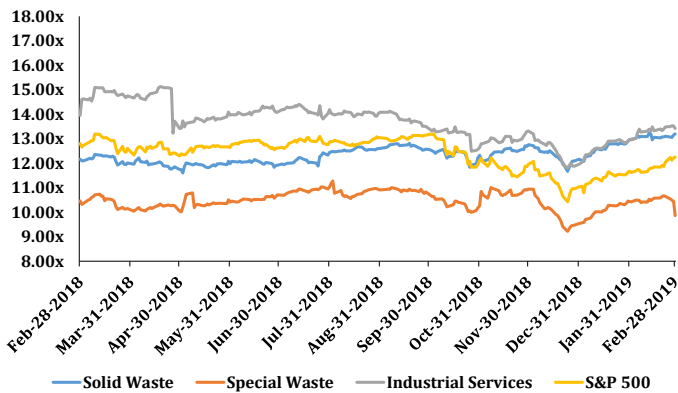


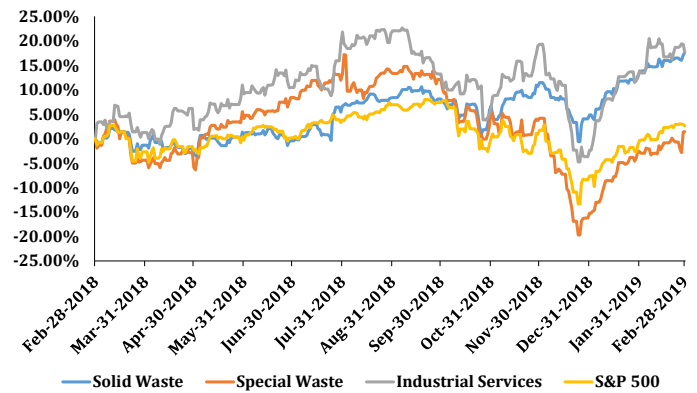
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Environmental Services LTM TEV/EBITDA



Environmental Services LTM Share Price (Shown as % change)



Indices Performance (% change)

	February 2019	LTM		February 2019	LTM
S&P 500	2.9%	2.6%	Solid Waste	17.6%	3.6%
Dow Jones	3.4%	3.5%	Special Waste	1.4%	4.2%
NASDAQ	3.7%	3.6%	Industrial Services	17.7%	3.4%

(Source: CapitalIQ)

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

Casella Waste Systems, Inc.	17.1%	US Ecology, Inc.	(9.9%)
Clean Harbors, Inc.	14.9%	Sharps Compliance Corp.	(5.8%)
CECO Environmental Corp.	10.8%	Heritage-Crystal Clean, Inc.	(5.6%)
Waste Management, Inc.	5.8%	Cypress Energy Partners, L.P.	(4.2%)
Covanta Holding Corporaiton	5.5%	Perma-Fix Environmental Services, Inc.	(1.4%)

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Select Public Trading Statistics (as of 2/28/2019)

Solid Waste:

(\$ in millions, except per share data)

Company	Share Price 02/28/2019	% 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	\$101.25	99.9%	\$42,908	\$52,874	3.5x	12.7x	19.6x	22.8x	23.5x	23.6x	38.0%	18.3%	28.2%	2.4x
Republic Services, Inc.	BSG	\$78.43	99.8%	\$25,224	\$33,494	3.3x	12.2x	20.4x	24.8x	24.5x	24.4x	38.4%	16.7%	27.8%	3.0x
Waste Connections, Inc.	WCN	\$83.40	98.0%	\$21,947	\$25,806	5.2x	16.6x	29.7x	40.3x	33.8x	31.3x	41.7%	17.7%	31.5%	2.5x
Advanced Disposal Services, Inc.	ADSW	\$26.52	94.7%	\$2,352	\$4,248	2.7x	10.9x	42.3x	249.9x	49.1x	49.2x	35.3%	6.4%	24.8%	4.9x
Casella Waste Systems, Inc.	CWST	\$35.28	98.0%	\$1,640	\$2,182	3.3x	17.8x	42.2x	235.2x	52.6x	45.4x	31.3%	7.8%	18.5%	4.4x
Mean				\$18,814	\$23,721	3.6x	14.1x	30.8x	114.6x	36.7x	34.8x	36.9%	13.4%	26.2%	3.4x
Median				\$21,947	\$25,806	3.3x	12.7x	29.7x	40.3x	33.8x	31.3x	38.0%	16.7%	27.8%	3.0x
High				\$42,908	\$52,874	5.2x	17.8x	42.3x	249.9x	52.6x	49.2x	41.7%	18.3%	31.5%	4.9x
Low				\$1,640	\$2,182	2.7x	10.9x	19.6x	22.8x	23.5x	23.6x	31.3%	6.4%	18.5%	2.4x

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 02/28/2019	% 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		
Stortec, Inc.	SRCL	\$44.58	62.4%	\$4,043	\$6,802	2.0x	9.5x	14.8x	NM	14.3x	16.3x	40.0%	13.2%	20.5%	3.8x
Clean Harbors, Inc.	CLH	\$68.00	93.8%	\$3,798	\$5,091	1.5x	10.5x	27.7x	58.6x	NM	NM	30.1%	5.6%	14.6%	2.7x
Darling Ingredients Inc.	DAR	\$21.98	97.2%	\$3,619	\$5,249	1.5x	8.9x	19.6x	36.6x	62.6x	26.1x	21.9%	3.2%	12.7%	3.6x
US Ecology, Inc.	ECOL	\$57.38	74.4%	\$1,264	\$1,596	2.8x	13.3x	20.5x	25.5x	30.5x	28.3x	30.1%	13.7%	21.3%	2.8x
Shaps Compliance Corp.	SMED	\$3.77	77.4%	\$61	\$56	1.3x	NM	NM	NM	NM	NM	29.9%	0.4%	4.2%	(2.7x)
Perma-Fix Environmental Services, Inc.	PESI	\$3.55	68.9%	\$42	\$45	0.9x	23.4x	127.8x	22.3x	NM	NM	24.1%	0.7%	3.8%	1.9x
Mean				\$2,138	\$3,140	1.7x	13.1x	42.1x	35.8x	35.8x	23.6x	29.4%	6.1%	12.8%	2.0x
Median				\$2,442	\$3,344	1.5x	10.5x	20.5x	31.1x	30.5x	26.1x	30.0%	4.4%	13.7%	2.7x
High				\$4,043	\$6,802	2.8x	23.4x	127.8x	58.6x	62.6x	28.3x	40.0%	13.7%	21.3%	3.8x
Low				\$42	\$45	0.9x	8.9x	14.8x	22.3x	14.3x	16.3x	21.9%	0.4%	3.8%	(2.7x)

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 02/28/2019	% 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	\$16.98	94.1%	\$2,213	\$4,649	2.5x	13.8x	39.4x	14.8x	NM	NM	30.5%	6.0%	17.7%	7.4x
Heritage-Crystal Clean, Inc	HCCI	\$24.16	84.2%	\$557	\$540	1.4x	12.5x	20.3x	23.6x	38.9x	25.4x	21.2%	5.5%	9.4%	(0.4x)
CECO Environmental Corp.	CECE	\$7.62	83.0%	\$266	\$319	1.0x	13.4x	33.0x	NM	31.1x	19.2x	33.1%	4.2%	8.1%	1.7x
Cypress Energy Partners, L.P.	CELP	\$7.55	88.8%	\$90	\$178	0.6x	8.8x	12.0x	9.0x	NM	NM	14.0%	5.0%	6.8%	2.8x
Ecology & Environment, Inc.	EEI	\$11.80	81.7%	\$51	\$36	0.3x	6.7x	8.4x	23.9x	NM	NM	44.7%	4.1%	5.1%	(3.0x)
Fuel Tech, Inc.	FTEK	\$1.23	67.2%	\$30	\$26	0.5x	26.7x	NM	NM	NM	NM	35.5%	0.8%	2.3%	(9.4x)
Quest Resource Holding Corporation	QRHC	\$1.58	51.0%	\$24	\$28	0.3x	NM	NM	NM	NM	NM	16.2%	(1.9%)	0.9%	3.5x
Industrial Services of America, Inc.	ISDA	\$1.27	47.0%	\$10	\$18	0.3x	6.8x	30.2x	NM	NM	NM	6.7%	0.7%	4.1%	3.0x
Mean				\$405	\$724	0.9x	12.7x	23.9x	17.8x	35.0x	22.3x	25.2%	3.0%	6.8%	0.7x
Median				\$71	\$107	0.5x	12.5x	25.2x	19.2x	35.0x	22.3x	25.9%	4.1%	6.0%	2.2x
High				\$2,213	\$4,649	2.5x	26.7x	39.4x	23.9x	38.9x	25.4x	44.7%	6.0%	17.7%	7.4x
Low				\$10	\$18	0.3x	6.7x	8.4x	9.0x	31.1x	19.2x	6.7%	-1.9%	0.9%	(9.4x)

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

❖ Macquarie Completes Wheelabrator Acquisition, Buys Tunnel Hill Partners

February 12, 2019 – Macquarie Infrastructure Partners (MIP) and Wheelabrator Technologies Inc. just announced that MIP, acting through one of its managed funds, has completed the purchase of Wheelabrator from funds managed by Energy Capital Partners (ECP). MIP operates within the Macquarie Infrastructure and Real Assets (MIRA) division of Macquarie Group. In addition, Ironwood Capital announced an exit from its investment in Tunnel Hill Partners, which was sold to Macquarie Group. Wheelabrator is a leading owner and operator of WTE facilities. Wheelabrator provides waste disposal solutions for local communities and delivers baseload, renewable energy to residential and commercial customers. Wheelabrator currently has a platform of 25 strategically located assets located in the U.S. and the U.K., including 19 WTE facilities (three under construction), two waste fuel facilities and four ash monofills. The Wheelabrator sale was approved by the Federal Energy Regulatory Commission, Committee on Foreign Investment in the United States, Department of Justice, Federal Trade Commission, Federal Communications Commission and the New Jersey Department of Environmental Protection. Tunnel Hill is the largest integrated waste-by-rail operator in the United States with five waste-by-rail transfer stations in the Northeast, two rail-served landfills in Ohio, the largest beneficial use site in Pennsylvania (also rail-served), a hauling operation with transfer stations in Connecticut and a recycling operation in Massachusetts. The company provides a variety of services including hauling, recycling, beneficial reuse, transfer and disposal to commercial and industrial customers throughout the Northeast and Ohio.

❖ KKR Completes Acquisition of Ramky Enviro Engineers

February 15, 2019 – Global investment firm KKR announced the completion of its previously announced acquisition of Ramky Enviro Engineers Limited (REEL), a provider of environmental services and solutions in India and overseas. Under the terms of the transaction, KKR has acquired a 60 percent stake in REEL for approximately \$510 million via a combination of primary and secondary investments. In addition to investing in REEL from its KKR Asian Fund III, the investment is part of KKR's Global Impact strategy, which is focused on identifying and investing in businesses with positive social or environmental impact that measurably contribute solutions to one or more of the United Nations Sustainable Development Goals.

❖ Anaergia Announces Bond Financing for Organic WTE Facility

February 20, 2019 – Anaergia announced the successful issuing of bonds as part of the funding of its Rialto Bioenergy Facility (RBF). A total of \$117 million of tax-exempt bonds were issued by the California Pollution Control Financing Authority for the RBF. This is a substantial portion of the \$160 million of total capital for the construction and commissioning of this facility, which is to begin operations in the third quarter of 2020. When fully operational, the RBF will be the largest food waste digester facility in all of North America, converting 700 tons per day of food waste and 300 tons per day of biosolids into renewable natural gas, renewable electricity and Class A organic fertilizer. Anaergia is building the RBF in collaboration with Waste Management, Republic Services, Southern California Edison, Anaheim Public Utility, Southwest Gas Utility, city of Rialto, the Sanitation Bureau of the City of Los Angeles and the Sanitation Districts of Los Angeles County and of Orange County. Sources of the funding for the RBF include the California Energy Commission, the U.S. Department of Energy, California Department of Resources Recycling and Recovery (CalRecycle), the state of California and significant private investment.

❖ Bobcat and Inland Waste Become Orion Waste Solutions

February 25, 2019 – The investor group and management team of Bobcat North America announced that Orion Waste Solutions will become its new operating name. In addition to Bobcat, the portfolio companies of Inland Waste Solutions and Russo & Sons are transitioning to the new Orion Waste Solutions brand. Orion Waste Solutions is a fully integrated regional solid waste and recycling company based in Sarasota, Florida, that services more than 165,000 commercial, industrial and residential customers across seven states, primarily in the southeast United States.

❖ Wastequip to Acquire Garbage Truck, Hoist Manufacturer Amrep

February 26, 2019 – Wastequip announced it has signed a definitive agreement to acquire Amrep, a refuse body and hoist manufacturer. A family-owned business based in Ontario, California, with additional facilities in Salisbury, North Carolina; Phoenix; Pacific, Washington; and Sacramento, California, Amrep was founded in 1976 and has become a well-recognized brand in the West Coast market. Under terms of the transaction, Amrep will continue to operate as its own entity with the existing leadership team reporting directly to Wastequip CEO Marty Bryant. The transaction is not expected to result in a reduction in force for either company. The addition of Amrep's front load and automated side load refuse trucks fulfills Wastequip's mission of serving as a one-stop-shop for waste equipment for haulers and municipalities, with products for curbside collection to final destination. Amrep's heavy-duty refuse trucks feature 100 percent Hardox steel in the hopper, packer, body and tailgate along with a patented zero-radius arm that allows haulers to use more efficient side load trucks even in the tightest urban areas. Additionally, the acquisition provides Amrep with the capital to complete its technology offering with its refuse body trucks, including onboard diagnostics and routing. Existing parts customers will benefit from a greatly expanded line card and will now have the ability to order high-quality Amrep cylinders manufactured in house and sold through Wastequip's Go To Parts brand, which, as a result of the transaction, will expand its technical expertise and parts offerings to serve a broader customer base.



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Select Industry News

❖ Strategic Materials Names New CFO

February 1, 2019 – Strategic Materials, Inc., announced the appointment of Mike Hajost as executive vice president and CFO for the company, leading the finance and information technology business functions. Hajost is the former senior vice president and CFO of Accuride Corporation, a developer of wheel-end components for the heavy truck and trailer industry. Hajost played a key role in the successful transition to take Accuride Corporation private and executed two significant acquisitions, significantly expanding the size and geographic scope of the company. Strategic Materials recovers and processes post-consumer and post-industrial glass in end markets such as container glass, fiberglass insulation and specialty glass applications. Recycled glass, or cullet, results in energy savings and a reduction in carbon emissions by up to 30 percent when utilized in container glass and fiberglass insulation production.

❖ No-Waste Grocery Stores Open in Canada

February 6, 2019 – Nada grocery store in Vancouver, British Columbia, sells hundreds of food products without single-use packaging. According to a Huffington Post report, the store's owner is part of a wave of environmentally conscious entrepreneurs who are opening no-waste food markets across Canada. According to the report, the shop encourages customers to bring clean, reusable containers from home to box the food. Shoppers who arrive unprepared can rummage through bins of free miscellaneous containers or purchase reusable packaging.

❖ GP Harmon Recycling Changes Name to Georgia-Pacific Recycling

February 8, 2019 – Georgia-Pacific's Harmon Recycling is changing its name to Georgia-Pacific Recycling. The change more directly reflects that the recycling business is an integrated part of a large, stable and respected organization, according to the company. Georgia-Pacific Recycling maintains its headquarters in Jericho, New York, and operates six recycling centers in the U.S. The business was acquired by Georgia-Pacific in 2000 and, until now, has continued to operate under the Harmon name. With nearly 50 years of experience in the recycling industry, the team helps customers reduce their waste stream and maximize recyclables. In addition to exclusively supplying waste paper to Georgia-Pacific tissue and containerboard mills, Georgia-Pacific Recycling is a global marketer of recyclable materials, selling more than 6 million tons of paper and 450 million pounds of plastics annually. The business is now using the new Georgia-Pacific Recycling name, but some official documents will reflect the GP Harmon Recycling name until the transition is complete later this year, noted the company.

❖ Republic Services Makes Barron's 100 Most Sustainable U.S. Companies List

February 14, 2019 – Republic Services announced it was recognized on Barron's 100 Most Sustainable U.S. Companies list for the second consecutive year, advancing to No. 80 on the 2019 list. Republic noted it remains the sole recycling and solid waste services provider on the list. Barron's partnered with Calvert Research and Management, which analyzed the 1,000 largest publicly-held U.S. companies by market capitalization to develop the top 100 list. The firm studied more than 300 key performance indicators—including water usage, greenhouse gas emissions, business ethics and environmental impact—that, in turn, fall into the stakeholder categories of shareholders, employees, customers, community and planet.

❖ WCA's Spencer Promoted to COO

February 20, 2019 – WCA Waste Corporation announced that Senior Vice President of Operations Matt Spencer has been promoted to COO, effective March 1. Spencer is a three-year veteran of WCA and has a total of 15 years of experience in the solid waste industry. He has served WCA as the senior vice president of operations for the last two years, responsible for day-to-day operations throughout WCA, including safety, collection operations, sales and marketing, landfill operations and fleet and procurement activities.

❖ Waste Connections CEO Takes Temporary Leave of Absence

February 20, 2019 – Waste Connections, Inc. announced that Ronald J. Mittelstaedt, chairman and CEO of Waste Connections, will take a temporary leave of absence to address health matters affecting him and his family. Until Mittelstaedt returns to work, Worthing F. Jackman, president of Waste Connections, will assume the duties and responsibilities of the company's principal executive officer. Michael W. Harlan, the company's lead independent director, will preside at all meetings of the Board of Directors until Mittelstaedt returns. This news comes shortly after Waste Connections released its 2018 fourth quarter and year-end earnings. Mittelstaedt was absent from the earnings call due to a family emergency.

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