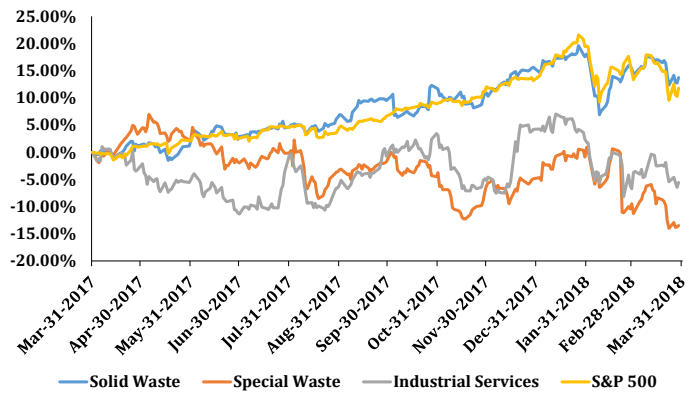
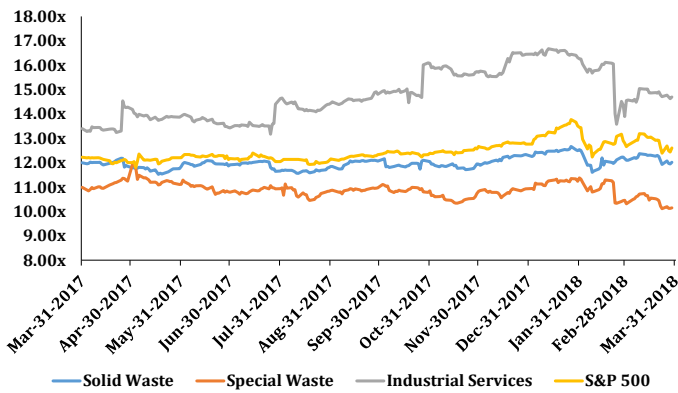


# Trash Talk

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Environmental Services LTM TEV/EBITDA

Environmental Services LTM Share Price (Shown as % change)



Indices Performance (% change)

	March 2018	LTM		March 2018	LTM
S&P 500	(1.4%)	11.5%	Solid Waste	(1.4%)	13.8%
Dow Jones	(2.1%)	16.3%	Special Waste	(4.4%)	(13.5%)
NASDAQ	(1.6%)	19.4%	Industrial Services	1.3%	(5.6%)

(Source: CapitalIQ)

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

Heritage-Crystal Clean, Inc.	17.8%	Attis Industries, Inc.	(12.3%)
Industrial Services of America, Inc.	17.3%	Cypress Energy Partners, L.P.	(11.5%)
Fuel Tech, Inc.	10.1%	Casella Waste Systems, Inc.	(8.0%)
CECO Environmental Corp.	8.3%	Stericycle, Inc.	(6.6%)
Perma-Fix Environmental Services, Inc.	6.4%	Darling Ingredients Inc.	(4.9%)

## Environmental Services Industry Contacts

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## Select Public Trading Statistics (as of 3/31/2018)

### Solid Waste:

(\$ in millions, except per share data)

Company	Share Price 03/31/2018	% 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	CY18 P/E	CY19 P/E	Gross	EBIT	EBITDA		
Waste Management, Inc.	WM	\$84.12	93.7%	\$36,372	\$45,864	3.2x	11.7x	18.0x	19.1x	22.9x	21.0x	37.9%	18.3%	27.9%	2.4x
Republic Services, Inc.	BSG	\$66.23	95.4%	\$21,832	\$29,939	3.0x	10.9x	18.4x	17.6x	22.3x	20.3x	38.1%	16.5%	27.6%	2.9x
Waste Connections, Inc.	WCN	\$71.74	96.2%	\$18,915	\$22,414	4.8x	15.5x	27.5x	32.9x	31.5x	28.5x	41.6%	17.6%	31.3%	2.4x
Advanced Disposal Services, Inc.	ADSW	\$22.28	86.7%	\$1,972	\$3,924	2.6x	10.0x	36.8x	51.8x	51.2x	38.9x	36.2%	7.0%	25.9%	5.0x
Casella Waste Systems, Inc.	CWST	\$23.38	85.4%	\$989	\$1,469	2.5x	12.8x	27.8x	NM	38.2x	31.5x	32.4%	8.8%	19.2%	4.2x
Attis Industries, Inc.	MRIIN	\$0.57	14.3%	\$10	\$100	2.1x	28.6x	NM	NM	NM	NM	22.3%	NM	NM	(0.8x)
Mean				\$13,348	\$17,285	3.0x	14.9x	25.7x	30.3x	33.2x	28.1x	34.8%	13.6%	26.4%	2.7x
Median				\$10,444	\$13,169	2.8x	12.2x	27.5x	26.0x	31.5x	28.5x	37.0%	16.5%	27.6%	2.7x
High				\$36,372	\$45,864	4.8x	28.6x	36.8x	51.8x	51.2x	38.9x	41.6%	18.3%	31.3%	5.0x
Low				\$10	\$100	2.1x	10.0x	18.0x	17.6x	22.3x	20.3x	22.3%	7.0%	19.2%	(0.8x)

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 03/31/2018	% 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	CY18 P/E	CY19 P/E	Gross	EBIT	EBITDA		
Stericycle, Inc.	SREL	\$58.53	66.5%	\$5,007	\$7,719	2.2x	10.2x	15.3x	216.8x	17.0x	16.1x	40.9%	14.1%	21.1%	3.6x
Darling Ingredients Inc.	DAR	\$17.30	88.7%	\$2,848	\$4,538	1.2x	9.7x	27.5x	22.5x	24.8x	22.2x	21.5%	3.7%	12.0%	3.7x
Clean Harbors, Inc.	CLH	\$48.81	79.2%	\$2,758	\$4,030	1.4x	9.6x	30.4x	27.7x	NM	NM	30.0%	4.5%	14.3%	3.0x
US Ecology, Inc.	ECOL	\$53.30	89.3%	\$1,163	\$1,414	2.8x	12.9x	20.6x	23.7x	26.2x	23.7x	30.4%	13.6%	21.8%	2.3x
Sharps Compliance Corp.	SMED	\$4.54	79.3%	\$73	\$70	1.7x	NM	NM	NM	NM	NM	30.5%	0.4%	4.3%	(2.0x)
Perma-Fix Environmental Services, Inc.	PESI	\$4.15	96.5%	\$49	\$52	1.0x	43.7x	NM	NM	NM	NM	20.1%	(5.4%)	2.4%	2.4x
Mean				\$1,983	\$2,970	1.7x	17.2x	23.4x	72.7x	22.7x	20.6x	28.9%	5.2%	12.6%	2.1x
Median				\$1,961	\$2,722	1.6x	10.2x	24.0x	25.7x	24.8x	22.2x	30.2%	4.1%	13.1%	2.7x
High				\$5,007	\$7,719	2.8x	43.7x	30.4x	216.8x	26.2x	23.7x	40.9%	14.1%	21.8%	3.7x
Low				\$49	\$52	1.0x	9.6x	15.3x	22.5x	17.0x	16.1x	20.1%	(5.4%)	2.4%	(2.0x)

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 03/31/2018	% 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	CY18 P/E	CY19 P/E	Gross	EBIT	EBITDA		
Covanta Holding Corporation	CVA	\$14.50	83.8%	\$1,879	\$4,350	2.5x	15.5x	65.9x	33.1x	NM	NM	28.7%	3.7%	16.0%	8.8x
Heritage-Crystal Clean, Inc	HCCI	\$23.55	93.5%	\$558	\$546	1.5x	13.1x	23.1x	19.1x	27.6x	22.9x	24.6%	6.5%	11.4%	(0.3x)
CECO Environmental Corp.	CECE	\$4.45	37.0%	\$155	\$257	0.7x	9.0x	20.7x	NM	36.8x	21.2x	33.0%	3.6%	8.2%	3.6x
Cypress Energy Partners, L.P.	CELP	\$5.59	60.3%	\$67	\$156	0.5x	11.3x	18.9x	20.7x	7.4x	NM	11.7%	2.8%	4.8%	8.2x
Ecology & Resource, Inc.	EEI	\$11.63	89.0%	\$50	\$34	0.3x	5.4x	6.6x	22.6x	NM	NM	44.7%	4.8%	5.8%	(3.0x)
Quest Resource Holding Corporation	QRHC	\$2.21	73.7%	\$34	\$39	0.2x	NM	NM	NM	550.0x	NM	11.4%	(3.9%)	(0.9%)	(4.8x)
Fuel Tech, Inc.	FTEK	\$1.20	65.6%	\$29	\$21	0.5x	NM	NM	NM	NM	NM	39.9%	(8.8%)	(5.4%)	3.4x
Industrial Services of America, Inc.	ISDA	\$2.49	92.1%	\$20	\$27	0.5x	14.2x	NM	NM	NM	NM	5.8%	(0.5%)	3.5%	3.7x
Mean				\$349	\$679	0.8x	11.4x	27.1x	23.9x	155.5x	22.0x	25.0%	1.0%	5.4%	2.5x
Median				\$58	\$98	0.5x	12.2x	20.7x	21.7x	32.2x	22.0x	26.6%	3.2%	5.3%	3.5x
High				\$1,879	\$4,350	2.5x	15.5x	65.9x	33.1x	550.0x	22.9x	44.7%	6.5%	16.0%	8.8x
Low				\$20	\$21	0.2x	5.4x	6.6x	19.1x	7.4x	21.2x	5.8%	(8.8%)	(5.4%)	(4.8x)

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

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### ❖ Clean Earth Acquires MKC Enterprises

March 16, 2018 – Clean Earth, Inc., a Hatboro, Pennsylvania-based provider of tailored waste disposal systems and programs, has successfully acquired MKC Enterprises, Inc., a Doraville, Georgia-based waste services company. Acquest International, L.P., a New York-based M&A firm, served as exclusive financial advisor to Clean Earth throughout the acquisition. MKC's company-owned, fully permitted hazardous waste RCRA Part B facility will serve as a regional hub going forward for Clean Earth's customized hazardous and non-hazardous waste management programs for the high-end technical market, including university research and development labs, industrial companies and medical facilities.

### ❖ H.I.G. Capital Closes Acquisition of Wastequip

March 23, 2018 – Wastequip, LLC, the Charlotte, North Carolina-based waste equipment manufacturer, has announced the close of its acquisition by an affiliate of H.I.G. Capital, LLC, the Miami, Florida-based private equity investment firm. As part of the agreement, Andreas Y. Gruson has been named chairman of Wastequip's board of directors. Gruson has worked in the global waste and financial industry for more than 20 years. He also serves as chairman of Estre Ambiental, Inc. and as executive chairman of Compology, Inc.

### ❖ Valet Living Acquires V.I.P. Waste Services, Expands in Midwest Region

March 26, 2018 – Tampa, Florida-based Valet Living has acquired V.I.P. Waste Services. Founded in 2010, Ohio-based V.I.P. Waste Services provided valet (doorstep) trash and recycling programs for apartment communities, serving more than 30,000 unique residents per week in the Midwest region. The strategic acquisition further increases Valet Living's presence in the Midwest. The co-founders of V.I.P. Waste Services, Jesse Lear and Travis Smith, will join Valet Living as regional sales executives in the company's Midwest market. All current V.I.P. Waste Services clients will continue with their service with no disruptions, and they will now have access to Valet Living's proprietary iValet technology, as well as on-demand assistance with maintenance staffing, unit turns and pet waste stations.

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## Select Industry News

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### ❖ Ecomelida Launches North American Operations in Orangeburg County, South Carolina

March 12, 2018 – Ecomelida, Inc., a subsidiary of Zhangzhou Sanlida Environmental Technology Corporation, has announced its plans to launch its North American operations in Orangeburg County, South Carolina. The company will construct a \$52 million recycling facility that is expected to create 200 jobs. The facility is expected to be fully operational by the fourth quarter of 2018. Ecomelida has been granted \$750,000 from the Rural Infrastructure Fund to assist with site preparation and construction, and the Coordinating Council for Economic Development has approved job development credits related to the project.

### ❖ LyondellBasell and SUEZ Begin Joint Plastics Recycling Venture

March 15, 2018 – LyondellBasell, a global plastics, chemicals and refining company, and SUEZ, the global sustainable resource management company, have partnered equally to launch Quality Circular Polymers (QCP), a Netherlands-based premium plastics recycling company. In the partnership, SUEZ will provide technology solutions to improve materials identification and preparation. Meanwhile, LyondellBasell will draw on its product development experience and knowledge of key end markets.

### ❖ SWANA Surpasses 10,000 Members

March 16, 2018 – The Solid Waste Association of North America (SWANA) has announced that membership has surpassed 10,000 members in the U.S., Canada and the Caribbean. This accomplishment marks a 22 percent increase in membership since 2015. With 45 chapters across North America, SWANA members have access to the exchange of ideas about industry trends and best practices as well as training, networking and leadership opportunities.

### ❖ Millville Plastics to Develop \$20M Plastic Recycling Facility in New Jersey

March 22, 2018 – Millville Plastics, a recently formed company in Millville, New Jersey, has announced the development of a new \$20 million plastics recycling facility to be built in Millville. Developers say the facility will process about 100 million pounds of plastics each year. The facility will be roughly 350,000 square feet and has been in the works for more than three years. Millville Plastics will hire approximately 50 employees to work three shifts at the facility. Operations are expected to begin in around two years.



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## ❖ Waste Management Fighting Odor at High Acres Landfill in New York

March 22, 2018 – Residents in Perinton, New York, and nearby Macedon, have been dealing with odor issues at the High Acres Landfill, operated by Waste Management, since the end of 2017. Waste Management has been working to curb the odor problems and believes that progress is being made. The landfill has been in operation for 40 years, with Waste Management handling operations for the last 12 years. Residents in Perinton and Macedon attended a meeting with Waste Management in January 2018 to discuss the problem.

## ❖ Waste Management Founder H. Wayne Huizenga Has Died

March 23, 2018 – H. Wayne Huizenga, the founder of Waste Management Inc., died at age 80 on March 22 at his Fort Lauderdale, Florida, home after succumbing to "a decades-long battle with cancer," Bob Henninger, executive vice president at Huizenga Holdings, told the South Florida Sun Sentinel. Huizenga took a risk in 1968, when he conceived Waste Management at the age of 25 with a single garbage truck. But that risk quickly turned into a successful move, as Waste Management became a Fortune 500 company and the largest waste disposal company in the U.S. After completing 133 acquisitions of small haulers and letting Waste Management go public in the early 1970s, Huizenga teamed up with a group of other investors to found Blockbuster in 1985. Huizenga and the investors ended up growing the video rental company from about 10 stores to more than 3,000 stores worldwide. The company had a good run and was eventually sold to Viacom in 1994 for \$8.4 billion. In 2013, Blockbuster closed almost all of its stores, but a few locations in remote areas remain open. Huizenga's career didn't stop there. He re-entered the waste management industry by serving as chairman of Republic Services, and in the 1990s, he launched AutoNation, the first nationwide auto dealer in the U.S., which also became a Fortune 500 company.

## ❖ Amazon, International Paper and Starbucks Join The Recycling Partnership

March 29, 2018 – Amazon, International Paper and Starbucks Coffee Company have joined The Recycling Partnership as new funding partners. The Recycling Partnership, a national nonprofit that uses funds from corporate partners to invest in recycling efforts across the country, has raised \$29 million in just four years. In addition to these three companies, The Recycling Partnership receives support from 34 other companies including Coca-Cola, Target, Pepsi and P&G. The nonprofit has invested in recycling infrastructure in 640 different communities since its inception.

## ❖ Zerocycle Concludes Recycling Initiatives with Two Cities

March 29, 2018 – Zerocycle, a Washington, D.C.-based recycling technology company, has successfully concluded two recycling initiatives with the cities of Buffalo, New York, and Cincinnati, using its proprietary Resident Engagement Platform (REP) to help local governments in both communities increase recycling. In Buffalo, Zerocycle's initiative doubled the rate of increase in recycling tonnage across target households, leading the city to extend its engagement with Zerocycle and increase the number of target households by 400 percent. In Cincinnati, the initiative led to a 15.7 percent increase in recycling participation. Zerocycle's REP uses proprietary data analytics to analyze several existing data streams like weight tickets and route information. The platform is then able to deliver targeted messaging to specific areas of the community based on need for improvement.

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