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FOR IMMEDIATE RELEASE

Federal Signal Raises Full-Year Outlook after Record Second Quarter

Oak Brook, Illinois, July 31, 2019 — Federal Signal Corporation (NYSE:FSS), a leader in environmental and safety solutions, today reported results for the second quarter ended June 30, 2019.

- Net sales of \$324 million, up \$33 million, or 11%, from last year
- Operating income of \$46.3 million, up \$8.2 million, or 22%, from last year
- GAAP EPS of \$0.54, up \$0.10, or 23%, from last year
- Adjusted EPS of \$0.55, up \$0.11, or 25%, from last year
- Executed new five-year \$500 million revolving credit facility
- Raising full-year adjusted EPS* outlook to a new range of \$1.64 to \$1.72, from the previous range of \$1.50 to \$1.60

Consolidated net sales for the second quarter were \$324.3 million, a record for the Company, and up \$33.3 million, or 11%, versus the same quarter a year ago. Net income for the second quarter was \$32.8 million, equal to \$0.54 per diluted share, compared to \$26.9 million, equal to \$0.44 per share, in the prior-year quarter.

The Company also reported adjusted net income for the second quarter of \$33.6 million, equal to \$0.55 per diluted share, another Company record, and up from \$27.1 million, or \$0.44 per diluted share, in the second quarter of last year. The Company is reporting adjusted results to facilitate comparisons of underlying performance on a year-over-year basis. A reconciliation of these and other non-GAAP measures is provided at the conclusion of this news release.

Outstanding Q2 Results Exceed Expectations; Reflect Significant Increases in Sales and Income

“We were anticipating a strong second quarter in what is typically a seasonally-strong period for many of our businesses. Our outstanding results surpassed those expectations,” commented Jennifer L. Sherman, President and Chief Executive Officer. “We reported double-digit organic growth in both net sales and orders, and our operating income was up 22% year-over-year. Each of our groups delivered margin performance in excess of our target ranges, translating to a consolidated adjusted EBITDA margin of 17.6%. Within the Environmental Solutions Group, we realized benefits from higher sales volumes, favorable sales mix, strong aftermarket demand and operational efficiencies resulting from increased production levels, associated with our ongoing efforts to reduce backlogs for certain product lines with extended lead times. I was also pleased that the Safety and Security Systems Group largely overcame the effects of some temporary softness in domestic public safety markets, which we had anticipated, and improved its adjusted EBITDA margin by 240 basis points.”

In the Environmental Solutions Group, net sales were up \$33.9 million, or 15%, to \$267.2 million, primarily due to increases in shipments of vacuum trucks, sewer cleaners, and dump truck bodies, as well as a 14% improvement in aftermarket revenues, represented by higher rental income and increases in parts, service and used equipment sales. Net sales in the Safety and Security Systems Group of \$57.1 million were generally consistent with the prior-year quarter.

Consolidated operating income for the second quarter was \$46.3 million, up \$8.2 million, or 22%, compared to the prior-year quarter, primarily driven by increases of \$7.6 million and \$1.3 million within the Environmental Solutions Group and Safety and Security Systems Group, respectively. Consolidated operating margin was 14.3%, up from 13.1% in the prior-year quarter.

Consolidated adjusted earnings before interest, tax, depreciation and amortization (“adjusted EBITDA”) for the second quarter was \$57.1 million, up \$9.8 million, or 21%, compared to the prior-year quarter, and consolidated adjusted EBITDA margin was 17.6%, compared to 16.3% last year.

Adjusted EBITDA in the Environmental Solutions Group was up \$8.9 million, or 20%, to \$54.4 million, and its adjusted EBITDA margin was 20.4%, up from 19.5% last year. Within the Safety and Security Systems Group, adjusted EBITDA was \$10.3 million, up \$1.3 million, or 14%, from last year, and its adjusted EBITDA margin was 18.0%, compared to 15.6% last year.

Consolidated orders for the second quarter were \$308.0 million, up \$30.4 million, or 11%, compared to the prior-year quarter, primarily due to organic order growth of \$35.9 million, or 17%, within the Environmental Solutions Group. Consolidated backlog at June 30, 2019 was \$348 million, up \$25 million, or 8%, compared to last year.

New Credit Facility Further Strengthens Our Financial Position, Providing Additional Financial Flexibility to Fund Growth Opportunities

Net cash of \$34.6 million was provided by operating activities during the second quarter, up \$7.1 million, or 26%, compared to the prior-year quarter. At June 30, 2019, consolidated debt was \$209 million, total cash and cash equivalents were \$39 million and the Company had \$180 million of availability for borrowings.

The Company also announced today the completion of a new five-year \$500 million revolving credit facility, to replace its existing \$400 million credit facility. The new arrangement also provides the Company with the flexibility to borrow up to an additional \$250 million for permitted acquisitions, subject to approval by applicable lenders.

“We are extremely pleased to announce this new credit facility, which provides further financial flexibility to invest in organic growth initiatives and pursue strategic acquisitions,” said Sherman. “The terms of the new facility are more favorable to the Company, reflecting the strength of our performance, cash flow and balance sheet. This marks another important milestone on our path to disciplined, strategic growth.”

The Company also funded dividends of \$4.8 million during the second quarter, reflecting a dividend of \$0.08 per share, and the Board of Directors recently declared a similar dividend that will be payable in the third quarter.

Outlook

“Conditions in our end markets remain positive and our organic growth initiatives are continuing to gain traction,” Sherman noted. “With our record second quarter results, the strength of our backlog, and a modest earnings contribution from the recently-completed MRL acquisition, we are raising our 2019 adjusted EPS* outlook to a new range of \$1.64 to \$1.72, from a range of \$1.50 to \$1.60. The new range equates to a year-over-year improvement of between 16% and 22%.”

CONFERENCE CALL

Federal Signal will host its second quarter conference call on Wednesday, July 31, 2019 at 10:00 a.m. Eastern Time. The call will last approximately one hour. The call may be accessed over the internet through Federal Signal’s website at www.federalsignal.com or by dialing phone number 1-877-705-6003 and entering the pin number 13692737. A replay will be available on Federal Signal’s website shortly after the call.

About Federal Signal

Federal Signal Corporation (NYSE: FSS) builds and delivers equipment of unmatched quality that moves material, cleans infrastructure, and protects the communities where we work and live. Founded in 1901, Federal Signal is a leading global designer, manufacturer and supplier of products and total solutions that serve municipal, governmental, industrial and commercial customers. Headquartered in Oak Brook, Ill., with manufacturing facilities worldwide, the Company operates two groups: Environmental Solutions and Safety and Security Systems. For more information on Federal Signal, visit: www.federalsignal.com.

“Safe Harbor” Statement under the Private Securities Litigation Reform Act of 1995

This release contains unaudited financial information and various forward-looking statements as of the date hereof and we undertake no obligation to update these forward-looking statements regardless of new developments or otherwise. Statements in this release that are not historical are forward-looking statements. Such statements are subject to various risks and uncertainties that could cause actual results to vary materially from those stated. Such risks and uncertainties include but are not limited to: economic conditions in various regions; product and price competition; supplier and raw material prices; risks associated with acquisitions such as integration of operations and achieving anticipated revenue and cost benefits; foreign currency exchange rate changes; interest rate changes; increased legal expenses and litigation results; legal and regulatory developments and other risks and uncertainties described in filings with the Securities and Exchange Commission.

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* Adjusted EPS is a non-GAAP measure, which includes certain adjustments to reported GAAP net income and diluted EPS. Our outlook assumes certain adjustments to exclude the impact of acquisition and integration-related expenses and purchase accounting effects, where applicable. In 2018, we also made adjustments to exclude the impact of hearing loss settlement charges and special tax items, where applicable. Should any similar items occur during 2019, we would expect to exclude them from the determination of adjusted EPS. However, because of the underlying uncertainty in quantifying amounts which may not yet be known, a reconciliation of our Adjusted EPS outlook to the most applicable GAAP measure is excluded based on the unreasonable efforts exception in Item 10(e)(1)(i)(B). In addition, to facilitate comparisons with prior periods, when reporting our interim and annual non-GAAP results in 2019, we are adjusting our previously-issued non-GAAP results for 2018 to exclude the recognition of a deferred gain, which will no longer occur in 2019 following the adoption of the new lease accounting standard. On this basis, Adjusted EPS for 2018 would have been \$1.41. See Exhibit 99.1 to the Form 10-K for the year ended December 31, 2018 for the associated non-GAAP reconciliation.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

(in millions, except per share data)	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Net sales	\$ 324.3	\$ 291.0	\$ 598.1	\$ 540.7
Cost of sales	235.3	211.8	438.8	399.6
Gross profit	89.0	79.2	159.3	141.1
Selling, engineering, general and administrative expenses	41.8	40.7	85.7	82.5
Acquisition and integration-related expenses	0.9	0.4	1.5	0.9
Operating income	46.3	38.1	72.1	57.7
Interest expense	2.0	2.5	4.0	5.0
Other (income) expense, net	(0.1)	0.4	0.3	0.5
Income before income taxes	44.4	35.2	67.8	52.2
Income tax expense	11.6	8.3	17.5	12.4
Net income	\$ 32.8	\$ 26.9	\$ 50.3	\$ 39.8
Earnings per share:				
Basic	\$ 0.55	\$ 0.45	\$ 0.84	\$ 0.67
Diluted	\$ 0.54	\$ 0.44	\$ 0.82	\$ 0.65
Weighted average common shares outstanding:				
Basic	60.1	59.9	60.1	59.9
Diluted	61.3	61.0	61.2	60.9
Cash dividends declared per common share	\$ 0.08	\$ 0.08	\$ 0.16	\$ 0.15
Operating data:				
Operating margin	14.3%	13.1%	12.1%	10.7%
Adjusted EBITDA	\$ 57.1	\$ 47.3	\$ 93.0	\$ 76.3
Adjusted EBITDA margin	17.6%	16.3%	15.5%	14.1%
Total orders	\$ 308.0	\$ 277.6	\$ 607.0	\$ 607.3
Backlog	347.7	322.3	347.7	322.3
Depreciation and amortization	9.8	9.0	19.3	17.6

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS

(in millions, except per share data)	June 30, 2019 (Unaudited)	December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 38.6	\$ 37.4
Accounts receivable, net of allowances for doubtful accounts of \$1.8 and \$1.6, respectively	145.9	124.4
Inventories	173.5	157.3
Prepaid expenses and other current assets	9.6	9.4
Total current assets	367.6	328.5
Properties and equipment, net of accumulated depreciation of \$121.0 and \$116.0, respectively	67.2	62.0
Rental equipment, net of accumulated depreciation of \$38.5 and \$30.0, respectively	106.5	96.6
Operating lease right-of-use assets	24.9	—
Goodwill	375.0	375.1
Intangible assets, net of accumulated amortization of \$17.5 and \$13.4, respectively	139.5	143.1
Deferred tax assets	11.3	12.5
Deferred charges and other long-term assets	3.3	5.6
Long-term assets of discontinued operations	0.4	0.4
Total assets	\$ 1,095.7	\$ 1,023.8
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term borrowings and finance lease obligations	\$ 0.2	\$ 0.2
Accounts payable	71.3	66.1
Customer deposits	10.0	10.1
Accrued liabilities:		
Compensation and withholding taxes	22.8	29.5
Other current liabilities	61.5	52.7
Current liabilities of discontinued operations	0.2	0.2
Total current liabilities	166.0	158.8
Long-term borrowings and finance lease obligations	209.2	209.9
Long-term operating lease liabilities	19.4	—
Long-term pension and other postretirement benefit liabilities	54.7	54.6
Deferred gain	—	6.8
Deferred tax liabilities	51.0	46.3
Other long-term liabilities	14.1	15.9
Long-term liabilities of discontinued operations	1.2	1.4
Total liabilities	515.6	493.7
Stockholders' equity:		
Common stock, \$1 par value per share, 90.0 shares authorized, 66.7 and 66.4 shares issued, respectively	66.7	66.4
Capital in excess of par value	221.3	217.0
Retained earnings	479.7	432.5
Treasury stock, at cost, 6.3 and 6.2 shares, respectively	(91.4)	(88.5)
Accumulated other comprehensive loss	(96.2)	(97.3)
Total stockholders' equity	580.1	530.1
Total liabilities and stockholders' equity	\$ 1,095.7	\$ 1,023.8

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

(in millions)	Six Months Ended June 30,	
	2019	2018
Operating activities:		
Net income	\$ 50.3	\$ 39.8
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	19.3	17.6
Deferred financing costs	0.2	0.2
Deferred gain	—	(0.9)
Stock-based compensation expense	4.2	4.0
Pension expense, net of funding	(0.1)	(3.2)
Changes in fair value of contingent consideration and deferred payment	0.8	0.6
Deferred income taxes	4.0	2.0
Changes in operating assets and liabilities	(52.9)	(22.3)
Net cash provided by operating activities	25.8	37.8
Investing activities:		
Purchases of properties and equipment	(9.4)	(7.0)
Proceeds from acquisition-related activity	—	3.0
Other, net	—	0.1
Net cash used for investing activities	(9.4)	(3.9)
Financing activities:		
Decrease in revolving lines of credit, net	(3.1)	(26.6)
Purchases of treasury stock	(1.0)	—
Redemptions of common stock to satisfy withholding taxes related to stock-based compensation	(1.6)	(0.3)
Cash dividends paid to stockholders	(9.6)	(9.0)
Proceeds from stock-based compensation activity	—	0.9
Other, net	(0.1)	0.1
Net cash used for financing activities	(15.4)	(34.9)
Effects of foreign exchange rate changes on cash and cash equivalents	0.2	(0.5)
Increase (decrease) in cash and cash equivalents	1.2	(1.5)
Cash and cash equivalents at beginning of year	37.4	37.5
Cash and cash equivalents at end of period	\$ 38.6	\$ 36.0

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

GROUP RESULTS (Unaudited)

The following tables summarize group operating results as of and for the three and six months ended June 30, 2019 and 2018:

Environmental Solutions Group

(\$ in millions)	Three Months Ended June 30,			Six Months Ended June 30,		
	2019	2018	Change	2019	2018	Change
Net sales	\$ 267.2	\$ 233.3	\$ 33.9	\$ 486.7	\$ 429.9	\$ 56.8
Operating income	44.8	37.2	7.6	70.5	57.8	12.7
Adjusted EBITDA	54.4	45.5	8.9	89.1	74.2	14.9
Operating data:						
Operating margin	16.8%	15.9%	0.9%	14.5%	13.4%	1.1%
Adjusted EBITDA margin	20.4%	19.5%	0.9%	18.3%	17.3%	1.0%
Total orders	\$ 253.2	\$ 217.3	\$ 35.9	\$ 496.9	\$ 491.7	\$ 5.2
Backlog	322.0	291.3	30.7	322.0	291.3	30.7
Depreciation and amortization	8.9	8.0	0.9	17.5	15.7	1.8

Safety and Security Systems Group

(\$ in millions)	Three Months Ended June 30,			Six Months Ended June 30,		
	2019	2018	Change	2019	2018	Change
Net sales	\$ 57.1	\$ 57.7	\$ (0.6)	\$ 111.4	\$ 110.8	\$ 0.6
Operating income	9.5	8.2	1.3	18.2	14.3	3.9
Adjusted EBITDA	10.3	9.0	1.3	19.9	15.8	4.1
Operating data:						
Operating margin	16.6%	14.2%	2.4%	16.3%	12.9%	3.4%
Adjusted EBITDA margin	18.0%	15.6%	2.4%	17.9%	14.3%	3.6%
Total orders	\$ 54.8	\$ 60.3	\$ (5.5)	\$ 110.1	\$ 115.6	\$ (5.5)
Backlog	25.7	31.0	(5.3)	25.7	31.0	(5.3)
Depreciation and amortization	0.8	1.0	(0.2)	1.7	1.9	(0.2)

Corporate Expenses

Corporate operating expenses were \$8.0 million and \$7.3 million for the three months ended June 30, 2019 and 2018, respectively. For the six months ended June 30, 2019 and 2018, corporate operating expenses were \$16.6 million and \$14.4 million, respectively.

SEC REGULATION G NON-GAAP RECONCILIATION

The financial measures presented below are unaudited and are not in accordance with U.S. generally accepted accounting principles (“GAAP”). The non-GAAP financial information presented herein should be considered supplemental to, and not a substitute for, or superior to, financial measures calculated in accordance with GAAP. The Company has provided this supplemental information to investors, analysts, and other interested parties to enable them to perform additional analyses of operating results, to illustrate the results of operations giving effect to the non-GAAP adjustments shown in the reconciliations below, and to provide an additional measure of performance which management considers in operating the business.

Impact of New Lease Accounting Standard on Non-GAAP Measures:

Effective January 1, 2019, the Company adopted the new lease accounting standard, which resulted in a change to the Company’s recognition of the deferred gain associated with historical sale lease-back transactions. Prior to 2019, the deferred gain, which initially totaled \$29.0 million, was being recognized through the Consolidated Statement of Operations on a straight-line basis over the 15-year lease term. As a result, approximately \$1.9 million of the deferred gain had been recognized each year since 2008, of which approximately \$1.1 million and \$0.8 million had been recognized within the Environmental Solutions Group and Safety and Security Systems Group, respectively. Effective in 2019, the Company no longer recognizes any portion of the gain through the Consolidated Statement of Operations, and recognized the remaining deferred gain balance, net of the related deferred tax asset, as a cumulative effect adjustment to opening retained earnings. To facilitate comparisons with prior periods, we have revised our previously-issued non-GAAP results for the three and six months ended June 30, 2018 to exclude the recognition of this deferred gain.

Adjusted Net Income and Earnings Per Share (“EPS”):

The Company believes that modifying its 2019 and 2018 net income and diluted EPS provides additional measures which are representative of the Company’s underlying performance and improves the comparability of results across reporting periods. During the three and six months ended June 30, 2019 and 2018 adjustments were made to reported GAAP net income and diluted EPS to exclude the impact of acquisition and integration-related expenses, purchase accounting effects and hearing loss settlement charges, where applicable.

(in millions)	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Net income	\$ 32.8	\$ 26.9	\$ 50.3	\$ 39.8
Add:				
Income tax expense	11.6	8.3	17.5	12.4
Income before income taxes	44.4	35.2	67.8	52.2
Add:				
Acquisition and integration-related expenses	0.9	0.4	1.5	0.9
Purchase accounting effects ^(a)	0.2	0.4	0.3	1.0
Hearing loss settlement charges	—	—	—	0.4
Adjusted income before income taxes	45.5	36.0	69.6	54.5
Adjusted income tax expense ^(b)	(11.9)	(8.5)	(17.9)	(12.9)
Adjusted net income	\$ 33.6	\$ 27.5	\$ 51.7	\$ 41.6
Less:				
Deferred gain recognition, net of income tax expense	—	(0.4)	—	(0.8)
Adjusted net income, as revised	\$ 33.6	\$ 27.1	\$ 51.7	\$ 40.8

(dollars per diluted share)	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
EPS, as reported	\$ 0.54	\$ 0.44	\$ 0.82	\$ 0.65
Add:				
Income tax expense	0.19	0.14	0.29	0.20
Income before income taxes	0.73	0.58	1.11	0.85
Add:				
Acquisition and integration-related expenses	0.01	0.01	0.02	0.01
Purchase accounting effects ^(a)	0.00	0.00	0.00	0.02
Hearing loss settlement charges	—	—	—	0.01
Adjusted income before income taxes	0.74	0.59	1.13	0.89
Adjusted income tax expense ^(b)	(0.19)	(0.14)	(0.29)	(0.21)
Adjusted EPS	\$ 0.55	\$ 0.45	\$ 0.84	\$ 0.68
Less:				
Deferred gain recognition, net of income tax expense	—	(0.01)	—	(0.01)
Adjusted EPS, as revised	\$ 0.55	\$ 0.44	\$ 0.84	\$ 0.67

(a) Purchase accounting effects relate to adjustments to exclude the step-up in the valuation of acquired JJE equipment that was sold subsequent to the acquisition in the three and six months ended June 30, 2019 and 2018, as well as to exclude the depreciation of the step-up in the valuation of the rental fleet acquired.

(b) Adjusted income tax expense for the three and six months ended June 30, 2019 and 2018 was recomputed after excluding the impact of acquisition and integration-related expenses, purchase accounting effects and hearing loss settlement charges, where applicable.

Adjusted EBITDA and Adjusted EBITDA Margin:

The Company uses adjusted EBITDA and the ratio of adjusted EBITDA to net sales (“adjusted EBITDA margin”), at both the consolidated and segment level, as additional measures which are representative of its underlying performance and to improve the comparability of results across reporting periods. We believe that investors use versions of these metrics in a similar manner. For these reasons, the Company believes that adjusted EBITDA and adjusted EBITDA margin, at both the consolidated and segment level, are meaningful metrics to investors in evaluating the Company’s underlying financial performance.

Consolidated adjusted EBITDA is a non-GAAP measure that represents the total of net income, interest expense, hearing loss settlement charges, acquisition and integration-related expenses, purchase accounting effects, other income/expense, income tax expense, and depreciation and amortization expense. Consolidated adjusted EBITDA margin is a non-GAAP measure that represents the total of net income, interest expense, hearing loss settlement charges, acquisition and integration-related expenses, purchase accounting effects, other income/expense, income tax expense, and depreciation and amortization expense divided by net sales for the applicable period(s).

Segment adjusted EBITDA is a non-GAAP measure that represents the total of segment operating income, acquisition and integration-related expenses, purchase accounting effects and depreciation and amortization expense, as applicable. Segment adjusted EBITDA margin is a non-GAAP measure that represents the total of segment operating income, acquisition and integration-related expenses, purchase accounting effects and depreciation and amortization expense, as applicable, divided by net sales for the applicable period(s). Segment operating income includes all revenues, costs and expenses directly related to the segment involved. In determining segment income, neither corporate nor interest expenses are included. Segment depreciation and amortization expense relates to those assets, both tangible and intangible, that are utilized by the respective segment.

Other companies may use different methods to calculate adjusted EBITDA and adjusted EBITDA margin.

Consolidated

The following table summarizes the Company's consolidated adjusted EBITDA and adjusted EBITDA margin and reconciles net income to consolidated adjusted EBITDA for the three and six months ended June 30, 2019 and 2018:

(\$ in millions)	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Net income	\$ 32.8	\$ 26.9	\$ 50.3	\$ 39.8
Add:				
Interest expense	2.0	2.5	4.0	5.0
Hearing loss settlement charges	—	—	—	0.4
Acquisition and integration-related expenses	0.9	0.4	1.5	0.9
Purchase accounting effects*	0.1	0.3	0.1	0.7
Other (income) expense, net	(0.1)	0.4	0.3	0.5
Income tax expense	11.6	8.3	17.5	12.4
Depreciation and amortization	9.8	9.0	19.3	17.6
Consolidated adjusted EBITDA	\$ 57.1	\$ 47.8	\$ 93.0	\$ 77.3
Less:				
Deferred gain recognition	—	(0.5)	\$ —	\$ (1.0)
Consolidated adjusted EBITDA, as revised	\$ 57.1	\$ 47.3	\$ 93.0	\$ 76.3
Net sales	\$ 324.3	\$ 291.0	\$ 598.1	\$ 540.7
Consolidated adjusted EBITDA margin	17.6%	16.4%	15.5%	14.3%
Consolidated adjusted EBITDA margin, as revised	17.6%	16.3%	15.5%	14.1%

* Excludes purchase accounting expenses reflected in depreciation and amortization of \$0.1 million and \$0.1 million for the three months ended June 30, 2019 and 2018, and \$0.2 million and \$0.3 million for the six months ended June 30, 2019 and 2018, respectively.

Environmental Solutions Group

The following table summarizes the Environmental Solutions Group's adjusted EBITDA and adjusted EBITDA margin and reconciles operating income to adjusted EBITDA for the three and six months ended June 30, 2019 and 2018:

(\$ in millions)	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Operating income	\$ 44.8	\$ 37.2	\$ 70.5	\$ 57.8
Add:				
Acquisition and integration-related expenses	0.6	0.3	1.0	0.6
Purchase accounting effects*	0.1	0.3	0.1	0.7
Depreciation and amortization	8.9	8.0	17.5	15.7
Adjusted EBITDA	\$ 54.4	\$ 45.8	\$ 89.1	\$ 74.8
Less:				
Deferred gain recognition	—	(0.3)	—	(0.6)
Adjusted EBITDA, as revised	\$ 54.4	\$ 45.5	\$ 89.1	\$ 74.2
Net sales	\$ 267.2	\$ 233.3	\$ 486.7	\$ 429.9
Adjusted EBITDA margin	20.4%	19.6%	18.3%	17.4%
Adjusted EBITDA margin, as revised	20.4%	19.5%	18.3%	17.3%

* Excludes purchase accounting expenses reflected in depreciation and amortization of \$0.1 million and \$0.1 million for the three months ended June 30, 2019 and 2018, and \$0.2 million and \$0.3 million for the six months ended June 30, 2019 and 2018, respectively.

Safety and Security Systems Group

The following table summarizes the Safety and Security Systems Group's adjusted EBITDA and adjusted EBITDA margin and reconciles operating income to adjusted EBITDA for the three and six months ended June 30, 2019 and 2018:

(\$ in millions)	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Operating income	\$ 9.5	\$ 8.2	\$ 18.2	\$ 14.3
Add:				
Depreciation and amortization	0.8	1.0	1.7	1.9
Adjusted EBITDA	\$ 10.3	\$ 9.2	\$ 19.9	\$ 16.2
Less:				
Deferred gain recognition	—	(0.2)	—	(0.4)
Adjusted EBITDA, as revised	\$ 10.3	\$ 9.0	\$ 19.9	\$ 15.8
Net sales	\$ 57.1	\$ 57.7	\$ 111.4	\$ 110.8
Adjusted EBITDA margin	18.0%	15.9%	17.9%	14.6%
Adjusted EBITDA margin, as revised	18.0%	15.6%	17.9%	14.3%