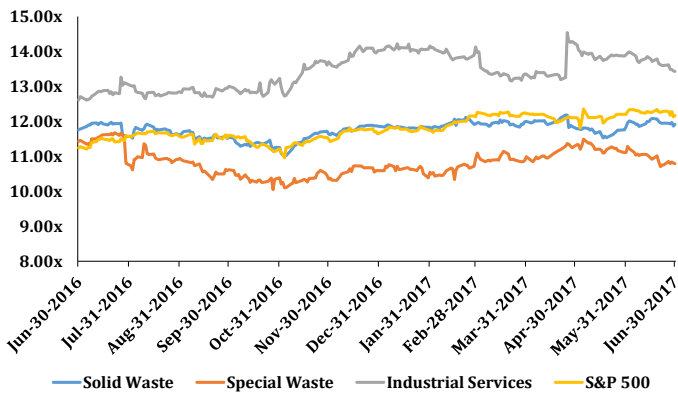


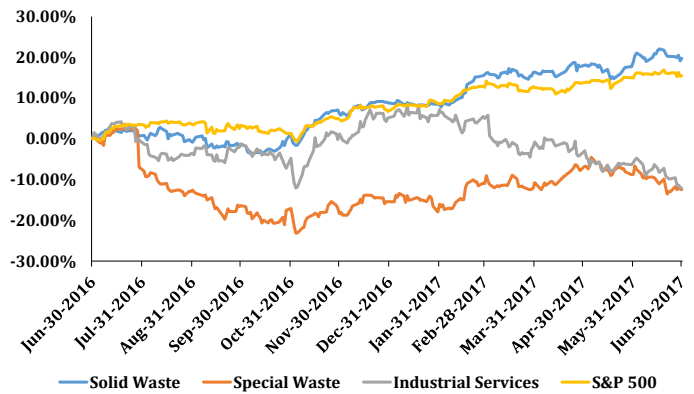
Trash Talk

An Environmental Services
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Environmental Services LTM TEV/EBITDA



Environmental Services LTM Share Price (Shown as % change)



Indices Performance (% change)

	<u>June 2017</u>	<u>LTM</u>		<u>June 2017</u>	<u>LTM</u>
S&P 500	(0.3%)	15.5%	Solid Waste	0.7%	19.8%
Dow Jones	1.0%	19.1%	Special Waste	(4.2%)	(12.5%)
NASDAQ	(1.7%)	26.8%	Industrial Services	(6.7%)	(12.1%)

(Source: CapitalIQ)

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

Casella Waste Systems, Inc.	17.1%	Meridian Waste Solutions, Inc.	(46.8%)
Industrial Services of America, Inc.	15.5%	Covanta Holding Corporation	(10.5%)
Ecology & Environment, Inc.	11.1%	Fuel Tech, Inc.	(10.2%)
Cypress Energy Partners, L.P.	6.6%	Stericycle, Inc.	(6.7%)
Perma-Fix Environmental Services, Inc.	4.3%	Quest Resource Holding Corporation	(4.7%)

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Select Public Trading Statistics (as of 6/30/2017)

Solid Waste:

(\$ in millions, except per share data)

Company	Share Price 06/30/2017	% 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	\$73.35	98.4%	\$32,406	\$41,439	3.0x	11.2x	17.3x	26.8x	24.2x	22.2x	37.6%	17.7%	27.2%	2.4x
Republic Services, Inc.	RSG	\$63.73	97.5%	\$21,546	\$29,185	3.1x	10.9x	18.3x	33.9x	26.4x	23.7x	38.5%	16.8%	28.1%	2.8x
Waste Connections, Inc.	WCN	\$64.42	96.1%	\$16,964	\$20,695	5.2x	17.0x	30.7x	74.7x	33.7x	29.7x	41.5%	17.0%	30.9%	3.1x
Advanced Disposal Services, Inc.	ADSW	\$22.73	94.3%	\$2,006	\$3,950	2.8x	10.0x	29.7x	NM	61.7x	46.4x	37.9%	9.3%	27.7%	5.0x
Caseella Waste Systems, Inc.	CWST	\$16.41	96.8%	\$687	\$1,194	2.1x	10.7x	23.7x	NM	29.9x	25.4x	32.7%	8.8%	19.5%	4.5x
Meridian Waste Solutions, Inc.	MRDN	\$1.65	5.5%	\$15	\$100	2.8x	NM	NM	NM	NM	NM	38.1%	(30.2%)	(4.9%)	(48.8x)
Mean				\$12,271	\$16,094	3.2x	12.0x	23.9x	45.1x	35.2x	29.5x	37.7%	6.6%	21.4%	-5.2x
Median				\$9,485	\$12,322	2.9x	10.9x	23.7x	33.9x	29.9x	25.4x	38.0%	13.1%	27.4%	2.9x
High				\$32,406	\$41,439	5.2x	17.0x	30.7x	74.7x	61.7x	46.4x	41.5%	17.7%	30.9%	5.0x
Low				\$15	\$100	2.1x	10.0x	17.3x	26.8x	24.2x	22.2x	32.7%	-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 06/30/2017	% 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	\$76.32	70.8%	\$6,508	\$9,335	2.6x	11.7x	17.4x	39.8x	19.8x	19.0x	44.5%	15.0%	22.3%	3.5x
Clean Harbors, Inc.	CLH	\$55.83	90.6%	\$3,194	\$4,531	1.6x	11.2x	39.6x	NM	NM	NM	30.0%	4.1%	14.4%	3.3x
Darling Ingredients Inc.	DAR	\$15.74	94.8%	\$2,592	\$4,310	1.2x	8.5x	19.7x	24.3x	31.3x	22.7x	21.9%	4.4%	12.6%	3.6x
US Ecology, Inc.	ECOL	\$50.50	93.5%	\$1,101	\$1,367	2.9x	12.8x	20.6x	34.6x	30.5x	25.7x	30.4%	14.0%	22.6%	2.5x
Sharps Compliance Corp.	SMED	\$4.23	72.1%	\$68	\$65	1.8x	NM	NM	NM	NM	NM	31.1%	(2.2%)	1.4%	(6.0x)
Perma-Fix Environmental Services, Inc.	PEFI	\$3.65	64.9%	\$43	\$50	0.9x	20.3x	NM	NM	NM	NM	19.2%	(3.8%)	4.6%	2.8x
Mean				\$2,251	\$3,276	1.8x	12.9x	24.3x	32.9x	27.2x	22.5x	29.5%	5.2%	13.0%	1.6x
Median				\$1,847	\$2,838	1.7x	11.7x	20.1x	34.6x	30.5x	22.7x	30.2%	4.2%	13.5%	3.0x
High				\$6,508	\$9,335	2.9x	20.3x	39.6x	39.8x	31.3x	25.7x	44.5%	15.0%	22.6%	3.6x
Low				\$43	\$50	0.9x	8.5x	17.4x	24.3x	19.8x	19.0x	19.2%	-3.8%	1.4%	(6.0x)

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 06/30/2017	% 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	\$13.20	76.9%	\$1,732	\$4,388	2.6x	14.4x	44.8x	NM	NM	NM	30.9%	5.7%	17.9%	8.7x
Heritage-Crystal Clean, Inc.	HCCI	\$15.90	94.9%	\$358	\$377	1.1x	10.2x	20.0x	29.0x	28.1x	24.5x	24.8%	5.4%	10.5%	0.5x
CECO Environmental Corp.	CKCE	\$9.18	61.7%	\$318	\$397	1.0x	7.3x	10.8x	NM	13.8x	12.7x	33.4%	9.1%	13.5%	1.5x
Cypress Energy Partners, L.P.	CELP	\$7.47	52.3%	\$89	\$178	0.6x	12.2x	20.2x	NM	20.6x	15.7x	11.8%	2.9%	4.9%	7.8x
Ecology & Environment, Inc.	EEI	\$12.55	96.1%	\$54	\$44	0.4x	7.7x	9.5x	39.9x	NM	NM	44.6%	4.6%	5.6%	(2.1x)
Quest Resource Holding Corporation	QRHC	\$2.42	80.7%	\$37	\$43	0.2x	NM	NM	NM	(20.4x)	NM	8.4%	(4.0%)	(1.7%)	(2.0x)
Fuel Tech, Inc.	FTEK	\$0.79	43.9%	\$19	\$9	0.2x	NM	NM	NM	NM	NM	35.9%	(25.1%)	(18.1%)	1.2x
Industrial Services of America, Inc.	ISIA	\$1.49	44.5%	\$12	\$18	0.4x	34.5x	NM	NM	NM	NM	5.8%	(4.1%)	1.2%	11.9x
Mean				\$327	\$682	0.8x	14.4x	21.0x	34.4x	10.5x	17.6x	24.4%	-0.7%	4.2%	3.4x
Median				\$71	\$111	0.5x	11.2x	20.0x	34.4x	17.2x	15.7x	27.8%	3.8%	5.3%	1.3x
High				\$1,732	\$4,388	2.6x	34.5x	44.8x	39.9x	28.1x	24.5x	44.6%	9.1%	17.9%	11.9x
Low				\$12	\$9	0.2x	7.3x	9.5x	29.0x	-20.4x	12.7x	5.8%	-25.1%	-18.1%	(2.1x)

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

❖ Closed Loop Fund Highlights its 2016 Results

June 2, 2017 – The Closed Loop Fund, an investment fund that finances recycling infrastructure and sustainable manufacturing technologies to advance the circular economy, has released its 2016 impact results. The Closed Loop Fund committed nearly \$25 million to 11 projects, with three times in co-investments in over \$64 million from municipalities, banks and impact investors. Eight live projects have already diverted 98,500 tons of material from landfill, reducing the equivalent of 232,000 metric tons of GHG emissions. The fund estimates it's resulted in \$533,000 in economic benefits to municipalities. Activities represent recycling generated by nearly 1.2 million households. Since the end of 2016, Closed Loop Fund has closed two additional loans: Aero Aggregates, a lightweight aggregate manufacturing company creating a high value end market for recycled glass in road construction and other geotechnical applications, and Escambia County Utilities Authority (ECUA), a new high-tech materials recovery facility (MRF) in Pensacola, Florida serving a region that was previously a recycling desert.

❖ WCA Waste Corporation Acquires Three Solid Waste Companies

June 6, 2017 – In the first five months of 2017, WCA Waste Corporation acquired three solid waste companies: Midwest Companies, Inc. in Marshall, Missouri, EnviroStar Waste Service, Inc. in Kansas City, Missouri, and Community Waste Services in Gainesville, Florida. WCA now owns and operates Midwest Companies' mixed solid waste transfer station and collection operation, EnviroStar's entire operation and Community Waste's commercial collection accounts. The company will continue to look for other acquisition opportunities throughout the remainder of 2017 and beyond.

❖ Bond Street Joins RubiconPro Financing

June 9, 2017 – Bond Street is now a partner of Rubicon Global's RubiconPro Financing program, which provides U.S.-based independent waste hauling companies and truckers with fuel, equipment, maintenance and financial benefits to grow their businesses and infrastructure. Bond Street, an online lender that serves as an affordable option for companies to finance growth investments such as hiring additional employees, purchasing inventory or equipment or refinancing a credit card, offers 1- to 30-year term loans from \$25,000 to \$1 million, with rates starting at 6 percent. Rubicon announced its RubiconPro buying program at WasteExpo in May, and the company's technology-driven waste and recycling model empowers its network of more independent haulers to compete for customers of all sizes, operate more efficiently and grow their businesses.

❖ Graham Waste Services Acquires Thompson Waste Removal

June 23, 2017 – Boston-based Graham Waste Services, a family-owned and operated trash and recycling services provider, has acquired the weekly residential trash and recycling pick-up business of Thompson Waste Removal of Hanson, Massachusetts, for an undisclosed price. The new addition will grow Graham Waste Service's weekly residential trash and recycling pick-up business, as well as add new commercial customers. Graham Waste Services has a presence throughout Massachusetts' South Shore, and with the acquisition will expand that presence in several communities including Cohasset, Hingham, Hull, Scituate, Marshfield, Kingston, Hanson, Hanover, Carver, Plymouth, Plympton, Raynham, Taunton, Easton, Norton, Middleboro, Bridgewater, West Bridgewater, East Bridgewater, Halifax and Holbrook. The business transaction included Thompson Waste Removal's residential and commercial trash pick-up customers as well as equipment. Thompson will continue to operate other sectors of their business separately.

Select Industry News

❖ Former Rizzo Environmental Services CEO Indicted for Bribery, Fraud

June 1, 2017 – In late 2016, concerns were raised about waste hauler Rizzo Environmental Services after allegations that the company paid bribes to Clinton, Michigan, Township Trustee Dean Reynolds for preferential treatment on a contract were released. In February 2017, Macomb County, Michigan, officials Brett Harris and Christopher Craigmiles pled guilty to taking bribes from an undercover agent in exchange for their votes on what they thought was a future Rizzo waste contract. Now, Charlie "Chuck" Rizzo Jr., the former CEO of Rizzo Environmental Services, has been indicted on nearly two dozen charges for bribery and fraud in connection with garbage contracts in Clinton, Macomb and Chesterfield Townships. Each bribery charge carries a maximum sentence of 10 years imprisonment and a fine of \$250,000, each mail and wire fraud charge carries a maximum sentence of 20 years imprisonment and a fine of \$250,000 and the bribery conspiracy charge carries a maximum sentence of five years imprisonment and a fine of \$250,000.



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❖ Chinese E-Waste Recycling Company to Bring 45 Jobs to Anson County, North Carolina

June 6, 2017 – USB Recycling, a unit of a large e-waste recycling company based in Tianjin, China, is turning a 23,000-square-foot former shirt factory in Anson County, North Carolina, into a new \$500,000 e-waste recycling facility, which will reclaim old computers, cell phones, television and other e-waste items. USB will employ 15 workers when it opens, and the number of employees is expected to grow to 45 within three years.

❖ Huntington Beach, California City Council Approves Rate Increase for Trash Collection

June 8, 2017 – The Huntington Beach (California) City Council voted 6-1 in favor of increasing rates for trash collection. The increase coincides with the increases that Republic Services charges the city for collection. Under the approved plan, rates will increase from \$19.61 to \$19.81 per month per household on July 1, and increase again by 76 cents per month on November 1. For two years after that, increases of 20 cents per month will be implemented.

❖ Las Vegas City Council Denies Appeal from Simple Environmental Services Group

June 9, 2017 – Earlier this year, Republic Services, the city of Las Vegas' longtime waste hauler, proposed a contract extension that would extend its contract until 2031. And despite pressure from some local groups and legislation under consideration that would affect how solid waste agreements are negotiated in Nevada, the Las Vegas City Council approved the proposed contract extension in April. Shortly following that decision, Simple Environmental Services Group's COO Danielle Basson filed an appeal to the council action, stating the city's business impact study was insufficient under state standards and that it didn't adequately consider or underestimated the economic effect of the move on businesses. The City Council denied Basson's appeal.

❖ Georgia Judge Issues Temporary Restraining Order Against Rubicon Global

June 20, 2017 – A superior court judge in Georgia has issued a temporary restraining order against Rubicon Global in a suit brought by Waste Connections against the tech company and a former Waste Connections employee. The suit charged Jonathan Dewitt, a former district sales manager for Progressive Waste Solutions and Waste Connections, with illegally downloading more than 1,000 confidential documents that detailed the Toronto-based hauler's specialized training program and included detailed customer information and sales leads in several markets. It also charged Dewitt and Rubicon with violating the Georgia Trade Secrets Act and Rubicon with engaging in tortious interference with an existing contract. In its lawsuit, Waste Connections said the incident is part of a pattern on the part of Rubicon "targeting Waste Connections" and that the firm "is currently seeking to misappropriate from Waste Connections its customers, key employees, trade secrets and infrastructure." The temporary restraining order will remain the status quo until a full hearing can be held in the case.

❖ Rubicon Global Names Chad Gold as New CFO

June 29, 2017 – International cloud-based, full-service waste and recycling company Rubicon Global has named Chad Gold, former global vice president of finance and CFO of cloud software company SAP Ariba, as its new CFO. Gold is an experienced finance executive with a proven track record of growth in the cloud and software industry. At SAP Ariba, Gold held multiple roles and most recently served as CFO and led its global finance organization, which consisted of 32 professionals based in five continents. He also oversaw growth that resulted in cloud subscription revenue more than doubling since SAP's \$4.3 billion acquisition of Ariba in 2012.

❖ NWRA Names Darrell Smith as New President and CEO

June 30, 2017 – The National Waste & Recycling Association (NWRA) has appointed Dr. Darrell Smith as its new president and CEO. The NWRA's board of trustees announced Smith's selection after an extensive search and cited his selection as giving the group "a leader who understands the invaluable contributions the waste and recycling industry makes for America, who can position the organization as an advocacy powerhouse on the national, state and local stage, and who can provide direction, motivation and new energy to the mission of the trade group." Smith comes to the NWRA from the Industrial Minerals Association—North America (IMA-NA), which is part of the mining industry. He is currently the group's executive vice president. He previously served as an industry advocate for the petroleum and chemical industries. Before working in the public policy sector, Smith worked in several industries include hazardous waste. Smith takes over from NWRA Vice President and General Counsel Kevin Kraushaar, who had been serving as acting president and CEO since last November when the association's previous head, Sharon Kneiss, resigned.

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

