

WASTE MANAGEMENT, RECYCLING AND REMEDIATION

QUARTERLY UPDATE

Q4 2019

INDUSTRY OVERVIEW WASTE COLLECTION SERVICES IN CANADA



The waste collection services industry in Canada, is defined as collecting hazardous and non-hazardous waste and recyclable materials. Non-hazardous waste includes municipal solid waste and industrial and commercial waste. The industry includes transfer stations where waste is transferred from local vehicles to long-distance vehicles for transport to disposal facilities. The industry includes private solid waste management companies that provide curbside collection, recycling and other waste management solutions to both households and businesses.

- The waste collection services industry in Canada experienced steady expansion during the five years leading up to 2019, growing at an annualized rate of 3.1% to \$5.9 billion.
- Rising consumer spending and consumption levels have resulted in an increased residential waste output over the most recent 5-year period.
- Over the five years to 2024, continuing trends of public-private partnerships are expected to help stimulate revenue growth, as will continuing growth in the population.

Key external drivers:

- 1. Population
- 2. Value of non-residential construction
- 3. Demand from manufacturing
- 4. Demand from recycling facilities
- 5. World price of crude oil

The industry has experienced structural change in recent years, including:

- Shift to privatization Many local governments have had difficultly maintaining disposal sites and have sought relief by contracting waste collection services to private operators. However, the majority of municipalities in Canada continue to be served by public waste management agencies.
- Increased regulation Increased federal and provincial-level regulation has driven up industry costs across all segments. New regulations are aimed at further development in the diversion of recyclable, electronic, or compostable waste from landfills.
- Transfer stations In an effort to promote operational efficiency, large operators in the industry have focused on developing networks of transfer stations and disposal facilities. These enable operators to reduce costs.
- Vertical integration In response to increased regulations and costs, larger operators have focused on vertically integrating their waste management operations. This includes acquisitions to gain additional services, as well as acquisitions to gain additional landfill facilities.

INDUSTRY GLANCE

2019 Revenue

\$5.9B

Annual Growth 2014 - 2019

3.1%

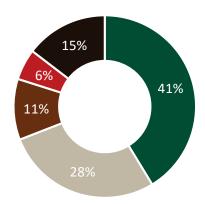
Projected Annual Growth 2019 - 2024

1.7%

Number of Businesses in 2019

1,570

PRODUCTS AND SERVICES SEGMENTATION (2019)



- Non-hazardous residential waste collection
- Non-hazardous non-residential collection
- Non-hazardous consolidation storage and preparation services
- Non-hazardous waste transfer facility services
- All other services

INDUSTRY OVERVIEW





The waste treatment and disposal services industry is defined as owners and operators of waste treatment or disposal facilities, including waste combustors, waste-to-energy (WTE) plants, solid waste landfills and compost dumps or other types of disposal facilities for hazardous or non-hazardous waste.

- Overall waste production continued to grow, and industry revenue has been increasing despite the trend toward recycling.
- Most waste directed to landfills is the product of consumer goods, and as disposable income levels rise there has a been a higher level of consumption.
- Conversely, the industry has been hampered by a decline in crude oil prices between 2015 and 2016 that reduced investment in the energy sector and cut demand from related activities, prompting a strong decline in industry revenue and cutting into profit.

Key external drivers:

- 1. Consumer spending
- 2. Population
- 3. Industrial capacity utilization
- 4. Value of non-residential construction

The industry has experienced structural change in recent years, including:

- Waste volume decreases Many industries, particularly in the manufacturing sector, have invested in developing products with greater efficiency and minimizing waste by-products. This helped to constrain growth in waste volumes. Further, declining oil and gas prices have decreased activity in several related sectors. In some cases, this has cut waste volumes and hurt the bottom line of industry operators.
- Waste-to-energy Industry operators will continue to turn to waste-to-energy operations and gas recovery landfills in an effort to combat rising landfill costs and regulations. Operators will benefit from regulation that supports the use of renewable energy, as there are tax incentives for renewable energy investment. Over the near term, it is expected that operators will shift their focus to operating WTE rather than traditional landfill operations.
- Diversion from landfills Over the most recent five-year period, many provincial governments have introduced waste reduction targets to limit waste sent to landfills. Regulations to limit landfill waste have led to higher landfill levies, provision of paper and organic municipal recycling collection services and stringent regulations on waste disposal methods.

INDUSTRY GLANCE

2019 Revenue

\$4.4B

Annual Growth 2014 - 2019

-1.5%

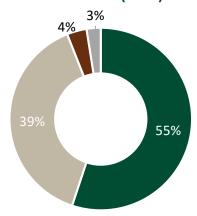
Projected Annual Growth 2019 - 2024

2.1%

Number of Businesses in 2019

683

PRODUCTS & SERVICES SEGMENTATION (2019)



- Hazardous waste treatment and disposal
- Solid waste treatment and disposal
- Waste-to-energy
- Other

INDUSTRY OVERVIEW RECYCLING FACILITIES IN CANADA



The recycling facilities industry in Canada is defined as operators of material-recovery facilities that separate and sort recyclable materials from non-hazardous waste streams. Operators also sort commingled recyclable materials, such as paper, plastics, used beverage cans and metals.

- The industry includes small-scale operators that rely on labour-intensive processes to large-scale operators that benefit from the use of technological machinery for sorting.
- The industry has been boosted by efforts by the federal and local governments to develop programs that manage waste responsibly.
- Provincial regulation requires producers of materials that can be recycled to contribute to the recycling programs.
- Industry revenue has slowed in the most recent five years, compared with the decade before. This is a result of declining commodity prices that have diminished the cost benefit of recycled plastics.

Key external drivers:

- 1. Demand from recyclable material wholesaling
- 2. Consumer spending
- 3. Population
- 4. World price of crude oil

The industry has experienced structural change in recent years.

- Recycling volume growth The industry has benefited from increased regulations towards recycling programs. As a result, overall recycling volume has increased, with the largest segment household recycling growing at the fastest rate.
- Government regulation The Waste Diversion Act (2002) promotes reducing, reusing and recycling. Subsequently, the Canadian Council of Ministers of the Environment approved a nation-wide Action Plan for Extended Producer Responsibility (2009), adding responsibility to producers to remain responsible for the recycling of their products.
- **Demand for recycled materials** The industry has benefited from demand from downstream markets. The decline in the commodity markets eroded the financial benefit of purchasing recycled plastic goods, however as the world price of oil rebounds and stabilizes, demand is expected to pick up.
- **Technological growth** The industry has experienced strong technological growth in the past five years. Advances in automated processing equipment have led to more streamlined sorting processes. This has led to an increase in capital intensity across the industry in order to stay competitive.

INDUSTRY GLANCE

2019 Revenue

\$942.7M

Annual Growth 2014 - 2019

2.6%

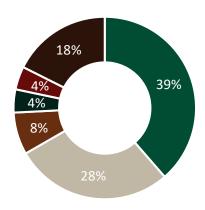
Projected Annual Growth 2019 - 2024

1.7%

Number of Businesses in 2019

255

PRODUCTS AND SERVICES SEGMENTATION (2019)



- Paper Materials
- Organics
- Metals
- Glass
- Plastics
- Other Materials



INDUSTRY OVERVIEW M&A TRANSACTIONS AND PERFORMANCE





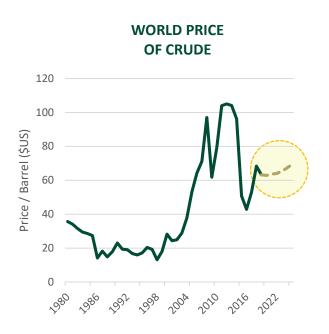
M&A MARKET UPDATE FOR Q4 2019

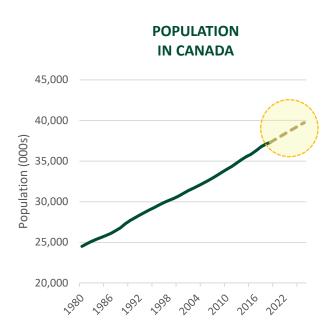
- The chart above highlights the quarterly M&A market activity within the sanitary services industry, including waste management, collection and recycling operators.
- M&A activity within the industry has been robust in recent years as market participants seek consolidation in a fragmented waste management market.
- Since 2016, there have been several large transactions where two industry leaders have merged into one entity. Examples include Waste Connections US, Inc. acquiring Progressive Waste Solutions Ltd. for a reported \$2.8 billion Cdn which closed in June 2016, GFL Environmental Inc.'s \$3.7 billion Cdn acquisition of Waste Industries which closed in November 2018 and most recently, Waste Management's announced (April 2019) acquisition of Advanced Disposal Services for \$6.6 billion Cdn.
- Q4 2019 had a total of 11 reported transactions slightly lower than the three-year average of 13 reported transactions. Based on the highly-fragmented nature of the industry, there is possibility of many smaller players and participants being active in M&A activity, without any public disclosure.
- Transaction volume for the quarter included both select asset acquisitions, including waste and recycling routes, as well as full buyout transactions. Purchasers included strategic operators, private-equity backed operators and sponsor-to-sponsor transactions.
- The strong transaction levels have been a result of the low cost of borrowing, increased level of specialization and the desire of industry leaders to gain additional market share.
- Additionally, as a result of improving underlying commodity prices, including oil prices, there has been an increased level of consolidation among recycling companies as recycled plastics become more economical for downstream customers.

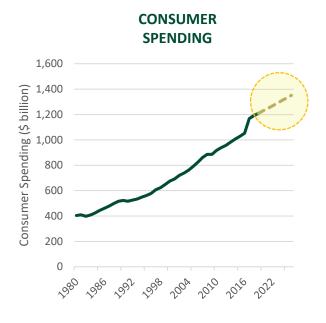
MACROECONOMIC INDICATORS

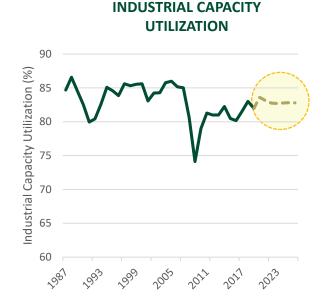


The key external drivers that affect the waste collection and disposal industries in Canada include: world price of crude oil, population of Canada, consumer spending and industrial capacity utilization. Growth in the industry is expected to be fueled by rising consumption levels and increased regulations.









SELECT RECENT M&A TRANSACTIONS





Announced	Dec 12, 2019
Closed	Jan 2, 2020
TEV	Not disclosed
TEV/EBITDA	Not disclosed
TEV/Revenue	Not disclosed

- GFL Environmental Inc. completed the acquisition of County Waste from Clairvest Equity Partners' portfolio in January 2020.
- County Waste is a waste and recycling company that provides residential, commercial, industrial, construction, and demolition waste collection and trash disposal services in Virginia and southern Maryland.
- GFL Environmental operates as a diversified environmental services company in North America.
- The addition of County Waste's operations to GFL's existing solid waste business further expands their eastern US footprint.



acquired



Closed	Dec 17, 2019
TEV	Not disclosed
TEV/EBITDA	Not disclosed
TEV/Revenue	Not disclosed

- Waste Connections Inc. completed the acquisition of Penn Waste Inc, from Scott Wagner in December 2019.
- Waste Connections provides waste collection, transfer, disposal and recycling services in Canada and the US.
- Penn Waste provides residential and commercial waste removal and recycling services to the south-central Pennsylvania region.
- The acquisition of Penn Waste will allow Waste Connections to enter the solid waste collection and recycling market in addition to strengthening their current presence in Pennsylvania.

INDUSTRY CONSOLIDATORS



The waste collection and services industry is a highly fragmented industry, with a number of regional players serving local markets. Additionally, there are many different specialized services within waste collection that add to the fragmentation. The industry is currently undergoing high levels of consolidation as large players — both public and private — and regional players seek to add specialization, waste routes and market share through both vertical and horizontal integration. Below we have highlighted the industry consolidators, based on the number of reported transactions since 2013.

		Total Disclosed	Last Transaction				
Buyer	Number of Transactions	Transaction Value (CAD millions)	Target Company	Transaction Date			
Advanced Disposal Services South, LLC	18	na	CGS Services, Inc.	Feb-2017			
Waste Management, Inc.	17	7,774	Advanced Disposal Services Inc.	Announced			
GFL Environmental Inc. / Waste Industries Inc.	13	3,734	Country Waste LLC	Jan-2020			
Waste Connections, Inc.	11	3,491	Penn Waste Inc.	Dec-2019			
Lakeshore Recycling Systems, LLC	7	na	Waste routes of Molenhouse Enterprises	Jan-2019			
Covanta Environmental Solutions LLC	6	67	Quantex Technologies Inc.	Announced			
US Ecology, Inc.	5	2,048	NRC Group Holdings Corp.	Jan-2019			
Republic Services, Inc.	5	207	High Country Disposal/Deschutes Recycling	Announced			

Total	82	17,32
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HIGHLIGHTED BUYERS



Waste Connections, Inc. is an integrated waste services company that provides non-hazardous solid waste collection and disposal services to commercial, industrial, municipal and residential customers. Waste Connections is currently the third-largest waste management company in North America.

Funding:

Publicly listed (NYSE:ADSW)

Recent News:

- Acquisition of Penn Waste Inc. (Announced Dec. 2019)
- Acquisition of Mountain Waste & Recycling Inc. (Closed Apr. 2019)
- Acquisition of American Disposal Services, Inc. (Closed Dec. 2018)
- Acquisition of Groot Industries (Closed. Jan 2017)
- Acquisition of Progressive Waste (Closed. Jun 2016)

WASTE MANAGEMENT

Waste Management Inc., through its subsidiaries, provides waste management environmental services to residential, commercial, industrial and municipal customers in North America.

Funding:

Publicly listed (NYSE:WM)

Recent News:

- Acquisition of Advanced Disposal Services Inc. (Announced Apr. 2019)
- Acquisition of EnviroSolutions, Inc. (Closed Apr. 2018)
- Acquisition of TLC Waste Disposal Services (Announced Apr. 2018)



GFL is a diversified environmental services company. GFL provides services in solid waste management, liquid waste management and infrastructure, serving the Canadian and US markets.

Funding:

Private equity backed (BC Partners, Teachers Private Capital)

Recent News:

- Acquisition of County Waste LLC (Closed Jan. 2020)
- Acquisition of Soil Safe Inc. and Windsor Disposal Services Limited (Closed July and Sept. 2019)
- Acquisition of Canada Fibers Ltd. (Announced July 2019)
- Acquisition of National Waste Services Inc. (Announced Nov. 2018)
- Acquisition of Waste Industries Inc. (Closed Nov. 2018)

Source: S&P Capital IQ, Company websites.



PUBLIC COMPARABLE ANALYSISTRADING MULTIPLES AND OPERATING STATISTICS

(Figures In USD Millions, except percentages and ratios)

		_	ι	LTM Operating Figures				sensus Esti	Valuation (LTM)		
Company	Market Cap	Enterprise Value	Revenue	Revenue Growth	EBITDA	EBITDA Margin	Revenue Growth	EBITDA Margin	EV/ EBITDA	EV/ EBITDA	EV/ Revenue
Large Capitalization Waste, Recycli	ng, and Rem	nediation									
Waste Management, Inc.	\$48,347	\$59,270	\$15,451	4.9%	\$4,334	28.0%	4.9%	29.0%	12.6x	13.7x	3.8x
Republic Services, Inc.	\$28,605	\$37,487	\$10,253	1.8%	\$2,824	27.5%	4.6%	28.3%	12.3x	13.3x	3.7x
Waste Connections, Inc.	\$23,941	\$27,952	\$5,288	9.8%	\$1,634	30.9%	8.0%	31.0%	15.8x	17.1x	5.3x
Median Mean	\$28,605 \$33,631	\$37,487 \$41,570	\$10,253 \$10,331	4.9% 5.5%	\$2,824 \$2,931	28.0% 28.8%	4.9% 5.8%	29.0% 29.4%	12.6x 13.6x	13.7x 14.7x	3.8x 4.3x
Small Cap & Specialty Services											
Stericycle, Inc.	\$5,815	\$8,930	\$3,362	-4.5%	\$670	19.9%	-2.5%	18.4%	14.8x	13.3x	2.7x
Clean Harbors, Inc.	\$4,786	\$6,216	\$3,399	6.6%	\$516	15.2%	3.3%	15.9%	11.2x	12.1x	1.8x
Advanced Disposal Services, Inc.	\$2,939	\$4,831	\$1,617	4.5%	\$384	23.7%	5.1%	26.4%	10.8x	12.6x	3.0x
Casella Waste Systems, Inc.	\$2,199	\$2,809	\$724	13.7%	\$132	18.2%	10.4%	21.8%	16.1x	21.3x	3.9x
Covanta Holding Corporation	\$1,940	\$4,535	\$1,885	1.2%	\$307	16.3%	1.3%	22.8%	10.4x	14.8x	2.4x
US Ecology, Inc.	\$1,825	\$2,181	\$612	12.9%	\$124	20.3%	70.0%	22.1%	9.5x	17.5x	3.6x
Heritage-Crystal Clean, Inc	\$727	\$778	\$433	8.5%	\$39	9.1%	5.8%	13.9%	12.2x	19.8x	1.8x
Charah Solutions, Inc.	\$72	\$266	\$609	-13.8%	\$57	9.4%	-4.6%	6.6%	6.9x	4.6x	0.4x
Median	\$2,070 \$2,538	\$3,672 \$3,818	\$1,171 \$1,580	5.5% 3.6%	\$219 \$279	17.2% 16.5%	4.2% 11.1%	20.1% 18.5%	11.0x 11.5x	14.0x 14.5x	2.5x 2.4x



PUBLIC COMPARABLE ANALYSISTRADING MULTIPLES AND OPERATING STATISTICS

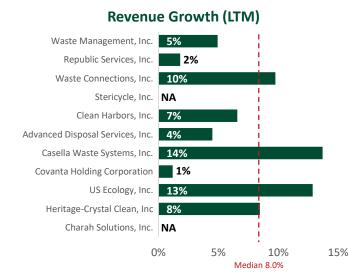
(Figures In USD Millions, except percentages and ratios)

			_	Gr	owth Rates		Profita	bility (LTN	1)	Credit Statistics	
Company	Stock Price	52-Week %	% of 52W High	EBITDA (CY+1)	EBITDA 5- (CY+2)	Year EPS CAGR	Gross Margin	EBIT	EBITDA	Tot Debt / I EBITDA	TM EBITDA / Int Exp
Large Capitalization Waste Collectio	n										
Waste Management, Inc.	\$114	\$122	94%	4%	7%	8%	38%	18%	28%	3.2x	10.6x
Republic Services, Inc.	\$90	\$91	99%	4%	6%	8%	39%	17%	28%	3.2x	7.5x
Waste Connections, Inc.	\$91	\$98	93%	6%	9%	9%	41%	17%	31%	2.6x	11.1x
Median Mean	\$91 \$98	\$98 \$103	94% 95%	4% 5%	7% 7%	8% 8%	39% 39%	17% 17%	28% 29%	3.2x 3.0x	10.6x 9.8x
Small Cap & Specialty Waste Collect	ion										
Stericycle, Inc.	\$64	\$67	96%	-22%	7%	9%	37%	12%	20%	4.7x	5.5x
Clean Harbors, Inc.	\$86	\$88	97%	10%	5%	0%	30%	6%	15%	3.4x	6.2x
Advanced Disposal Services, Inc.	\$33	\$33	100%	2%	7%	10%	35%	6%	24%	5.0x	3.8x
Casella Waste Systems, Inc.	\$46	\$48	96%	15%	13%	10%	31%	8%	18%	4.7x	5.1x
Covanta Holding Corporation	\$15	\$18	81%	-7%	3%	15%	28%	5%	16%	8.7x	2.2x
US Ecology, Inc.	\$58	\$67	86%	23%	59%	0%	31%	12%	20%	3.0x	8.4x
Heritage-Crystal Clean, Inc	\$31	\$33	96%	19%	27%	15%	21%	5%	9%	2.8x	23.1x
Charah Solutions, Inc.	\$2	\$8	29%	-76%	79%	0%	8%	5%	9%	3.5x	9.6x
Median Mean	\$39 \$42	\$40 \$45	96% 85%	6% -5%	10% 25%	9% 7%	30% 28%	6% 7%	17% 17%	4.1x 4.5x	5.8x 8.0x

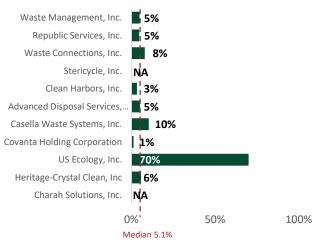
PUBLIC COMPARABLE ANALYSIS







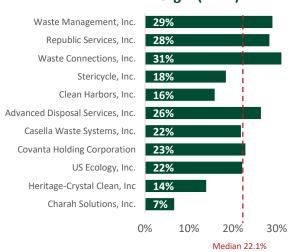
Revenue Growth (NTM)



EBITDA Margin (LTM)



EBITDA Margin (NTM)



EV/EBITDA (LTM)



EV/EBITDA (NTM)

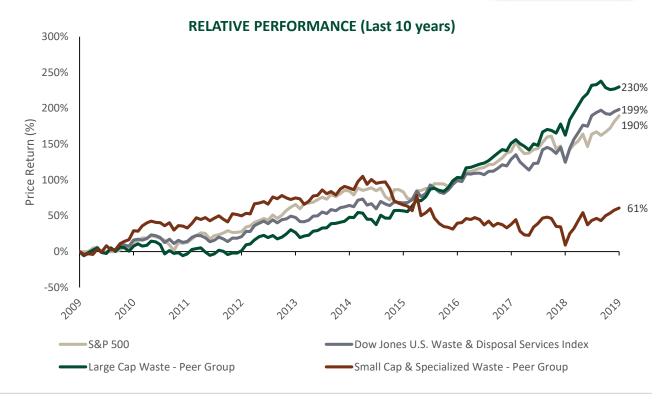


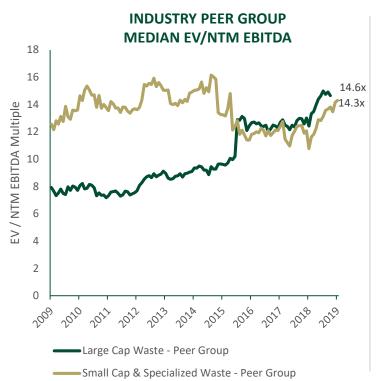
Median 12.2x

PUBLIC COMPARABLE ANALYSIS



PERFORMANCE ANALYSIS





PEER GROUP PERFORMANCE

- The sector experienced a recovery in public market prices in 2019, following a correction at the end of 2018. This price appreciation in public equities has outpaced corporate earnings growth, which has resulted in significant valuation multiple expansion.
- The median EV/NTM EBITDA multiple for the large cap waste management peer group currently trades at 14.6x, while the small cap and specialized waste peer group trades at 14.3x.
- The Large Cap Waste Peer Group has outperformed the S&P 500 over the most recent 10-year period, ending December 31, 2019.
- The Small Cap & Specialized Waste Peer Group has underperformed S&P 500 significantly, lagging by 129% over the 10year period.

PUBLIC COMPARABLE ANALYSIS



PERFORMANCE ANALYSIS

BENCHMARK PERFORMANCE (LTM)



LAST-TWELVE MONTHS PERFORMANCE

- Equity markets experienced volatility in 2018 and 2019, as a result of many factors including Brexit, trade tensions, government policies and a fear of slowing corporate growth.
- The public waste industry participants experienced a consistent upward trend within 2019 achieving significant gains for investors.
- Alongside the overall equity markets, the Large Cap Waste Peer Group has rebounded in 2019, performing in line with the S&P 500 and ended December 31, 2019 with a gain of 26% over the last twelve months.
- The Small Cap & Specialized Waste Peer Group saw extremely strong price appreciation in the first few months of 2019, however, there was a blip in the month of May and a slow recovery for the remainder of the year. Overall, the index has realized nearly double the returns of the industry large caps and achieved 49% price appreciation over the last twelve months.

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RECENTLY CLOSED DEALS



NATIONAL













