop/RCF Ratio	Population Served	Closest RCF (km)
North Okanagan					
Armstrong	4,842	3	1,614	4,842	0.6
Coldstream	10,938	3	3,646	10,938	3.6
Enderby	2,816	3	939	2,816	0.3
Lumby	1,722	2	861	1,722	0.4
Spallumcheen	5,222			5,222	4.7
Vernon	41,671	3	13,890	41,671	1.4
Unincorporated Areas	14,755				
Native Reserves	3,818				
Northern Rockies					
Fort Nelson	3,902	1	3,902	3,902	1.4
Northern Rockies Regional Mun.	5,834				
Unincorporated Areas	445				
Okanagan-Similkameen					
Keremeos	1,348			1,348	20.1
Oliver	4,568	1	4,568	4,568	1.3
Osoyoos	4,800	1	4,800	4,800	3.9
Penticton	33,016	2	16,508	33,016	1.2
Princeton	2,782	1	2,782	2,782	0.2
Summerland	11,375	1	11,375	11,375	2.6
Unincorporated Areas	24,636				
Okanagan Falls					
Peace River					
Chetwynd	2,877	1	2,877	2,877	0.3
Dawson Creek	12,115	2	6,058	12,115	1.2
Fort St. John	22,618	2	11,309	22,618	0.6
Hudson's Hope	1,022			1,022	41.2
Pouce Coupe	689			689	6.4
Taylor	1,544			1,544	13.9
Tumbler Ridge	2,853				75.0
Unincorporated Areas	22,870				
Powell River					
Powell River	13,729	3	4,576	13,729	1.0
Unincorporated Areas	6,851				

Regional District	Community Population	# of RCFs	Pop/RCF Ratio	Population Served	Closest RCF (km)
Skeena-Queen Charlotte					
Masset	859				301.0
Port Clements	366				260.0
Port Edward	474			474	17.5
Prince Rupert	11,261	1	11,261	11,261	2.4
Village of Queen Charlotte	943				204.0
Unincorporated Areas	3,679				
Squamish-Lillooet					
Lillooet	2,403	1	2,403	2,403	1.8
Pemberton	2,511	1	2,511	2,511	0.3
Squamish	19,067	2	9,534	19,067	1.8
Whistler	10,627			10,627	25.5
Unincorporated Areas	7,017				
Strathcona					
Campbell River	33,696	2	16,848	33,696	0.8
Gold River	1,254	1	1,254	1,254	0.7
Sayward	311				63.0
Tahsis	295				46.5
Zeballos	99				61.3
Unincorporated Areas	10,563				
Sunshine Coast					
Gibsons	4,550	1	4,550	4,550	3.2
Sechelt	9,490	2	4,745	9,490	0.3
Sechelt Ind Gov.	831			831	0.5
Unincorporated Areas	12,108				
Pender Harbour	3,000			3,000	18.3
Thompson-Nicola					
Ashcroft	1,557			1,557	9.8
Barriere	1,751	1	1,751	1,751	0.2
Cache Creek	972	1	972	972	0.2
Chase	2,365	1	2,365	2,365	0.4
Clearwater	2,368	1	2,368	2,368	0.5
Clinton	629	1	629	629	1.5
Kamloops	91,402	6	15,234	91,402	0.9
Logan Lake	2,099			2,099	35.8
Lytton	240			240	38.9
Merritt	7,607	2	3,804	7,607	0.9
Sun Peaks Mountain	457			457	30.5
Unincorporated Areas	23,627				

Canadian Battery Association
2018 Report to Director, Waste Management

INDEPENDENT REASONABLE ASSURANCE REPORT

To the Director of
Canadian Battery Association (the "Association")

We have been engaged by the management of Canadian Battery Association (the Association) to undertake a reasonable assurance engagement in respect of the following disclosures within the Company's Annual Report to the Director (the Report) for the year ended December 31, 2018 (together the "Subject Matter"):

- Location of collection facilities, and any changes in the number and location of collection facilities from the previous report in accordance with Section 8(2)(b) of BC Regulation 449/2004 (the Recycling Regulation);
- The description of how the product was managed in accordance with the pollution prevention hierarchy in accordance with Section 8(2)(d) of the Recycling Regulation;
- The total amount of the producer's product sold and collected and, if applicable, the producer's recovery rate in accordance with Section 8(2)(e) of the Recycling Regulation; and,
- The performance for the year in relation to approved targets under Sections 8(2)(b), (d) and (e) in accordance with Section 8(2)(g) of the Recycling Regulation.

The objective of this report is to disclose how the Association's management has discharged its responsibility to report on the Subject Matter in accordance with Section 8(2)(b), (d), (e) and (g) of the Recycling Regulation.

RESPONSIBILITIES

The Subject Matter is the responsibility of the Association's management who have prepared the Subject Matter in accordance with the evaluation criteria which are an integral part of the Subject Matter. Our responsibility in relation to the Subject Matter is to perform a reasonable assurance engagement and to express a conclusion based on the work performed. Our opinion does not constitute a legal determination on the Association's compliance with the Recycling Regulation.

EVALUATION CRITERIA

The suitability of the evaluation criteria is the responsibility of management. The evaluation criteria presented in Appendix 1 are an integral part of the Subject Matter and address the relevance, completeness, reliability, neutrality and understandability of the Subject Matter.

SCOPE OF THE AUDIT

We carried out our reasonable assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audit or Reviews of Historical Financial Information published by the International Auditing and Assurance Standards Board. This Standard requires, amongst others, that the assurance team possesses the specific knowledge, skills and professional competencies needed to understand the information included within the Subject Matter, and that they comply with the independence and other ethical requirements of the International Federation of Accountants Code of Ethics for Professional Accountants.

A reasonable assurance engagement includes examining, on a test basis, evidence supporting the amounts and disclosures within the Subject Matter. A reasonable assurance engagement also includes assessing the evaluation criteria used and significant estimates made by management, as well as evaluating the overall presentation of the Subject Matter. The main elements of our work were:

- Inquiring and discussing with the Association's management to obtain an understanding of the management and information systems, processes and relevant controls used to generate, aggregate and report the data in the Annual Reports;
- Performing walkthroughs to test the design, and where relevant the operating effectiveness, of internal controls relating to data collection and reporting of the Subject Matter;
- Agreeing the number of collection facilities to supporting documentation;
- Confirming the existence of collection facilities including address, types of product accepted and hours of operations;
- Investigating any significant fluctuation in the total number of collection facilities over the past three years;
- Agreeing the total amounts of the producers product sold and collected during the year to source records on a test basis;
- Verifying that all recovered product was received by recycling and smelting facilities that have valid permits, approvals and/or export permits;
- Agreeing data used in calculations to source records on a test basis;
- Agreeing the applicable Annual Report target data to the approved stewardship plan to ensure completeness and consistency;
- Reviewing the Report to determine whether it is consistent with our overall knowledge of, and experience with, the non-financial performance of the Association; and,
- Comparison of reported performance against targets to internal records and calculations of performance.

OPINION

In our opinion, the Subject Matter within Canadian Battery Association's Annual Report the Director for the year ended December 31, 2018 presents fairly in accordance with the evaluation criteria, in all material respects:

- Location of collection facilities, and any changes in the number and location of collection facilities from the previous report in accordance with Section 8(2)(b) of the Recycling Regulation;
- The description of how the product was managed in accordance with the pollution prevention hierarchy in accordance with Section 8(2)(d) of the Recycling Regulation;
- The total amount of the producer's product sold and collected and, if applicable, the producer's recovery rate in accordance with Section 8(2)(e) of the Recycling Regulation; and,
- The performance for the year in relation to approved targets under Sections 8(2)(b), (d) and (e) in accordance with Section 8(2)(g) of the Recycling Regulation.

Our report has been prepared solely for the purposes of management's stewardship under the Recycling Regulation and is not intended to be and should not be used for any other purpose. Our duties in relation to this report are owed solely to Association, and accordingly, we do not accept any responsibility for loss occasioned to any other party acting or refraining from acting based on this report.

Green Horwood & Co LLP

GREEN HORWOOD & CO LLP
CHARTERED PROFESSIONAL ACCOUNTANTS

Victoria BC, Canada
August 30, 2019

Appendix 1 to the Independent Reasonable Assurance Report

Evaluation Criteria

COLLECTION FACILITIES

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed		
Disclosed information	**Claim in the Report**	**Reference**
Number of collection facilities	• 239 Return Collection Facilities (RCFs) for the public and 35 return locations for the IC&I sector	• Part 2, Section 8(2)(b), • See Page 3, Table 4 and Table 5 of 2018 Annual Report and www.recyclemybattery.ca
Changes to number of collection facilities	• There were no new RCFs added in 2018.	• Part 2, Section 8(2)(b), • See Page 3 and Table 4 of 2018 Annual Report

The following definitions were applied to the assessment of the location of collection facilities, and any changes in the number and location of collection facilities from the previous report in accordance with Section 8(2)(b) of the Recycling Regulation:

- Collection Facility: any consumer or industrial facility that accepts Lead Acid Batteries.

The following evaluation criteria were applied to the assessment of the location of collection facilities, and any changes in the number and location of collection facilities from the previous report in accordance with Section 8(2)(b) of the Recycling Regulation:

1. The number of collection facilities is determined based on the number of retail outlets or industrial depots that advertise they will accept lead acid batteries.

2. Changes in the number of collection facilities are determined based on a review of retail outlets and CBA members self-reporting industrial battery depots.

PRODUCT MANAGEMENT

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed		
Disclosed information	**Claim in the Report**	**Reference**
A description of how the recovered product was managed in accordance with the pollution prevention hierarchy (S.8(2)(d))	• all LABs collected by CBA members were sent to permitted smelters for recycling – 100% compliance with Basel Convention regarding the shipment of hazardous waste to non-OECD countries; • 99% of lead in LABs recovered in smelting process. 1% of dross is privately landfilled – information from smelter; • 100% of electrolyte (H2SO4) is reused in other production processes; • 30% of plastic battery casings used for energy recovery and creating anoxic conditions during the smelting process; • 70% of plastic LAB casings recycled into new LAB casings.	• Part 2, Section 8(2)(d). Pollution Prevention Hierarchy and Product / Component Management. • See Page 5 & page 6 of 2018 Annual Report

The following definitions were applied to the assessment of the description of how the recovered product was managed in accordance with the pollution prevention hierarchy in accordance with Section S.8(2)(d):

- Total weight of LABs processed, by category, is determined based on scaled deliveries to licensed smelters in North America by CBA members or exported by permit to OECD countries.
- The recycling requirements and emission levels for recyclers and smelters are set by Provincial or State governments as part of their permit/approval processes for the recycling and smelting facilities.

The following evaluation criteria were applied to the assessment of the description of how the recovered product was managed in accordance with the pollution prevention hierarchy in accordance with Section S.8(2)(d):

1. All recovered LABs collected by CBA members are sent to recycling and smelting facilities that have valid permits, approvals and/or export permits.

PRODUCT SOLD AND COLLECTED

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed		
Disclosed information	**Claim in the Report**	**Reference**
Product collected	• CBA members reported 24.2M kgs of waste lead-acid batteries recovered in 2018. • Recovery of the three categories of lead batteries are reported.	• Part 2, Section 8(2)(e), • See Page 2 of 2018 Annual Report
Product sold	• CBA members reported sales of 24.0M kgs of new and used lead acid batteries in 2018. • Recovery of the three categories of lead batteries are reported.	• Part 2, Section 8(2)(e), • See Page 2 of 2018 Annual Report
Recovery rate	• See the evaluation criterion for performance for the year in relation to targets in the approved stewardship plan below	

The following evaluation criteria were applied to the assessment of total amounts of the producer's product sold and collected and, if applicable, the producer's recovery rate has been calculated in accordance with Section 8(2)(e);

1. Product Sold: Product sold is determined based on self-reporting by each steward of units sold by category on an annual basis.
2. Product Collected: The weight of product collected is based on the weight of material shipped to smelters by CBA members for recycling.
3. Product Collected: Adjustments for in-transit material and inventory at consolidation sites that are not yet invoiced by processors are made for annual reporting purposes.

TARGETS

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed		
Disclosed information	**Claim in the Report**	**Reference**
Targets associated with Section 8(2)(b) per Approved Stewardship Plan: • There will be over 180 retail facilities located in urban locations for the public to drop off LABs at no charge • There will be a minimum of 20 warehouse drop-off locations for large industrial and commercial batteries at no charge.	• The CBA has identified 239 Return Collection Facilities (RCFs) for the public and 35 Return Collection Facilities for the IC&I sector and their industrial lead-acid batteries.	Part 2, Section 8(2)(b), See Page 3, Table 4 and Table 5 of 2018 Annual Report and www.recyclemybattery.ca
Targets associated with Section 8(2)(d): • Compliance with Basel Convention	• All LABs collected by CBA members were sent to permitted smelters in North America or exported to OECD Countries for recycling	See Page 5 of 2018 Annual Report.
Targets associated with Section 8(2)(e): • 95% Recovery Rate for SLI and Motive Batteries	• SLI & Motive Product sold 23,120,475kg • SLI & Motive Product recovered 24,139,597kg • SLI & Motive Recovery rate 104.4% of CBA sales	See Page 2 of the 2018 Annual Report.

The following evaluation criteria were applied to the description of performance for the year in relation to the specific targets associated with Section 8(2)(b), (d) and (e) of the Recycling Regulation in the approved stewardship plan:

1. Targets in the stewardship plan have been identified and reported on by management in the annual report; and

2. The description of progress against targets to date is supported by records maintained by the Canadian Battery Association.

3. The expected outcomes and target dates in the annual report are consistent with the targets in the approved stewardship plan.

4. The facts disclosed in the annual update on progress are supportable by evidence, neutral and understandable.

5. All LABs are delivered to permitted smelters in North America or exported to OECD countries by Export Permits. This is intended to demonstrate that LABs are recycled in accordance with strict environmental standards. This is covered by the product management evaluation criteria above and no further evaluation criteria are necessary.