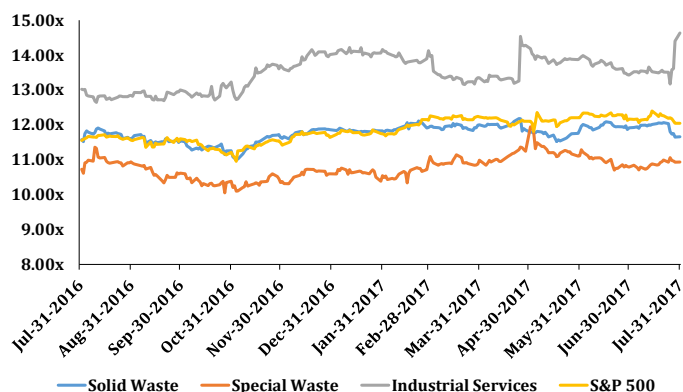


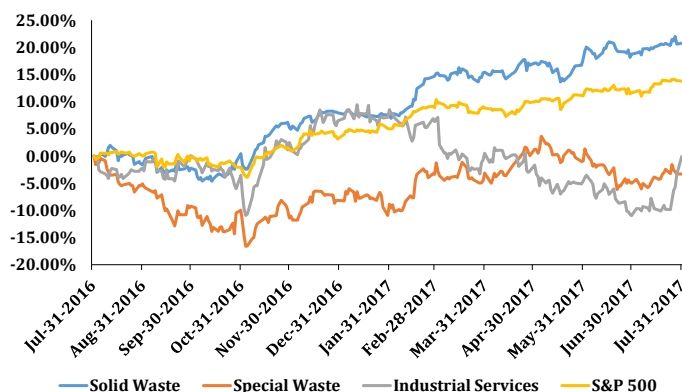
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Environmental Services LTM TEV/EBITDA



Environmental Services LTM Share Price (Shown as % change)



Indices Performance (% change)

	<u>July 2017</u>	<u>LTM</u>		<u>July 2017</u>	<u>LTM</u>
S&P 500	1.9%	13.8%	Solid Waste	1.7%	20.8%
Dow Jones	2.5%	18.9%	Special Waste	1.8%	(3.3%)
NASDAQ	3.4%	22.5%	Industrial Services	12.3%	(0.1%)

(Source: CapitalIQ)

Largest Environmental Services Movers and Losers (largest % changes in the month of July)

Heritage-Crystal Clean, Inc.	18.2%	Quest Resource Holding Corporation	(28.1%)
Covanta Holding Corporation	14.4%	Meridian Waste Solutions, Inc.	(12.1%)
Sharps Compliance Corp.	10.9%	Cypress Energy Partners, L.P.	(1.5%)
Fuel Tech, Inc.	8.9%	Ecology & Environment, Inc.	(1.5%)
Advanced Disposal Services, Inc.	6.4%		

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Select Public Trading Statistics (as of 7/31/2017)

Solid Waste:

(\$ in millions, except per share data)

Company	Share Price 07/31/2017	% of 52 Wk High	Market Capitalization	Enterprise Value	Valuation Multiples			PE Multiples			LTM Operating Margins			Net Debt/EBITDA	
					TEV/Total Revenue	TEV/EBITDA	TEV/EBIT	LTM P/E	CY17 P/E	CY18 P/E	Gross	EBIT	EBITDA		
Waste Management, Inc.	WM	\$75.15	98.9%	\$33,069	\$42,115	3.0x	11.1x	17.1x	25.7x	24.4x	22.2x	37.6%	17.9%	27.3%	2.3x
Republic Services, Inc.	RSG	\$64.22	98.0%	\$21,627	\$29,374	3.0x	10.8x	18.1x	33.0x	27.9x	25.0x	38.4%	16.9%	28.0%	2.8x
Waste Connections, Inc.	WCN	\$64.98	96.8%	\$17,131	\$20,748	4.7x	15.2x	27.2x	55.3x	33.8x	29.9x	41.3%	17.3%	31.1%	2.6x
Advanced Disposal Services, Inc.	ADSW	\$24.18	99.4%	\$2,134	\$4,078	2.9x	10.4x	30.6x	NM	48.7x	41.1x	37.5%	9.0%	27.4%	4.9x
Caseella Waste Systems, Inc.	CWST	\$16.78	94.6%	\$703	\$1,209	2.1x	10.8x	24.0x	NM	32.6x	26.9x	32.5%	8.9%	19.4%	4.4x
Meridian Waste Solutions, Inc.	MRDN	\$1.45	4.8%	\$14	\$98	2.8x	NM	NM	NM	NM	NM	38.1%	(30.2%)	(4.9%)	(48.8x)
Mean				\$12,446	\$16,270	3.1x	11.7x	23.4x	38.0x	33.5x	29.1x	37.5%	6.6%	21.4%	-5.3x
Median				\$9,633	\$12,413	2.9x	10.8x	24.0x	33.0x	32.6x	26.9x	37.8%	13.0%	27.3%	2.7x
High				\$33,069	\$42,115	4.7x	15.2x	30.6x	55.3x	48.7x	41.1x	41.3%	17.9%	31.1%	4.9x
Low				\$14	\$98	2.1x	10.4x	17.1x	25.7x	24.4x	22.2x	32.5%	-30.2%	-4.9%	-48.8x

Source: Capital IQ

Total Enterprise Value (TEV) = Market Capitalization + Preferred Equity + Debt + Minority Interest - Cash

LTM = Last Twelve Months

Special Waste:

(\$ in millions, except per share data)

Company	Share Price 07/31/2017	% of 52 Wk High	Market Capitalization	Enterprise Value	Valuation Multiples			PE Multiples			LTM Operating Margins			Net Debt/EBITDA	
					TEV/Total Revenue	TEV/EBITDA	TEV/EBIT	LTM P/E	CY17 P/E	CY18 P/E	Gross	EBIT	EBITDA		
Stericycle, Inc.	SRCL	\$77.08	85.2%	\$6,572	\$9,400	2.6x	11.8x	17.5x	40.2x	19.8x	19.0x	44.2%	15.0%	21.6%	3.6x
Clean Harbors, Inc.	CLH	\$56.80	92.2%	\$3,249	\$4,586	1.6x	11.3x	40.1x	NM	NM	NM	30.0%	4.4%	14.5%	3.1x
Darling Ingredients Inc.	DAR	\$16.27	95.8%	\$2,679	\$4,397	1.3x	8.7x	20.1x	25.1x	58.8x	21.2x	21.6%	3.9%	12.2%	3.8x
US Ecology, Inc.	ECOL	\$51.90	94.4%	\$1,132	\$1,407	2.9x	13.2x	21.6x	40.6x	30.6x	26.5x	30.0%	13.6%	22.3%	2.6x
Sharps Compliance Corp.	SMEG	\$4.69	86.2%	\$75	\$72	2.0x	NM	NM	NM	NM	NM	31.0%	(1.3%)	2.6%	(2.1x)
Perma-Fix Environmental Services, Inc.	PEFI	\$3.65	64.9%	\$43	\$50	0.9x	20.3x	NM	NM	NM	NM	19.9%	(5.0%)	4.1%	1.8x
Mean				\$2,292	\$3,319	1.9x	13.0x	24.8x	35.3x	36.4x	22.2x	29.4%	5.1%	12.9%	2.1x
Median				\$1,905	\$2,902	1.8x	11.8x	20.8x	40.2x	30.6x	21.2x	30.0%	4.1%	13.3%	2.8x
High				\$6,572	\$9,400	2.9x	20.3x	40.1x	40.6x	58.8x	26.5x	44.2%	15.0%	22.3%	3.8x
Low				\$43	\$50	0.9x	8.7x	17.5x	25.1x	19.8x	19.0x	19.9%	-5.0%	2.6%	(2.1x)

Source: Capital IQ

Total Enterprise Value (TEV) = Market Capitalization + Preferred Equity + Debt + Minority Interest - Cash

LTM = Last Twelve Months

Industrial Services:

(\$ in millions, except per share data)

Company	Share Price 07/31/2017	% of 52 Wk High	Market Capitalization	Enterprise Value	Valuation Multiples			PE Multiples			LTM Operating Margins			Net Debt/EBITDA	
					TEV/Total Revenue	TEV/EBITDA	TEV/EBIT	LTM P/E	CY17 P/E	CY18 P/E	Gross	EBIT	EBITDA		
Covanta Holding Corporation	CVA	\$15.10	91.5%	\$1,981	\$4,769	2.8x	16.1x	53.6x	NM	NM	NM	30.8%	5.2%	17.4%	9.4x
Heritage-Crystal Clean, Inc	HCCI	\$18.80	96.9%	\$425	\$429	1.2x	10.4x	18.5x	24.5x	31.3x	26.9x	25.6%	6.5%	11.6%	0.1x
CECO Environmental Corp.	CECE	\$9.66	64.9%	\$334	\$414	1.0x	7.6x	11.2x	NM	19.1x	13.7x	33.6%	8.3%	12.7%	1.9x
Cypress Energy Partners, L.P.	CEP	\$7.36	51.6%	\$87	\$176	0.6x	12.1x	20.1x	NM	16.5x	12.8x	12.1%	3.4%	5.4%	7.2x
Ecology & Environment, Inc.	EHI	\$12.37	94.7%	\$53	\$43	0.4x	7.6x	9.3x	39.3x	NM	NM	44.6%	4.6%	5.6%	(2.1x)
Quest Resource Holding Corporation	QRHC	\$1.74	58.0%	\$27	\$33	0.2x	NM	NM	NM	(15.7x)	NM	9.1%	(3.6%)	(1.2%)	(2.3x)
Fuel Tech, Inc.	FTEK	\$0.86	50.6%	\$20	\$10	0.2x	NM	NM	NM	NM	NM	35.9%	(31.1%)	(24.0%)	0.7x
Industrial Services of America, Inc.	ISIA	\$1.52	45.4%	\$12	\$19	0.4x	34.9x	NM	NM	NM	NM	5.3%	(3.2%)	1.8%	9.2x
Mean				\$368	\$737	0.9x	14.8x	22.5x	31.9x	12.8x	17.8x	24.6%	-1.2%	3.7%	3.0x
Median				\$70	\$110	0.5x	11.2x	18.5x	31.9x	17.8x	13.7x	28.2%	4.0%	5.5%	1.3x
High				\$1,981	\$4,769	2.8x	34.9x	53.6x	39.3x	31.3x	26.9x	44.6%	8.3%	17.4%	9.4x
Low				\$12	\$10	0.2x	7.6x	9.3x	24.5x	-15.7x	12.8x	5.3%	-31.1%	-24.0%	(2.3x)

Source: Capital IQ

Total Enterprise Value (TEV) = Market Capitalization + Preferred Equity + Debt + Minority Interest - Cash

LTM = Last Twelve Months





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Select Mergers and Acquisitions & Capital Raising News

❖ U.K. Firm Biffa Buys O'Brien Waste Recycling Solutions for \$46.6M

July 5, 2017 – U.K.-based Biffa plc, one of the U.K.'s largest waste management companies, has completed the acquisition of O'Brien Waste Recycling Solutions Holdings Ltd., a leading provider of waste and recycling solutions in the North East of England. O'Brien has been acquired for a cash consideration of \$45.44 million (1.0x revenue, 5.3x EBITDA), funded from Biffa's existing cash and debt facilities, with a further contingent consideration of up to \$1.16 million payable subject to the satisfaction of certain conditions. The acquisition is expected to immediately enhance earnings for the group. As of April 30, 2017, O'Brien WRS generated annual revenue of \$44.4 million, EBITDA of \$8.5 million and operating profit of \$6.8 million with 190 employees. The acquisition brings a substantial recycling and waste treatment operation across three locations which serves both commercial and local authority customers and which will significantly strengthen Biffa's infrastructure in the region. These facilities will be incorporated into Biffa's Resource Recovery and Treatment divisions.

❖ Closed Loop Fund Invests to Help Composites Manufacturer Develop Recycling Infrastructure

July 6, 2017 – IntegriCo Composites Inc., a composite industrial products manufacturer, has entered into a strategic partnership with Closed Loop to fund comprehensive recycling infrastructure as well as to expand its strategic sourcing programs in capturing increased volumes of landfill bound plastics. The investment will enable IntegriCo to complete its second manufacturing line in Sarepta, Louisiana, prior to the end of 2017 resulting in capacity of 250,000 rail cross ties annually, while consuming in excess of 65 million pounds of recycled plastics. The expansion will also permit the continued production of new products including longer length rail ties and a recently redesigned composite grade crossing system.

❖ Closed Loop Invests in Food Waste Reduction Tech Firm

July 21, 2017 – Closed Loop has made an investment in Rebound Technologies. Rebound has developed IcePoint, a technology promising innovation in refrigeration. According to the firm, the technology can freeze more food in less time and use 40 percent less energy. Closed Loop invested alongside PRIME Coalition and Investors' Circle. A facility using two IcePoint units is projected to divert 4,400 tons of food waste, decrease GHG emissions by 23,000 tons of CO₂_eq, and save 14 billion gallons of water. This impact is realized while also increasing earnings by \$275,000 per unit.

❖ GPB Capital Makes Two NYC Hauler Acquisitions

July 28, 2017 – GPB Capital has acquired stakes in Joe Morea & Sons Private Sanitation Inc. and Staten Island Carting Inc., two waste management companies serving New York City communities. The firms will be merged into Five Star Carting Inc., a GPB Capital portfolio company, a move which the company says is likely to facilitate significant synergies for GPB Capital's waste management portfolio. Joe Morea & Sons, founded in 1982, provides municipal solid waste and cardboard hauling services to residents of Brooklyn, New York, and surrounding areas. The company is expected to generate savings for Five Star Carting via the consolidation of workers' compensation insurance and fleet insurance, as well as route synergies throughout much of Brooklyn. Joe Morea & Sons will also likely divert nearly 1,000 tons of municipal solid waste per month to Citygreen Organics, another GPB Capital portfolio company. Staten Island Carting is a hauling company which currently operates five trucks that process approximately 815 tons of municipal solid waste and 165 tons of recycling per month in Staten Island, New York. An investment from GPB Capital will enable Staten Island Carting to transition to front-end loading trucks, which will reduce operational costs and the number of workers required per truck. This vehicle upgrade, along with route consolidation and savings on workers' compensation insurance and fleet insurance, is expected to cut costs and increase cash flow over the long-term.

❖ Australia Firm Buys U.S. Platinum Recycling Assets

July 31, 2017 – Australia-based Northam Platinum is entering the U.S. market with a \$10.7 million acquisition of platinum-group metals recycling equipment and a property in Pennsylvania from A-1 Specialized Services. The company will acquire multiple ceramic catalytic converter processing lines and ancillary equipment, including sampling and separation systems, transportation and a materials handling fleet.

Select Industry News

❖ Waste Management to Assess New Recycling Fee for Orange County, Florida

July 11, 2017 – Orange County, Florida, which had never charged cities to process municipal recyclables, has recently informed cities that they may have to pay the city's recycling centers operator Waste Management a \$42-per-ton fee as of July 1. This fee was created due to the decline in commodity values and the additional service charges required by contractors who sort and sell bundled commodities.



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❖ New Connecticut Law Creates More WTE Opportunities

July 11, 2017 – The State of Connecticut is one of the leaders of waste-to-energy (WTE) in the U.S. In fact, the state just recently passed a new law that will open more doors for WTE. The law focuses on two main areas: fuel cells and WTE power plants. For fuel cells, the law creates a large opportunity to win long-term power-purchase contracts with utility companies. For WTE plants, the law could help drive up long-stagnant prices of renewable energy credits. One WTE company, Covanta, recently announced an agreement with the Southeastern Connecticut Regional Resource Recovery Authority for waste disposal at the Southeastern Connecticut Resource Recovery Facility located in Preston, Connecticut. Since 1991, Covanta SECONN has provided waste management services in the region. The WTE facility processes 689 tons of post-recycled municipal solid waste daily into 18 megawatts of energy, enough to power approximately 15,000 homes continuously. The facility also recycles more than 9,000 tons of metal annually. While that is a success for Covanta, the company recently had to close its 10-acre trash transfer plant due to a significant reduction in waste.

❖ Shortage of Class-A Drivers Impacting Cobb County, Georgia Waste Collection

July 19, 2017 – Due to a shortage of class-A truck drivers to operate the 18-wheelers that haul trash from transfer stations to local landfills, Cobb County, Georgia, is dealing with a bit of a backlog. Trash is piling into transfer stations faster than it can be hauled out, affecting area residents. One sanitation company left an apology for its customers. As the problem continues to get worse, another company is working to recruit more drivers and on-site managers from out of state.

❖ New Jersey Aims to Reduce Food Waste by 50% by 2030

July 24, 2017 – New Jersey Governor Chris Christie signed a legislation that could help the state achieve its goal of reducing food waste by 50 percent by 2030. The law, which is part of a package of bills dealing with the issue of food waste still awaiting final approval, gives the state Department of Environmental Protection and the state Department of Agriculture one year to develop and begin implementation of a plan.

❖ Waste Management, Waste Connections Kickoff Q2'17 Earnings Season with Blockbuster Results

July 26, 2017 – Waste Management Inc. and Waste Connections Inc. each saw strong year-over-year growth in key metrics across the board during the second quarter, getting the industry's second quarter earnings season off to a roaring start. Houston-based Waste Management, the industry's largest firm, posted revenue of \$3.68 billion compared with \$3.43 billion for the same 2016 period. Net income for the quarter was \$362 million compared with net income of \$287 million a year ago. For Waste Management, EBITDA amounted to \$1.03 billion compared to \$951 million in the second quarter of 2016. That figure is the highest operating EBITDA posted in the company's history. Meanwhile, Toronto-based Waste Connections posted revenue of \$1.18 billion, up from \$727.6 million in second quarter of 2016. For Waste Connections, revenue from the Progressive Waste acquisition completed on June 1, 2016, was \$511.4 million and \$174.0 million in the current year and prior year periods, respectively. Operating income was \$206.9 million. This compares to operating income of \$63.5 million in the second quarter of 2016, which included \$73.2 million of items primarily related to the Progressive Waste acquisition completed in that period.

❖ During Q2 Republic Revenue Surges; Covanta Posts EBITDA Gains

July 28, 2017 – Phoenix-based Republic Services posted revenue of \$2.53 billion in the second quarter, up from \$2.35 billion in the same period a year ago. Total revenue increased 7.5 percent over the prior year, the company's highest level of growth in more than eight years. The company also reported net income of \$202.9 million versus \$180.8 million for the comparable 2016 period. Excluding certain gains and expenses, on an adjusted basis, net income for the period was \$205.9 million, versus \$189.5 million in 2016. Morristown, New Jersey-based Covanta Holding Corp., meanwhile, posted revenue of \$424 million, up from \$418 million in the second quarter of 2016. The company, however, posted a net loss of \$37 million, down from a net loss of \$29 million a year ago. Its adjusted EBITDA rose to \$93 million in 2017 from \$82 million in 2016.

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Sources include Waste360, Waste Dive and various publicly available news publications. Additional information is available upon request.

